

EX-10.21 9 d173853dex1021.htm MASTER SERVICES AGREEMENT

Exhibit 10.21

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*** CERTAIN INFORMATION, MARKED BY BRACKETS AND AN ASTERISK, IN THIS EXHIBIT HAS BEEN OMITTED AND FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION. CONFIDENTIAL TREATMENT HAS BEEN REQUESTED WITH RESPECT TO THE OMITTED PORTIONS.**

MASTER SERVICE AGREEMENT

Between

BRIGHTSOURCE CONSTRUCTION MANAGEMENT, INC.

And

CHEVRON TECHNOLOGY VENTURES, A DIVISION of CHEVRON U.S.A. INC.

Dated as of December 17, 2008

CHEVRON SOLAR-TO-STEAM DEMONSTRATION PLANT

*Confidential**Execution Copy***MASTER SERVICES AGREEMENT**

This Master Services Agreement (including all Exhibits and Schedules attached hereto, this “Agreement”) is entered into as of December 17, 2008 (the “Effective Date”) by and between **Chevron Technology Ventures**, a division of Chevron U.S.A. Inc., a Pennsylvania corporation, with an office address at 3901 Briarpark Drive, Houston, Texas 77042, (the “Company”) and **BrightSource Construction Management, Inc.** (“Provider”), a California corporation, with an office address at 1999 Harrison Street, Suite 2150, Oakland, California 94612, and for the limited purposes of agreeing to Sections 8, 11 and 36 hereof, **BrightSource Industries (Israel) Ltd.** (“BSII”), and for the limited purposes of agreeing to Sections 7(b), 11, 14, 17(b), 34 and 36 hereof and guaranteeing all of Provider’s and BSII’s obligations hereunder, **BrightSource Energy, Inc.**, (“BSE,” together with its subsidiaries, including Provider and BSII, “BrightSource”). The Company and Provider are individually referred to herein as a “Party” and collectively or jointly as the “Parties”.

WITNESSETH:

WHEREAS, the Company would like to have Provider provide to it certain technical, developmental, engineering, procurement, construction and consulting services for the design and construction of a Solar-to-Steam Demonstration Plant at the Company’s oil production facility in Coalinga, California (the “Demo Plant” or “Project”); and

WHEREAS, Provider is willing to provide such services to the Company as more fully set forth below.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, the Parties hereto agree as follows.

1. Work.

- (a) *Scope of Work.* Provider agrees to perform design, technical, developmental, engineering, procurement, installation, construction, consulting and other services required for the Project (collectively, the “Services”). Without limiting the foregoing, the Services include all labor necessary to perform such Services, including the services set forth in Exhibit A. The Services; all deliverables related thereto (the “Deliverables”); and all materials, fabrications, assemblies, equipment, supplies, spare parts and components incorporated or to be incorporated into the Project or furnished pursuant to this Agreement (collectively, the “Products”) as set forth in Exhibit A are collectively referred to herein as the “Work.” Provider shall perform the Work under the terms of this Agreement. For the avoidance of

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doubt, the Work does not include the obligations or performance of Provider or BrightSource under Sections 13 or 14.

(b) *Warranties.*

- (i) Provider represents and warrants that it fully understands the Work to be performed as well as the Company's purposes and objectives relative to the Work to the extent described in this Agreement and will perform the Services in a professional, timely and diligent manner in accordance with the Requirements and consistent with that employed by a reasonably prudent provider of similar services servicing its own business and as otherwise required by this Agreement. Provider further represents and warrants that its personnel shall be qualified and skilled in the Services they provide. Further, Provider represents and warrants that it has knowledge and expertise in the field of solar technology and related technologies as required by the Work. Provider shall ensure that its personnel and subcontractors who provide Services under this Agreement will possess sufficient educational qualifications and experience to provide such Services in a professional, timely and diligent manner. If the Company becomes dissatisfied with any such personnel or subcontractor, Provider shall cooperate to remedy the problem as soon as possible and, if reasonably requested by the Company, remove from the Project any individual who is the subject of dissatisfaction and replace that individual with other personnel reasonably approved by the Company.
- (ii) In the event Provider fails to perform or complete all or any portion of the Services in accordance with subsection (b)(i) above, subject to Sections 1(j) and 15, Provider shall re-perform the non-conforming Services at Provider's sole cost and expense so that such Services comply in all material respects with the requirements of this Agreement.
- (iii) Provider represents and warrants to the Company that:
 - (A) All Products are new, unused, of the grade(s) specified (if any), of a suitable quality for their intended use, and further meet the Requirements.
 - (B) All Products will be free from defects in design, materials, and workmanship.

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- (C) The Work will not infringe or violate the intellectual property rights or interest of any third party.
 - (D) The Project will be designed, engineered, installed, constructed, interconnected, tested, commissioned, and completed in accordance with the Requirements.
 - (E) [Deleted]
 - (F) Title to all Products and Deliverables is vested in the Company, free of any liens or other adverse claims, upon payment thereof pursuant to the terms of this Agreement (the foregoing warranties in Sections 1(b)(iii)(A) – (F) being hereinafter collectively referred to as the “Warranty”).
 - (G) The Warranty shall not include loss, damage or failure to the extent caused by (i) normal wear and tear; or (ii) operation and maintenance in a manner that is inconsistent with (x) manufacturers’ recommendations, (y) Prudent Industry Practices, or (z) the Project and/or equipment designs and specifications.
- (iv) To the extent that third party warranties on materials or equipment incorporated into the Work exceed the Provider warranty period, Provider assigns such warranties to the Company at the expiration of the Provider warranty period.
 - (v) If, at any time prior to the expiration of the applicable warranty period, the Company discovers any breach of the Warranty other than the Warranty in Section 1(b)(iii)(C), subject to Section 15, Provider shall, at Provider’s sole cost and expense, promptly correct such breach in a manner and at such times that to the extent reasonably practicable minimizes any interruption of the Company’s or Provider’s operation of the Project, whether by repair, retrofit, replacement or otherwise (which corrective action shall include any necessary removal, disassembly, re-design, reinstallation, reassembly, reconstruction or retesting and commissioning of any part or portion of the Work) so that the Work complies with the Warranty. Any remedial action performed by Provider shall be covered by the Warranty until expiration of the warranty period applicable to such portion of the Work.
 - (vi) Where remedial action is required by Provider under subsections (b)(ii) or (b)(v) above, Provider shall promptly

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commence corrective action after notice thereof, and shall complete such action within a reasonable period of time. If Provider fails to promptly commence the corrective action or fails to diligently continue such corrective action until completion, the Company has the right to remedy the defect by itself or by engaging another contractor, and Provider is responsible for all reasonable costs, subject to Section 15, incurred by the Company in connection with such corrective action.

- (vii) Provider shall conduct annual inspection procedures to confirm that the Work meets the Warranties in subsection (b)(iii) above (other than the Warranties in Sections 1(b)(iii)(C) and 1(b)(iii)(F)) until the expiration of the applicable warranty period with respect to such Work set forth in Section 1(j). The first annual inspection shall be conducted one calendar year after successful completion of the Startup Test (as defined in Exhibit F) and thereafter on each anniversary thereof until the expiration of the applicable warranty period.
 - (viii) If, at any time prior to the expiration of the applicable warranty period, the Company discovers any breach of the Warranty in Section 1(b)(iii)(C), subject to Section 15, Provider shall, at Provider's option, (i) procure for the Company the right to use the Work that does not comply with Section 1(b)(iii)(C); or (ii) replace or modify the Work that does not comply with Section 1(b)(iii)(C) so that it does comply with Section 1(b)(iii)(C).
- (c) *Subcontractors and Vendors.*
- (i) Provider agrees that all subcontractors (any subcontractors of Provider being referred to herein as "Subcontractors") shall possess suitable training (including all Company training requirements set forth in this Agreement), experience and expertise with respect to the portion of the Work it is to provide. Provider shall be responsible and liable for the actions and inactions of its Subcontractors as if the Subcontractors were Provider itself.
 - (ii) Prior to executing any Subcontracts or Major Equipment supplier purchase agreements for the Project, Provider shall provide Company with a list of its intended Subcontractors and Major Equipment suppliers for the Work. Provider shall submit to Company prequalification packages (including the forms in Exhibit E-1, Appendix B), license and insurance

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information for all Subcontractors. Prior to commencement of the applicable portion of the Work, Provider shall provide Company with a list of its intended lower-tiered subcontractors. Within five (5) working days of receipt of the applicable list, Company shall have the right to reasonably object to any Subcontractors, lower-tiered subcontractors or suppliers listed by Provider, and the parties will thereafter meet and confer with respect to any Company objection. Subcontractors and lower-tiered subcontractors must meet minimum safety requirements and safety record index threshold required by Company to be prequalified. So long as (1) Provider has met and conferred with Company, (2) the Subcontractor or the lower-tiered subcontractor in question meets minimum safety requirements and the safety record index threshold required by Company, and (3) Company cannot reasonably demonstrate a material issue of reliability with the Subcontractor, lower-tiered subcontractor or supplier objected to, Provider may hire such Subcontractor, lower-tiered subcontractor or supplier despite Company's reasonable objection. Notwithstanding the foregoing, Company may require that Provider use another proposed subcontractor, lower-tiered subcontractor or supplier so long as Company agrees (pursuant to a Change Order) to compensate Provider for any change in the subcontract or purchase order cost. If the rejected low-cost subcontractor or supplier submits an invoice and demands payment for the cost of preparing and clarifying its proposal, the Parties will in good faith consider whether or not such cost will be included in the Change Order.

- (iii) In the event of a termination of this Agreement due to a breach by Provider, Provider shall if requested by the Company promptly assign to the Company all of its rights and obligations under all subcontracts and Major Equipment vendor supply contracts entered into by Provider with respect to the Work and the Company may, to the extent permitted by Applicable Law, enforce directly against any such Subcontractor or vendor all rights of Provider under such contracts. Upon such assignment, Company shall receive all benefits under such subcontract or vendor contract and shall assume all obligations thereunder without recourse to Provider, except to the extent of any payment obligations thereunder that should have been satisfied from payments of the Contract Price to date, or any breach of such subcontract or vendor contract by Provider prior to the date of the assignment. All subcontracts and Major Equipment vendor supply contracts entered into by Provider

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shall contain a provision whereby the Subcontractor or vendor agrees and consents to such assignment by Provider to the Company, subject to the Company assuming all obligations of Provider under said contract.

- (iv) Provider shall include a provision in its contracts with Subcontractors that the Subcontractor in question abide by and observe all Applicable Laws, rules and regulations, all applicable safety and security regulations, including minimum Company safety requirements set forth in Exhibits E and E-1, and all applicable terms and conditions of this Agreement. Each Subcontractor shall supply contractual warranties with respect to workmanship and materials for period of one (1) year from the time the Work performed by such Subcontractor is completed and indemnification to protect and indemnify Provider that reflect the nature, extent, and location of such Subcontractor's activities and typical industry provisions, but without derogation of Provider's warranty and indemnification obligations herein. Provider shall require all Subcontractors to comply with the provisions of this subsection (iv) and all other provisions hereunder specifically requiring such compliance by insertion of the applicable requirements hereof and thereof in a written agreement between Provider and Subcontractors.
- (v) In the event of non-payment of sums due third parties from Provider for any portion of the Work, the Company reserves the right to pay such third parties directly, but only in strict accordance with the subcontract with such third party and not in advance of any amounts due thereunder, and deduct the amount so paid from the total amount due to Provider pursuant to Exhibit B, provided, however that the aforesaid shall not limit Provider's discretion in subcontracting all or part of the Project to third parties.
- (d) *Representative of Each Party.* Each Party shall have a designated employee be its representative under this Agreement. The representative for each Party shall be the individual designated to receive notice for such Party under Section 22 hereof. Provider shall not change its representative during the course of the Work hereunder unless agreed to in writing by the Company, which agreement shall not be unreasonably denied or delayed. Company shall not change its representative during the course of the Work hereunder except upon written notice to Provider, such change to be effective upon receipt of such notice. Each designated representative of a Party shall have complete authority to act for such party with respect to this Agreement except to the extent such

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authority is expressly and specifically limited by a written notice to the other Party. Each Party's authorized representative shall be the only person to whom the other Party shall issue instructions, orders or directions, except in an emergency.

- (e) *Independent Contractor.* Provider shall perform the Work as an independent contractor, retaining complete control over its personnel and operations, and conforming to all applicable labor laws, regulations and orders with respect to its employees. Neither Provider nor its employees shall be the Company's employees or agents, or have any authority to represent or bind the Company. During the performance of the Work, Provider shall consult frequently with the Company's designated representative in order to ensure that the specific Work is being performed in accordance with the terms of this Agreement.
- (f) *Progress Reports.* Provider shall furnish the Company's designated representative reports as to the progress made on the Work as set forth in Exhibit H.
- (g) *Compliance with Employment Laws.* Provider shall pay when due to all personnel used by it for the Work all salaries, wages, fringe benefits, other forms of compensation, and reimbursement payable as a result of or in connection with performance of the Work and shall withhold and pay over to the appropriate authorities in a timely manner all Federal, State and local personal income and other payroll taxes (including contributions or taxes assessed against employees) payable with respect to such compensation. Provider shall in a timely manner make all reports concerning such personnel required by governmental authorities. The Company, from time to time, may require Provider to furnish evidence satisfactory to the Company that Provider has complied with the provisions of this subsection (g). The Company, in the event it is so required by law, may withhold from Provider's compensation and pay to Federal or State tax authorities any tax levied or assessed on account of Provider's Work hereunder, subject to Company's obligation to pay certain taxes with respect to the Work as set forth in Section 10. Provider shall indemnify and hold harmless the Company, or any of its Affiliates, and the agents and employees of any of them, from and against any and all loss, damage or liability to any of them (including, without limitation, taxes, penalties and interest) resulting from Provider's failure to comply with the provisions of this subsection (g). For the avoidance of doubt, the foregoing claims constitute Third Party Claims not subject to the limitations on liability set forth in Section 15.

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- (h) *Termination of Work.* The Company may only terminate the Work as set forth in Section 23.
- (i) *Change Orders.*
 - (i) *Change Orders Generally.* Changes and/or modifications to the Work and/or Milestone Schedule (as set forth in Exhibit A-5, the “Milestone Schedule”) shall be authorized by a written Change Order signed by both Company and Provider (a “Change Order”). The Change Order shall state the change and/or modification to the Work and/or the Milestone Schedule and any related additional compensation to be paid or extension of time. Except pursuant to a Change Order executed by the Company, Provider shall not commence any Work or make any changes to the Milestone Schedule for which it will contend that extra compensation or extension of time is or will be due. In addition, if Company requests a proposal from Provider for a change to the Work or the Milestone Schedule and Company subsequently elects to not proceed with such change, Company agrees that a Change Order shall be issued to reimburse Provider for any costs reasonably incurred for estimating services, design and/or preparation of the proposal requested by the Company. Exhibit H contains additional protocols applicable to Change Orders.
 - (ii) *Change Orders Requiring Additional Compensation.* Provider shall be entitled to additional compensation for the following reasons to the extent that such reasons actually increase the cost of performing the Work: (1) Company requested changes and/or modifications to the Work or the Milestone Schedule; (2) Company caused delays not otherwise permissible or compensated for hereunder; (3) discovery of any non-geological subsurface or other Site conditions different from those described in Exhibit A, (4) discovery of any pre-existing, undisclosed Hazardous Substance condition at, in, under, or upon the Site, and (5) to the extent provided under subsection (iv) below.
 - (iii) *Change Orders Requiring Additional Time / Excusable Delays.* Provider shall be entitled to a reasonable extension of time to the Milestone Schedule and a Change Order therefor for the following reasons (each, an “Excusable Delay”) to the extent that such reasons actually increase the time required to complete the Work (it being understood that Provider shall not be obligated to undertake extra-ordinary efforts to maintain the Milestone Schedule due to such

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reasons): (1) events of Force Majeure; (2) material changed conditions that justify a delay or extension of time pursuant to Section 1(i)(iv) below; and (3) Company caused delays. The Milestone Schedule will not be extended due to normal seasonal weather variations. Prior to the extension of any dates contained in the Milestone Schedule due to Excusable Delay, Provider will use reasonable efforts to make up such delays, including authorizing overtime payments (provided that Company has issued a Change Order authorizing and agreeing to pay for any such overtime payments).

- (iv) *Material Changed Conditions.* Provider will provide written notice to Company of any material changed condition as soon as reasonably possible, but in any event within ten (10) calendar days of Provider's first discovery of such material changed condition. In the event that Provider's notice concerns unanticipated subsurface conditions, including non-geological soil conditions or Hazardous Substances, Provider will not disturb the condition until said notice has been given to Company, and Company has had a reasonable opportunity to investigate the condition. If there is a disagreement between Company and Provider as to whether a Change Order should be issued because of the material changed condition or delay caused by its existence or Company's investigation thereof, those disputes shall be resolved in accordance with the provisions of Section 21 of this Agreement. Pending the resolution of any dispute between Provider and Company concerning a material changed condition or any requested increase in compensation or extension of time, Provider will continue the Work and Company shall continue to make payments to Provider in accordance with the terms of this Agreement; provided, however, that Provider shall not be required to remediate, dispose of, or otherwise be responsible for any pre-existing Hazardous Substance condition at, in, under, or upon the Site. Notwithstanding the foregoing, Provider shall not be required to implement a Change Order if Provider reasonably demonstrates that implementation of such Change Order will (A) adversely impact the design, performance, safety, operability, or operation and maintenance costs of the Project or (B) increase the liabilities or warranty obligations of Provider hereunder.
- (v) *Minor Changes to Scope of Work.* Provider shall have authority to make minor changes that do not result in additional compensation or change the Milestone Schedule and are consistent with the intent of the final Contract

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Documents and the Requirements, without prior notice to Company. Provider will either promptly inform Company, in writing, of any minor changes made during the implementation of the Project, or make available to Company at the site a set of as-built drawings that will be kept current to show those minor changes.

- (j) *Applicable Warranty Periods.* The representations and warranties set forth in this Section 1 terminate as follows:
- (i) The representations and warranties set forth in Section 1(b)(i) terminate and expire [*] after successful completion of the Startup Test (as defined in Exhibit F).
 - (ii) The representations and warranties set forth in Section 1(b)(iii) (other than in Section 1(b)(iii)(F)) terminate and expire (A) with respect to the Solar Field Equipment (as defined in Exhibit J) [*] after successful completion of the Startup Test and (B) with respect to the Balance of Plant (as defined in Exhibit J), [*] after successful completion of the Startup Test.
 - (iii) The representations and warranties set forth in Section 1(b)(iii)(F) terminate and expire [*] after successful completion of the Startup Test.
 - (iv) For the avoidance of doubt, any representations and warranties set forth in Section 1(b) concerning the performance of the Project as it relates to the quantity and properties of steam produced or producible at the Project terminate and expire (1) upon termination hereof under Section 23(g) or (2) upon successful completion of the Annual Production Test (as defined in Exhibit F) or, subject to Section 15, payment of the liquidated damages with respect to the Annual Production Test as set forth in Exhibit F.
- (k) *NO IMPLIED WARRANTIES.* EXCEPT AS EXPRESSLY PROVIDED IN THIS AGREEMENT, PROVIDER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND PROVIDER DISCLAIMS AND COMPANY WAIVES ANY IMPLIED WARRANTIES OR WARRANTIES IMPOSED BY LAW, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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(l) *Provider's Obligations.*

- (i) *General Obligations.* Provider represents and warrants that it has satisfied itself as to the conditions under which the improvements are to be constructed, including, but not limited to, climatic conditions, available labor supply and costs, local and other governmental requirements (to the extent Provider's responsibilities pursuant to Exhibit A), available equipment supply and costs, as well as all other items which, in Provider's judgment, could in any manner affect the timely performance or cost of the Work. Provider shall furnish and provide all supervision, labor, transportation, equipment, materials, resources, and other services necessary to complete the Work for the Project. Provider shall hold, and shall ensure that all Subcontractors doing any portion of the Work hold, all applicable licenses required to perform the Work covered by the Agreement, and shall keep all such licenses current and valid during the performance of the Work. Provider shall provide proof of valid licenses if requested by Company.
- (ii) *Project Control and Supervision.* Provider shall manage and direct the Work in all particulars, including its own activities and those of its Subcontractors, and coordinate all portions of the Work with the activities and responsibilities of Company to complete the Project in accordance with the Contract Documents. Provider shall be solely responsible for its means, methods, techniques, sequences, and procedures employed for the construction. Provider shall supervise, coordinate, and direct Provider's own forces and those of its Subcontractors, regularly monitor as appropriate to achieve adequate performance, and provide inspection to assure quality workmanship for the Work. Provider shall enforce discipline and good order at the Project Site.
- (iii) *Physical Construction.* Provider shall furnish and pay for all supervision, labor, materials, fabrications, assemblies, construction equipment and machinery, tools, water (other than for dust control), water trucks, drinking water and sanitation facilities, transportation, and all other facilities and services that are necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work, excluding only those items specifically identified to be provided by Company.

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- (iv) *Capturing Operating Data.* Provider shall capture all ongoing operating data from the Demo Plant from the completion of the Startup Test until satisfactory completion of the Annual Production Test, and shall make such information and data available to Company promptly upon request. Such operating data shall not be erased or deleted.
- (m) *Design Preparation by Provider.* Provider's Work shall include the preparation of plans and specifications in accordance with the Requirements. Provider shall comply with each of the following requirements:
 - (i) Provider shall employ a qualified engineer licensed to practice professional engineering in the state and/or locality where the Project is located, or if permitted by State law, may subcontract such engineering services to a properly licensed engineer. Provider's plans and specifications shall be prepared under the direct supervision of a licensed professional engineer and, if required by Applicable Law, said engineer shall stamp the design upon completion of the plans and specifications.
 - (ii) Provider shall be solely responsible for the adequacy, safety, suitability, and completeness of its design. Provider is responsible for taking all field dimensions and noting all field conditions which may impact engineering and design. Provider's plans and specifications are subject to the written approval of Company in accordance with the procedures set forth in Exhibit A-2; without such, work shall not proceed. Such approval shall be limited to a determination of whether such plans and specifications conform to the Requirements. Company shall have fourteen (14) days to review and approve the plans and specifications.
 - (iii) Provider shall supply copies of the design to Company for review and approval as outlined in Exhibit A-2 Engineering Scope of Work to the Agreement. Provider shall perform interactive reviews of the design with Company, based on previously agreed upon process in Exhibit A-2, to facilitate Company input, feedback, and approval of the Project and component design. Such approval shall be limited to a determination of whether such design conforms to the Requirements. Company shall have fourteen (14) days to review and approve the design. Provider shall also meet with representatives of Company to discuss the design as appropriate between such interactive reviews.

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- (iv) With consultation and feedback from Company, Provider shall submit the final design, plans and specifications to the appropriate governmental agencies having jurisdiction over the Project if and to the extent such submission is required by Applicable Law. Provider shall work with said agencies to secure the Permits for which Provider is responsible for securing pursuant to Section 20(f). Company will use its knowledge and expertise to assist Provider in identifying the required permits.
- (n) *Contract Time and Schedule.*
 - (i) *Progress and Completion.* The time period set forth in the Milestone Schedule to achieve Mechanical Completion may be extended only for causes and events expressly authorized under the Agreement, including Section 1(i)(iii). Provider shall not commence any portion of the construction work at the Site prior to the issuance of a written notice to proceed by Company for such portion of the Work ("Notice to Proceed"). A Notice to Proceed shall be issued within ten (10) business days of Company's approval of the issued-for-construction engineering package for such portion of the Work. In the event that Company fails to issue a Notice to Proceed within such time period, such Notice to Proceed shall be deemed issued on the tenth (10th) business day. Provider shall thereafter prosecute the Work continuously, expeditiously, and diligently at such a rate to maintain sufficient progress in accordance with the Milestone Schedule to achieve Mechanical Completion within the Contract Time, unless an extension of time is justified under the Agreement. Should it appear at any time that Provider is in danger of failing to meet any of the milestone dates contained in the Milestone Schedule, Provider shall cause its employees and its Subcontractors to increase personnel or perform overtime work as is necessary to return to the original Milestone Schedule. Provider shall not be compensated or reimbursed for any additional costs resulting from such overtime work, and no adjustment shall be made to the Contract Time, unless an extension of time would have been justified under the Agreement and Provider had supplied Company with notice of its intent to accelerate prior to providing such overtime work.
 - (ii) *Procurement Process for Major Equipment.* Purchase agreements for the Major Equipment identified on Exhibit A-6 hereto may be issued by Provider upon execution of this Agreement. For any remaining Major Equipment, the

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process for issuing the purchase agreements shall be as set forth in Section 1(c)(ii). Company shall have seven (7) days to review and approve all shop drawings for the Major Equipment.

2. Compensation.

- (a) Subject to the terms and conditions of this Agreement, the Company shall pay Provider, as full compensation for the performance of the Work and its obligations hereunder, a fixed, lump sum amount equal to \$26,000,000 (Twenty-Six Million Dollars), (the "Contract Price") plus any amount payable pursuant to any written Change Order, less a credit of (Seven Hundred Twenty-Eight Thousand Dollars) \$728,000, the aggregate amount of all payments made by the Company under that certain Letter of Authorization, dated December 11, 2007 ("LOA") between the Company and Provider through the date hereof (it being understood that as of such date, as set forth in Section 27, the LOA shall terminate and be superseded by this Agreement). Company shall be under no obligation to compensate Provider any additional amounts beyond the Contract Price unless there is a written Change Order that provides for additional compensation. The Contract Price shall be payable in installments as milestone payments as set forth in Exhibit B, but such milestone payments shall not be determinative between Provider and Company as to the compensation owed hereunder for the portion of the Work identified in such milestone or completed through the date such milestone is achieved.
- (b) After each milestone identified in Exhibit B is reached or an amount shall otherwise be due or shall be due under a Change Order, Provider shall submit an invoice ("Invoice") for the amount due it hereunder, referencing this Agreement, together with such detail as shall be reasonably required to establish Provider's right to payment (such as field verification that the applicable milestone has been reached, packing slips, shipping documentation, etc), all of which shall be sent to the following address:

Chevron Technology Ventures,
a division of Chevron U.S.A. Inc.
Attention: Sergio Hoyos
Address: 3901 Briarpark Drive
Houston, Texas 77042

The amount due hereunder will be paid by wire transfer within thirty (30) days of receipt of Invoice, except for the first milestone payment which shall be paid within ten (10) business days of the

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execution of this Agreement, as follows:

Routing Transit Number	[*]
Bank Name	Wells Fargo Bank, N.A.
Bank Address	420 Montgomery, San Francisco, CA 94104
Beneficiary	Brightsource Energy, Inc.
Beneficiary Account#	[*]

With written notice of such payment sent to:

BrightSource Construction Management, Inc.
 Attn: Jack Jenkins-Stark, CFO
 1999 Harrison Street, Suite 2150
 Oakland, CA 94612

If Company disputes an Invoice, payment of the portion of the Invoice disputed may be withheld until resolution of the dispute. Without waiver of its right to payment of the disputed amount, Provider may submit a new Invoice for the undisputed amount. If Provider either amends the Invoice so as to resolve the dispute or provides the required documentation, or submits an Invoice for the undisputed amount, the thirty (30) day time period for payment of any such disputed portion of the Invoice shall commence from the date of Company's receipt of the amended Invoice or of the additional required documentation. Any overpayments to Provider shall, unless otherwise corrected or adjusted, be repaid to Company.

- (c) Company may decline to pay Provider, in whole or in part, to such extent as may be necessary in Company's good faith opinion to protect Company from loss because of:
 - (i) third party claims or perfected liens filed; or
 - (ii) failure of Provider to make payments properly to its Subcontractors.
- (d) *Waivers and Releases.* As a prerequisite for the final payment to Provider, Provider shall provide, in the forms attached as Exhibit I, lien waivers as therein specified executed by Provider and by every Subcontractor, lower-tiered subcontractor and material supplier to Provider, a Subcontractor or a lower-tiered subcontractor furnishing labor or material for the Work who has filed a Preliminary Notice (also known as a pre-lien notice). Provider shall verify with Company that Company has received copies of all pre-lien notices

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that Provider receives. Company shall file a Notice of Completion following satisfactory completion of the Acceptance Test.

- (e) Provider agrees to provide, at the request of Company, evidence of payment of amounts due to its Subcontractors and vendors.
- (f) No payment to Provider will be authorized until Company receives a complete and accurate submittal package from Provider in accordance with this Section 2. No payment to Provider, other than the first milestone payment upon the execution hereof, will be authorized until Company has received a current Certificate of Insurance. Provider shall not be allowed to commence construction at the Site until Company has received the current Certificate of Insurance.
- (g) Company's inspection, its final payment, its acceptance of the Work, and Company's possession of the Project shall not operate as a waiver of any Warranty provisions herein. Provider's acceptance of final payment shall constitute a waiver of all claims of Provider except those previously made in writing and expressly identified as unsettled at the time of submission of Provider's final Invoice.
- (h) Any amount owed to Company or Provider hereunder and not paid when due shall accrue daily interest at the rate of two percent (2%) over the Prime Rate from the date due hereunder until paid; provided, however, that the first milestone payment due Provider shall not accrue interest until thirty (30) days past the date due hereunder. Any amount owing hereunder that remains unpaid for sixty (60) days past the due date shall accrue daily interest at the rate of four percent (4%) over the Prime Rate from the sixty-first day until paid.

3. Records.

- (a) *Records.* Provider shall maintain complete and accurate records in connection with the Work and all transactions related thereto and shall retain all such records for at least twenty-four months after the end of the calendar year in which the Project is completed. The Company may from time to time and at any time until twenty-four months after the end of the calendar year in which the Project is completed make an audit of all records of Provider in connection with all costs, if any, related to the Work which are reimbursable under this Agreement. Notwithstanding the above, if any records are or may be required to resolve any claim or dispute actually known by Provider to have arisen in relation to this Agreement, the period of retention shall continue until final disposition of such claim

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or dispute. Any amount by which the total payment by the Company to Provider exceeds the amount due Provider shall be returned to the Company within thirty (30) calendar days after the date of any final determination thereof. Items of compensation not determined on a reimbursement of cost basis, such as fixed percentages, fixed fees or milestone payments, or fixed lump sums shall not be subject to record keeping requirements under this subsection (a).

- (b) *Gifts.* No director, employee or agent of Provider or of any Subcontractor or vendor of Provider shall give or receive any commission, fee, rebate, or gift or entertainment of significant cost or value in connection with the Work, or enter into any business arrangement with any director, employee or agent of the Company or any Affiliate, other than as a representative of the Company or its Affiliate, without the Company's prior written agreement. Neither Provider nor its directors, employees, agents, subsidiaries and Affiliated entities or their directors, employees or agents shall make any payment or give anything of value to any official of any government or public international organization (including any officer or employee of any government department, agency or instrumentality) to influence his or its decision or to gain any other advantage for the Company or Provider in connection with the services performed hereunder. Provider shall promptly notify the Company of any violation of this subsection (b) and any consideration received as a result of such violation shall be paid over or credited to the Company. Any representatives authorized by the Company may audit any and all applicable records of Provider for the sole purpose of determining whether there has been compliance with this subsection (b).
- (c) *Subcontractor and Vendor Agreements.* Provider shall require all Subcontractors and vendors, in all agreements in connection with the Work, to agree to the inclusion therein of the provisions of Section 3(b) (other than the last two sentences thereof).
- (d) *Open Book and Make Right Reporting.* Following successful completion of the Startup Test, Provider shall provide to Company a final and accurate account of the total Project costs (including a breakdown of indirect cost categories identified on Exhibit B-1), broken down by subcontractor and equipment (with a lump sum for the Heliostats). Such cost data shall be updated as applicable following completion of the Acceptance Test. Provider shall submit Make Right and Warranty Remedy Expense Reports in accordance with the requirements of Exhibit H.

4. Intellectual Property; Indemnification.

- (a) *No Infringement.* Software, technology, and other materials, products and information used by Provider in connection with the Work (the “Provider Proprietary Properties”) do not and will not infringe upon or violate the intellectual property rights of any third party.
- (b) *General Indemnity by Provider.* Provider shall defend, indemnify and hold harmless the Company and any Affiliate of Company, and the members, partners, managers, directors, officers, agents, consultants, contractors, representatives and employees of any of them (the “Company Indemnitees”), from and against any and all loss, damage, injury, liability, and claims thereof for injury to or death of any person (including an employee of Provider or an Company Indemnatee) or for loss of or damage to property (including but not limited to tangible personal property), resulting from or in connection with Provider’s performance of the Work under this Agreement, including, but not limited to, (i) Provider’s negligent or willful acts, (ii) Provider’s use of motor vehicles or other equipment provided by the Company or others, (iii) any release of a Hazardous Substance by Provider or any enforcement or compliance proceeding commenced by or in the name of any Governmental Authority having jurisdiction over the Provider because of an alleged, threatened or actual violation of any Applicable Law by Provider; and (iv) any action reasonably necessary to abate, remediate or prevent a violation or threatened violation of any Applicable Law by Provider. Such indemnity shall apply whether or not an Company Indemnatee was or is claimed to be passively, concurrently, or actively negligent, and regardless of whether liability without fault is imposed or sought to be imposed on one or more of the Company Indemnites. The indemnity shall not apply to the extent that such indemnification is void or otherwise unenforceable under Applicable Law and shall not apply to the extent such loss, damage, injury, liability or claim is the result of the negligence or willful misconduct of any Company Indemnatee. Neither Provider nor the Company shall settle or compromise any litigation for which indemnification is provided without the consent of the other Party if such settlement or compromise obligates the other to make any payment or part with any property or assume any obligation or grant any license or other rights or be subject to any injunction by reason of such settlement or compromise. The Company’s right to indemnification by Provider under the foregoing shall be independent of the Company’s rights under the insurance provided under Section 5. The Company is authorized to withhold from any amount payable to Provider all amounts for which the Company may become liable to third parties due to Provider’s

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negligent or willful acts in performing or failing to perform its obligations under this Agreement. In the event that any claim is made by a third party, which is disputed by Provider, or any indebtedness exists which may be the basis for a lien claim (other than mechanics or vendor lien claims in the ordinary course of performance of the Work), the Company may withhold from any payment due to Provider an amount sufficient to cover such claim. If the Company withholds any amount due as permitted by the preceding two sentences, upon resolution of the potential liability or dispute, the Company shall promptly pay to Provider any amount withheld in excess of the liability of Provider with respect thereto with interest from the date such excess was withheld. The Company's failure to exercise this right to withhold shall not affect Provider's obligation to protect the Company as provided herein.

- (c) *Infringement Indemnity.* Provider shall defend, indemnify and hold harmless the Company Indemnitees from and against any and all loss, damage, injury, liability and claims thereof for any actual or alleged patent, copyright or trademark infringement, or trade secret misappropriation, or proprietary rights violations by Provider, its employees, representatives or agents, or resulting directly or indirectly from Provider's performance of the Work, including without limitation provision of material or designs by Provider or use of tools and other equipment by or for Provider in any connection therewith, and shall reimburse the Company fully for any royalties, damages, expenses, losses or other payments that the Company shall be obliged to pay in connection therewith. The Company shall have the right to be present and represented by counsel, at its own expense, at all times during litigation and/or other discussions relating to any such claims of patent, copyright or trademark infringement, trade secret misappropriation or proprietary rights violations. Neither Provider nor the Company shall settle or compromise any such litigation without the consent of the other if such settlement or compromise obligates the other to make any payment or part with any property or assume any obligation or grant any license or other rights or be subject to any injunction by reason of such settlement or compromise. The Company's right to indemnification by Provider under the foregoing shall be independent of the Company's rights under the insurance provided under Section 5. If any Provider Proprietary Properties infringe upon or violate the intellectual property rights of any third party, Provider shall have the right after notice to the Company to substitute non-infringing items so long as the substituted items provide the same functionality and efficacy as the infringing items in all material respects and such substitution does not result in any modification of any warranty, indemnity, or other obligations of Provider hereunder.

- (d) *Additional Indemnification.* Provider shall at all times during the performance of the Work (i) comply in all material respects with all Applicable Laws, statutes and ordinances and all applicable rules, regulations and orders of any Governmental Authority having jurisdiction over the Provider with respect to the Work; and (ii) subject to Section 20(f), obtain all licenses, permits, certificates, approvals, bonds and notices required in connection with its performance under this Agreement. Provider shall defend, indemnify and hold harmless Company Indemnitees against all damages, claims (including Tax claims), fines, or penalties of whatever nature (including any fees and expenses incurred in defense thereof) as a result of Provider's failure to comply with this subsection (d).
- (e) *General Indemnity by Company.* Company shall defend, indemnify and hold harmless Provider and any Affiliate of Provider, and the members, partners, managers, directors, officers, agents, consultants, contractors, representatives and employees of any of them (the "Provider Indemnitees"), from and against any and all loss, damage, injury, liability, and claims thereof for injury to or death of any person (including an employee of Company or a Provider Indemnitee) or for loss of or damage to property (including but not limited to tangible personal property), resulting from or in connection with Company's obligations under this Agreement, including, but not limited to, (i) Company's negligent or willful acts, (ii) Company's use of motor vehicles or other equipment provided by Company or others, (iii) any release of a Hazardous Substance by Company, prior to or after the date hereof, or any enforcement or compliance proceeding commenced by or in the name of any Governmental Authority having jurisdiction over Company because of an alleged, threatened or actual violation of any Applicable Law by Company, (iv) any action reasonably necessary to abate, remediate or prevent a violation or threatened violation of any Applicable Law by Company, and (v) any pre-existing Hazardous Substance condition at, in, under, or upon the Site, whether or not caused by Company. Such indemnity shall apply whether or not a Provider Indemnitee was or is claimed to be passively, concurrently, or actively negligent, and regardless of whether liability without fault is imposed or sought to be imposed on one or more of the Provider Indemnitees. The indemnity shall not apply to the extent that such indemnification is void or otherwise unenforceable under Applicable Law and shall not apply to the extent such loss, damage, injury, liability or claim is the result of the negligence or willful misconduct of any Provider Indemnitee. Neither Provider nor Company shall settle or compromise any litigation for which indemnification is provided without the consent of the other Party if such settlement or compromise obligates the

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other to make any payment or part with any property or assume any obligation or grant any license or other rights or be subject to any injunction by reason of such settlement or compromise.

(f) *Procedures.* All claims for indemnification under this Agreement shall be asserted and resolved as follows:

- (i) A Party claiming indemnification under this Agreement (an “Indemnified Party”) shall with reasonable promptness (A) notify the Party from whom indemnification is sought (the “Indemnifying Party”) of any third-Party claim or claims (“Third Party Claim”) for which indemnification is sought and (B) transmit to the Indemnifying Party a written notice (“Claim Notice”) describing in reasonable detail the nature of the Third Party Claim, a copy of all papers served with respect to such claim (if any), an estimate of the amount of damages attributable to the Third Party Claim to the extent feasible (which estimate shall not be conclusive of the final amount of such claim) and the basis of the Indemnified Party’s request for indemnification under this Agreement; provided, however, that no delay on the part of the Indemnified Party in providing the Claim Notice shall relieve the Indemnifying Party from its obligations hereunder unless (and then only to the extent) the Indemnifying Party is damaged by such delay.

Within thirty (30) days after receipt of any Claim Notice (the “Election Period”), the Indemnifying Party shall notify the Indemnified Party (X) whether the Indemnifying Party disputes its potential liability to the Indemnified Party with respect to such Third Party Claim and (Y) whether the Indemnifying Party desires, at the sole cost and expense of the Indemnifying Party, to defend against such Third Party Claim, whether or not it disputes its potential liability to the Indemnified Party with respect to such Third Party Claim.

- (ii) If the Indemnifying Party notifies the Indemnified Party within the Election Period that the Indemnifying Party elects to assume the defense of the Third Party Claim, then the Indemnifying Party shall have the right to defend, at its sole cost and expense, with counsel reasonably satisfactory to the Indemnified Party, such Third Party Claim by all appropriate proceedings, which proceedings shall be prosecuted diligently by the Indemnifying Party in accordance with this subsection (ii), unless and until the Indemnifying Party notifies the Indemnified Party that it chooses to cease such defense. The Indemnifying Party

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shall have full control of such defense and proceedings, including any compromise or settlement thereof, subject to the restrictions contained herein. The Indemnified Party is hereby authorized, at the sole cost and expense of the Indemnifying Party (but only if the Indemnified Party is entitled to indemnification hereunder), to file, during the Election Period, any motion, answer or other pleadings that the Indemnified Party shall reasonably deem necessary or appropriate to protect its interests or those of the Indemnifying Party and not materially prejudicial to the Indemnifying Party. If requested by the Indemnifying Party, the Indemnified Party agrees, at the sole cost and expense of the Indemnifying Party, to cooperate with the Indemnifying Party and its counsel in contesting any Third Party Claim that the Indemnifying Party elects to contest. Except as otherwise provided herein, the Indemnified Party may participate in, but not control, any defense or settlement of any Third Party Claim controlled by the Indemnifying Party pursuant to this subsection (ii) and shall bear its own costs and expenses with respect to such participation, provided that if the parties to any suit or proceeding shall include the Indemnifying Party as well as the Indemnified Party and the Indemnified Party shall have been advised by counsel that one or more legal defenses may be available to it that may not be available to the Indemnifying Party, then the Indemnifying Party shall be obligated to bear the reasonable fees and expenses of counsel of the Indemnified Party, which shall be selected by the Indemnified Party in its complete and sole discretion. Notwithstanding the foregoing, the Indemnified Party may, at any time and in its sole discretion, release the Indemnifying Party from its obligations hereunder with respect to a Third Party Claim and thereafter assume control of the defense or settlement thereof at its sole cost and expense.

- (iii) If the Indemnifying Party fails to notify the Indemnified Party within the Election Period that the Indemnifying Party elects to defend the Indemnified Party pursuant to subsection (ii) above, or if the Indemnifying Party provides notice pursuant to subsection (ii) above that it will cease the defense of the Indemnified Party or elects to defend the Indemnified Party but fails diligently and promptly to prosecute or settle the Third Party Claim, then the Indemnified Party shall have the right to defend, at the sole cost and expense of the Indemnifying Party (but only if the Indemnified Party is entitled to indemnification hereunder), the Third Party Claim by all appropriate proceedings, which proceedings shall be

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promptly and vigorously prosecuted by the Indemnified Party to a final conclusion or settled. The Indemnified Party shall have full control of such defense and proceedings with respect to the liability of the Indemnified Party but not the Indemnifying Party.

- (iv) Notwithstanding the foregoing, if the Indemnifying Party has delivered a written notice to the Indemnified Party to the effect that the Indemnifying Party disputes its potential liability to the Indemnified Party hereunder and if such dispute is resolved in favor of the Indemnifying Party, the Indemnifying Party shall not be required to bear the costs and expenses of the Indemnified Party's defense pursuant to subsection (ii) or (iii) above or of the Indemnified Party's participation therein at the Indemnifying Party's request, and the Indemnified Party shall reimburse the Indemnifying Party in full for all costs and expenses of such litigation.
- (v) The Indemnifying Party may participate in, but not control, any defense or settlement controlled by the Indemnified Party pursuant to subsection (iii) above, and the Indemnifying Party shall bear its own costs and expenses with respect to such participation.
- (vi) In the event any Indemnified Party should have a claim against any Indemnifying Party hereunder that does not involve a Third Party Claim, the Indemnified Party shall transmit to the Indemnifying Party a written notice (the "Indemnity Notice") describing in reasonable detail the nature of the claim, a reasonable estimate of the amount of damages attributable to such claim to the extent feasible (which estimate shall not be conclusive of the final amount of such claim) and the basis of the Indemnified Party's request for indemnification under this Agreement. If the Indemnifying Party does not notify the Indemnified Party within thirty (30) days from its receipt of the Indemnity Notice that the Indemnifying Party disputes such claim, the claim specified by the Indemnified Party in the Indemnity Notice shall be deemed a liability of the Indemnifying Party hereunder. If the Indemnifying Party has timely disputed such claim, as provided above, such dispute shall be resolved pursuant to Section 21.

5. Insurance.

- (a) It is understood and agreed by the Parties that neither the minimum policy limits of insurance required in connection with the Work

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under this Section 5 nor the actual amounts of insurance maintained under any insurance program in any way limit or reduce Provider's liability and indemnity obligations under this Agreement.

- (b) Provider shall maintain or cause to be maintained the following insurance and all such other insurance as required by the applicable law:
 - (i) Worker's Compensation and Employer's Liability Insurance as prescribed by applicable laws of the country in which the Work will be performed and the states and/or countries of residence of expatriate employees, including coverage under the Longshoremen's and Harbor Worker's Act, the Jones Act, Death on the High Seas Act and the Outer Continental Shelf Lands Act, if applicable.
 - (ii) Comprehensive or Commercial General Liability (Bodily Injury and Property Damage) Insurance, including the following supplemental or monoline coverages: Contractual Liability to cover the liabilities assumed in this Agreement, Products and Completed Operations, coverage for explosion and collapse (limit of [*]), Sudden and Accidental Pollution (limit of [*]) and a cross-liability endorsement or severability of interest clause. The policy territory coverage shall include the area in which the Work is to be performed. The policy limits must be not be less than [*] U.S. Dollars (US [*]) combined single limit per occurrence.
 - (iii) Automobile Bodily Injury and Property Damage Liability Insurance extending to all vehicles provided by Contractor in the performance of the Work. The policy limits for such insurance must be higher of the amount required by applicable law and [*] U.S. Dollars (US[*]) or its currency equivalent combined single limit per occurrence.
- (c) Policy Endorsements.
 - (i) Provider shall, or shall cause the insurers to, provide Company with thirty (30) days' written notice (ten (10) days for nonpayment of premium therefor) prior to the cancellation or making of a material change of the insurance required by subsection (b) above.
 - (ii) The insurance specified in subsection (b)(i) above shall contain waivers of subrogation rights in favor of the Company Indemnitees.

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- (iii) The insurance specified in subsections (b)(ii) and (b)(iii) above shall:
 - (A) name the Company as an additional insured to the extent of the liabilities assumed by Provider under this Agreement. The coverage provided to the Company as additional insured must expressly include liability imposed or sought to be imposed upon the Company to the extent that Provider has assumed such liabilities under the Agreement;
 - (B) provide that the insurance is primary coverage with respect to all insureds, including additional insureds, and shall not be considered contributory insurance with any insurance policies of any insureds, including additional insureds ; and
 - (C) provide a cross-liability or severability of interest clause that has the effect of ensuring that each insured (including additional insureds) is covered as a separate insured.
- (d) Builders Risk Insurance. Provider shall also maintain in full force and effect Builders Risk Insurance which shall include coverage for damage to the Work during the construction, testing and commissioning phases and continue until the successful completion of the Startup Test. The policy shall cover all risks (excluding earthquake and flood at the discretion of Provider) of physical loss or damage in an amount not less than the full replacement cost value of the equipment at final completion with terms and conditions as broad as available in the insurance marketplace. The policy shall contain a waiver of subrogation in favor of the Company and all Company contractors and subcontractors. The policy shall be primary coverage for damage to the Work and shall not be considered contributory with any insurance policies maintained by the Company or any of the Company's contractors or subcontractors. The Builders Risk Insurance policy proceeds shall be used first, to the extent necessary, for Provider to fulfill its obligations hereunder for the repair and replacement of lost or damaged portions of the Work. For the avoidance of doubt, nothing contained in this Section 5(d) diminishes Provider's obligation to complete the Project in accordance with and subject to the terms of this Agreement.
- (e) *Evidence of Insurance*. Before commencing the Work, Provider shall provide Company with certificates or other documentary evidence satisfactory to Company of the insurance and

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endorsements set forth in subsections (b), (c) and (d) above. Acceptance of any such certificate by Company shall not constitute a waiver, release or modification of any of the insurance coverages and endorsements required under this Section 5. Upon request of Company, Provider shall provide copies of insurance policies required pursuant to this Agreement.

- (f) *Deductibles or Self-Insured Retentions.* Provider is solely responsible for payment of all deductibles or self-insured retentions that are applicable to any claims made against the Company covered by insurance policies required to be maintained or caused to be maintained by Provider under this Section 5. The level of these deductibles or retentions must be reasonable and compatible with that expected of a prudent contractor in similar circumstances.
- (g) *Waiver of Subrogation for Physical Damage Insurance.* Provider shall obtain a written waiver of subrogation in favor of the Company from insurers who provide physical damage insurance with respect to any property used in the performance of the Work to the extent Provider has assumed liability for its property under this Agreement.
- (h) *Insurance Required from Subcontractors.* Without in any way limiting Provider's liability pursuant to Section 5, Provider shall cause its Subcontractors, subject to appropriate adjustments given the nature, location, and extent of the activities of said Subcontractors, to obtain the insurance coverage and endorsements set forth in subsections (b)(i) and (iii) and (c)(i) and (ii) above, but with the Company named as an additional insured thereon.
- (i) *Repair or Replacement by Company.* Upon successful completion of the Startup Test, risk of loss shall transfer to Company as set forth in Section 6. Thereafter, Company shall be responsible for physical damage or loss to the Work (subject to any rights of Company to indemnification pursuant to Section 4 hereof). From and after such time until completion of the Annual Production Test or termination hereof under Section 23(g), if any such physical damage or loss occurs, Company shall repair or replace such damage or loss to the condition prior to such damage or loss at its expense in order for Provider to be able to fulfill its obligations under Exhibit F to pass the Acceptance Test and Annual Production Test; provided, however, that Company at its election may waive the requirement for Provider to pass the Acceptance Test and Annual Production Test, as the case may be, and upon payment to Provider of the full amount of any unpaid Contract Price, plus any amount payable pursuant to any written Change

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Orders, the obligation to repair and replace hereunder shall terminate. If any repair or replacement is necessary due to such physical damage or loss, Provider shall assist in such activities as requested by Company, including selling Heliostats and components thereof to the Company at the prices set forth in Exhibit B-1. Such activities shall be documented as a Change Order hereunder and shall be the basis for an adjustment as necessary for the completion date of the Acceptance Test or Annual Performance Test, as the case may be.

6. **No Liens; Transfer of Title.** Provider shall promptly pay its Subcontractors and suppliers the amounts to which they are entitled. Provider shall not include in its contracts with Subcontractors and suppliers provisions that allow Provider to withhold payments to its Subcontractors and suppliers until Provider receives payment from Company. Provider shall promptly discharge or bond or otherwise secure against all perfected liens, claims, security interests, encumbrances and attachments which are filed against the Company or its interests in connection with the Project and Provider shall indemnify and save the Company and the Company Indemnitees harmless from and against any and all loss, damage, injury, liability and claims thereof resulting from such liens, encumbrances and attachments and any mechanics liens or stop notices. Care, custody, control, risk of loss, and legal title to the Project shall transfer to Company upon successful completion of the Startup Test.
7. **Confidentiality.**
- (a) *Confidential Information.* During the performance of the Work hereunder, it will be necessary for each Party to make its or its Affiliates' confidential technical, business or other information ("Confidential Information") available to the other Party. Each Party agrees to use all such Confidential Information provided by the other Party solely for the performance of this Agreement, including the design, construction, operation and maintenance of the Project, and to hold all such Confidential Information in confidence and not to copy or disclose any such Information to any third party without the prior written consent of the other Party. The Company hereby consents to limited disclosure of its Confidential Information to Subcontractors, vendors, consultants, accountants and attorneys, and other agents, advisors and representatives of Provider to the extent necessary for such parties to perform their work in connection with the Work so long as such parties agree to the provisions of this subsection concerning Confidential Information as required by Section 8(b). Provider hereby consents to limited disclosure of its Confidential Information to subcontractors, consultants, accountants and attorneys, and other agents, advisors and representatives of the Company to the extent necessary for

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such parties to perform their work in connection with the Project so long as such parties are bound to the Company by confidentiality obligations as required by Section 8(c). Provider and Company each are responsible for the breach of this Section 7 by any of its own subcontractors, vendors, consultants, accountants and attorneys, and other agents, advisors and representatives. All Confidential Information shall be promptly returned to the disclosing Party or, at such Party's option, destroyed, upon any expiration or termination of this Agreement, except that the Company may retain copies of the Confidential Information of Provider to the extent necessary in connection with the ownership, operation, maintenance, repair, and replacement of the Project and Provider may retain copies of the Confidential Information of the Company to the extent necessary to fulfill its obligations hereunder and to document the performance of the Work.

- (b) *Public Statements.* Each Party and BSE, shall not (i) use the names or marks of the other Party and its Affiliates in any advertisements, marketing materials, product endorsements, press releases or any other publications, documentations or announcements, including announcements about this Agreement or the activities contemplated hereunder, or (ii) photograph or video tape at the Company's premises or at the Project, in each case without such other Party's prior written approval (except that this limitation shall not apply to the Company with respect to the Company's premises excluding the Project and except that this limitation shall not apply to either Party with respect to the Project so long as such photographs or video tapes are themselves considered Confidential Information and subject to the terms of subsection (a)). Provider and BSE shall not publish or publicly release any information, announcement or press release about the Project without Company's prior written consent. Company may publish or release any information, announcement or press release about the Project without using the names or marks of Provider or BSE in its sole discretion.
- (c) Except as expressly permitted herein, neither Party shall disclose to any third party any Confidential Information about the Project, including the Work and the terms and conditions of this Agreement, without the prior written consent of the other Party. The term "Confidential Information" with respect to a Party shall not include, and obligations of confidentiality herein shall not apply to, information that: (i) the other Party had in its possession at the time of disclosure to such Party hereunder; (ii) the other Party obtains from a third party who is not under an obligation of confidentiality to the disclosing Party with respect to such Confidential Information; (iii) is or becomes part of the public domain through no act or

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omission of other Party in violation hereof; or (iv) is independently developed by the other Party. If a Party is required by law, regulation, including rule of stock exchange, or a court or entity with competent jurisdiction to disclose Confidential Information of the other Party, such Party shall, prior to any disclosure, promptly notify the other Party in writing of such required disclosure, including the terms and circumstances thereof. An appropriate protective order may be sought by the other Party and such Party shall cooperate with the other Party in seeking such protective order. In the absence of such an order or upon the receipt of a waiver by the other Party with respect to compliance with the provisions hereof for purposes of the required disclosure, a Party shall disclose only that portion of Confidential Information that it is advised by its counsel is legally required, it shall give the other Party written notice of what will be disclosed as far in advance as possible, and it shall take all reasonable and lawful actions to obtain confidential treatment for such disclosure.

8. Intellectual Property.

- (a) The Parties agree that:
 - (i) All inventions, improvements and discoveries, including all computer software, works, material and data whether or not protectable by patent, trade secret or copyright (collectively “IP”) created prior to December 11, 2007, as well as any IP conceived outside the Work at any time after December 11, 2007 (“Background IP”) shall be owned by the Party whose employees, consultants and Affiliates invented or created such IP; provided, that in the case of Provider, such Background IP will be owned by BSII.
 - (ii) Except as provided in subsections (i), (iii), (iv) and (v) of this Section 8 (a), all IP that Provider embodies and/or uses in its design for the Demo Plant including IP that either Party and its respective Affiliates, employees, and consultants develop in the course of performing the Work that is an improvement to or derivative of BSII’s Background IP (collectively “Provider IP”) shall be the sole and exclusive property of BSII.
 - (iii) All IP created in connection with the Work by either Party and its respective Affiliates, employees, and consultants that is embodied in the Heat Exchanger System for the Demo Plant (collectively, “Joint IP”) shall be assigned jointly to BSII and to the Company. Both BSII and the Company shall have all rights as joint owners under the laws of any country

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in which the Joint IP is exploited or patented. Each Party will promptly disclose to the other such Joint IP and will cooperate fully in acquiring any patent protection; BSII shall also cooperate to the extent applicable. In the event either BSII or the Company want to obtain patent protection in a country and the other does not want to join in paying for patent protection in such country, BSII or the Company, as the case may be, has the option to obtain a patent in that country, but the patent in that country will still be jointly owned.

- (iv) Without derogating from Provider's and BSII's general IP rights hereunder in respect to Background IP, Provider IP, patents and Joint IP, and subject to the Company's payment to Provider of all payments due to Provider hereunder, all data, designs, documentation, plans, and specifications created by either Party specifically for the Demo Plant (collectively, "Documentation") shall be the sole and exclusive property of the Company; provided however that the Company agrees not to use any such Provider created Documentation except for use in the construction, operation, maintenance, repair and replacement (which shall include repair and replacement of equipment, materials, components and parts) of the Demo Plant, or an expansion of the Demo Plant by less than 15% capacity, without Provider's prior permission, which shall not be unreasonably withheld, it being understood that Provider shall have no obligation to authorize such use for the construction of a greater than fifteen percent (15%) capacity expanded Solar-to-Steam Facility unless Provider is unable or unwilling to assist Company in such an expansion on reasonable and mutually agreeable terms; and further provided that Provider and its Affiliates may use such Provider created Documentation in connection with their business, but without disclosure of any Confidential Information of the Company. Notwithstanding the foregoing provision 8(a)(iv), Company shall not interconnect with, modify or add to the existing Project control system or software without Provider's prior written consent unless Company is entitled to access the escrowed source code pursuant to Section 11.
- (v) In the event the Demo Plant does not operate to the specifications set forth in Exhibit A-1 upon completion, and Provider is either unable or unwilling to modify the Demo Plant to meet said specifications, then any IP that the Company (or its subcontractors or consultants) develops to

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modify the Demo Plant to meet said specifications shall be the sole and exclusive property of the Company.

- (vi) All Provider IP, Background IP, Joint IP and Documentation shall constitute “Confidential Information” pursuant to this Agreement.
 - (b) *Provider Employees and Subcontractors.* Provider represents and warrants that each of its employees or Subcontractors who are involved in performance of the Work and/or who have access to Confidential Information of the Company shall be obligated to Provider in a manner consistent with Provider’s obligations under Section 7 and under this Section 8.
 - (c) *Company Employees and Subcontractors.* Company represents and warrants that each of its employees or subcontractors who are involved in Provider’s performance of the Work and/or who have access to Confidential Information of Provider shall be obligated to the Company in a manner consistent with Company’s obligations under Section 7 and under this Section 8.
 - (d) *Review of Deliverables.* The Company shall have the right to review, as set forth in Exhibit H, the progress of any Deliverables.
9. **Assignments.** Provider acknowledges that Company is relying upon the unique expertise and capability of Provider. Except as set forth specifically below in this Section 9, none of this Agreement, the Work or money due Provider hereunder shall be assigned or transferred in whole or in part by Provider, voluntarily or by operation of law, except with the prior written consent of the Company, and any attempt to do so without such written consent shall be void. Provider must demonstrate that any proposed assignee has both the financial capacity and the technical ability to perform the obligations required under this Agreement at a level deemed appropriate by Company. This provision shall not limit Provider’s right to subcontract all or any portion of the Work so long as Provider remains fully responsible for the Work hereunder. The Company and Provider shall have the right to assign this Agreement and any Work hereunder to any Affiliate or third party who acquires all or substantially all of the assets or equity of such Party, whether by sale, merger, consolidation or otherwise in such Party’s sole discretion. For the avoidance of doubt, any such permitted assignee shall be bound by all of the terms of this Agreement, including Sections 14(b) and 17(b), and such assignee and any of its Affiliates shall be further bound by Sections 14(b) and 17(b) as if they were a third party thereunder. This Agreement shall inure to the benefit of and be binding upon the Parties and their permitted assigns and successors. Any consent requested pursuant to this Section shall not be unreasonably withheld.

*Confidential**Execution Copy***10. Taxes.**

- (a) *Income and Other Similar Taxes.* Provider shall pay all taxes imposed upon or measured by net income on any revenue derived from this Agreement. Additionally, Provider shall pay employment taxes, business licenses, permits and any other taxes based on similar requirements.
- (b) *Sales and Other Similar Taxes.* For purpose of this Agreement, sales and other similar taxes includes, but is not limited to, sales, use, gross receipts, occupational privilege, excises and value added taxes (collectively, “Tax” or “Taxes”). Company shall pay all Taxes imposed on tangible personal property transferred to the Company hereunder (whether payable by Provider or any Subcontractor or vendor to Provider) in compliance with the applicable tax statutes. The Parties to this Agreement agree to cooperate to minimize the application of Taxes that Company will pay directly or indirectly to any tax authority or reimburse to Provider as part of specified incurred expenses. Cooperation includes, but is not limited to bundling and unbundling of services and goods as part of any invoice or statement by Provider to produce the lowest net Tax cost to Company in accordance with Applicable Law. Provider hereby agrees, on behalf of itself and its Subcontractors, to modify its invoicing and reimbursement procedures, processes and presentation to accomplish this result, including separating out software development from software maintenance and to separate any tangible personal property from any service on any invoice. Provider shall also separately invoice for the reproduction costs and delivery of any hardcopy manuals to the Company for use by its employees. Company shall, except as provided in subsections (c), (d) and (e) below, pay or reimburse Provider for any present or future Taxes, excluding such Taxes on any property to which Provider retains title, relating to the Work, and any third party software, equipment or services specifically acquired by Provider with the express written consent of the Company to meet its obligations under this Agreement to which the Company retains title. The Company shall not, under any circumstances, be responsible to pay or reimburse Provider for any assessment of interest and penalties for any Taxes covered by this subsection (b) unless due to the Company’s failure to timely pay any such Taxes when due.
- (c) *Requests for Payment.* The Parties agree to reasonably and cooperatively address the treatment and consequences of mandatory withholding of taxes from any Company payment, or payment by any Affiliate, to Provider at such time withholding of taxes is required, commences or is recognized.

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- (d) *Cooperation to Minimize Taxes.* Provider and the Company mutually agree to cooperatively work to minimize any and all Taxes described in subsection (b) for which Provider will request payment or reimbursement as well as those Tax obligations the Company may incur in connection with this Agreement. This cooperation includes, but is not limited to, location of staff, method of delivery and installation of Provider and third party canned or custom software and user manuals, location of computer hardware and characterization of work product and intellectual property, invoicing structure and appearance or any other reasonable and lawful act.
- (e) *Tax Protest Rights.* Provider hereby expressly permits the Company to protest and appeal through administrative or legal processes any assessment of Tax for which Provider may seek reimbursement from the Company. Provider agrees that, if legally required or strategically advantageous to do so at the discretion of the Company, Provider will, at the Company's expense, using either the Company's own employees or the Company's selected external advisors or counsel, protest either through administrative or legal process any such assessment. Provider further agrees to notify the Company as soon as practical by the most expeditious means, but in no event less than the period of time necessary to prepare and file a protest, of any assessment for Taxes for which Provider will seek payment or reimbursement. In the event Provider, at its sole discretion, does not want to protest or challenge the assessment of any Tax for which it could otherwise seek payment or reimbursement from the Company, it may pay the assessment and reimburse the Company for all increased costs associated with said assessment.
- (f) *Document Retention.* Provider and the Company agree to produce and retain such records as are necessary to document the payment of any Tax covered by this Agreement and agree to cooperate and retain such records for a period equal to the longest statute of limitations of the taxing jurisdiction for which Taxes have been collected, including any periods held open by a waiver of the statute of limitations.
- (g) *Survival of Tax Provision.* Notwithstanding any other provision of this Agreement, the obligations under this Section 10 shall survive the term of the Agreement by a period not longer than the longest statute of limitations, including any waivers therefore, barring an assessment or collection action by the applicable taxing authority.
- (h) *Tax Withholding.* In the event that Company or any of Company's Affiliates are required by any taxing authority to withhold tax from any payment to Provider, Company shall make such withholding

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from payments and provide the Provider a receipt from the taxing authority for the withheld taxes. Company will timely provide notice to Provider of any withholding tax withheld from any payment.

11. **License.** BrightSource represents that BSII does and will own and have the right to license the Background IP owned by BSII and Provider IP. BSII hereby grants to the Company and its Affiliates an irrevocable, perpetual, transferable, assignable, non-exclusive, royalty free license, with right to modify and have modified, copy, and use, the Background IP owned by BSII and Provider IP solely in connection with and only to the extent necessary for the operation, maintenance, repair, improvement, replacement (which shall include repair and replacement of equipment, materials, components and parts), restoration and expansion (expansion only in connection with the Company's exercise of its rights under Section 8(a)(iii) hereof) of the Project (such portion, the "Project IP", and said license, the "License"), which License includes the right to use the Project IP for training Company's employees and subcontractors in connection therewith. BSII agrees to place source code necessary to utilize the Project IP for the purposes of the License in escrow pursuant to a mutually satisfactory escrow agreement, (which source code, if accessed, shall be included within and subject to all of the limitations of the License). Access to such escrowed materials shall be governed by the terms of said escrow agreement, which shall provide for access (1) in the event of the institution by or against Provider of insolvency, receivership, or bankruptcy proceedings (which proceedings shall not be dismissed within sixty (60) days), (2) upon any assignment for the benefit of Provider's creditors, (3) upon Provider's dissolution or ceasing to do business, (4) upon termination of this Agreement by the Company for cause in accordance with Section 23(b) (but only if Company intends to and does in fact complete the Project as provided under Section 23(i)(ii)(A) hereof), or (5) upon termination of this Agreement for failure to pass the Acceptance Test in accordance with Section 23(g) hereof (but only if Company intends to and does in fact complete the Project as provided under Section 23(i)(iii) hereof).
12. **Acceptance and Performance Tests.** Acceptance and performance tests with respect to the Demo Plant shall be as set forth in Exhibit F.
13. **O&M Agreement.** Provider or its Affiliate shall provide operating and maintenance services for the Demo Plant as set forth in Exhibit A-4, the Operating and Maintenance Agreement ("O&M Agreement"). Provider acknowledges and agrees that no act or omission (including negligence and willful misconduct) of Provider or its Affiliate in performing the services pursuant to the O&M Agreement shall in any way impair any rights or claims of Company under any Warranty provided hereunder. In the event that the O&M Agreement is terminated by Company for cause prior to the successful completion of the Acceptance Test, Provider agrees to perform

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the operating and maintenance services under the same terms contained in the O&M Agreement. In the event that the O&M Agreement is terminated by Company for cause following successful completion of the Acceptance Test, Company may perform the operating and maintenance services (or hire a third party to perform on its behalf). So long as Company performs such services to the standards required by the O&M Agreement, the Warranties provided hereunder shall remain in effect for the periods set forth herein.

14. Commercial-Scale Facility.

- (a) For purposes of this Agreement, “Solar-To-Steam Facility” shall mean any plant or device that converts solar energy into thermal energy, including but not limited to steam or preheated water but excluding electricity and steam to produce electricity; “Enhanced Oil Recovery” shall mean any method or process employed to improve the extraction or recovery of crude oil or natural gas; and “Commercial-Scale Facility” shall mean any Solar-To-Steam Facility for Enhanced Oil Recovery larger than the Demo Plant (approximately [*] pounds of steam per year at the Design Criteria set forth in Exhibit A-1). Provider and BSE agree that for each of them and their respective Affiliates, if an agreement therefor is reached between Provider or any of its Affiliates and Company or any of its Affiliates (Company, collectively with its Affiliates, “Chevron”), Provider or its Affiliates, as the case may be, will (i) deliver to Chevron all major equipment and materials for the first Commercial-Scale Facility developed and constructed by Provider or its Affiliates, as the case may be, for Chevron (the “First Commercial-Scale Facility”) as soon as practicable, but in no event later than twenty (20) months after execution of such agreement and (ii) promptly commence providing any services desired by Chevron in connection with the First Commercial-Scale Facility after execution of an agreement between the Parties for such services as provided therein; in each case so long as the applicable agreement is executed within five (5) years after successful completion of the Acceptance Test (in accordance with Exhibit F), or if such Test is not passed, within six (6) years after the Demo Plant has passed the Startup Test. If Provider or its Affiliates, as the case may be, does not meet the prescribed timeframes, Provider or its Affiliates, as the case may be, shall discount the total cost of the First Commercial-Scale Facility in accordance with Exhibit C; provided, however that in the case of any delays in the delivery of items or equipment that are part of the Balance of Plant (as defined in Exhibit J) caused by events and circumstances outside of the direct control of Provider or its Affiliates, as the case may be, the parties shall negotiate a reasonable adjustment to the delay discount set forth in said Exhibit C.

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- (b) Provider and BSE agree that, for each Commercial-Scale Facility developed and constructed by Provider or any of its Affiliates for itself, any of its Affiliates, or for a third party, Provider will pay to the Company an amount equal to [*] for such Commercial-Scale Facility (the "Royalty"), provided that (i) such facility is intended for an Enhanced Oil Recovery application, (ii) the order for such Facility is placed by such third party and received by Provider on or before December 31, 2018, (iii) the aggregate amounts of Royalty paid to the Company shall not exceed [*] if Chevron does not order a Commercial-Scale Facility from Provider or any of its Affiliates, (iv) the aggregate amounts of Royalty paid to the Company shall not exceed [*] if Chevron does order a Commercial-Scale Facility from Provider or its Affiliates, and (v) if Chevron has not ordered a Commercial-Scale Facility from Provider or its Affiliates prior to the time the aggregate amounts of Royalty exceed [*] for any and all third party sales made by Provider or its Affiliates, then such Royalty amounts in excess of [*] will be accrued and become payable to Chevron only if and when it orders a Commercial-Scale Facility on or before December 31, 2018.
 - (c) Notwithstanding the foregoing, the obligations in Sections 14(a) and (b) above shall not apply to any Commercial-Scale Facility developed and constructed by an Affiliate of BSE if (i) such Affiliate is both an entity and a shareholder of BSE and (ii) such Commercial-Scale Facility does not utilize any Background IP owned by BSII, Provider IP, Joint IP, or derivations thereof; Documentation; or Confidential Information of the Company or its Affiliates.
- 15. Liability.** Each Party shall be solely responsible and liable for all losses, damages and other liabilities arising out of the actions or omissions of such Party or its employees, Affiliates, agents, representatives, contractors, vendors and Subcontractors in connection with this Agreement. Except for Third Party Claims and breaches of confidentiality, in no event will either Party be liable to the other for any special, indirect or consequential damages. Notwithstanding the foregoing, the liability of Provider herein shall be limited as follows:
- (a) *Limitations on Warranty Remedies and Make Right Obligations.* Upon satisfactory completion of the Startup Test (as set forth in Exhibit F), the liability and obligation of Provider thereafter pursuant to Sections 1(b)(ii), 1(b)(v), 1(b)(vi) and 1(b)(viii) to remedy any failure referred therein, and the obligation of Provider to make repairs, alterations, and additions so the Project passes the Acceptance Test (as set forth in Exhibit F) shall be limited by the aggregate liability of Provider set forth below.

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- (b) *Limitations on Buy Down for Failure to Satisfy the Acceptance Test.* The obligation of Provider to forfeit a portion of the Contract Price if the Project fails to satisfy the Acceptance Test as set forth in Section 23(g) shall be limited to an aggregate amount equal to [*] of the Contract Price.
- (c) *Limitations on Make Right for Failure to Satisfy the Annual Production Guarantee.* The obligation of Provider to make repairs, alterations, and additions so the Project satisfies the Annual Production Guarantee (as set forth in Exhibit F) shall be limited by the aggregate liability of Provider set forth below.
- (d) *Limitations on Buy Down for Failure to Satisfy the Annual Production Guarantee.* The obligation of Provider to refund a portion of the Contract Price if the Project fails to satisfy the Annual Production Guarantee shall be limited to the Liquidated Damages calculated in accordance with Exhibit F.
- (e) *Aggregate Limitations.* The aggregate and collective liability of Provider described in subsections (a) through (d) above and Section 4 (but excluding Third Party Claims and breaches of confidentiality from this aggregate sublimit) shall not exceed an aggregate amount equal to [*] of the Contract Price (including the buy down for failure to satisfy the Acceptance Test) prior to satisfaction of the Acceptance Test, and [*] of the Contract Price (including Liquidated Damages and inclusive of all such amounts expended prior to satisfaction of the Acceptance Test) following satisfaction of the Acceptance Test. In the event that Provider's aggregate expenditures pursuant to this Section 15 reach [*] of the Contract Price, Provider shall give Company written notice of same. If such event occurs prior to satisfaction of the Acceptance Test, Company shall promptly notify Provider whether or not it wants Provider to continue to make expenditures in its attempt to satisfy the Acceptance Test. If Company does not want Provider to continue, Provider may nevertheless continue, but any expenditures after such notification by Company shall not count toward the [*] aggregate limit set forth in this Section 15(e). For the avoidance of doubt, and by way of example, if the Company does not want Provider to continue pursuant to the preceding sentence, and (1) if the Acceptance Test is never satisfied, this Agreement shall terminate under Section 23(g), Company shall make the Milestone Payment No. 7, and Milestone Payment No. 8 shall not be made, pursuant to Section 23(h) or (2) if the Acceptance Test is satisfied, Company shall make both Milestone Payment Nos. 7 and 8, the Annual Performance Test shall be conducted pursuant to Exhibit F, no Liquidated Damages shall be

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payable in any event, and Provider shall not have any further obligations under this Agreement with respect to matters limited by the aggregate limitations set forth in this Section 15(e).

- (f) *Exclusive Remedy.* The remedies set forth in Sections 1(b)(ii), 1(b)(v), 1(b)(vi), and 1(b)(viii) and Exhibit F, subject to the limitations set forth in this Section 15, shall constitute Company's sole and exclusive remedies for liabilities of Provider arising from representations and warranties herein and failure to pass the Acceptance Test and to satisfy the Annual Production Guarantee.

16. **Amendments; Waivers.** This Agreement may not be modified or amended except by a written instrument executed by or on behalf of each of the Parties and BSE. The observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively) by the Party entitled to enforce such term, but such waiver shall be effective only if it is in a writing signed by the Party entitled to enforce such term and against which such waiver is to be asserted. Any such waiver shall not be deemed to constitute a waiver of any other breach of the same or any other provision hereof. The right of either Party to require strict performance shall not be affected by any prior waiver or course of dealing.

17. **Non-exclusivity/Exclusivity.**

- (a) The Company shall not be prohibited from entering into similar contracts with other contractors.
- (b) As an inducement to the Company's execution of this Agreement and except as may otherwise be agreed in writing by Provider and the Company from time to time, each of Provider and BSE agrees that for each of them and their respective Affiliates, for a period of five (5) years after successful completion of the Acceptance Test, or if such Test is not passed, for a period of six (6) years after the Demo Plant has passed the Startup Test (the "Exclusivity Period"), neither it nor its Affiliates shall provide any technology, services or materials in connection with any Solar-To-Steam Facility intended for an Enhanced Oil Recovery application in [*] as such areas are specifically defined in the map attached as Exhibit D hereto, provided that the Exclusivity Period shall automatically terminate if Chevron has not executed an agreement with Provider or any of its Affiliates for the First Commercial-Scale Facility within thirty (36) months after successful completion of the Acceptance Test. As an inducement to Provider and BSE's agreement to the Exclusivity Period under this Section, the Company hereby agrees that the Exclusivity Period will automatically terminate if (i) Provider or its

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Affiliates submit a bid for a Commercial-Scale Facility for Chevron and Chevron orders such a facility from any entity other than Provider or its Affiliates on terms substantially the same as or more favorable to such entity than those contained in Provider's or its Affiliates' bid for such facility or (ii) Chevron does not invite Provider or its Affiliates to bid for a Commercial-Scale Facility.

- (c) Notwithstanding the foregoing, the exclusivity provisions in Section 17(b) shall not apply to the provision of technology, services or materials by an Affiliate of BSE if (i) such Affiliate is both an entity and a shareholder of BSE and (ii) so long as such technology, services or materials do not utilize any Background IP owned by BSII, Provider IP, Joint IP, or derivatives thereof; Documentation; or Confidential Information of the Company or its Affiliates.

18. Governing Law. This Agreement, and its performance and enforcement, shall be governed by the local law of the State of California, without regard to any conflicts of law principles that may require the application of the laws of any other jurisdiction.

19. Attorneys' Fees. Each Party shall promptly pay to the other Party all costs and reasonable attorneys' fees in any legal proceeding or arbitration in which the such Party or its Affiliate prevails brought against the other Party based on a breach of this Agreement; provided, however, in any arbitration commenced pursuant to Section 21(b), attorney's fees shall be awarded in the discretion of the arbitrator.

20. Compliance with Laws.

- (a) *Generally.* Provider shall comply with all Applicable Laws as they may be modified from time to time, to the extent such modifications are applicable to the Work. Provider acknowledges that Company is an unincorporated division of Chevron U.S.A. Inc., a United States company, and further acknowledges that performance by Provider under this Agreement may be subject to regulations on international trade and U.S. export control laws and regulations and, in particular, the restrictions pertaining to the export and re-export to non-United States destinations. All of Company's obligations in connection with this Agreement are subject to Applicable Laws, including, export and import controls and U.S. anti-boycott laws. Neither Company nor Provider shall be obliged to perform any obligations hereunder if and to the extent that such performance in connection therewith would be in conflict with Applicable Laws.

Import/Export. Provider is responsible for importing all property, supplies, materials or technology (hereinafter "Export/Import Items") that it requires to perform its obligations under this Agreement,

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including exporting any Export/Import Item from its country of origin, manufacture or supply and, if required by law, for exporting any Export/Import Item when no longer needed to perform the Services. Provider is responsible for securing any necessary permits, licenses, authorizations and clearances for the export and import of any Export/Import Item. If any such license or other authorization is issued which, by its terms, restricts the further distribution of the Import/Export Item, Provider must provide Company with a full and complete copy of said license or authorization. Provider is responsible for paying any necessary customs or import duties or taxes, and all other proper and lawful charges related to port or customs clearances or charges on the import or export of goods, including, but not limited to, pilotage, agent fees, broker fees, handling charges and port dues. Provider represents that in the event that it imports or exports any Export/Import Item to comply with the terms of this Agreement, Provider's price or fee for any Products or Services provided to Company under this Agreement shall not be increased as a result of any import or export by Provider. All temporary import and export bonds shall be administered by and provided at the sole cost of Provider.

- (b) *Conflict of Interest.* Neither Party shall give any director, employee or representative of the other Party any commission, fee, rebate, gift or entertainment of significant cost or value in connection with this Agreement, or enter into any other business arrangement with any director, employee or representative of the other, without prior written notification to the other Party.
- (c) *Antibribery.* Neither Party nor its employees, agents, subsidiaries or Affiliates, or their employees or agents, shall make any payment or give anything of value to any official of any government or public international organization (including any officer or employee of any government department, agency or instrumentality) to influence his or its decision, or to gain any other advantage for Company or Provider in connection with this Agreement.
- (d) *Data Privacy.* Without limiting the generality of the foregoing, Provider shall comply with all reasonable written requests of the Company with respect to protecting personal data of the Company's employees, customers and suppliers that Provider receives in connection with its performance of this Agreement, including but not limited to, following the Company's instructions in connection with processing such personal data, implementing adequate security measures to protect such personal data commensurate with such measures Provider has in place to protect personal data of its own employees, customers and suppliers, not disclosing such personal data to any third party without the

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Company's written permission, and complying with all applicable data privacy laws.

- (e) *Workplace Policies.* When visiting any Company sites or facilities, Provider shall, and shall cause its employees, Affiliates, agents, representatives, Subcontractors and vendors to, comply and act in accordance with Exhibit E-1 and H and all Company policies and procedures furnished to Provider prior to any such visit.
- (f) *Permits.* The Company shall be responsible for and obtain all the environmental permits required by any Environmental Law for the installation of the Project, including biological, archeological and other applicable permits. Provider shall be responsible for all licenses and building permits required for its performance of the Work.
- (g) *Federal Compliance.* To the extent applicable to this Agreement, the following clauses contained in the Code of Federal Regulations are incorporated herein by reference: 48 C.F.R. §52.203-6 (Subcontractor Sales to Government); 48 C.F.R. §52.203-7 (Anti-Kickback Procedures); 48 C.F.R. §§52.219-8 (Utilization of Small Business Concerns); 48 C.F.R. §52.219-9 (Small Business Subcontracting Plan); 48 C.F.R. §§22.804-1 and 52.222-26 and 41 C.F.R. §60-1.4 (Equal Opportunity); 48 C.F.R. §52.222-21 (Prohibition of Segregated Facilities); 48 C.F.R. §§52.222-35 and 52.222-37 and 41 C.F.R. § 60-250.4 (Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans); 48 C.F.R. §52.222-36 and 41 C.F.R. § 60-741.5 (Workers With Disabilities); 48 C.F.R. §52.223-3 (Hazardous Material Identification and Material Safety Data); 48 C.F.R. §52.223-14 (Toxic Chemical Release Reporting); 48 C.F.R. §52.225-13 (Restrictions on Certain Foreign Purchases); and 48 C.F.R. §§52.227-1 and 52.227-2 (Patent Authorization & Patent and Copyright Infringement). Provider covenants that none of its employees, or employees of its subcontractors, who provide Work to Company pursuant to this Agreement are unauthorized aliens as defined in the Immigration Reform and Control Act of 1986. Provider shall insert the substance of the foregoing provisions of this Section into all non-exempt subcontracts or purchase orders as required. "Non-exempt" subcontracts are covered "subcontracts" under Executive Order No. 11246 (30 Fed. Reg. 12319), as amended by Executive Order No. 11375 (32 Fed. Reg. 14303) and Executive Order No. 12086 (43 Fed. Reg. 46501); Section 502 of the Rehabilitation Act of 1973 (29 U.S.C. § 793); Section 402 of the Vietnam Era Veteran's Readjustment Assistance Act of 1973, as amended (38 U.S.C. § 4212), and the regulations implementing these laws.

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- (h) *Notification.* Each Party shall immediately notify the other Party of any material violation of this Section 20 by such Party and in the case of a violation of Section 20(c), shall immediately reimburse the other Party an amount equal to the amount of the payment or the value of the gift to such an official which gives rise to such violation. Each Party shall hold the other Party harmless for all losses and expenses arising out of violations of this Section 20.
- (i) Provider shall not be responsible for any pre-existing Hazardous Substance condition at, in, under, or upon the Site. If any pre-existing Hazardous Substance is found at the Site, the removal and disposal thereof in compliance with all Applicable Laws shall be the responsibility of and at the cost of Company, and any reasonable additional cost or delay related thereto incurred by Provider shall be for the account of Company. Provider shall be responsible for complying with all Applicable Laws with respect to the removal and proper disposal of all Hazardous Substances brought onto or generated by Provider or by any of its subcontractors in the course of performing the Services.
- (j) *Universal Provisions.* Company represents to Provider that Section 20(g) is a standard provision, and that it, or a substantially similar provision, is required by its corporate policies to be placed in every negotiated contract that it enters into in which United States Federal laws may apply, and Company acknowledges and agrees that by its mere presence no implication is intended and no inference shall be drawn that the laws and regulations thereby incorporated by reference are applicable to the performance by Provider of its obligations hereunder.

21. Dispute Resolution.

- (a) *Informal Resolution.* The Parties shall attempt within forty five (45) days after the date (the “Issue Date”) an issue is presented to it in good faith to resolve any dispute, controversy or claim related to this Agreement, with the exception of a Tax dispute, but including any dispute over the breach, interpretation, or validity, but not the termination, of this Agreement.
- (b) *Arbitration.* If the Company and Provider are unsuccessful in their good faith attempt to resolve the dispute, the dispute shall be submitted to, and settled by, binding arbitration in San Francisco, California. The Parties shall, within twenty (20) days after the formal conclusion of the mediation but not later than one hundred twenty (120) days after the Issue Date, select a mutually agreed upon single arbitrator and may utilize any format and rules for the binding arbitration upon which they may mutually agree. If the

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Parties are unable to so agree, the dispute shall be submitted to a single arbitrator in San Francisco, California chosen by the Parties from a list of retired judges and justices at JAMS, San Francisco, California. Should the Parties be unable to agree on a choice of arbitrator within thirty (30) days from the date of the aforesaid submission to arbitration, the contract arbitration administrator of JAMS in San Francisco, California shall furnish to each party a list of three names and each side shall strike one name, thereby nominating the remaining person as the arbitrator. If more than one name remains, the contract arbitration administrator of JAMS will choose an arbitrator from the list of remaining names. In no event is the arbitrator authorized or empowered to award punitive or consequential damages or damages in excess of actual direct damages. The arbitration award shall be in writing and shall specify the factual and legal basis for the award. Judgment upon any award rendered by the arbitrator may be entered in any court with jurisdiction. The arbitrator shall determine the allocation of the costs and expenses of arbitration based upon the percentage which the portion of the contested amount not awarded to each Party bears to the amount actually contested by such Party. For example, if the Company submits a claim for \$1,000 and if the Provider contests only \$500 of such amount, and if the arbitrator resolves the dispute by awarding the Company \$300 of the \$500 contested, then the costs and expenses of arbitration will be allocated 60% (i.e., 300 divided by 500) to the Provider and 40% (i.e., 200 divided by 500) to the Company.

- (c) *Injunctive Relief.* Notwithstanding any of the foregoing, either Party may request injunctive relief and/or equitable relief from the arbitrators or the court in order to protect the rights or property of such Party pending the resolution of the dispute as provided hereunder.
- (d) *Injunctive Relief Upon Breach of Confidentiality.* In the event of a breach or threatened breach of the confidentiality provisions of Section 7 hereof by a Party, the other Party will suffer irreparable damages and its remedy at law will be inadequate. Therefore, if the disclosing Party threatens to breach or actually breaches such confidentiality provisions, the other Party shall be entitled, in addition to all other remedies available to it at law or in equity, to the following: (a) equitable relief, including specific performance and injunctive relief to enforce any confidentiality provision hereof and to restrain such disclosing Party from using or disclosing, in whole or in part, directly or indirectly, any Confidential Information, without having to prove that actual damages or monetary damages would not be an adequate remedy, and without having to post a bond and (b) recovery for damages, losses, and expenses of any

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nature (including, but not limited to, attorneys' fees and other litigation expenses) arising out of, resulting from, or otherwise relating to such breach or threatened breach.

- (e) *Continue to Perform and Pay During Dispute.* Except as specifically set forth in Section 2(c), during the pendency of any Dispute, the Provider shall continue to perform under the terms of this Agreement and the Company shall continue to pay Provider for the Work under the terms of this Agreement without offset or withheld amounts except that the Company may withhold any specific disputed amounts the right to receipt of which under the terms of this Agreement are the subject matter of the Dispute.

22. **Notices.** Wherever under this Agreement one Party is required or permitted to give notice to the other Party, such notice shall be in writing and shall be delivered personally, sent by facsimile transmission, sent by electronic transmission (email), sent by nationally recognized express courier or sent by certified mail (return receipt requested). Any such notice shall be deemed given when actually received and shall be addressed as follows:

To the Company: Chevron Technology Ventures, a division of Chevron
U.S.A. Inc.
Attn: Sergio Hoyos
3901 Briarpark Drive
Houston, Texas 77042
Fax No. 713 954 6368
Email: shoyos@chevron.com

With a copy to: Chevron Technology Ventures, a division of Chevron
U.S.A. Inc.
Attn: Legal Department, Contract Administrator
3901 Briarpark Drive
Houston, Texas 77042
Fax No. 713 954 6368

To Provider: BrightSource Construction Management, Inc.
Attn: Arie Amit
1999 Harrison Street, Suite 2150
Oakland, CA 94612
Fax No. 510-550-8165
Email: aamit@luz2.com

With a copy to: BrightSource Construction Management, Inc.
Attn: Daniel T. Judge, General Counsel
1999 Harrison Street, Suite 2150

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Oakland, CA 94612
Fax No. 510-550-8165
Email: djudge@brightsourceenergy.com

Either Party may change its address for notices upon giving written notice of the change to the other Party in the manner provided above.

23. Termination.

- (a) *Termination Generally.* Company or Provider may terminate this Agreement as set forth below. The right to terminate this Agreement is in addition to all available remedies at law or in equity or under this Agreement.
- (b) *Termination by Company For Cause.* Upon the occurrence of any Company Release Event (as defined below), the Company may terminate this Agreement immediately by providing Provider with written notice. A “Company Release Event” shall be deemed to have occurred if one or more of the following events or conditions shall have occurred and Provider has failed to cure such event or condition within thirty (30) days after receiving written notice from the Company thereof: (i) Provider is in breach of this Agreement and has failed to cure such breach within such thirty (30) day cure period, unless a longer period is permissible pursuant to this Agreement, or unless such breach cannot be remedied by the payment of money and cannot with diligence be remedied within such 30-day period and Provider has promptly commenced and continues to prosecute with diligence appropriate remedial action; (ii) Provider becomes insolvent, or generally does not pay its debts as they become due, or admits in writing its inability to pay its debts, or makes a general assignment for the benefit of creditors; (iii) Insolvency, receivership, reorganization, or bankruptcy proceedings are commenced by or against Provider, and in the case of any such proceeding instituted against Provider (but not instituted or otherwise acquiesced to by Provider) such proceeding remains in effect and unstayed for a period of sixty (60) days; (iv) Provider makes an assignment or transfer of this Agreement or any interest herein in a manner prohibited by Section 9; (v) any material representation made by Provider herein proves to have been false or intentionally misleading in any material respect when made; or (vi) Provider has abandoned or refused to perform its obligations hereunder.
- (c) *Payment Upon Termination for Cause.* In the event of termination by Company for cause, the Company shall pay Provider a pro rata portion of the compensation for the Work set forth herein consistent with Provider’s progress on the Project up to the date of termination

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(based upon a percent complete approach applied to the line items listed on Exhibit B-1 and the value thereof set forth in Exhibit B-1, reduced in each case by [*] plus any additional compensation pursuant to any written Change Orders; provided however that in no event shall Company's payment hereunder exceed the Contract Price plus any additional compensation pursuant to any written Change Orders. Nothing in this subsection shall diminish the Company's right to claim damages as set forth herein for breach if the termination is for cause.

- (d) *Termination by Company for Convenience.* The Company may terminate this Agreement without cause upon thirty (30) days prior written notice to Provider.
- (e) *Payment Upon Termination for Convenience.* In the event of termination by Company for convenience, the Company shall pay Provider a pro rata portion of the compensation for the Work set forth herein consistent with Provider's progress on the Project up to the date of termination (based upon a percent complete approach applied to the line items listed on Exhibit B-1 and the value thereof set forth in Exhibit B-1 plus any additional amount pursuant to any written Change Orders (it being understood that the result could be a payment in excess of the Contract Price), plus any actual costs directly attributable to, and reasonably incurred in terminating, the Work, including cancellation charges owed to third parties, de-mobilization costs, and the difference between purchase cost and salvage value on materials and equipment that have been received or for which the orders therefor cannot be cancelled, unless the Company chooses to purchase such materials and equipment, in which case such items shall be paid for as described above for work in progress. Notwithstanding the foregoing Section 23(e), in the event that Company's termination for convenience (1) is due to catastrophic damage to Company's oil production facility in Coalinga, CA prior to successful completion of the Startup Test, the percent complete approach shall be applied to the line items listed on Exhibit B-1 and the value thereof set forth in Exhibit B-1, reduced in each case by [*] plus any additional amount pursuant to any written Change Orders, or (2) occurs following successful completion of the Startup Test, Company shall pay Provider the full amount of any unpaid Contract Price, plus any amount payable pursuant to any written Change Orders, in lieu of the amounts otherwise due under the preceding sentence.
- (f) *Refund of Overpayment.* In the event that this Agreement is terminated by Company for cause or convenience and after the

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determination of the amount owed to Provider under subsection (c) or (e), as the case may be, Provider has been paid more than what is owed to it under such subsection, Provider shall refund to Company the amount of such overpayment for the Work in progress.

- (g) *Termination for Failure to Satisfy Acceptance Test.* This Agreement shall terminate immediately in the event that the Project fails to satisfy the Acceptance Test within the allowable time period (as set forth in Exhibit F). For the avoidance of doubt, a failure of the Project to satisfy the Acceptance Test shall not be considered a breach of the Agreement.
- (h) *Payment Upon Termination for Failure to Satisfy Acceptance Test.* In the event of termination for failure to satisfy the Acceptance Test, Company shall pay Provider the outstanding balance of the Contract Price due and owing plus any additional compensation pursuant to any written Change Orders, less the final milestone payment of [*].
- (i) *Effect of Termination.*
 - (i) In the event this Agreement is terminated by Company for any reason pursuant to the terms hereof, or pursuant to Section 23(g) above, Provider shall, subject to Company's obligation to pay therefor as described in subsections (c), (e) or (h) immediately above, immediately deliver all applicable portions of the Work, including all Documentation, to the Company and do all things necessary to ensure the efficient, proper close-out of the terminated Work. In the event that a refund is owed Company pursuant to subsection (f) immediately above, Provider shall pay Company the amount owing within thirty (30) days of the determination of the amount to be refunded, which determination shall not be more than sixty (60) days after notice of termination.
 - (ii) In the event this Agreement is terminated by Company for cause: (A) Company shall have the right to have the terminated Work completed; (B) upon such termination, Provider shall be entitled to receive payments of the Contract Price for work in progress as set forth in subsection (c) above; (C) Provider shall be liable to Company for all reasonable costs and expenses in excess of the Contract Price incurred by Company (taking into account amounts paid to Provider hereunder) in completing the Work or having the Work completed; (D) Company may in its sole discretion engage third parties to finish the Work or

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dismantle the Project by whatever method or means as Company may reasonably deem expeditious.

- (iii) In the event this Agreement is terminated pursuant to Section 23(g) above, Company shall have the right to have the terminated Work completed at its own expense and may in its sole discretion engage third parties to finish the Work.
- (j) *Termination by Provider.* Upon the occurrence of any Provider Release Event (as defined below), Provider may terminate this Agreement immediately by providing Company with written notice. A “Provider Release Event” shall be deemed to have occurred if one or more of the following events or conditions shall have occurred and Company has failed to cure such event or condition within thirty (30) days after receiving written notice from the Provider thereof: (i) Company is in breach of this Agreement and has failed to cure such breach within such thirty (30) day period, unless a longer period is permissible pursuant to this Agreement, or unless such breach cannot be remedied by the payment of money and cannot with diligence be remedied within such 30-day period and Company has promptly commenced and continues to prosecute with diligence appropriate remedial action; (ii) Company becomes insolvent, or generally does not pay its debts as they become due, or admits in writing its inability to pay its debts, or makes a general assignment for the benefit of creditors; or (iii) Insolvency, receivership, reorganization, or bankruptcy proceedings are commenced by or against Company, and in the case of any such proceeding instituted against Company (but not instituted or otherwise acquiesced to by Company) such proceeding remains in effect and unstayed for a period of sixty (60) days.
- (k) *Payment Upon Termination by Provider.* In the event of termination by Provider, the Company shall pay Provider as described in subsection (e) above for termination by Company for convenience. Nothing in this subsection shall diminish the Provider’s right to claim damages as set forth herein for breach.
- (l) *Survival of Obligations.* Termination or expiration of this Contract (i) shall not relieve either Party of its obligations with respect to Confidential Information disclosed by the other Party; (ii) shall not relieve either Party of any obligations hereunder which expressly or by implication survive termination hereof; (iii) except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party (which provisions shall survive the termination of this Contract); shall not relieve either Company or Provider of any obligations or liabilities for losses incurred by the other Party (or an Indemnified Party) arising out of or caused by

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acts or omissions of Company or Provider, as the case may be, prior to the effectiveness of such termination or arising out of such termination; (iv) if the termination is by Company for cause, shall not relieve Provider of its obligations relating to performance and completion of the Work, warranty obligations or other obligations assumed by Provider prior to the date of termination under this Agreement; and (v) for the avoidance of doubt, if the termination is by Company for convenience, the obligations of Provider and BSE in Exhibit F and in Sections 1(b), 13, 14, and 17(b) shall terminate; if the termination is by Company for cause or for failure to pass the Acceptance Test as set forth in Section 23(g), the obligations of Provider under Sections 13 and 14(a) shall terminate and the obligations of Provider and BSE in Sections 14(b) and 17 shall continue for the periods set forth in those Sections with the applicable time periods commencing upon termination. This Section 23 shall survive the termination or expiration of this Agreement.

24. Suspension of Work.

- (a) *Suspension.* The Company may, at any time and for any reason, suspend the Work to be performed by Provider, in whole or in part, by serving written notice to Provider (the “Suspension Notice”). Provider agrees to cease the Work to be performed as detailed in the Suspension Notice not later than 24 hours after its receipt of the Suspension Notice or at such later time as specified therein, subject to any additional time and effort necessary to secure and protect the Site and the materials and equipment thereon and to take delivery of items of materials and equipment previously scheduled to be delivered at the Site during the period of suspension. When the Company desires Provider to resume the Work, it shall so inform Provider by written notice. Provider shall resume the Work within 24 hours or as soon thereafter as reasonably possible. Notwithstanding the foregoing, the Company may also suspend the Work in whole or in part pursuant to and in accordance with Section 17.1 of Exhibit E - Health, Safety and Environmental Guidelines and Drug, Alcohol, and Search Policy or Item K and Appendix A of Exhibit E-1. Any Work so suspended shall be governed by and managed in accordance with such Section, the Project Safety Management Plan in Exhibit E-1, and/or the detailed Site Safety Plan to be developed after execution of this Agreement by the Parties.
- (b) *Adjustments.* In the event of suspension hereunder, the Parties shall mutually agree to the period by which the Milestone Schedule shall be adjusted. Provider shall promptly advise the Company in writing of any costs involved and the Company shall promptly

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reimburse Provider for the actual, reasonable, unavoidable and verifiable costs of suspending the Work and of demobilizing and mobilizing personnel and equipment. Notwithstanding the foregoing, if the Work is suspended pursuant to a stop work notice provided pursuant to Exhibit E or E-1, any delay and additional costs shall be for the account of Provider, unless both (i) the stop work notice was provided by the Company or an Affiliate, employee, agent, advisor or representative of the Company and (ii) the work environment was in objective fact (which fact may be established after the stop work notice is given) not imminently hazardous to persons, property, or the environment, in which case any such delay or cost shall be for the account of the Company.

25. **Force Majeure.** Neither Party shall be considered to be in default in the performance of any obligation under this Agreement when a failure of performance shall be due to an event of Force Majeure. For the purposes of this Agreement, “**Force Majeure**” shall mean any cause beyond the control of the affected Party which has an adverse effect on that Party’s ability to perform its obligations and which by the exercise of due diligence such Party could not reasonably have been expected to avoid. Neither Party shall be relieved of its obligation to perform if such failure is due to causes arising out of its own negligence or fault or the negligence or fault of its agents, employees, suppliers or subcontractors, or due to removable or remediable causes which it fails to remove or remedy within a reasonable amount of time. If any event of Force Majeure occurs or is anticipated, the affected Party shall promptly notify the other Party of such event, and the cause and estimated duration of any delay due to such event. The Party whose ability to perform hereunder is affected by Force Majeure shall exercise due diligence to shorten, avoid and mitigate the effects of any such delay by promptly taking appropriate corrective action and shall keep the other Party advised as to the affected Party’s efforts and its estimate of the continuance of the delay. In no event shall either Party be entitled to any damages, or to any adjustment to the compensation payable hereunder, because of any delay due to Force Majeure. Events of Force Majeure may include (to the extent meeting the requirements of this Section 25): orders of government agencies; war, riots, terrorism and civil insurrection; and fires, floods, earthquakes, severe weather events outside of the range of weather conditions reasonably to be expected at the Site at the time such weather event occurs, and loss of public utilities beyond the control of either Party. Force Majeure shall not include (1) a Party’s financial inability to perform under this Agreement, (2) failure or nonperformance by a Subcontractor, unless the Party claiming Force Majeure can point to an identifiable event of Force Majeure that caused such failure or nonperformance, and (3) other events that are foreseeable and would in the normal course of prudent construction practices by experienced firms familiar with the locality of the Site be protected against in order to prevent or avoid such event.

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26. **Definitions.** All defined terms shall have the meanings ascribed to them herein, including Exhibit J Definitions.
27. **Entire Agreement.** Except as set forth in the last sentence of this Section, this Agreement, including its Exhibits, supersedes all prior and contemporaneous agreements and understandings between the Parties, both oral and written, with respect to its subject matter and constitutes the complete agreement and understanding between the Parties, unless modified in writing and signed by both Parties. The Company and Provider entered into the LOA concerning the Project pursuant to which Provider provided and the Company paid for certain engineering services as set forth therein. Upon the execution hereof, the LOA shall be deemed terminated and superseded, and all services provided thereunder and payments therefor shall be deemed provided pursuant to this Agreement. This Agreement does not supersede the Confidentiality Agreement entered into by the Parties dated August 16, 2006, as amended by an Amendment No. 1 (One) executed in September, 2007, which Confidentiality Agreement continues in full force and effect; provided, however, that the terms of this Agreement shall govern all disclosures of Confidential Information with respect to the Project, whether made prior to or after the execution hereof.
28. **Exhibits.** The following Exhibits, including any exhibits or documents referenced therein, are incorporated herein for all purposes.
- Exhibit A Scope of Work
- Exhibit B Schedule of Milestone Payments
- Exhibit C Discount Schedule
- Exhibit D Areas of Exclusivity
- Exhibit E Health, Environmental and Safety Guidelines
- Exhibit F Acceptance and Performance Tests
- Exhibit G IP Escrow Agreement
- Exhibit H Procedures Manual
- Exhibit I Forms of Lien Waivers
- Exhibit J Definitions
29. **Construction.** The section headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. As used herein, unless otherwise provided to the contrary, (a) all references to days, months or quarters

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shall be deemed references to calendar days, months or quarters, and (b) any reference to a “Section” or “Exhibit” shall be deemed to refer to a section of or an exhibit to this Agreement. Unless the context otherwise requires, as used in this Agreement, all terms used in the singular shall be deemed to refer to the plural as well, and vice versa. The words “hereof,” “herein” and “hereunder” and words of similar import refer to this Agreement as a whole and not to any particular provision of this Agreement. Whenever the words “include,” “includes” or “including” are used in this Agreement, they shall be deemed to be followed by the words “without limitation.” References in this Agreement to “\$” shall be deemed a reference to United States dollars unless otherwise specified.

30. **Contract Documents / Discrepancies.** The Parties intend to provide for all items necessary for the proper execution and completion of the Work. Without limiting the duty of Provider and Company to fully review the Contract Documents, in the event of a conflict or discrepancy among the various Contract Documents, the documents shall be given precedence in the following order (in descending order of precedence, with each document at the same subsection level with equal precedence):

- (i) This Agreement, and any amendments thereto, excluding all Exhibits;
- (ii) Exhibits A-1, A-4, A-5, B, B-1, C, D, F, F-1, G, H, and J;
- (iii) Exhibits A-2, A-3, E, and E-1;
- (iv) All remaining Exhibits to the Agreement;
- (v) Specifications; and
- (vi) Drawings - (large-scale Drawings over small-scale).

If either Party discovers any errors, discrepancies, ambiguities, or omissions at any time in the Contract Documents, such Party shall notify the other Party in writing promptly, and in any event before beginning the Work involved.

31. **Severability.** If any term, condition or provision of this Agreement is found by a court of competent jurisdiction to be invalid, illegal or otherwise unenforceable, the same shall not affect the other terms, conditions and provisions hereof or the whole of this Agreement, but such term, condition or provision will be deemed modified to the extent necessary to render such term, condition or provision enforceable, and the rights and obligations of the Parties will be construed and enforced accordingly, preserving to the fullest permissible extent the Parties’ intent and agreements set forth herein.
32. **Counterparts.** This Agreement may be executed in two or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one agreement binding on the Parties,

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notwithstanding that both Parties are not signatories to the same counterpart.

33. **Contractor's Notice.** Provider is licensed as a Contractor under the laws of the State of California, License No. 915607. Contractors are required by law to be licensed and regulated by the Contractor's State License Board which has jurisdiction to investigate complaints against contractors if a complaint regarding a patent act or omission is filed within four years of the date of the alleged violation. A complaint regarding a latent act or omission pertaining to structural defects must be filed within 10 years of the date of the alleged violation. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, P.O. Box 2600, Sacramento, CA 95826.
34. **BSE Parent Guaranty.** BSE hereby guarantees to the Company the prompt performance of all of the obligations of Provider and BSII under this Agreement. In the event of a breach by Provider or BSII of their respective obligations hereunder and its or their failure to cure such breach in accordance herewith, BSE hereby agrees to assume and perform all of the obligations of Provider or BSII, as the case may be, hereunder as a principal, subject to all of the rights and defenses of Provider or BSII, as the case may be, hereunder (save and except for any defense associated with the insolvency, receivership, reorganization or bankruptcy of Provider or BSII, as the case may be, and any proceeding related thereto) and the performance by Company of its obligations hereunder. The Company may proceed directly against BSE to enforce its rights under such guaranty without proceeding against or joining Provider or BSII, as the case may be. BSE has all requisite power and authority to enter into such guaranty and to perform its obligations in connection therewith.
35. **Chevron Technology Ventures Status.** Chevron Technology Ventures ("CTV") is an unincorporated division of Chevron U.S.A. Inc., a Pennsylvania corporation. CTV is authorized and empowered pursuant to the Amended and Restated Articles of Incorporation and Bylaws of Chevron U.S.A. Inc. and resolutions duly adopted by the Board of Directors of Chevron U.S.A. Inc., acting through any officer of CTV, to execute for and on behalf of Chevron U.S.A. Inc. papers requiring execution in the name of Chevron U.S.A. Inc. in connection with this Agreement. By execution of this Agreement as set forth below, CTV is doing so pursuant to its authority to execute agreements on behalf of Chevron U.S.A. Inc. with the purpose and effect that this Agreement is a direct agreement by and between Chevron U.S.A. Inc. and Provider and this Agreement is enforceable directly against Chevron U.S.A. Inc. in accordance with its terms, including Sections 21 and 22 hereof. Except for this Section 35, each reference herein to the Company includes Chevron U.S.A. Inc. as part of that reference.

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36. **BSII Status**. BSII, an Israeli corporation, is a wholly-owned subsidiary of BSE. Provider is also a wholly-owned subsidiary of BSE. BSII is a signatory to this Agreement for the limited purpose of agreeing to Sections 8 and 11 hereof because it owns and will own all of the rights to Background IP, Provider IP, patents and Joint IP owned or that will be owned by BrightSource. Notwithstanding that BSII is such a signatory, and for the avoidance of doubt, Provider, BSE, BSII, and Company each acknowledge and agree that the License and the rights and obligations of BSII and the Company related thereto are governed by the generally applicable provisions of the Agreement, including Sections 16, 18, 19, 21, 22, 29, and 30, and Provider has complete authority with respect to the interpretation, modification, waiver, and enforcement of the License and such BSII rights and obligations. Provider may proceed directly against Company to enforce BSII's rights under this Agreement without joining BSII. Company may proceed directly against either BSII or Provider to enforce Company's rights against BSII under this Agreement without joining Provider or BSII, respectively.

[Signature page follows.]

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IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first above written:

Chevron Technology Ventures,
a division of Chevron U.S.A. Inc.

**BrightSource Construction
Management, Inc.**

By: /s/ Dana Flanders
Name: Dana Flanders
Title: President

By: /s/ Israel Kroizer
Name: Israel Kroizer
Title: President

By signing below, BrightSource Energy, Inc. agrees to with Sections 7(b), 11, 14, 17(b), 34 and 36 hereof.

BrightSource Energy, Inc.

By: /s/ John Woolard
Name: John Woolard
Title: President

By signing below, BrightSource Industries (Israel) Ltd. agrees to Sections 8, 11 and 36 hereof.

BrightSource Industries (Israel) Ltd.

By: /s/ Israel Kroizer
Name: Israel Kroizer
Title: President

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Exhibit A	Scope of Work
Exhibit A-1	Design Criteria
Exhibit A-2	Engineering Scope of Work
Exhibit A-3	Procurement and Construction Scope of Work
Exhibit A-4	O&M Agreement
Exhibit A-5	Milestone Schedule
Exhibit A-6	Major Equipment - Purchase Agreement Release List
Exhibit B	Schedule of Milestone Payments
Exhibit B-1	Schedule of Values
Exhibit C	Discount Schedule
Exhibit D	Areas of Exclusivity
Exhibit E	Independent Contractor Health, Environmental and Safety Guidelines
Exhibit E-1	Project Safety Management Plan
Exhibit F	Acceptance and Performance Tests
Exhibit F-1	Performance Model User Manual
Exhibit F-2	Performance Model
Exhibit G	IP Escrow Agreement
Exhibit H	Procedures Manual
Exhibit I	Forms of Lien Waivers
Exhibit J	Definitions

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EXHIBIT A
SCOPE OF WORK

A-1. Design Criteria

A-2. Engineering Scope of Work

A-3. Procurement and Construction Scope of Work

A-4. O&M Agreement

A-5. Milestone Schedule

A-6. Major Equipment – Purchase Agreement Release List

EXHIBIT A-1
DESIGN CRITERIA

The Design Criteria is defined as:

[*]	[*]	[*]
[*]		
[*]		
[*]	[*]	[*]
[*]	[*]	[*]
[*]		
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]		
[*]	[*]	[*]

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EXHIBIT A-2
ENGINEERING SCOPE OF WORK
Attached.

EXHIBIT A-2

ENGINEERING SCOPE OF WORK

Attached hereto is the Engineering Scope of Work applicable, as amended as set forth below, to the Scope of Work under the Master Services Agreement dated as of December 17, 2008 by and between Chevron Technology Ventures, a division of Chevron U.S.A. Inc. and BrightSource Construction Management, Inc.

The attached document is hereby amended as set forth below for all purposes under said Agreement. Each such amendment is hereby made because the topic is covered elsewhere in the Contract Documents or is otherwise inapplicable to the Scope of Work.

Page(s) Number	Section(s) Number	Action
13	D	Delete
13	E	Delete

**Chevron Solar-to-Steam Demo Project****Engineering Scope of Work & Payment Schedule****December 10, 2007**



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Title: Proposed Engineering Scope of Work & Schedules – December 10, 2007									
 A BrightSource Energy Company	Kiryat Mada 11 - Amot Bldg #6 P.O. Box 45220 Har Hotzvim Jerusalem 91450 Israel Ph: +972 (0)77-202-5000 Fax: +972 (0)2 571-1059		Project	08 Chevron Solar-to-Steam Demo Plant					
			File Name	Engineering Scope of Work and Schedules					
			Sheet	1	of	13	Rev	5	

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A. Scope of Engineering Services

- Project Description

Provide all of the design and detailed engineering necessary for Chevron's Solar-to-Steam Demonstration Plant (for description see APPENDIX I: "Coalinga Solar Demo Plant: Technical description and Design specification"). This project is being developed by Chevron to evaluate the technical, operational, and economic feasibility of using solar energy to produce steam to complement the enhanced oil recovery (EOR) operations of Chevron's San Joaquin Valley Business Unit.


- Planning and Layout Activities

1. Prepare health, environment, and safety (HES) process for the project.
2. Prepare "design for safety" procedures.
3. Examine the project site existing conditions and coordinate with Chevron site studies as required for the design works, including surveying, topography, geotechnical studies, hydrology, rainfall data, and any other required studies.
4. Execute the required studies, including conducting site topography survey, geotechnical investigation, distance to nearby Earthquake fault, and items identified from above.
5. Obtain requirements from local authorities pertaining to the planning and layout requirements imposed by them, e.g. set back, parking space.
6. Obtain and study Chevron's actual installation and together with feedback of the above prepare a Basic Project Layout Plan.
7. Prepare a Tie-In plan for connection to existing Chevron installations (feed water, steam, power, raw water, etc.).
8. Develop Tower and Building Sketch Plan for the buildings (control room and MCC) required for the Project.
9. Inquire and confirm detailed submission procedure and requirements by the relevant authorities for the statutory approval prior to commencement of work, upon project completion and before commencement of operation.
10. Prepare all documents required to submit building permit applications, including all required Federal Aviation Administration permits or notices.
11. Work with Chevron in order to prepare the design criteria and parameters based on Chevron specifications.


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- Design Activities


1. General (Scope Defining Documentation)
 - a. Process Flow Diagram (PFD) showing nominal design rates and maximum instantaneous rates, fluid properties, process parameters for all flow streams, and equipment ratings. Material/energy balance (Process detail design).
 - b. Utility demands (water, electricity, etc.)
 - c. Site Plan
 - i. Layout of entire site, including operation and maintenance facilities
 - ii. Equipment location plan
 - d. Process & Instrumentation Diagrams
 - e. One-line diagrams
 - f. Control System Architecture
2. BSE health, environment, and safety (HES) plans, including safety in design, Process Hazard Analysis / Hazop, Job-Safety Analysis, Lightning protection plan, and Fire protection plan.
3. Prepare Design Drawings for civil works including site preparation (clearing and grubbing, minimal cut and fill, compaction), storm drainage, roads, pavement, drainage, sewers and water supply and distribution, gate and fencing, finish grading and ground surface treatments.
4. Piping and piping support design up to connections to all delivery/tie-in points.
5. Prepare Specifications and Design Drawings for the architectural design of the Control Room and Maintenance buildings for the project.
6. Prepare structural design drawings for Solar Tower.
7. Perform structural analysis for solar tower under operating and severe load conditions, specifically combined with wind load and earthquake load and demonstrate their conforming to performance criteria.
8. Foundations plan and details for Solar Tower, buildings, facilities, equipment pads, Heliostats, pumps, steam generator, and all other equipment, piping support, and components that require foundations.
9. Provide all vendor specifications, design drawings, and technical evaluations including heliostat fabrication plan and site location.
10. Prepare Civil Structural Specifications or Design Criteria, including at a minimum the following:
 - a. Civil Structural Design Criteria
 - b. Performance criteria for Solar Tower and Heliostat Structures
 - c. Specification for Pre-engineered Metal Building (if applicable upon evaluation)
 - d. Specification for Cast-in Place Concrete and Reinforcing Steel

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- e. Specification for Structural Steel Material and Fabrication
11. Electrical & Control
 - a. Electrical design, including power feeder from Chevron connection, transformation as required, Motor Control Center (MCC), motors' power supply cables, power supply cables to PDUs, grounding, equipment lightning protection, and lighting
 - b. Instrumentation and control (I&C) design, including control wiring, local instrumentation, control room, software design
12. Process detailed design, including:
 - a. Specification Index
 - b. Design Basis
 - c. Civil-Structural
 - d. Equipment – List, specifications, and datasheets
 - e. Piping – List and specifications
 - f. Welding – Procedures and qualifications
 - g. Valves – List and specifications
 - h. Components – List and specifications
 - i. Motors – List and specifications
 - j. Electrical
 - k. Instruments – List, specifications, and datasheets
 - l. Finish – Painting and protective coatings
 - m. Packaged Systems
 - n. Operation System Description, including process control and logic
 - o. System Check-out Procedure
13. Procurement, Fabrication & Construction
 - a. Bills of quantities
 - b. Procurement plan (including shipping, tracking, receiving)
 - c. QA/QC Plans for procurement, fabrication, and construction
 - d. Equipment Bid Packages
 - e. Contractor Bid Packages
 - f. Site Logistic Plan, including site Project Management (PM) / Construction Management (CM) offices, contractors' area, welfare area, lay-down areas, sanitary utilities, material staging areas
 - g. Commissioning and Start-up Plan
 - h. Detailed Safety Plan
 - i. Constructability validation


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14. Operations and Maintenance outline, including estimated costs, water and utilities usage requirements, staffing requirements, training program plans, manuals and all plant documentation, and spare part requirements.
- Project Management Activities
 1. Project execution procedures/implementation plans:
 - a. HES management plan
 - b. Document Control plan
 - c. Communication plan
 - d. Project schedule and plan based on Critical Path Method (CPM)
 - e. Permits plan
 - f. Construction Sequencing plan
 - g. Logistics plan
 - h. Commissioning and Start-up plan
 - i. Close-out plan
 - j. Turnover Plan
 - k. Procurement plan
 - l. Quality Management plan
 - m. Training plan
 2. Scope verification, tracking and control
 3. Change order tracking and control
 4. Cost tracking and control
 5. Meeting management
 6. Documentation Control
 7. Design quality control


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Title: Proposed Engineering Scope of Work & Schedules – December 10, 2007						
 Kiryat Mada 11 - Amot Bldg #6 P.O. Box 45220 Har Hotzvim Jerusalem 91450 Israel Ph: +972 (0)77-202-5000 Fax: +972 (0)2 571-1059	Project		08 Chevron Solar-to-Steam Demo Plant			
	File Name		Engineering Scope of Work and Schedules			
	Sheet		6	of	13	Rev 5

B. Design Review Agenda


- First Project Design Phase – Basic Design (30%):
 1. Project execution plans, for comments
 2. Design specifications of the following major system components
 - a. Steam generator/heat exchanger
 - b. Solar receiver
 - c. Feedwater pumps and tank(s)
 - d. Heliostats
 - e. Control system architecture
 - f. Reverse osmosis system
 - g. Condenser
 - h. Cooling tower
 - i. Emergency generator
 - j. Compressed air system
 3. Utilities capacity summary including plan for back-up power generation
 4. P&ID's showing all equipment quantities, in-line instrumentation, mechanical indicating devices, line size and type designations, including P&ID legend drawing
 5. Electrical one-line diagrams
 6. First revision of each system Master Design Specs (MDS) and Construction Specifications for the project. Does not include data sheets or other appendices.
 7. Equipment type and size have been selected.
 8. Solar Tower conceptual design (general arrangement diagram)
 9. Master Site Plot Plan
 10. Major structural members have been determined. Concrete and steel systems have been selected.
 11. Code analysis to determine basis of design and to identify alternate materials and methods.
 12. Define long lead Items for purchasing.
 13. Control systems architecture and block diagrams
 14. Preliminary Issue of Civil Structural Specifications and Criteria including:
 - a. Civil Structural Design Criteria
 - b. Civil Specifications
 - c. Performance criteria for Solar Tower and Heliostat Structures
 - d. Specification for Pre-engineered Metal Building (if applicable upon evaluation)

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	File Name	Engineering Scope of Work and Schedules					
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- e. Specification for Cast-in Place Concrete and Reinforcing Steel
 - f. Specification for Structural Steel Material and Fabrication
15. BSE health, environment, and safety plans, including safety in design, Process Hazard Analysis/Hazop, Job Safety Analysis, Lightning protection plan, and Fire protection plan
 16. Preliminary Operations and Maintenance outline, including estimated costs, water and utilities usage requirements, staffing requirements, training program plan, and preliminary spare part requirements (submitted two weeks after 30% review)
- Second Project Design Phase – Detailed Design (60%)
 1. Updated project execution plans for approval
 2. All documents included in previous review, including all 30% review comments
 3. Updated design specifications of the following major system components
 - a. Steam generator/heat exchanger
 - b. Solar receiver
 - c. Feedwater pumps and tank(s)
 - d. Heliostats
 - e. Control system architecture
 - f. Reverse osmosis system
 - g. Condenser
 - h. Cooling tower
 - i. Emergency generator
 - j. Compressed air system
 4. P&ID's showing instrumentation with numbering and interface to DCS, for comments
 5. Miscellaneous components and Construction Specifications
 6. Vendors' proposals for equipment and components, including technical bid evaluation
 7. Detailed civil, structural, architectural (including control room), piping, and facilities design drawings and calculations (process, structural, etc.), for comments
 8. Preliminary instrument wiring and loop diagrams
 9. Preliminary instrument installation details
 10. Preliminary PLC and Lighting Control Panel (LCP) cabinet layouts
 11. Preliminary PLC I/O rack wiring and wiring termination diagrams
 12. PLC communication plan/routing drawings


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	File Name		Engineering Scope of Work and Schedules				
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13. Preliminary Motor Control Center (MCC)/UPS layouts and interconnection diagrams
 14. Preliminary Motor Control Schematics
 15. Cable and conduit/cable tray routing
 16. Equipment lightning protection & grounding plan
 17. Solar Tower design drawings for comment
 - a. General arrangement drawings
 - b. Civil-Structural Foundation Plan
 - c. Structural engineering drawing and specifications
 18. Piping plan drawings
 - a. Piping layout
 - b. Bill of quantities
 - c. Piping support plan and calculations
 - d. Piping stress analysis
 19. Control System
 - a. Equipment control descriptions/Sequences of operation, for comments
 - b. Control philosophy and narrative
 - c. PLC code and System Integration programming requirements
 - d. Human-Machine Interface (HMI) and Data Historian requirements
 20. Bills of quantities (Mechanical/Pipe/Valves/Fittings/Electrical)
 21. Construction work packages, for comments
 22. Updated BSE health, environment, and safety plans, including safety in design, Process Hazard Analysis / Hazop, Job-Safety Analysis, Lightning protection plan, and Fire protection plan
 23. Operations and Maintenance outline, including estimated costs, water and utilities usage requirements, staffing requirements, training program plan, and spare part requirements
- ***Deliver FEED documentation to Chevron after Second Phase Design Review***
 - Third Project Design Phase (90%):
- Note: at this stage the construction drawings may still include “hold” areas for final decisions*
1. All documents included in previous review, including all 60% review comments
 2. Updated project execution plans for approval

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3. Complete detailed design drawings for last comments and approval
4. Code analysis and application for alternate materials and methods are complete.
5. Coordinated interdisciplinary review
6. Final Data Sheets and equipment outline drawings
7. Detailed design drawings and specifications, for approval
8. Up-dated Bills of Quantities (Mechanical/Pipe/Valves/Fittings/Electrical)
9. Final Construction Scope Of Work
10. Design for Tie-In to existing Chevron utilities, for approval
11. Final health, environment, and safety plans
12. All civil/structural design to be performed (or checked) and stamped by a Registered Professional Engineer in the State of California
13. Cable and conduit termination schedule
14. Lighting panel schedule
15. Instrument Data sheets
16. Control System algorithms

- **Completion of Engineering with Design hand-over to Construction Manager**


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C. Deliverables

	Applicable (Y,N) 30%	Applicable (Y,N) 60%	Applicable (Y,N) FEED	Applicable (Y,N) 90%	Applicable (Y,N) IFC
Level of completeness, design Review Meeting					
PROJECT MANAGEMENT					
Project execution plans	Y	Y			
Health, environment, and safety plans	Y	Y	Y	Y	Y
Operations, maintenance, and training plans	Y	Y	Y	Y	Y
Cost and schedule plans	Y	Y	Y	Y	Y
PROCESS					
Process description	Y	Y	Y	Y	Y
Update of Process Flow Diagrams (PFDs)	Y	Y	Y	Y	Y
Process and Instrumentation Diagrams (P&IDs) (main equipment, main lines, instrumentation, major control loops, etc.)	Y	Y	Y	Y	Y
Sequence of Operations.	N	N	Y	Y	Y
Equipment layout (site plan)	Y	Y	Y	Y	Y
Equipment list	Y	Y	Y	Y	Y
Lines list	N	Y	Y	Y	Y
Instrumentation list	N	Y	Y	Y	Y
Motors list	N	Y	Y	Y	Y
Special Items list	N	Y	Y	Y	Y
Process equipment specifications and data sheets	N	Y	Y	Y	Y
BOQ – Execution Specification	N	Y	N	Y	Y
PIPING & MECHANICAL					
Equipment proposals	N	Y	Y	—	—
Equipment detail design	N	N	N	Y	Y
Piping layout, levels and cross section of all utilities	N	Y	N	Y	Y
Piping supports details for all equipment and piping	N	N	N	Y	Y
Piping detail design including stress analysis.	N	Y	N	Y	Y
BOQ – Execution Specifications	N	N		Y	Y

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Deliverables, Continued

CIVIL / STRUCTURAL					
Solar Tower Civil/ Structural Design	Y	Y	Y	Y	Y
Foundations plans and details as defined in Design Activities	N	Y	N	Y	Y
Structural and miscellaneous steel construction detailed drawings for all plant buildings and facilities	N	Y	N	Y	Y
Civil Structural Design Criteria and all Specifications as defined in Design Activities	Y	Y	Y	Y	Y
Architectural design drawings for all plant buildings and facilities as applicable	N	Y	Y	Y	Y
Solar Tower and Heliostat Structure functional performance criteria and structural analysis report	N	N	N	Y	N
Details civil site developments, road, payment, drainage, sewers, water supply, gate and fencing, final surface treatment design drawings	N	Y	Y	Y	Y
BOQ – Execution Specification	N	N	N	Y	Y
ELECTRICAL					
1-Line diagram	Y	Y	Y	Y	Y
Equipment Power Supply	N	Y	N	Y	Y
Cabinets layout design in electrical room and open area	N	Y	N	Y	Y
Design of UPS/Emergency systems	N	Y	N	Y	Y
Design of lighting power and grounding.	N	Y	N	Y	Y
Issue of Specifications and B.O.Q	N	Y	N	Y	Y
Cables schedule	N	N	N	Y	Y
Motors schedule	N	N	N	Y	Y
Equipment list	N	Y	Y	Y	Y
BOQ – Execution Specification	N	N	N	Y	Y
I&C					
Control System Architecture	Y	Y	Y	Y	Y
Instruments schedule	N	Y	N	Y	Y
Cables schedule	N	Y	N	Y	Y
Analog and digital I/O schedule and allocation	N	Y	N	Y	Y
Instruments design specifications and data sheets	N	Y	N	Y	Y
J.B, Cabinets and control systems construction drawings	N	Y	N	Y	Y
Wiring diagrams	N	Y	N	Y	Y
Control loops drawings	N	Y	N	Y	Y

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Equipment room and control room layout	N	Y	Y	Y	Y
Field instruments location drawings	N	N	N	Y	Y
Junction boxes and cable routes location drawings	N	Y	N	Y	Y
Hook up drawings for instruments assemble	N	Y	N	Y	Y
BOQ and Execution Specification	N	N	N	Y	Y


D. Design & Engineering Schedule

LOA	December 14, 2007
30% Design	Week 12
60% Design	Week 17
FEED Submittal	Week 19
Chevron ToGo Dec.	Week 21
Issue Equipment POs	Week 25 (week 13 for solar boiler)
Vendor Equip. Design	Week 34
90% Design	Week 39
Issue IFC Package	Week 49

E. Payment Schedule

Total cost for Engineering SOW and Project Management of Engineering [*] to be paid as follows:

- [*] - upon execution of Letter of Authorization (LOA)
- [*] - upon 30% design review approval by CTV
- [*] - upon 60% design review approval by CTV
- [*] - upon 90% design review approval by CTV
- [*] - upon IFC package delivery approval by CTV

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* Confidential Treatment Requested

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EXHIBIT A-3
PROCUREMENT AND CONSTRUCTION SCOPE OF WORK
Attached.

12/13/2008



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Chevron - S2S Project

BY: R.K

APP: A.A Rev: 8 Date: December 12, 2008 Doc No. 08-GE-G-L-004

Doc. No	Rev	Sheets	Document Title	Doc Date
1. PM Docs				
080402 FAA	N/A		Cranston FAA Cert. Rev B	2/Apr/08
08-GE-G-L-001	1	5	Appendix A1 - QA/QC Critical Components Matrix	7/Aug/08
08-GE-G-L-002	1	1	Appendix N - Chevron Project Procurement Log	14/Jul/08
08-GE-G-L-003	0	290	Chevron 60% Comments agreed for MSA (two files)	12/Dec/08
08-GE-G-P-002	2	18	Project Execution Plan (PEP)	8/Aug/08
08-GE-G-P-003	2	44	Appendix A -Procurement Procedures	29/Jul/08
08-GE-G-P-004	5	20	Appendix B - Document Control & Buzzsaw Procedures	16/Jul/08
08-GE-G-P-006	2	23	Appendix C - Change Order Procedures	29/Jul/08
08-GE-G-P-007	1	33	Appendix D - Project Closeout Procedures	29/Jul/08
08-GE-G-P-008	1	3	Appendix E - Project WBS Structure	13/Jul/08
08-GE-G-P-009	N/A	N/A	Appendix F - BSCM / LUZ II Corporate Safety Policy	MSA
08-GE-G-P-010	N/A	N/A	Appendix G - Health & Safety Work Practices	MSA
08-GE-G-P-011	N/A	N/A	Appendix H - Site Specific Project Safety Manual	MSA
08-GE-G-P-012	2	19	Appendix I - QA/QC Plan	31/Jul/08
08-GE-G-P-013	1	7	Appendix J - Project Control Procedures	29/Jul/08
08-GE-G-P-014	1	8	Appendix K - MRB Procedures	29/Jul/08
08-GE-G-P-015	B	6	Appendix L - Operation Test Plan	29/Jul/08
08-GE-G-P-016	A	11	Appendix M - Project Risk Analysis Procedures	29/Jul/08
08-GE-G-P-020	A	4	Appendix Q Risk Register RevA	14/Jul/08
08-GE-G-P-022	B	1	Procurement Plan	28/Oct/08
08-GE-G-S-101	C	12	Safety in Design Specification	7/Aug/08
08-GE-G-L-003-1	0	202	Chevron's final agreed comments (1-200)	9/Dec/08
08-GE-G-L-003-2	0	27	Chevron's final agreed comments (201-245)	9/Dec/08
08-GE-I-P-001	C	12	Appendix P I&C QA/QC Plan	31/Jul/08
Biological report	C		Biological resource evaluation	10/Dec/07
Chevron FAA 2-20-08			Determination of no Hazzard to air Navigation	
Fresno county letter July 07			Zoning determination section 857 A.2	
Permit reconnaissance				
SID SU 5106	7-Feb-08	250	Safety in design	

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APP: A.A Rev: 8 Date: December 12, 2008 Doc No. 08-GE-G-L-004

Doc. No	Rev	Sheets	Document Title	Doc Date
SWP WU 5159	7-Sep-07	50	Safe work practice std.	
2. Process Docs				
08-BP-F-D-004	3	1	Utilities / Water Balance Process Flow Diagram	8/Aug/08
08-BP-F-D-020	4	2	Process Water & Steam Process Flow Diagram	4/Aug/08
08-BP-F-D-030	4	2	Service Water & Steam Process Flow Diagram	4/Aug/08
08-BP-F-D-300	E	1	Piping and instrumentation Legend	11/Jul/08
08-BP-F-D-302	G	1	Process Wtr/Steam P & ID	4/Aug/08
08-BP-F-D-303	G	1	Service Wtr/Steam P & ID	4/Aug/08
08-BP-F-D-304	G	1	Utilities P& ID	4/Aug/08
08-BP-F-D-305	G	1	Utilities P& ID Air	4/Aug/08
08-BP-F-S-001	F	12	System Operating Description	22/Jul/08
08-GE-F-S-001	J	21	Project Design Basis	6/Aug/08
08-GE-F-S-009	A	Later	Performance Model	Later
08-GE-F-S-010	B	216	Appendix C - Performance Model Results	27/Jul/08
08-GE-F-S-011	C	31	Appendix A - Performance Model Overview	28/Jul/08
08-GE-F-S-012	B	7	Appendix B - Analysis of Parasitics	5/Aug/08
08-GE-M-L-301	C	4	Lines list	31/Jul/08
08-GE-M-L-303	A	1	Specialty Items List	31/Jul/08
08-GE-M-L-304	T	4	Process Equipment List	25/Sep/08
08-GE-M-L-307	A	1	Tie-In List	31/Jul/08
08-GE-M-S-302	B	1	Service index list	5/Aug/08
08-PB-M-S-006	C	12	Appendix A - Sequence of Operations (preliminary)	5/Aug/08
08-PB-M-S-007	C	6	Appendix B - Overnight Heat Loss Analysis and anticipated Mitigations	4/Aug/08
08-UT-G-S-301	B	1	Utilities Capacity Summary	7/Jul/08
3. Mechanical Docs				
08-BP-G-S-001	E	1	HX Proposal Scope Review Sheet	7/Aug/08
08-BP-G-S-002	G	6	Centrifugal Pumps Scope review sheet	24/Sep/08
08-BP-G-S-002-1	A	3	Pump Quotation Recommendations	6/Aug/08
08-BP-G-S-005	L	1	Water Treatment System Proposals Scope review sheet	4/Aug/08

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APP: A.A Rev: 8 Date: December 12, 2008 Doc No. 08-GE-G-L-004

Doc. No	Rev	Sheets	Document Title	Doc Date
08-BP-G-S-317-2	A	1	Elevators quotations summary	8/Aug/08
08-BP-L-D-310	A	1	Piping Sections	31/Jul/08
08-BP-M-L-301	0	1	Equipment Installation BOQ	18/Aug/08
08-BP-M-S-301	E	16	Water Tanks Specification	4/Aug/08
08-BP-M-S-303	3	27	Compressed Air Spec	5/Aug/08
08-BP-M-S-304	H	10	Water Treatment System Specifications	8/Aug/08
08-BP-M-S-305	A	10	Elevator Spec	14/Jul/08
08-BP-M-S-306	A	15	Chilled Water Spec System	31/Jul/08
08-BP-M-S-307	B	32	Packaged Air Conditioning Units	4/Aug/08
08-BP-M-S-310	E	8	P-601 Pump Calculations	30/Jul/08
08-BP-M-S-311	G	6	P-602 Pump Calculations	30/Jul/08
08-BP-M-S-314	A	14	Maintenance Boiler RFQ	7/Jul/08
08-BP-M-S-317	B	1	Elevator Bid Analysis	8/Aug/08
08-BP-M-S-320	A	1	Pump Data Sheet P-804	5/Aug/08
08-BP-M-S-321	A	1	Pump Data Sheet P-806	16/Jun/08
08-BP-M-S-322	A	1	P-804 Pump Calculations	5/Aug/08
08-BP-M-S-323	A	1	P-806 Pump Calculations	5/Aug/08
08-BP-M-S-324	A	11	Positive Displacement Pump Specs	5/Aug/08
08-BP-M-S-325	B	24	Nitrogen System Spec	5/Aug/08
08-BP-M-S-390	B	2	Condensate Vessel Data Sheet V-604	4/Aug/08
08-BP-M-S-391	B	2	Boiler Feedwater Tank Data Sheet V-801	4/Aug/08
08-BP-M-S-392	B	2	Waste Water Tank Data Sheet T-803	4/Aug/08
08-BP-M-S-393	E	4	P-601 Data Sheet	16/Jul/08
08-BP-M-S-394	G	4	P-602 Data Sheet	16/Jul/08
08-BP-M-S-395	C	1	P-802 Data Sheet	15Jun08
08-BP-M-S-396	B	2	Mirror Wash Wtr Tank Data Sheet T-802	4/Aug/08
08-BP-M-S-398	D	1	P-805 Data Sheet	12/Jun/08
08-BP-M-S-399	B	1	Potable Water Storage Tank Data Sheet T-804	4/Aug/08
08-GE-F-L-301	B	15	Mechanical & Process Design Criteria (list of Standards & regulatory codes being followed)	24/Jul/08

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APP: A.A Rev: 8 Date: December 12, 2008 Doc No. 08-GE-G-L-004

Doc. No	Rev	Sheets	Document Title	Doc Date
08-GE-M-S-002	C	3	Fire Protection Plan	7/Aug/08
08-GE-M-S-301	A	10	Mech Scope of Work	31/Jul/08
08-GE-M-S-308	G	1	Piping and valves Bill of Materials	1/Aug/08
08-GE-M-S-311	B	13	Capital Cost Estimate	14/Aug/08
08-GE-M-S-312-1	A	1	Piping and valves insulation Bill of Materials	1/Aug/08
08-GE-M-S-312-2	A	1	Equipment and steel insulation Bill of Materials	1/Aug/08
08-PB-M-S-001	2	12	Centrifugal Pumps Specifications	6/Aug/08
08-PB-M-S-002	D	12	Air cooled heat exchanger	6/Aug/08
08-PB-M-S-004	4	13	Heat Exchanger Specifications	31/Jul/08
08-PB-M-S-305	7	1	E-601 Data Sheet (Steam Generator)	21/Jul/08
08-PB-M-S-306	7	1	E-602 Data Sheet (Pre-Heater)	21/Jul/08
08-SF-M-S-006	1	29	Heliostat Specification	7/Aug/08
08-TR-F-S-001	3	28	Solar Boiler Specifications	7/Aug/08
08-TR-L-D-003	1	1	SB General Arrangement	2/Jul/08
08-TR-P-D-301	B	1	Piping Plans 0ft	31/Jul/08
08-TR-P-D-302	B	1	Piping Plans 20ft	31/Jul/08
08-TR-P-D-303	B	1	Piping Plans 40ft	31/Jul/08
08-TR-P-D-304	B	1	Piping Plans 90ft	31/Jul/08
08-TR-P-D-305	B	1	Piping Plans 130ft	31/Jul/08
08-TR-P-D-306	B	1	Piping Plans 190ft	31/Jul/08
08-TR-P-D-307	B	1	Piping Plans 230ft	31/Jul/08
08-TR-P-D-309	A	1	MCC Building Duct HVAC plan	31/Jul/08
08-TR-P-D-310-1	A	15	Piping Stress Analysis	25/Jul/08
08-TR-P-D-310-2	A	17	Piping Stress Analysis	25/Jul/08
08-TR-P-D-351	A	1	Pipe Support Plan El 0'-0"	31/Jul/08
08-TR-P-D-352	A	1	Pipe Support Plan El 20'-0"	31/Jul/08
08-TR-P-D-353	A	1	Pipe Support Plan El 40'-0"	31/Jul/08
08-TR-P-D-355	A	1	Pipe Support Plan El 130'-0"	31/Jul/08
08-TR-P-D-356	A	1	Pipe Support Plan El 190'-0"	31/Jul/08

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APP: A.A Rev: 8 Date: December 12, 2008 Doc No. 08-GE-G-L-004

Doc. No	Rev	Sheets	Document Title	Doc Date
08-TR-P-D-357	A	1	Pipe Support Plan	31/Jul/08
08-TR-P-D-361	A	4	Piping Support Standard Details	18/Jul/08
08-TR-P-D-362	A	2	Piping Standard Details	18/Jul/08
08-TR-P-S-001	D	7	Appendix A - Solar Boiler Panel Coating	27/Jul/08
1 CL 11	7-Nov-08		Piping specification	
1 CS 11	7-Sep-08		Piping specification	
1 CS 12	7-Nov-08		Piping specification	
1 NM 11	7-Nov-08		Piping specification	
9 CS 13	7-Nov-08		Piping specification	
9 CS 14	8-Mar-08		Piping specification	
9 SA 91	7-Nov-08		Piping specification	
CVX 101	Year 2005		Asme WPS sample	
CVX 401	Year 2005		Asme WPS sample	
FIG 3-1			Orrifice plate & flanges data sheet	
GA 199880-2	Year 1988		Std detail of bars at pipelines Tee conn	
Inih 1000	7-Oct-08		PIP Inih 1000 hot insulation installation	
Insh 1000	7-Aug-08		PIP Insh 1000 hot service insulation materials & piping.	
N/A	4	12	Appendix A - Vendor Proposals	19/Jun/08
PIDD Index	3-Jun-08		Piping item description classification index	
PIDDF Foreward	1-Mar-08		Piping item description database	
Piping component selection	3-Nov-08		200 component selection- valves, strainers, orrifice, etc.,	
PNSC 0001	1-Oct-00		PIP PNSC 0001 ASME B31.1 Metallic piping fab. and exam.	
PNSC 0011	4-Feb-08		PIP PNSC 0011 Instal Of ASME B31.3 Metallic piping.	
PNSC 0021	1-Oct-00		PIP PNSC 0021 Leak testing of piping systems	
PNSM 0110	4-Feb-08		PIP PNSM 0021 Procurement of valves	
PPL DG 4737	5-Apr-08		PIP DG 4737 Data sheet GUIDE for induction bending	
PPL DS 4737			PIP DG 4737 Data sheet for induction bending	
PPL EG 1564-D	YEAR 1990		PIP PPL EG 1564-D Radiographic inspection	
PPL EE 1632	YEAR 1988		PIP PPL EG 1050 Cement lined pipe	

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Doc. No	Rev	Sheets	Document Title	Doc Date
PPL EG 1800 H	YEAR 1999		PIP PPL EG 1800-H onshore pipeline construction	
PPL SU 5023	1-Sep-02		Materials and fabrication of liquid transportation pipelines	
PPL SV 1050	4-Jul-08		PIP PPL welded line pipe: electric welded & submerged welded pipe	
PPL SV 1051 A	4-Jul-08		PIP PPL SEAMLESS line pipe	
PPLDG 1050	6-Apr-08		PIP PPL DG 1050 Data sheet guide for welded pipe line	
PPLDG 1051	3-Sep-08		PIP PPL DG 1051 Data sheet guide for seamless pipe line	
PPLDS 1632			PIP PPL DS 1632 Data sheet for cement lined pipe line	
QWP R 01			QW 482 WPS R 01	
QWP R 10			QW 482 WPS R 10	
REI E 686	YEAR 1996	203	Recommended practices for machinery installation	
swpfront	1-Jun-00		Qualified welders procedures	
UTL DU 5084	1-Jun-06		Sewers drains & paving arrangements	
UTL DU 6000	1-Dec-05		Steam traps	
WPS 001			QW 482 WPS PS-1	

4. C.E./S.E. Docs:

012 08004	1-May-07	1	Geotechnical report	5/Aug/08
08-GE-C-D-300	C	1	Site Development Title Sheet	31/Oct/08
08-GE-C-D-301	C	1	Site Development General Notes & Abbreviations	31/Oct/08
08-GE-C-D-302	E	1/Jan/00	Area Development Site Plan	31/Oct/08
08-GE-C-D-303	A	1/Jan/00	Area Development Existing condition Site Plan	31/Oct/08
08-GE-C-D-304	D	1	Area Development initial SWPPP & Demo Plan	31/Oct/08
08-GE-C-D-306	B	1	Final SWPP	31/Oct/08
08-GE-C-D-307-1thru3	A	3	SWPP Dets	5/Aug/08
08-GE-C-D-308	C	1	Grading & Drainage Overall Plan	31/Oct/08
08-GE-C-D-308-01thru03	C	3	Area Development Grading & Drainage Plan sheets 1-3	31/Oct/08
08-GE-C-D-310-01thru02	A	2	Site layout plan sh 3&2	31/Oct/08
08-GE-C-D-311-01thru03	B	3	Area Development Construction Details	31/Oct/08
08-GE-C-D-311-04	A	1	Area Development Construction Details	31/Oct/08
08-GE-C-1-301	D	2	Site development BOQ	26/Nov/08

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Doc. No	Rev	Sheets	Document Title	Doc Date
08-GE-C-S-303	D	7	Site Development SOW	26/Nov/08
08-BP-A-D-301	C	1	Main Bldg Plan	25/Jul/08
08-BP-A-D-302	C	1	Main Bldg Elev	25/Jul/08
08-BP-A-D-303	B	1	MCC Bldg Plan	25/Jul/08
08-BP-A-D-304	A	1	MCC Bldg Elev	17/Jul/08
08-BP-A-D-305	A	1	MCC/UPS/TRAFO Bldg Elevations (sheet 2)	25/Jul/08
08-BP-L-D-300-1	5	1	Equipment Layout Grade	31/Jul/08
08-BP-L-D-300-2	2	1	Equipment Layout on Tower	31/Jul/08
08-BP-L-D-305-1	6	1	Equip Layout WE Elevs	31/Jul/08
08-BP-L-D-305-2	6	1	Equip Layout SN Elevs	31/Jul/08
08-GE-C-S-301	E	11	Civil/Structural Engineering Design Criteria (show all calculations)	24/Jul/08
08-GE-C-S-302	A	5	Pre-Engineered Building Scope of Work	25/Jul/08
08-GE-C-S-305	C	1	Conc BOQ	26/Nov/08
08-GE-S-S-305	A	7	Struct SOW	6/Aug/08
08-GE-S-S-306	B	1	Structural Works BOQ	6/Aug/08
08-GE-S-S-307	0	141	Tower Analysis	4/Aug/08
08-GE-S-S-303	0	127	Steam Generator Platform Calculations	5/Aug/08
08-SF-C-S-001, 001-1	5	11	Appendix A - Flux Map on upper part of structural tower	6/Aug/08
08-TR-S-D-301-01	A	1	Structural Tower Plan 782 ft	4/Aug/08
08-TR-S-D-301-02	A	1	Structural Tower Plan 802 ft	4/Aug/08
08-TR-S-D-301-03	A	1	Structural Tower Plan 822 ft	4/Aug/08
08-TR-S-D-301-04	A	1	Structural Tower Plan 842 ft	4/Aug/08
08-TR-S-D-302-01	B	1	Structural Tower Plan 862Ft10-5in ft	4/Aug/08
08-TR-S-D-302-02	A	1	Structural Tower Plan 882Ft10-5in ft	4/Aug/08
08-TR-S-D-302-03	A	1	Structural Tower Plan 902Ft10-5in ft	4/Aug/08
08-TR-S-D-302-04	A	1	Structural Tower Plan 922Ft10-5in ft	4/Aug/08
08-TR-S-D-303	B	1	Structural Tower Plan 775 ft	5/Aug/08
08-TR-S-D-304	B	1	Structural Tower Plan 840 ft	5/Aug/08
08-TR-S-D-306	B	1	Structural Tower Plan 980 ft	5/Aug/08

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Doc. No	Rev	Sheets	Document Title	Doc Date
08-TR-S-D-307	B	1	Structural Tower Plan 1020 & 1022 ft	5/Aug/08
08-TR-S-D-308	A	1	Platform Elevation 1	5/Aug/08
08-TR-S-D-309	A	1	Platform Elevation 2	5/Aug/08
08-TR-S-D-311	C	1	Structural Tower North Elev	1/Aug/08
08-TR-S-D-312	C	1	Structural Tower South Elev	5/Aug/08
08-TR-S-D-313	C	1	Structural Tower East Elev	1/Aug/08
08-TR-S-D-314	C	1	Structural Tower West Elev	5/Aug/08
08-TR-S-D-315	B	1	Structural Tower Target Elev & Details	5/Aug/08
08-TR-S-D-317-01	B	1	55 Stair Schematic & Details	5/Aug/08
08-TR-S-D-317-02	A	1	55 Stair Schematic & Details	5/Aug/08
08-TR-S-D-317-03	A	1	55 Stair Schematic & Details	5/Aug/08
08-TR-S-D-317-04	A	1	55 Stair Schematic & Details	5/Aug/08
08-TR-S-D-319-01	B	1	55 Standard Details	5/Aug/08
08-TR-S-D-319-02	B	1	55 Standard Details	5/Aug/08
08-TR-S-D-319-03	B	1	55 Standard Details	5/Aug/08
08-TR-S-D-319-04	A	1	55 Standard Details	17/Jul/08
08-TR-S-D-319-05	B	1	55 Standard Details	5/Aug/08
08-TR-S-D-319-06	B	1	55 Standard Details	5/Aug/08
08-TR-S-D-320-01 thru 05	B	5	Structural Steel Sections & Details	5/Aug/08
08-TR-S-D-355-01	B	1	Concrete Standard Details sh1	5/Aug/08
08-TR-S-D-355-02	B	1	Concrete Standard Details sh2	5/Aug/08
08-TR-S-D-355-03	B	1	Concrete Sects and Details	5/Aug/08
ARS 13120	1-Jun-07	1	PIP ARS3120 pre engineered metal buildings spec	5/Aug/08
CIV SU 398		1	PIP CIV SU 398 Fabrication of struc. Steel, exemption to PIPI STS 05120	5/Aug/08
CIV-SU-4747-A	1-Dec-05	12	CONSTRUCTION OF UNDERGROUND DRAINAGE SYSTEMS	
CIV-SU-581-C	1-Jun-05	2	SITE PREPARATION, EXCAVATION, AND BACKFILL AN EXCEPTION TO PIP CVSO2100	
CIV-SU-850-1	1-Mar-04	7	PLAIN AND REINFORCED CONCRETE EXCEPTION TO PIP STS03001	
COM-SU-4743-D	1-Dec-05	15	EXTERNAL COATINGS	
CVS 02100	1-Apr-07	1	PIP CVS 02100 site prep, excavation & backfill spec	5/Aug/08

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Doc. No	Rev	Sheets	Document Title	Doc Date
CVS 02830	1-May-03	1	PIP CVS 02830 fab and instal of chain link fence and gate	5/Aug/08
ELC-EF-652 (4-90)	1-Apr-90	1	CONDUIT STUB-UP ARRANGEMENT	
RULE 8021	19-Aug-04	6	CONSTRUCTION, DEMOLITION, EXCAVATION, EXTRACTION, AND OTHER EARTHMOVING ACTIVITIES	
STC 01015	1-Sep-07	1	PIP STC 01015 structural design criteria	5/Aug/08
STC 03001	1-May-07	1	PIP STC 03001 plane and reinforced concrete spec	5/Aug/08
STS 03600	1-Jun-02	1	PIP STS 03600 Non shrink cementitious grout spec	5/Aug/08
STS 05120	1-Jan-02	1	PIP STS 05120 Fabrication of structural and misc steel spec	5/Aug/08
STS 05130	1-Feb-02	1	PIP STS STS 05130 Erection of structural & misc steel spec.	5/Aug/08

5. Electrical Docs

08-BP-E-D-200	D	1	Solar Field Electrical Cable Layout	20/Jul/08
08-BP-E-D-201-1	G	1	One-Line Line Diagram	4/Dec/08
08-BP-E-D-201- 2	E	1	One-Line Line Diagram	21/Nov/08
08-BP-E-D-202	B	1	Electrical Building Layout	25/Jul/08
08-BP-E-D-203			Lightning Protection Plan	
08-BP-E-D-205	A	1	PDU Plan1 N SLD	27/Jul/08
08-BP-E-D-207	A	1	PDU Plan2	27/Jul/08
08-BP-E-D-210	C	1	PDU2 SLD (E&W)	20/Nov/08
08-BP-E-D-211	D	1	PDU 1 & 2 Pnl View	8/Dec/08
08-BP-E-D-212	C	1	PDU1 SLD (N)	20/Nov/08
08-BP-E-D-214	D	1	Typ Load Ctr 2 EW SLD	20/Nov/08
08-BP-E-D-215	C	1	Typ load Ctr Pnl View	20/Nov/08
08-BP-E-D-216	D	1	Typ Load Ctrl N SLD	20/Nov/08
08-SF-E-D-003	B	1	Typical Cables Installation Detail	7/Dec/08
08-BP-E-D-300	G	1	Cable Install & Layout Principal Design	3/Dec/08
08-BP-E-D-301	A	1	Power Plan (J-Boxes & Cable Routes) (SF & BOP)	7/Aug/08
03-BP-E-D-304-1	A	1	Lighting Plan	7/Aug/08
08-BP-E-D-304-2	A	1	Lighting Fixture Sch Panel Brd	1/Aug/08
08-BP-E-D-304-3	A	1	Electrical Lighting Standard Details	1/Aug/08
08-BP-E-D-305-1	A	1	Grounding	1/Aug/08

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Doc. No	Rev	Sheets	Document Title	Doc Date
08-BP-E-D-305-2	A	1	Electrical Ground Legend Gen Notes and Dels	1/Aug/08
08-BP-E-D-312	A	1	Maint Bldg Control Rm Plan	1/Aug/08
08-BP-E-L-305	1	1	Electrical Potential Vendor List	22/May/08
08-BP-E-S-204	C	15	PDU Specification	27/Nov/08
08-BP-E-S-205	A	30	SF Electrical & Communication Specifications & SOW	23/Nov/08
08-GE-E-S-301	B	6	Electrical Design Criteria (List of Standards & regulatory codes being followed)	7/Aug/08
08-PB-E-D-300	A	1	Electrical Symbols, Legends and Gen Notes	31/Aug/08
08-PB-E-D-307	A	1	MCC Rm Grounding Plan	1/Aug/08
08-PB-E-D-308	A	1	MCC Rm Lighting Plan	1/Aug/08
08-SF-E-L-201	A	5	PDU & LC BOM	24/Nov/08
08-PB-E-D-309	A	1	MCC Rm Power Plan	1/Aug/08
08-PB-E-S-206-1	C	10	Electrical BOQ	5/Dec/08
08-PB-E-S-206-2	A	10	Electrical SOW	6/Aug/08
841-2001	1-Mar-01		IEEE std 841-2001 std pter_ & chemical severe duty TEFC motors up to 370 kw	
ELS AP 03	1-Jun-02		PIP ELS AP 03 design and fabrication of UPS	
ELS MC 13	1-Oct-07		PIP ELS MC 13 Low voltage MCC	
ELS SG 11	1-Jun-05		PIP ELS SG 11 Electrical power center spec	
ES WP REV 4	1-Jan-05		Chevron electrical safe work practices	

6.1 & C Docs

08-BP-I-D-001	D	1	Communications Installation Plan	7/Dec/08
08-BP-I-L-001	D	5	Analog & Digital I/O Schedule & Allocation	7/Aug/08
08-BP-I-L-303-1	C	56	Cables Schedule	31/Oct/08
08-BP-I-L-303-2	C	4	Cables Codes	31/Oct/08
08-BP-I-S-301	B	6	I & C Design Criteria (List of Standards & regulatory codes being followed)	24/Jul/08
08-SF-I-D-001	0	1	SF Interconnection Cable Installation Details	19/Nov/08
08-SF-I-D-002	0	1	SF Interconnection Cable Details	19/Nov/08
08-GE-I-D-001	3	1	Control System Architecture drawing	20/Nov/08
08-GE-I-D-002	3	1	Solar Field Network Drawing	20/Nov/08
08-GE-I-D-004-01/2	B	2	Discrete a Analog I & C Control Loop Drawings	6/Aug/08

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Doc. No	Rev	Sheets	Document Title	Doc Date
08-GE-I-L-301	3	3	I & C Potential Vendor List	2/Jul/08
08-GE-I-L-302	D	13	Appendix B - Instrument List	7/Aug/08
08-GE-I-S-001	1	14	Control System Philosophy & Narrative	13/Jul/08
08-GE-I-S-004	B	11	PLC Code & System Integration Programming Requirements	31/Jul/08
08-GE-I-S-005	B	83	HMI Specs	29/Jul/08
Chevron			Appendix A - Safety Instrumented System	
08-PB-I-S-003	A	14	Instrument Data Sheets	28/Jul/08
08-SF-I-S-005	4	9	Solar Field Cable & Connectors Specs	7/Jul/08
08-SF-1-S-009	2	17	Heliostat Controller Data Tags	21/Jul/08
08-SF-I-S-012	8	29	Load Center Panels and DC System Specification	27/Nov/08
PCCF L001			PIP PCCF 1001 Flow meters design criteria	
PCCV 001			PIP PCCV 001 selection of control valves	
PCSCV 001			PIP PCSCV 001 SPEC of control valves	
PCSCV 001 D			control valves spec sheet	
	A	1	PLC Configuration	28/Jul/08



Design Review Comments

Document Number : 08-GE-G-L-003 (Part 1&2)

Rev : 0

October 20

Sergio

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[Illegible]

Version History

v1.0 Original version released, 30% Design Review, includes response prepared by BSE (at later date)	10-Mar-08
v1.1 Review of re-submitted 30% Design Review content	17-Jun-08
v1.2 Review of 100% Design Review content	20-Oct-08
Comment Interim Close-out	12/12/08

Disclaimer

The Information and methods marked within [Illegible] spreadsheet are presented for:

capture and transmitted of design review comments and applicable response from design contractor(s).

The Information and methods presented herein are believed to be accurate and reliable, and are intended to be used by technically skilled persons at their own discretion.

References

- 1 Submitted specifications, drawings, and other documentation, as noted in Table of Contents, ahead 'TOC'

Spreadsheet Development Notes

- 1 Reorganize content to better accommodate the need to add/insert additional documents within the existing list. Modify the sheet names accordingly.
- 2 Provide for better version control of the comments to focus on recent comments and highlight worksheet tabs In accordance with comment version [Illegible]
- 3 Prepare a 'Print Summary' sheet which consolidates all comments (all versions) into a single sheet format for printing and tracking control. This sheet is not for editing content or providing responses, strictly for summarizing into a single sheet for printing/hard-copy output. Use individual sheets per document for providing response content.
- 4
- 5
- 6
- 7
- 8
- 9

Application Notes

- 1 The values in column B on the 'TOC' sheet must be arranged in according order for the VLOOKUP function to work properly.
- 2 Use 'Table of Contents' addin to update the hyperlinks in 'TOC' whenever new documents are added to the list.

- 3 Whenever new documents are added to the TOC list, and new sheet is added; use the hidden columns to update the Sheet Names, and associated VBA code to automatically resort/rename sheets to new names. This is required to ensure VLOOKUP function works properly. This function requires an 'Ascending Sort' list of Sheet Names to work properly.

4

5

6

7

CVX Signature Approval:

/s/ [Illegible]

12/12/2008

BSE Signature Approval:

/s/ [Illegible]

12/12/2008

Confidential

Execution Copy

EXHIBIT A-4

O&M AGREEMENT

Attached hereto is the Operations and Maintenance Agreement between BrightSource Construction Management, Inc., as Operator, and Chevron Technology Ventures, a division of Chevron U.S.A. Inc., as Owner. It is the intent of the Parties that BrightSource Construction Management, Inc. will assign the O&M Agreement pursuant to the terms thereof to an Affiliate, BrightSource Operating Services, LLC, which will be formed as a Delaware limited liability company prior to the Commencement Date of the O&M Agreement, and that BrightSource Operating Services, LLC will be the Operator thereunder during the term thereof.

OPERATING AND MAINTENANCE AGREEMENT

Between

BRIGHTSOURCE CONSTRUCTION MANAGEMENT, INC.

and

CHEVRON TECHNOLOGY VENTURES, A DIVISION of CHEVRON U.S.A. INC.

Dated as of December 17, 2008

CHEVRON SOLAR-TO-STEAM DEMONSTRATION PLANT

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EXHIBITS

- EXHIBIT A Operator Monthly Reports
- EXHIBIT B Project Safety Management Plan (PSMP)
- EXHIBIT C Health, Environmental and Safety Guidelines
- EXHIBIT D Training Plan for Owner's Operating Personnel
- EXHIBIT E List of Project Documents

OPERATING AND MAINTENANCE AGREEMENT

This **OPERATING AND MAINTENANCE AGREEMENT** (this “**Agreement**”), dated as of December 17, 2008, is made and entered into by and between BrightSource Construction Management, Inc., a California corporation, with offices located at 1999 Harrison Street, Suite 2150, Oakland, California 94612 (“**Operator**”), and Chevron Technology Ventures, a division of Chevron U.S.A. Inc., a Pennsylvania corporation with offices located at 3901 Briarpark Drive, Houston, Texas 77042 (“**Owner**”). Operator and Owner are individually referred to herein as a “**Party**” and collectively or jointly as the “**Parties**”. The Agreement is made with reference to the following:

RECITALS

A. Owner is developing a Solar-to-Steam Demonstration Plant at the Owner’s oil production facility in Coalinga, California (the “**Project**”). The Project is intended to provide steam to enhance the recovery of oil at Owner’s oil production facility in Coalinga, California;

B. BrightSource Construction Management, Inc. (“**BSCM**”) has entered into that certain Master Services Agreement, dated as of December 17, 2008, (the “**MSA**”) by and between BSCM and Owner. Pursuant to the MSA, Owner has contracted with BSCM to design, construct, startup, test and initially operate the Project;

C. Following design, construction, startup and testing of the Project by BSCM pursuant to the MSA, upon successful completion of the Startup Test (as defined in the MSA) and thereafter during the Project operating period through the completion of the Annual Production Test (as defined in the MSA), Owner requires the services of a qualified and competent operator to operate and maintain the Project; and

D. Operator is qualified and competent in the operation and maintenance of facilities and plants such as the Project and has agreed to provide such services to Owner for the Project in accordance with the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth herein and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, agree as follows:

ARTICLE 1. DEFINITIONS

1.1 **Defined Terms.** The following terms shall have the following meanings when used in this Agreement, unless the context requires otherwise:

“Affiliate” means any entity (including without limitation, any corporation, partnership, limited liability company, joint venture or other entity) that controls, is controlled by, or is under common control with another entity. An entity is deemed to

control another if it owns directly or indirectly ten percent (10%) or more of (i) the shares entitled to vote at a general election of directors of such other entity or (ii) the voting interest in such other entity if such entity does not have either shares or directors.

“Agreement” means this Operating and Maintenance Agreement, including all Exhibits attached hereto.

“Annual Base Fee” has the meaning given in Article 9.

“BSCM” has the meaning given in Recital B.

“Changed Circumstance” means a change not reasonably foreseeable at the time the then current Operating Plan was adopted in: (i) applicable Laws, or (ii) a requirement of permits, which affects the operation of the Project that is not occasioned by Operator’s Misperformance, and which impairs Operator’s ability to operate the Project within either the Budget or the constraints of the Operating Plan. For the avoidance of doubt, “Changed Circumstance” does not include any changes required or caused by BSCM’s warranty or make right obligations under the MSA, or Operator’s or BSCM’s attempts to successfully perform the Acceptance Test or Annual Production Test, each as defined in the MSA.

“Change Order” has the meaning given in Section 7.1.

“Claim Notice” has the meaning given in Section 15.5 (a).

“Commencement Date” means the date under the MSA when the Startup Test (as defined in the MSA) has been passed.

“Confidential Information” has the meaning given in Section 22.1 and 22.3.

“CTV” has the meaning given in Section 31.1.

“Day” means a calendar day.

“Defaulting Party” has the meaning given in Section 13.2.

“Delayed Payment Rate” means a per annum rate of interest equal to the lesser of (i) the prime rate for the last day of the prior month, as reported by the Wall Street Journal under the heading known as “Money Rates”, plus two percent (2%), and (ii) the maximum rate permitted by applicable Law.

“Effective Date” means the date Owner or BSCM provides the notice set forth in the Section 11.1.

“Election Period” has the meaning given in Section 15.5 (a).

“Emergency” means an event occurring at the Project which poses actual or imminent risk of serious personal injury, physical damage or environmental contamination

requiring immediate preventative or remedial action by Operator and for which advance approval by Owner otherwise required under this Agreement would be impossible or impractical.

“Export/Import Items” has the meaning given in Section 31.3.

“Force Majeure” has the meaning given in Section 19.1.

“Indemnified Party” has the meaning given in Section 15.5 (a).

“Indemnifying Party” has the meaning given in Section 15.5 (a).

“Indemnitees” of a Party means each of its Affiliates and the members, partners, managers, directors, officers, agents, consultants, contractors, representatives and employees of any of them.

“Indemnity Notice” has the meaning given in Section 15.5 (f).

“Issue Date” has the meaning given in Section 18.1.

“Laws” means all laws, statutes, rules, regulations, orders and ordinances or specified standards or objective criteria contained in any applicable license, permit or approval, or other legislative or administrative act, of the United States of America or any state, agency, department, authority, political subdivision or other instrumentality thereof, or a decree, judgment or order of a court from time to time in effect, including but not limited to those governing wages, hours, employment discrimination and safety, laws regarding workers’ compensation, disability laws and employee benefit laws and including any applicable engineering, construction, safety or electrical generation code.

“Lead Operator” means the representative of Operator from time to time appointed by Operator pursuant to Section 5.1.

“Maintenance Plan” means policies and procedures developed by BSCM or Operator for the implementation and management of: preventive maintenance, regular or scheduled maintenance, periodic major maintenance, facility improvements, inspections and inventory control. These policies and procedures shall be contained in a maintenance manual. The Maintenance Plan shall be developed in consultation with Owner.

“Major System Repair” means any repair, replacement or overhaul of a piece of equipment or system needed to operate the Project, except that a Major System Repair shall not include the performance or replacement of normal maintenance items or routine preventative maintenance procedures or any work undertaken or required and covered under any warranty or make right work provided pursuant to the MSA. For the avoidance of doubt, Major System Repair shall not include any of the Services included in the Annual Base Fee.

“MSA” means that certain Master Services Agreement, dated as of December 17, 2008, by and between BSCM and Owner

“Non-Defaulting Party” has the meaning given in Section 13.2.

“Operating Plan” means BSCM’s and/or Operator’s policies and procedures developed for the implementation and management of Project start-up, shut down, regular operations, non-regular operations and outages. These policies and procedures shall be contained in an operating manual. The Operating Plan shall be developed in consultation with Owner.

“Operator” means BrightSource Construction Management, Inc., a California corporation or its Affiliate, BrightSource Operating Services, LLC, a Delaware limited liability company, as the case may be, in its capacity as Operator under this Agreement.

“Operator’s Misperformance” means a failure by Operator, its Affiliates (excluding BSCM in its capacity as Provider under the MSA), or its or their employees, partners, agents, officers or directors to perform Services to the standards required by Section 4.1, or Operator’s, its Affiliates, or any Subcontractor’s negligence, fraud or willful misconduct.

“Owner” means Chevron Technology Ventures, a division of Chevron U.S.A. Inc., a Pennsylvania corporation.

“Owner’s Representative” has the meaning given in Section 11.10.

“Project” has the meaning given in Recital A and is more fully described in the MSA and the Exhibits attached thereto. The Project includes all equipment, structures, facilities and other improvements necessary for the ownership and operation of the Solar-to-Steam Demonstration Plant at Owner’s oil production facility in Coalinga, California.

“Project Documents” means all agreements and other documents related to the construction, startup, testing, operation and maintenance of the Project, including the agreements and documents listed in Exhibit E attached hereto.

“Prudent Industry Practices” means those practices, methods, standards and acts (including those engaged in or approved by a significant portion of the solar power industry with respect to the Solar Field Equipment (as defined in the MSA) and/or industrial process industry with respect to the Balance of Plant (as defined in the MSA) for similar facilities or processes in the United States) that at a particular time in the exercise of diligence and good judgment would have been expected to accomplish the desired result in a manner consistent with proven engineering standards and procedures, safety, environmental protection, economy and expediency as applied to the Project.

“Reimbursable Expenses” has the meaning given in Article 9.

“Safety Program” means policies and procedures developed for the implementation and management of: safety training, plant safety inspections and reporting, plant emergency conditions, plant start-up and shutdown, equipment tagging and lockout, work practices and operating procedures, including Exhibit B, the Project Safety Management Plan (PSMP) and Exhibit C, the Health, Environmental and Safety Guidelines.

These policies and procedures shall be contained in a safety manual, and updated as appropriate by Operator.

“Services” means the services of Operator described in Sections 3.1 and 3.2.

“Subcontractor” means either an entity contracting directly with Operator to furnish services or materials as a part of or related to the Services, or an entity contracting with a Subcontractor of any tier to furnish services or materials as a part of or related to the Services.

“Term” has the meaning given in Section 13.1.

“Third Party Claim” has the meaning given in Section 15.5 (a).

“Training Plan” has the meaning given in Exhibit D.

1.2 General Terms. As used in this Agreement, the terms “herein,” “hereunder,” “herewith,” and “hereof” are references to this Agreement, taken as a whole, the term “includes” or “including” shall mean “including, without limitation,” and references to a “Section,” “subsection,” “clause,” “Article,” “Exhibit,” “Appendix,” or “Schedule” shall mean a Section, subsection, clause, Article, Exhibit, Appendix or Schedule of this Agreement, as the case may be, unless in any such case the context requires otherwise. All references to a given agreement, instrument or other document shall be a reference to that agreement, instrument or other document as modified, amended, supplemented and restated through the date as of which such reference is made, and reference to a Law includes any amendment or modification thereof. The singular shall include the plural and the masculine shall include the feminine and neuter, and vice versa. Where the words “required,” “approved,” “satisfactory,” “determined,” “acceptable,” “decision” or words of like import are used in this Agreement, action by Owner is indicated unless the context clearly indicates otherwise.

ARTICLE 2. EXHIBITS

2.1 Exhibits. This Agreement consists of this document itself and the following Exhibits which are specifically made a part hereof by reference:

- EXHIBIT A Operator Monthly Reports
- EXHIBIT B Project Safety Management Plan (PSMP)
- EXHIBIT C Health, Environmental and Safety Guidelines
- EXHIBIT D Training Plan for Owner’s Operating Personnel
- EXHIBIT E List of Project Documents

2.2 Conflicting Provisions. In the event of any conflict between this document and any Exhibit hereto, the terms and provisions of this document, as amended from time to time, shall control. In the event of any conflict among the Exhibits, the following order of priority shall apply as among the Exhibits: Exhibit B, Exhibit C,

Exhibit D, Exhibit E and Exhibit A. Subject to the foregoing, the several instruments forming part of this Agreement are to be taken as mutually explanatory of one another.

ARTICLE 3. OPERATOR'S SERVICES

3.1 Appointment. Owner hereby appoints and retains Operator to operate and maintain the Project as set forth in this Agreement and to perform certain other tasks and duties described herein relating to the Project (collectively, the "Services"). Operator hereby accepts such engagement and agrees to perform the Services (a) on the terms and conditions of this Agreement and (b) in accordance with the standards set forth in Section 4.1.

3.2 Services.

3.2.1 Prior to the Commencement Date. Following BSCM's notification pursuant to Section 11.1, that BSCM and Owner anticipate that the Commencement Date is likely to be achieved approximately ninety (90) Days from the date of such notification, Operator shall perform the following Services:

(a) Operator shall employ qualified supervisory, management, operation and maintenance and technical personnel who shall meet the qualifications for such personnel set forth in the MSA and this Agreement. Such personnel shall become familiar with the operating procedures established by BSCM for the Project and any manuals prepared by BSCM pursuant to the MSA and shall otherwise prepare to assume all obligations of Operator under this Agreement upon the achievement of the Commencement Date. Prior to the Commencement Date, all such personnel at the Project site engaged in the start-up, commissioning and testing of the Project shall, when performing such activities, be under the supervision, direction and control of the BSCM, and shall comply with BSCM's directions and instructions with respect to such personnel. No less than thirty (30) Days prior to the expected Commencement Date (and periodically thereafter as personnel changes occur), Operator shall provide Owner with a list and qualifications of Operator's Project personnel who will be responsible for supervising the operation and maintenance of the Project pursuant to this Agreement. In the event that Owner does not approve of the Project personnel provided by Operator, or becomes dissatisfied with any such personnel during the Term, Operator shall cooperate to remedy the problem as soon as possible and, if reasonably requested by Owner, remove from the Project any individual who is the subject of dissatisfaction and replace that individual with other personnel reasonably approved by Owner.

(b) Operator shall provide its own familiarization and training of Owner's personnel for the Project and shall conduct orientation and training programs for new employees consistent with the requirements of Exhibit D – Training Plan for Owner's Operating Personnel; and

(c) Operator shall review and familiarize itself with the Project Documents and all Project permits and shall, at Owner's request, from time to time meet and consult with Owner and BSCM regarding any aspects of the Project Documents or Project permits which affect or relate to the Services to be provided by

Operator hereunder. Operator shall, at the request of Owner, assist Owner in Owner's administration of provisions of the Project Documents and Project permits set forth in Exhibit E which concern the operation and maintenance of the Project.

3.2.2 Services After the Commencement Date. From and after the Commencement Date, Operator shall be responsible for the operation of the Project in accordance with the provisions of this Agreement. Except as otherwise expressly provided herein, Operator shall perform all operation and maintenance services for the Project and shall supply or cause to be supplied all equipment, materials, tools, spare parts and supplies required therefor, including the following:

(a) Operator shall have responsibility for and control over the day-to-day operation of the Project during the Term of this Agreement, and Operator shall operate and maintain the Project seven (7) Days a week, in accordance with the requirements of the Project Documents, all Project permits, and the requirements of the Operating Plan and Maintenance Plan. Operator acknowledges that following the Commencement Date, BSCM's personnel may remain at the Project site to perform punch-list work, correction, repair and retesting, and Operator agrees at all times to cooperate fully with BSCM and to allow BSCM to schedule such work to the extent it does not unreasonably interfere with Operator's performance of the Services.

(b) Operator shall perform, or arrange for the performance of, all scheduled and unscheduled maintenance, repairs, inspections and overhauls of the Project, all in a manner consistent with the Operating Plan, Maintenance Plan, equipment manufacturers' recommendations, Project Documents, and all other requirements of this Agreement. Operator shall coordinate with Owner and notify Owner of planned inspections, maintenance and repairs of the Project requiring shutdowns of major equipment, and Operator shall use its reasonable efforts to schedule all outages and maintenance shutdowns in such a manner as to minimize both costs and inconvenience to Owner. Operator also shall maintain the Project site in a clean, well preserved and presentable manner.

(c) Operator shall obtain and maintain an inventory of supplies, lubricants, other consumables, materials and spare parts at the Project, consistent with BSCM's obligations under the MSA, to ensure that delays resulting from shortages shall be minimized as set forth in Operating Plan, as such may be modified by the dictates of experience and prudent operating practice. Operator shall replenish such inventory to the levels received by Operator at the Commencement Date, as the same may be adjusted by the Parties to reflect reduced needs for such inventory following startup of the Project.

(d) Operator shall ensure the maintenance of, safe, secure and segregated storage areas at the Project for all supplies, materials, tools and spare parts required for the Services.

(e) Operator shall implement and follow the provisions of the Safety Program concerning safety and security at all times and shall ensure that its

personnel conduct operations at the Project in such a manner as to minimize the risk of bodily harm to persons or damage to property, and to protect against vandalism, theft, and other similar risks. Without limiting the foregoing, Operator shall maintain, or cause to be maintained, accurate accident and injury reports and shall inform all operating personnel of safety practices and the requirements of Operator's safety program, shall maintain, or cause to be maintained, a supply of suitable safety equipment (including fire extinguishers and personal protective equipment) and enforce the use of such equipment by operating personnel and visitors (if any), shall promptly take all precautions which are reasonable to safeguard against such risks and shall make, or cause to be made, regular safety inspections of the Project, all in accordance with the safety and security procedures set forth in the Safety Program and Exhibit C – Health, Environmental and Safety Guidelines.

(f) Operator shall notify Owner as soon as reasonably practicable of any required Major System Repair and thereafter submit to Owner a brief written summary describing (i) the facts or circumstances (if known) resulting in the need for such Major System Repair, (ii) the details, including estimated costs, of the work, services and replacement parts involved in such Major System Repair, and (iii) requesting Owner's written approval to perform such Major System Repair. If a Major System Repair cannot be performed by regular operating personnel at the Project Site, Operator shall, at Owner's request, solicit bids for the work, review and advise Owner with respect to such bids, and administer or assist in the administration of any contracts entered into by Owner or Operator for the performance of any such Major System Repair.

(g) From time to time following the Commencement Date as personnel changes occur, Operator shall update and resubmit to Owner the list and qualifications (originally submitted pursuant to Section 3.2.1(a) above) of Operator's personnel who will be responsible for supervising the operation and maintenance of the Project.

(h) Operator shall provide administrative and procurement services related to the Operator's services and obligations described herein.

(i) Operator shall cooperate and assist Owner with any required inspections required by any governmental authorities, permitting agencies or environmental agencies.

(j) If requested by Owner, Operator shall establish and maintain a computerized maintenance management software program which shall be provided to Operator by Owner.

(k) Consistent with the requirements of this Agreement and the general scope of Services hereunder, Operator shall provide such other assistance, services and work as may be reasonably requested by Owner in connection with the operation, maintenance and management of the Project following the Commencement Date.

(l) Operator and Owner acknowledge the provisions of the MSA with respect to the Acceptance Test and Annual Production Test and Operator agrees to cooperate with BSCM and Owner pursuant to Exhibit F of the MSA in starting and restarting the facility, and conducting the Acceptance Test and Annual Production Test; and

(m) Operator, in cooperation with its Affiliates, shall have the right to deploy and test equipment related to the Project on the Project site at Operator's sole expense. Such activities shall be subject to Owner's written approval, which may be granted or withheld at Owner's sole discretion. Such activities shall not materially adversely affect the performance of the Project or the cost of operating it, and shall, at Owner's option, be dismantled and removed from the Project site by Operator at its expense prior to termination of this Agreement. Operator shall provide Owner with all data, reports and test results collected from such activities, and Owner shall have the right to use such information in connection with the Project.

3.3 Emergencies. In the event of any Emergency, Operator shall take such action as may be reasonable and necessary to prevent, avoid or mitigate any injury, damage or loss, provided that any such action taken by Operator must be in accordance with the requirements set forth in the Project Management Safety Plan (Exhibit B) and the Health, Environmental and Safety Guidelines (Exhibit C). Notwithstanding the provisions of Section 3.1 or any limitation in the description of Services in Section 3.2, if Operator believes in good faith that an Emergency exists and that changes or modifications in the Services are required to avoid or mitigate injury, damage or loss from such Emergency, Operator may make such changes or modifications to the extent required by such Emergency. Operator shall promptly notify Owner of any Emergency, the remedial and preventive measures taken, the costs incurred, and, if appropriate, proposals to modify procedures or Services in light of the circumstances resulting in the Emergency.

3.4 Subcontracts. Operator may subcontract with Subcontractors who meet the minimum safety requirements and safety record index threshold required by Owner, including Affiliates of Operator, on an arms-length basis, such routine or non-routine work as is necessary to perform scheduled or unscheduled maintenance and repairs, annual inspections and equipment overhauls, including Major System Repairs, which shall be subject to Owner's prior written approval. Notwithstanding any review, approval or other action taken by Owner with regard to the selection of a Subcontractor, Operator shall be fully responsible to Owner for the acts and omissions of Subcontractors and of persons directly or indirectly employed by them, in the same manner as it is responsible for the acts or omissions of persons directly employed by Operator, and subcontracting shall not relieve Operator of any of its duties hereunder.

3.5 Authority to Contract. Except as otherwise expressly authorized in an applicable Operating Plan, in performing procurement, contracting, administrative and other Services for Owner hereunder, Operator shall, subject to the limitations and other provisions of this Agreement, enter into all contracts, purchase orders and other agreements in its own name and shall have no authority to bind Owner or to enter into contracts, purchase orders or other agreements as agent for Owner or on behalf of Owner without the express prior written

consent of Owner. With respect to procurement and contracting services performed for Owner hereunder in connection with Major System Repairs, Owner and Operator shall mutually determine the appropriate method of contracting for each Major System Repair, and Operator shall not be authorized hereunder to contract on behalf of Owner with respect thereto without the express prior written consent of Owner.

3.6 Operator Licenses. Operator shall obtain and maintain all licenses, permits and other authorizations required by applicable Law to allow Operator and its personnel to do business and perform the Services hereunder.

ARTICLE 4. STANDARD OF SERVICES

4.1 Standard of Operation. Operator shall perform the Services:

- (a) in a prudent and efficient manner;
- (b) in accordance with: (i) all applicable Laws, (ii) Prudent Industry Practices, (iii) manufacturers' recommendations, and (iv) the Safety Program;
- (c) in accordance with: (i) the Operating Plan and the Maintenance Plan, and (ii) all applicable provisions of the Project Documents; and
- (d) in accordance with the provisions of this Agreement.

4.2 Optimization of Services. Except to the extent inconsistent with the then current Operating Plan, Operator shall perform all Services using all reasonable and practical efforts (a) to maximize the steam output of the Project at the design operating conditions set forth in the MSA, (b) to optimize the useful life of the Project, and (c) to minimize the time that the Project does not operate.

4.3 Liens. Provided Owner has paid to Operator all compensation due Operator under this Agreement, Operator shall not directly or indirectly create, incur, assume or suffer to be created by it, or any Subcontractor, employee, materialman or other supplier to Operator of goods or services, any claim, lien, charge or encumbrance on the Project site, the Project or any part thereof or interest therein, and Operator shall promptly pay or discharge, and discharge of record, any such claim, lien or encumbrance for labor, materials, supplies or other charges which, if unpaid, might be or become a lien upon the Project site or the Project or any component thereof. Upon the failure of Operator promptly to pay or discharge any such lien, claim, charge or encumbrance as required hereby within thirty (30) Days of notice of the existence thereof from any source, Owner may, but shall not be obligated to, pay, discharge or obtain a bond or security for such lien, claim, charge or encumbrance and, upon such payment, discharge or posting of security therefor, Owner shall be entitled to immediately recover from Operator on demand the amount thereof, together with all reasonable expenses incurred by Owner in connection with such payment or discharge, or set off all such amounts against any sums owed or to be owed by Owner to Operator hereunder.

4.4 Warranties and Guarantees. Operator shall use reasonable efforts to obtain warranties for Owner for parts, equipment, materials and services provided by third-

party suppliers in fulfilling Operator's obligations under this Agreement, and shall use reasonable efforts to ensure that all warranties that are obtained are assignable. Operator shall comply with all applicable warranties and guarantees made available by manufacturers or contractors and shall take no action that in any way impairs any rights or claims of Owner under any manufacturer's, supplier's or other party's warranty, except when this is not practicable in an Emergency. Upon expiration or termination of this Agreement, Operator shall assign to Owner all manufacturers' warranties which are assignable.

ARTICLE 5. PERSONNEL

5.1 Lead Operator. A duly authorized lead operator (the "Lead Operator") shall represent Operator, beginning as of the Effective Date, and continuing for the balance of the Term. The Lead Operator, and each successor Lead Operator, shall be named by Operator, by its notice to Owner, but shall be subject, after an interview of such person by Owner, to approval by Owner, which approval shall not be unreasonably withheld or delayed. Unless Owner identifies its reasons for not approving any person nominated to be Lead Operator in a notice to Operator delivered within fifteen (15) Days following such interview, the person shall be deemed approved by Owner. Upon approval or deemed approval of the Lead Operator by Owner, Operator shall not transfer such person to another position without the approval of Owner, which approval shall not be unreasonably withheld or delayed, and, where practicable, Operator shall consult with Owner in advance prior to arranging for any such transfer. The Lead Operator shall have full authority to act on behalf of Operator for all purposes in connection with this Agreement and his or her instructions, requests, approvals and decisions shall be binding upon Operator as to all matters pertaining to this Agreement and to the performance of Operator hereunder. The Lead Operator shall be responsible for the compliance with the Safety Program by all personnel.

5.2 Plant Personnel. All personnel of Operator providing Services hereunder shall (a) meet minimum job qualifications associated with their respective positions as determined by Operator, (b) possess experience and training at least equal to standards consistent with Prudent Industry Practices to carry out the tasks assigned, and (c) complete all training requirements set forth in the Safety Program prior to their commencing any services hereunder.

5.3 Employee Compensation. Operator shall retain sole authority, control and responsibility with respect to its personnel performing Services at the Project. The working hours, rates of compensation and all other labor matters relating to the performance of the Services by such personnel shall be determined solely by Operator, but in a manner consistent with industry standards and rates.

5.4 Labor Relations. Operator shall be solely responsible for all labor relations matters relating to the Services and shall at all times use and cause its Subcontractors to use reasonable efforts to maintain harmony among unions (if any) and other personnel employed in connection therewith. Operator shall use and shall cause its Subcontractors to use reasonable efforts and judgment to adopt and implement policies and practices designed to avoid work stoppages, slowdowns, disputes and strikes. Notwithstanding the foregoing, Operator acknowledges and agrees that it does not have the

authority to, and shall not enter into any contracts or collective bargaining agreements with respect to labor matters concerning the Project which govern personnel at the Project Site or which bind or otherwise obligate, or purport to bind or otherwise obligate, Owner or any successor of Owner.

5.5 Fire Prevention. Operator's personnel shall be trained in the basic elements of fire protection, including measures to ensure the safety of personnel, the handling of minor fires and situations which may result in a fire, and in emergency procedures for contacting and obtaining outside fire fighting capabilities.

5.6 Drugs and Alcohol. No personnel of Operator or any Subcontractor on the Project Site shall be under the influence of, or in possession of, any alcoholic beverage or controlled substance (except as prescribed by a physician, so long as the performance or safety of the Project is not affected thereby). Operator shall implement, maintain and enforce a written alcohol and drug abuse policy with respect to its personnel, as may from time to time be revised consistent with Operator's corporate policy and the requirements of Exhibit C, Health, Environmental and Safety Guidelines, hereto.

ARTICLE 6. INSPECTION AND COOPERATION

Owner and its representatives shall have access at all reasonable times to the Project site, Project operations, and, upon reasonable notice, documents, materials, records and accounts relating to Project operations, all for purposes of inspection and review. During any inspection or review, Owner shall comply, and shall cause its respective representatives to comply, with all of Operator's safety and security procedures, and Owner shall conduct any inspection or review in a manner causing minimum interference with Operator's activities. Operator shall cooperate with Owner in allowing other visitors access to the Project site under conditions mutually agreeable to the parties. Operator shall allow Owner's operating personnel to shadow Operator personnel while performing the Services as part of the training program for Owner's operating personnel.

ARTICLE 7. CHANGE ORDERS

7.1 Change Orders. If (i) Owner initiates any changes in the then current Operating Plan, or (ii) Operator requests changes thereto in order to enable Operator to meet the requirements of Sections 3.2 and 4.1 or (iii) as made necessary by the happening of an Emergency or Changed Circumstance (any such change being submitted in writing and herein referred to as a "Change Order"), Operator shall, prior to implementing the Change Order, notify Owner in writing and advise of the anticipated increase or decrease, if any, in the applicable budget or change in the applicable Operating Plan in connection with implementation of such change, including such detail and supporting documentation as shall be reasonably required by Owner. Unless implementation of a Change Order is necessary to avoid or mitigate losses in connection with an Emergency, Operator shall not implement such change until Owner and Operator have agreed upon the terms of the Change Order. If a Change Order is required as a result of an Emergency, Operator may implement measures necessary to avoid or mitigate damage, injury or losses to the Project; provided, however, that in the event that any such Emergency was caused by Operator's Misperformance,

Operator shall not be entitled to any reimbursement of costs or compensation for implementation of such Change Order. Additionally, Operator shall not be entitled to an increase in the applicable budget due to any changes required or caused by BSCM's warranty or make right obligations under the MSA or Operator's or BSCM's attempts to successfully perform the Acceptance Test or Annual Production Test, each as defined in the MSA.

7.2 Agreement. Owner and Operator shall endeavor diligently to reach agreement upon the terms of a Change Order within thirty (30) Days after the date of receipt of the Change Order request. If agreement is not reached within that period, the matter may be submitted to the dispute resolution procedure set forth in Article 18. Notwithstanding any other provision of this Agreement, in the event of a Changed Circumstance, Operator shall not be deemed to be in default of its obligations hereunder for failure to provide Services in compliance with Sections 3.2 and 4.1 of this Agreement if Owner fails to approve a Change Order required as a result of such Changed Circumstance; provided, that Operator notifies Owner in writing thereof promptly upon becoming aware of such Changed Circumstance.

7.3 Other Provisions Unaffected. Except to the extent a Change Order specifically amends in writing one or more provisions hereof, all provisions of this Agreement shall apply to the changes under each Change Order, and no change shall be implied as a result of any other change.

ARTICLE 8. REIMBURSABLES BUDGETS

8.1 Budgets. No later than forty-five (45) Days before the date Owner anticipates that the Commencement Date will occur through its notice to Operator pursuant to Section 11.1, and each calendar year thereafter during the Term of this Agreement, Operator shall prepare and submit to Owner proposed annual budgets for the costs of operating and maintenance Services, if any, which are not included within the Annual Base Fee, as set forth in Article 9. Such Services shall not include any services required pursuant to any warranty or make right obligations of BSCM set forth in the MSA. Such budgets shall be prepared in monthly detail with a breakdown approved by Owner, shall include such detail and supporting documents as Owner may reasonably require, and shall represent Operator's good faith estimate of the costs of Services for implementing the Operating Plan and Maintenance Plan not included within the Annual Base Fee. Owner shall promptly review Operator's proposed annual budgets and may request in writing changes, additions, deletions and modifications. Owner and Operator will then meet to agree upon final budgets which shall be approved in writing by both Parties. An approved final budget shall remain in effect throughout the applicable calendar year subject to adjustment or revision as set forth in this Agreement. Nothing contained in this Section 8.1 shall obligate Owner to approve a final budget.

8.2 No Approved Budget. If Owner has not approved Operator's proposed budget for a new calendar year, as set forth in Section 8.1, then:

(a) Operator shall nonetheless perform the Services that are essential to maintain Project performance in order to satisfy the requirements of the Acceptance Test or Annual Production Test based on the proposed annual budget, except that

Operator shall not carry out any Major System Repairs with respect to the Project unless (i) such Major System Repair is already contracted for with third parties, and was budgeted for in a prior calendar year, (ii) such Major System Repair constitutes improvements necessary or appropriate in light of an Emergency as provided in Section 3.3, or (iii) to the extent any such Major System Repair has been approved by Owner or mutually agreed upon by the Parties at such time; and

(b) Subject to mutually agreed upon adjustments, or resolution of the matter pursuant to Article 18 – Dispute Resolution, Operator shall be compensated for such Services to the extent implemented pursuant to Section 8.2(a) based upon Operator’s actual and reasonable out-of-pocket expenses for the provision of such Services, provided, however, that when a budget is finally approved after commencement of the calendar year, or the matter is resolved pursuant to Article 18, it shall immediately become effective, and shall include any adjustments necessary to make it retroactive to the first day of the calendar year. Operator shall in good faith attempt to minimize the cost of Services performed without an approved budget.

8.3 Budget Meetings. At Owner’s request, Operator shall meet with Owner:

(a) not less frequently than every two months, to review Operator’s performance under a budget and Operating Plan and Maintenance Plan for a calendar year, (or other period, as the case may be) and to consider upcoming capital expenditures under the budget and further actions to be taken by Operator in implementing such budget and/or Operating Plan and Maintenance Plan; and

(b) from time to time, on an informal basis, as reasonably requested by Owner, to review such aspects of Operator’s performance as Owner specifies.

ARTICLE 9. COMPENSATION

As compensation in full to Operator for the performance of all Services hereunder and for all costs incurred by Operator in connection therewith, Owner shall pay Operator, in the manner and at the times specified in Article 10 below, an Annual Base Fee and Reimbursable Expenses for Services provided by Operator which are not covered by the Annual Base Fee, as further set forth in this Article 9, as follows:

(a) Operator shall be entitled to an annual fee of [*] (the “**Annual Base Fee**”) payable in monthly installments in accordance with the provisions of Section 10.1, beginning with the month (to be pro-rated if such month is a partial month) in which the Commencement Date occurs. The Annual Base Fee constitutes a fixed-price annual payment agreed between Operator and Owner which shall be applicable for the Term of this Agreement (provided, however, in the event the Term of this Agreement extends beyond eighteen (18) months from the Commencement Date, the Annual Base Fee shall be revised to [*] for the remainder of the Term) covering all of Operator’s costs and expenses (whether such costs and expenses are greater or lesser than the Annual Base Fee) with respect to the following Services provided by Operator:

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personnel supervising and managing the performance of Services by Operator (including the Lead Operator), (ii) provision of labor for mirror washing and for general maintenance (including electrical and mechanical), (iii) provision of operating labor, including daily startup and shutdown, (iv) provision of mirror washing water and treatment chemicals, (v) the provision of recharge water and the treatment of such water, (vi) provision of materials, equipment, all spare parts (including those taken out of inventory following completion of the Startup Test) and small tools necessary for repairs and maintenance of the Solar Field Equipment (as defined in the MSA), pumps, valves and variable speed drives, and (vii) temporary portable sanitary services; and

(b) Operator shall be entitled to reimbursement in arrears on a monthly basis (the “**Reimbursable Expenses**”) as set forth in Section 10.1 below for its costs and expenses, as agreed by the Parties in an approved annual budget, or if there is no approved budget, in accordance with Section 8.2, with respect to the following Services, if and to the extent, provided by Operator: (i) cleaning and maintenance of the steam generator, (ii) Major System Repairs, including, major service, overhauls, repairs and replacements not covered by equipment vendors supplying equipment for the Project, or warranties provided by such vendors, or by BSCM to Owner under the MSA, (iii) the cost of electrical power for the Project, if paid for by the Operator, (iv) the cost for any blowdown or waste stream disposal and services, if paid for by Operator, (v) any project-specific insurance, including property, casualty and boiler and machinery insurance which Owner may require Operator to procure in connection with the Services provided hereunder, (vi) the cost of any additional labor and expense necessary to comply with local, state, or federal governmental reporting requirements, and any environmental requirements and operating permit fees, (vii) the cost of any governmental charges related to the Project, including property taxes, unless caused by Operator’s Misperformance, and (viii) costs and expenses incurred by Operator in connection with an Emergency, unless caused by Operator’s Misperformance.

ARTICLE 10. PAYMENT

10.1 **Invoices.** With respect to the Annual Base Fee, thirty (30) Days in advance of each calendar month beginning with the month in which the Commencement Date occurs, Operator shall furnish to Owner an invoice for such month indicating the monthly installment of [*] (such amount to be adjusted pursuant to Section 9(a), if applicable, and to be pro-rated if the first month following the Commencement Date is a partial month, or if the last month of the Term of this Agreement is a partial month) of the Annual Base Fee payable for such month. With respect to Reimbursable Expenses, at the end of each calendar month beginning with the month in which the Commencement Date occurs, Operator shall promptly prepare and furnish to Owner by the fifteenth (15th) Day of the following month, an invoice for Reimbursable Expenses incurred by Operator in connection with the provision of Services, as set forth in Article 9, paragraph (b), describing in detail the Reimbursable Expenses incurred or paid by Operator during the prior month, and setting forth the amount of any sales or use taxes paid or incurred by Operator as part of such Reimbursable Expenses during the month. Any invoices for Reimbursable Expenses shall be accompanied by purchase orders, invoices, receipts, and any other supporting documentation reasonably required by Owner to

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substantiate the Reimbursable Expenses. These invoices, together with Operator's monthly report in the form prescribed in Exhibit A – Operator Monthly Report, shall be submitted to Owner at the address set forth in Article 26. For the convenience of the Parties, Operator's initial invoice may include two (2) monthly installments of the Annual Base Fee (or a pro-rated fee for a partial month, plus a full month fee for the following month, if the first month following the Commencement Date is a partial month).

10.2 Payment. Subject to the provisions of Section 10.3 and subject to Owner's right to conduct a subsequent audit pursuant to Section 10.6, within thirty (30) Days following the date Owner receives each invoice and supporting documents under Section 10.1, Owner shall pay Operator the undisputed amount of the invoice. If Owner disputes a portion of any invoice, Operator may, without waiver of its right to payment of the disputed amount, submit a new invoice for the undisputed amount. All payments to Operator shall be made by wire transfer of immediately available funds to the account of Operator, or such other depository as Operator shall designate by written notice to Owner. Any amounts owing from Operator to Owner, including Owner's actual out-of-pocket costs for municipal water supplied to the Project, but paid for by Owner may, at Owner's option, be credited and offset against amounts owing by Owner to Operator hereunder.

10.3 Notice of Payment Disputes. Notwithstanding the foregoing provisions, if prior to the expiration of the applicable period for payment referenced in Section 10.2, Owner disputes any invoice, or a portion thereof, submitted by Operator, Owner shall, prior to the expiration of such period, provide Operator with written notice identifying the basis for such dispute. Thereafter, the payment of such disputed amounts shall be deferred until such dispute has been resolved to the satisfaction of Owner and Operator. Any dispute which is not resolved by mutual agreement shall be resolved in accordance with Article 18.

10.4 Late Payments. If there is a dispute about any amount invoiced by Operator, the amount not in dispute shall be promptly paid as described in this Article 10, and any disputed amount which is ultimately determined to have been payable prior to the actual due date of payment shall be paid with interest, at the Delayed Payment Rate, from the date due to the date of payment. Similarly, any other amount payable hereunder by either Party which is not paid on or before the date due shall bear interest at the Delayed Payment Rate from the date due to the date of payment, and the Party failing to make such payment shall be liable for all collection costs incurred by the other Party, including reasonable attorney fees.

10.5 Adjustments. Notwithstanding the payment by Owner of any Reimbursable Expenses pursuant to the foregoing provisions, Owner shall remain entitled to conduct a subsequent audit and review of all Reimbursable Expenses incurred by Operator and paid by Owner hereunder, together with any supporting documentation, in accordance with the provisions of Section 10.6 below, for a period of three (3) years from and after the close of the calendar year in which such Reimbursable Expenses were incurred. If, pursuant to any such audit and review, it is determined that any amount previously incurred by Operator and paid by Owner did not constitute a due and payable item of Reimbursable

Expense, Owner may recover such amount from Operator or deduct or cause to be deducted such amount from any payment which thereafter may become due to Operator hereunder.

10.6 Accounting and Audit Rights. Operator shall keep and maintain, or cause to be kept and maintained, at all times, in accordance with generally accepted accounting principles consistently applied, books, records, accounts and other documents sufficient to reflect accurately and completely all Reimbursable Expenses incurred pursuant to this Agreement. Such records shall include receipts, memoranda, vouchers, inventories, time reports, and accounts pertaining to the Services as well as complete copies of all subcontracts, purchase orders, service agreements and other such agreements entered into in connection therewith. Owner, its representatives and any firm of independent auditors appointed by Owner shall have access upon reasonable advance notice in writing, to all such records maintained by or for Operator, for the purposes of auditing and verifying Reimbursable Expenses; provided, however, that such audit rights shall not extend to any percentage mark-ups or other fixed amounts, including the Annual Base Fee, agreed to in advance by Owner. Owner shall have the right to reproduce any such records at its expense, and Operator shall keep and preserve all such records for a period of three (3) years from and after the close of the calendar year in which such Reimbursable Expenses or other amounts were incurred. Upon completion of any such audit, the parties shall prepare a written summary of audit findings, including a description of the resolution of any disputed item, and thereafter neither Owner, nor its assigns hereunder, shall be entitled to continuing audit rights pursuant to the foregoing in respect of any time period covered by such audit.

ARTICLE 11. RESPONSIBILITIES OF OWNER

Owner shall furnish to Operator, at Owner's expense, the information, services, materials and other items described below in this Section 11. All such items shall be made available at such times and in such manner as may be required for the expeditious and orderly performance of the Services by Operator.

11.1 Notice of Commencement Date. Owner (or BSCM under the MSA) shall give Operator at least ninety (90) Days advance notice of the anticipated Commencement Date and written notice of the occurrence of the Commencement Date on such date.

11.2 Easements. Owner shall obtain and maintain all franchises, easements, rights-of-way, permits and licenses necessary to allow the Project to be operated as contemplated under this Agreement.

11.3 Facilities. Owner shall make available to Operator such facilities for Operator's use in performing the Services as are provided to Owner by BSCM under the MSA.

11.4 Intentionally deleted.

11.5 Approval. Owner shall bear responsibility for reviewing, approving or otherwise responding to all required plans, budgets, procedures, programs and schedules in a timely fashion; provided, however, that Owner's review and approval, or

failure to review and approve, shall not relieve Operator of any of its liabilities or responsibilities under this Agreement.

11.6 Tools and Manuals. Owner shall provide Operator all special tools and spare parts for the Project furnished by BSCM or its subcontractors and suppliers under the MSA, and all BSCM supplied operations manuals to be used in connection with the Project.

11.7 Information. Owner shall provide to Operator technical, operational, and other information relating to the Project reasonably available to Owner. Operator shall be entitled to rely upon such information in the performance of the Services to the extent such information is prepared or created by Owner or its contractors.

11.8 Taxes. Owner shall have responsibility for payment of all real property taxes, personal property taxes, sales taxes, use taxes, excise taxes, fees to government agencies, and lease payments due in connection with the Project, except for sales taxes and use taxes paid by Operator as part the Services it provides pursuant to Article 9, paragraph (a).

11.9 Insurance. Owner shall provide the insurance coverages described in Section 16.1, if any.

11.10 Owner's Representative. Operator acknowledges that Owner intends to retain an authorized representative and contract administrator for purposes of this Agreement ("**Owner's Representative**"), and that Owner shall delegate to such Owner's Representative full authority to act for and on behalf of Owner with respect to the administration of this Agreement, except to the extent such authority is expressly and specifically limited by a written notice to Operator. Owner shall designate such Authorized Representative in writing to Operator. Owner and Operator agree that the acts, writings and notices of Owner's Representative with respect to Operator's Services hereunder shall be deemed to be the acts, writings and notices of Owner, binding upon Owner for all purposes of this Agreement, and Operator agrees that, except as otherwise expressly provided herein, Operator shall communicate and deal directly and solely with Owner's Representative on all matters arising under this Agreement. Claims and causes of action arising therefrom or relating thereto, however, shall be asserted only against Owner, and not against Owner's Representative, except in the case of fraudulent or willful misconduct by Owner's Representative. Owner may change its Owner's Representative at any time by written notice to Operator; provided that Operator shall be entitled to rely on instructions or decisions received from the existing Owner's Representative prior to receiving notice of such change.

11.11 Project Documents. Owner (or BSCM under the MSA) shall furnish Operator with true and complete copies of all Project Documents entered into by Owner, within ten (10) Days following the Effective Date with respect to all Project Documents entered into as of such time, and within five (5) Days following the execution, amendment or modification of any Project Document with respect to Project Documents entered into, amended or modified after the Effective Date. All such Project Documents furnished by Owner shall be deemed to be confidential information under Article 22 and

shall be returned to Owner upon the expiration or other termination of this Agreement. Operator's obligations hereunder to perform the Services in accordance with the Project Documents shall only apply to Project Documents and amendments or modifications thereof which have been furnished to Operator. In the event Operator is uncertain of the requirements imposed by any Project Document, Operator may request a clarification or instruction from Owner, which Owner shall promptly provide in writing to Operator and which, as between Owner and Operator, shall be binding upon Owner for purposes of this Agreement.

11.12 Site Access, Control and Security. Owner shall provide and maintain site access, control and security systems and employ personnel, procedures and practices in accordance with its requirements and policies and procedures.

ARTICLE 12. INDEPENDENT CONTRACTOR

Operator shall be an independent contractor with respect to the performance of the Services hereunder, and Operator shall be solely responsible for the Services, including all operating, maintenance and management means, methods, techniques, sequences, procedures, and safety and security programs employed in connection with the performance of the Services. Neither Operator nor its employees, Subcontractors, vendors or suppliers, or the employees of any such parties employed in the Project operations shall be deemed to be agents, representatives, employees, or servants of Owner. Except as otherwise expressly provided herein, this Agreement shall not constitute Operator as the legal representative or agent of Owner, nor shall Operator have the right or authority to assume, create or incur any liability or obligation, express or implied, against, in the name of, or on behalf of Owner or its members or partners. This Agreement is not intended to create, and shall not be construed to create, a relationship of partnership, joint venture, or an association for profit between Owner and Operator.

ARTICLE 13. TERM AND TERMINATION

13.1 Term. The term of this Agreement (the "**Term**") shall commence on the Commencement Date and continue for thirty (30) Days following the completion of the Annual Production Test (as defined in the MSA); provided, however, that Owner may elect to extend the Term of this Agreement for up to two (2) additional thirty (30) Day periods upon fifteen (15) Days prior written notice to Operator of such extension. Any such extension shall be on the same terms and conditions as this Agreement, including a prorated amount of the Annual Base Fee which shall be payable to Operator.

13.2 Termination for Material Breach. If a Party (hereinafter the "**Defaulting Party**") has committed a material breach of its obligations or representations and warranties under this Agreement, or violates or allows a violation of any Law applicable to the Services or the Project which violation has or may have a continuing material adverse effect on the operation or maintenance of the Project, the other Party (the "**Non-Defaulting Party**") may elect to terminate this Agreement as follows:

(a) The Non-Defaulting Party shall give the Defaulting Party a written notice describing such material default or violation in reasonable detail and demanding that the Defaulting Party cure such material default or violation.

(b) If within thirty (30) Days after receiving such notice, the Defaulting Party has not either (i) negotiated with the Non-Defaulting Party a termination of such notice, or (ii) cured the default or violation, then the Non-Defaulting Party may terminate this Agreement by written notice to the Defaulting Party; provided, however, that if the default or violation is such that it cannot be cured within such time period, but is reasonably curable within a longer period and if the Defaulting Party promptly commences action calculated to cure such default or violation within the thirty (30) Day period and thereafter diligently pursues such action to completion, the thirty (30) Day period provided in this clause shall be deemed extended for such reasonable period of time necessary to complete the cure. Notwithstanding any provision herein to the contrary, no failure of Operator to do any act or perform any Services which results from lack of budget authority or other required approval by Owner shall be deemed a breach of this Agreement.

13.3 Termination in the Event the MSA is Terminated. In the event the MSA is terminated pursuant to Section 23, paragraphs (b), (d), (g) or (j) of the MSA, then this Agreement shall also be terminated, as of the same date the MSA is terminated subject to Owner's right to extend the Term as provided in Section 13.1 hereof, by written notice by Owner to Operator provided thirty (30) Days in advance of such termination of the MSA, or such lesser period of advance notification as may be provided for in the MSA.

13.4 Termination for Insolvency. Either Party may terminate this Agreement by written notice to the other Party if the other Party (a) commences a voluntary proceeding under any federal or state bankruptcy, insolvency or reorganization law, or (b) has such a proceeding filed against it and fails to have such proceeding stayed or vacated within sixty (60) Days, or (c) upon the end of any such stay, fails to have such involuntary proceeding vacated within sixty (60) Days thereafter, or (d) admits the material allegations of any petition in bankruptcy filed against it, or (e) is adjudged bankrupt, or (f) makes a general assignment for the benefit of its creditors, or (g) has a receiver appointed for all or a substantial portion of its assets and is not discharged within sixty (60) Days after such appointment, or (h) is unable to pay its debts generally as they become due except where due to a failure of payment by Owner hereunder.

13.5 Termination Payment. In the event of a termination of this Agreement pursuant to Section 13.2 (where Owner is the Defaulting Party) or Section 13.3, Operator shall be entitled, in addition to all other amounts due to it hereunder as of the date of termination, to receive a termination payment equal to all costs and expenses reasonably incurred by Operator as a direct result of such termination, including (a) all severance costs incurred with respect to Operator's employees which Operator is contractually or legally obligated to pay to its employees or which are incurred with the prior written consent of Owner in accordance with established personnel policies of Operator, and (b) other costs reasonably incurred by Operator in withdrawing from the Project and otherwise demobilizing its operations with respect to the Project. Such amounts shall be due and payable by Owner, less any amounts owing from Operator to Owner under this Agreement, within thirty

(30) Days of Operator's submission of an invoice therefor, which invoice shall include a statement of all such costs and expenses covered thereby and such supporting documentation and additional data as Owner may reasonably request.

13.6 Effect of Termination. No termination of this Agreement shall deprive a Party of amounts or other performance due to such Party for any period prior to the date of such termination, or relieve any Party of the consequences of its breach of this Agreement. Election to terminate this Agreement pursuant to Section 13.2 shall not constitute an election of remedies and, subject to Article 20, shall be without prejudice to any other rights or remedies at law or in equity available to the Non-Defaulting Party by reason of any default of the other Party.

ARTICLE 14. ASSIGNMENT

This Agreement may not be assigned by either Party without the prior written consent of the other Party hereto, which consent may be granted or withheld in the Party's sole discretion, except that this Agreement may be assigned without such consent (i) by either Party, to an Affiliate of the assigning Party, or (ii) by Owner to its Affiliate, San Joaquin Valley Strategic Business Unit; provided that any such assignment hereunder (but excluding an assignment by Operator to Operator's yet-to-be formed Affiliate, BrightSource Operating Services, LLC) shall not relieve the assigning Party of any of its obligations under this Agreement. Except with respect to the assignment permitted under this Section, no assignment by either Party of this Agreement for any purpose whatsoever shall be valid unless all obligations of the assignor hereunder have been assumed by the assignee by written agreement delivered to the other Party. This Agreement shall be binding upon and shall inure to the benefit of the successors and permitted assigns of the Parties. Any assignment which does not comply with the provisions of this Article shall be null and void.

ARTICLE 15. INDEMNIFICATION

15.1 Operator Indemnification. To the fullest extent permitted by Law, but subject to the limitations set forth in Sections 20.1 and 20.3, Operator shall defend, indemnify and hold Owner and its Indemnitees harmless from and against any and all claims, actions, damages, expenses (including reasonable attorneys' fees), losses or liabilities incurred by or asserted against Owner or any of its Indemnitees for injury (including death) to persons or damage or destruction to property and any and all fees, costs or penalties incurred by Owner or any of its Indemnitees, to the extent that such claims, actions, damages, expenses, losses, liabilities, fees, costs or penalties are caused by or arise out of Operator's Misperformance; provided that Operator shall not be required to indemnify Owner or any of its Indemnitees for any loss or claim to the extent such loss or claim is due to the negligence or willful misconduct of Owner or any of its Indemnitees.

15.2 Owner Indemnification. To the fullest extent permitted by Law, but subject to the limitations set forth in Section 20.1, Owner shall defend, indemnify and hold Operator and its Indemnitees harmless from and against any and all claims, actions, damages, expenses (including reasonable attorneys' fees), losses or liabilities incurred by or asserted against Operator or its Indemnitees for injury (including death) to persons or damage

or destruction to property and any and all fees, costs or penalties incurred by Operator or any of its Indemnitees, to the extent that such claims, actions, damages, expenses, losses or liabilities are caused by the negligence, fraud or willful misconduct of Owner, its Affiliates, employees, partners, agents, officers or directors; provided that except to the extent set forth in Section 15.4 below, Owner shall not be required to indemnify Operator or any of its Indemnitees for any loss or claim to the extent such loss or claim is due to the negligence or willful misconduct of Operator or any of its Indemnitees.

15.3 Employee Claims. With respect to any claims against an indemnified Party hereunder by an employee of an indemnifying Party or anyone directly or indirectly employed by the indemnifying Party or anyone for whose acts it may be liable, the indemnification obligations stated in Sections 15.1 and 15.2 above shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the indemnifying Party under any applicable worker's compensation Law, disability Law or other employee benefit Law.

15.4 Hazardous Waste and Archaeological Discoveries.

(a) Upon the discovery of any hazardous waste or toxic materials existing at the Project site, for which Operator does not have liability under clause (b) below, or of any article of value or antiquity or of archaeological interest, Operator shall (i) promptly cease work in the affected area and direct its personnel and Subcontractors not to remove or further disturb the material or item; (ii) promptly notify Owner of such discovery; (iii) use all reasonable efforts to mitigate the effects of any such discovery on the performance of the Services; and (iv) follow any and all directions of Owner or its representatives with respect to such discoveries. Operator shall not be required to remove or handle any such hazardous waste or toxic materials. Owner shall be responsible for the removal from the Project site or for otherwise making safe in accordance with applicable Law any such hazardous waste or toxic materials existing at the Project site, and Owner shall indemnify, defend and hold harmless Operator and each of its Indemnitees with respect to any such hazardous waste or toxic materials. Such indemnity shall apply whether or not Operator or an Operator Indemnitee was or is claimed to be passively, concurrently, or actively negligent, and regardless of whether liability without fault is imposed or sought to be imposed upon one of more of the Operator Indemnites. Any item of value or archaeological interest shall, as between Owner and Operator, be deemed to be the property of Owner.

(b) Operator shall be liable for, and shall indemnify, defend and hold harmless Owner and each of its Indemnites with respect to, any hazardous waste or toxic materials created, brought on, handled at, generated or disposed from the Project site by Operator, its personnel or any Subcontractor, but only to the extent such action or conduct of Operator or its Subcontractor is not in accordance with the provisions of this Agreement or applicable Law. At its own expense, Operator shall perform or cause to be performed all necessary clean-up, removal, remediation and disposal with respect to any such hazardous waste or toxic materials for which Operator is responsible in compliance with all applicable Law.

15.5 Procedures. All claims for indemnification under this Agreement shall be asserted and resolved as follows:

(a) A Party claiming indemnification under this Agreement (an “**Indemnified Party**”) shall with reasonable promptness (i) notify the Party from whom indemnification is sought (the “**Indemnifying Party**”) of any third-party claim or claims (“**Third Party Claim**”) for which indemnification is sought and (ii) transmit to the Indemnifying Party a written notice (“**Claim Notice**”) describing in reasonable detail the nature of the Third Party Claim, a copy of all papers served with respect to such claim (if any), an estimate of the amount of damages attributable to the Third Party Claim to the extent feasible (which estimate shall not be conclusive of the final amount of such claim) and the basis of the Indemnified Party’s request for indemnification under this Agreement; provided, however, that no delay on the part of the Indemnified Party in providing the Claim Notice shall relieve the Indemnifying Party from its obligations hereunder unless (and then only to the extent) the Indemnifying Party is damaged by such delay.

Within thirty (30) days after receipt of any Claim Notice (the “**Election Period**”), the Indemnifying Party shall notify the Indemnified Party (X) whether the Indemnifying Party disputes its potential liability to the Indemnified Party with respect to such Third Party Claim and (Y) whether the Indemnifying Party desires, at the sole cost and expense of the Indemnifying Party, to defend against such Third Party Claim, whether or not it disputes its potential liability to the Indemnified Party with respect to such Third Party Claim.

(b) If the Indemnifying Party notifies the Indemnified Party within the Election Period that the Indemnifying Party elects to assume the defense of the Third Party Claim, then the Indemnifying Party shall have the right to defend, at its sole cost and expense, with counsel reasonably satisfactory to the Indemnified Party, such Third Party Claim by all appropriate proceedings, which proceedings shall be prosecuted diligently by the Indemnifying Party in accordance with this paragraph (b), unless and until the Indemnifying Party notifies the Indemnified Party that it chooses to cease such defense. The Indemnifying Party shall have full control of such defense and proceedings, including any compromise or settlement thereof, subject to the restrictions contained herein. The Indemnified Party is hereby authorized, at the sole cost and expense of the Indemnifying Party (but only if the Indemnified Party is entitled to indemnification hereunder), to file, during the Election Period, any motion, answer or other pleadings that the Indemnified Party shall reasonably deem necessary or appropriate to protect its interests or those of the Indemnifying Party and not materially prejudicial to the Indemnifying Party. If requested by the Indemnifying Party, the Indemnified Party agrees, at the sole cost and expense of the Indemnifying Party, to cooperate with the Indemnifying Party and its counsel in contesting any Third Party Claim that the Indemnifying Party elects to contest. Except as otherwise provided herein, the Indemnified Party may participate in, but not control, any defense or settlement of any Third Party Claim controlled by the Indemnifying Party pursuant to this paragraph (b) and shall bear its own costs and expenses with respect to such participation, provided, that if the parties to any suit or proceeding shall include the Indemnifying Party as well as the Indemnified Party and the Indemnified Party shall have been advised by counsel that one or more legal defenses may be available to it that may not be available to the Indemnifying Party, then the Indemnifying Party shall be obligated to bear the reasonable

fees and expenses of counsel of the Indemnified Party, which shall be selected by the Indemnified Party in its complete and sole discretion. Notwithstanding the foregoing, the Indemnified Party may, at any time and in its sole discretion, release the Indemnifying Party from its obligations hereunder with respect to a Third Party Claim and thereafter assume control of the defense or settlement thereof at its sole cost and expense.

(c) If the Indemnifying Party fails to notify the Indemnified Party within the Election Period that the Indemnifying Party elects to defend the Indemnified Party pursuant to paragraph (b) above, or if the Indemnifying Party provides notice pursuant to paragraph (b) above that it will cease the defense of the Indemnified Party or elects to defend the Indemnified Party, but fails diligently and promptly to prosecute or settle the Third Party Claim, then the Indemnified Party shall have the right to defend, at the sole cost and expense of the Indemnifying Party (but only if the Indemnified Party is entitled to indemnification hereunder), the Third Party Claim by all appropriate proceedings, which proceedings shall be promptly and vigorously prosecuted by the Indemnified Party to a final conclusion or settled. The Indemnified Party shall have full control of such defense and proceedings with respect to the liability of the Indemnified Party but not the Indemnifying Party.

(d) Notwithstanding the foregoing, if the Indemnifying Party has delivered a written notice to the Indemnified Party to the effect that the Indemnifying Party disputes its potential liability to the Indemnified Party hereunder and if such dispute is resolved in favor of the Indemnifying Party, the Indemnifying Party shall not be required to bear the costs and expenses of the Indemnified Party's defense pursuant to paragraphs (b) or (c) above, or of the Indemnified Party's participation therein at the Indemnifying Party's request, and the Indemnified Party shall reimburse the Indemnifying Party in full for all costs and expenses of such litigation.

(e) The Indemnifying Party may participate in, but not control, any defense or settlement controlled by the Indemnified Party pursuant to paragraph (c) above, and the Indemnifying Party shall bear its own costs and expenses with respect to such participation.

(f) In the event any Indemnified Party should have a claim against any Indemnifying Party hereunder that does not involve a Third Party Claim, the Indemnified Party shall transmit to the Indemnifying Party a written notice (the "**Indemnity Notice**") describing in reasonable detail the nature of the claim, a reasonable estimate of the amount of damages attributable to such claim to the extent feasible (which estimate shall not be conclusive of the final amount of such claim) and the basis of the Indemnified Party's request for indemnification under this Agreement. If the Indemnifying Party does not notify the Indemnified Party within thirty (30) days from its receipt of the Indemnity Notice that the Indemnifying Party disputes such claim, the claim specified by the Indemnified Party in the Indemnity Notice shall be deemed a liability of the Indemnifying Party hereunder. If the Indemnifying Party has timely disputed such claim, as provided above, such dispute shall be resolved pursuant to Article 18.

15.6 **Payment**. In the event either Party is required to make an indemnity payment under this Article 15, such Party shall promptly pay the indemnified

Party the amount so determined. The amount owing to the indemnified Party shall be the amount of such indemnified Party's actual out-of-pocket loss or expense, net of any insurance or other recovery paid to such indemnified Party. If there is a dispute as to the amount or manner of determination of any indemnity obligation, the indemnifying Party shall nevertheless pay when due such portion, if any, of the obligation as is not subject to dispute. Upon the payment in full of any claim, the indemnifying Party making payment shall be subrogated to the rights of the indemnified Party against any person with respect to the subject matter of such claim.

15.7 Not a Reimbursable Expense. It is understood and agreed by the Parties that any costs or expenses incurred by Operator pursuant to its indemnity obligations under this Article 15, including the cost of any deductibles with respect to the insurance maintained by Operator or Owner pursuant to Article 16, shall be for Operator's own account and shall not constitute a Reimbursable Expense under this Agreement.

15.8 Term of Indemnity. Notwithstanding any other provision in this Agreement to the contrary, the indemnification obligations and rights set forth in this Article 15 shall survive the expiration or other termination of this Agreement with respect to events, occurrences or conditions existing or arising on or prior to such expiration or other termination.

ARTICLE 16. INSURANCE

16.1 Intentionally deleted.

16.2 Operator's Insurance. It is understood and agreed by the Parties that neither the minimum policy limits of insurance required in connection with the Services under this Article 16 nor the actual amounts of insurance maintained under any insurance program in any way limit or reduce Operator's liability and indemnity obligations under this Agreement.

Provider shall maintain or cause to be maintained the following insurance and all such other insurance as required by the applicable law:

(a) Worker's Compensation and Employer's Liability Insurance as prescribed by applicable laws of the country in which the Services will be performed and the states and/or countries of residence of expatriate employees, including coverage under the Longshoremen's and Harbor Worker's Act, the Jones Act, Death on the High Seas Act and the Outer Continental Shelf Lands Act, if applicable;

(b) Automobile Bodily Injury and Property Damage Liability Insurance extending to all vehicles provided by Operator in the performance of the Services. The policy limits for such insurance must be higher of the amount required by applicable law and [*] or its currency equivalent combined single limit per occurrence; and

(c) Comprehensive or Commercial General Liability (Bodily Injury and Property Damage) Insurance, including the following supplemental or monoline

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coverages: Contractual Liability to cover the liabilities assumed in this Agreement, Products and Completed Operations, coverage for explosion and collapse (limit of [*]), Sudden and Accidental Pollution (limit of [*]) and a cross-liability endorsement or severability of interest clause. The policy territory coverage shall include the area in which the Services are to be performed. The policy limits must be not be less than [*] combined single limit per occurrence.

16.3 Deductibles or Self-Insured Retentions. Operator is solely responsible for payment of all deductibles or self-insured retentions that are applicable to any claims made against the Owner covered by insurance policies required to be maintained or caused to be maintained by Operator under this Article 16. The level of these deductibles or retentions must be reasonable and compatible with that expected of a prudent contractor in similar circumstances.

16.4 Evidence of Insurance. Before commencing the Services, Operator shall provide Owner with certificates or other documentary evidence satisfactory to Owner of the insurance and endorsements set forth in Sections 16.2 and 16.5. Acceptance of any such certificate by Company shall not constitute a waiver, release or modification of any of the insurance coverages and endorsements required under this Article 16. Upon request of Owner, Operator shall provide copies of insurance policies required pursuant to this Agreement.

16.5 Endorsements.

(a) Operator shall, or shall cause the insurers to, provide Owner with thirty (30) days' written notice (ten (10) days for nonpayment of premium therefor) prior to the cancellation or making of a material change of the insurance required by Section 16.2 above.

(b) The insurance specified in Section 16.2 above shall contain waivers of subrogation rights in favor of the Indemnitees.

(c) The insurance specified in subsections 16.2(b) and 16.2(c) above shall:

- (A) name the Owner as an additional insured to the extent of the liabilities assumed by Operator under this Agreement. The coverage provided to the Owner as additional insured must expressly include liability imposed or sought to be imposed upon the Owner to the extent that Operator has assumed such liabilities under the Agreement;
- (B) provide that the insurance is primary coverage with respect to all insureds, including additional insureds, and shall not be considered contributory insurance with any insurance policies of any insureds, including additional insureds; and

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- (C) provide a cross-liability or severability of interest clause that has the effect of ensuring that each insured (including additional insureds) is covered as a separate insured.

16.6 Waiver of Subrogation for Physical Damage Insurance. Operator shall obtain a written waiver of subrogation in favor of the Owner from insurers who provide physical damage insurance with respect to any property used in the performance of the Services to the extent Operator has assumed liability for its property under this Agreement.

16.7 Insurance Required from Subcontractors. Without in any way limiting Operator's liability pursuant to Article 16, Operator shall cause its subcontractors, subject to appropriate adjustments given the nature, location, and extent of the activities of said subcontractors, to obtain the insurance coverage and endorsements set forth in Sections 16.2(a) and 16.2(b) and 16.5(a) and 16.5(b) above, but with the Owner named as an additional insured thereon.

ARTICLE 17. NON-WAIVER OF BREACH

Either Party may specifically waive any breach of this Agreement or compliance with any of the terms hereof by the other Party, but no such waiver shall be deemed to have been given unless such waiver is in writing, signed by the waiving Party and specifically designates the breach or compliance which is waived, nor shall any such waiver constitute a continuing waiver of similar or other breaches or of other future compliance.

ARTICLE 18. DISPUTE RESOLUTION

18.1 Negotiation of Disputes and Disagreements. The Parties shall attempt within forty five (45) days after the date (the "**Issue Date**") an issue is presented to it in good faith to resolve any dispute, controversy or claim related to this Agreement, with the exception of a Tax dispute, but including any dispute over the breach, interpretation, or validity, but not the termination, of this Agreement.

18.2 Arbitration.

(a) If Owner and Operator are unsuccessful in their good faith attempt to resolve the dispute, the dispute shall be submitted to, and settled by, binding arbitration in San Francisco, California. The Parties shall, within twenty (20) days after the formal conclusion of the mediation but not later than one hundred twenty (120) days after the Issue Date, select a mutually agreed upon single arbitrator and may utilize any format and rules for the binding arbitration upon which they may mutually agree. If the Parties are unable to so agree, the dispute shall be submitted to a single arbitrator in San Francisco, California chosen by the Parties from a list of retired judges and justices at JAMS, San Francisco, California. Should the Parties be unable to agree on a choice of arbitrator within thirty (30) days from the date of the aforesaid submission to arbitration,

the contract arbitration administrator of JAMS in San Francisco, California shall furnish to each party a list of three names and each side shall strike one name, thereby nominating the remaining person as the arbitrator. If more than one name remains, the contract arbitration administrator of JAMS will choose an arbitrator from the list of remaining names. In no event is the arbitrator authorized or empowered to award punitive or consequential damages or damages in excess of actual direct damages. The arbitration award shall be in writing and shall specify the factual and legal basis for the award. Judgment upon any award rendered by the arbitrator may be entered in any court with jurisdiction. The arbitrator shall determine the allocation of the costs and expenses of arbitration based upon the percentage which the portion of the contested amount not awarded to each Party bears to the amount actually contested by such Party. For example, if the Owner submits a claim for \$1,000 and if the Operator contests only \$500 of such amount, and if the arbitrator resolves the dispute by awarding the Owner \$300 of the \$500 contested, then the costs and expenses of arbitration will be allocated 60% (i.e., 300 divided by 500) to the Operator and 40% (i.e., 200 divided by 500) to the Owner.

(b) *Injunctive Relief*. Notwithstanding any of the foregoing, either Party may request injunctive relief and/or equitable relief from the arbitrators or the court in order to protect the rights or property of such Party pending the resolution of the dispute as provided hereunder.

(c) *Injunctive Relief Upon Breach of Confidentiality*. In the event of a breach or threatened breach of the confidentiality provisions of Article 22 hereof by a Party, the other Party will suffer irreparable damages and its remedy at law will be inadequate. Therefore, if the disclosing Party threatens to breach or actually breaches such confidentiality provisions, the other Party shall be entitled, in addition to all other remedies available to it at law or in equity, to the following: (a) equitable relief, including specific performance and injunctive relief to enforce any confidentiality provision hereof and to restrain such disclosing Party from using or disclosing, in whole or in part, directly or indirectly, any Confidential Information, without having to prove that actual damages or monetary damages would not be an adequate remedy, and without having to post a bond and (b) recovery for damages, losses, and expenses of any nature (including, but not limited to, attorneys' fees and other litigation expenses) arising out of, resulting from, or otherwise relating to such breach or threatened breach

18.3 Applicable Law. The agreement to arbitrate set forth in Section 18.2 shall be enforceable in federal and state court. In deciding the substance of any claim, dispute or disagreement, the arbitrators shall apply the substantive Laws of the State of California.

18.4 Pendency of Dispute. The existence of any dispute, claim or disagreement under this Agreement or the pendency of the dispute settlement or resolution procedures set forth herein shall not in and of themselves relieve or excuse either Party from its ongoing duties and obligations under this Agreement, and Operator shall nevertheless proceed with the performance of the Services hereunder.

ARTICLE 19. FORCE MAJEURE

19.1 Definition. The term “Force Majeure” as used herein means acts, events, occurrences and conditions beyond the reasonable control, and not due to the fault or negligence, of the Party claiming Force Majeure which have an adverse effect on that Party’s ability to perform its obligations and which by the exercise of due diligence such Party could not reasonably have been expected to avoid, which may include acts of God, labor disputes (other than those affecting Operator unless such labor disputes are of a general or regional nature or affect the entire industry), fire, floods, earthquake, severe weather events outside of the range of weather conditions reasonably to be expected at the Project at the time such weather event occurs, the effect of changes in applicable Laws, actions by federal, state, or municipal agencies, actions of legislative, judicial, or regulatory agencies or denial, lapse or revocation of any permit, license or regulatory approval necessary in connection with the operation or maintenance of the Project. Force Majeure shall not include Operator’s Subcontractor or equipment vendor failures or delays, except to the extent resulting from any of the foregoing causes.

19.2 Excuse for Force Majeure. If either Party because of Force Majeure is rendered wholly or partly unable to perform its obligations under this Agreement (except any obligation to pay money), that Party shall be excused from whatever performance is affected by the Force Majeure (except any obligation to pay money) to the extent so affected provided that:

- (a) the non-performing Party, as soon as reasonably practicable but in no event later than five (5) Days after the occurrence of the Force Majeure, gives the other Party written notice describing the particulars of the occurrence,
- (b) the suspension of performance is of no greater scope and of no longer duration than is required by the Force Majeure,
- (c) the non-performing Party uses its reasonable efforts to mitigate and remedy its inability to perform (provided that this subsection shall not require the settlement of any strike, walkout, lockout or other labor dispute on terms which, in the sole judgment of the Party involved in the dispute, are contrary to its interest, it being understood that the settlement of strikes, walkouts, lockouts or other labor disputes shall be at the sole discretion of the Party having the difficulty),
- (d) No obligations of the non-performing Party which arose before the occurrence causing the suspension of performance shall be excused as a result of the occurrence, and
- (e) when the non-performing Party is able to resume performance of its obligations under this Agreement, that Party shall give the other Party written notice to that effect and shall promptly resume performance hereunder.

19.3 Legal Changes. In the event a Party is unable to perform due to legislative, judicial, or regulatory agency action, this Agreement shall be amended as appropriate to comply with the legal change which caused the non-performance.

19.4 Payment. Notwithstanding any provision herein to the contrary, during the occurrence and continuation of any event of Force Majeure, Owner shall remain obligated to pay to Operator the compensation set forth in Section 9, paragraph (a) subject to an amendment of the applicable annual budget, as the case may be, pursuant to Article 8, if appropriate, to provide for any increase or decrease in Reimbursable Expenses or other costs incurred by Operator as a result of such Force Majeure; and provided further that Operator shall use all reasonable efforts to limit the amount of expenses incurred during such period.

19.5 Owner Self-Help. If within a reasonable time after an event of Force Majeure has occurred that has caused Operator to suspend or delay performance of the Services, action to be undertaken by Operator has been identified and recommended to Operator by Owner, and Operator has failed to take such action as Operator could lawfully and reasonably initiate to remove or relieve the Force Majeure or its direct or indirect effects, Owner may, in its sole discretion and after written notice to Operator, initiate such reasonable measures as are designed to remove or relieve such Force Majeure or its direct or indirect effects, and thereafter Owner may require Operator to resume full or partial performance of the Services in accordance with the provisions of this Agreement. Without limiting the generality of the foregoing, in the event of a strike or other form of labor action or disruption by Operator's personnel affecting the operation of the Project for a period in excess of twelve (12) hours, Owner shall have the right to operate the Project itself, and to retain such other personnel, contractors or agents as Owner in its sole discretion deems necessary or advisable for such purpose.

ARTICLE 20. LIMITATIONS OF LIABILITY

20.1 Exclusion of Liability for Consequential Damages. Notwithstanding any provision in this Agreement to the contrary, neither Party nor its Affiliates, partners, members, agents, subcontractors, suppliers, vendors or their employees, of any tier, shall be liable hereunder for any consequential or indirect loss or damage, including loss of project revenues or performance, cost of capital, loss of goodwill, increased operating costs, or any other special or incidental damages; and the Parties hereby release each other and their respective Affiliates, partners, members, agents, subcontractors, suppliers, vendors and their employees, of any tier, therefrom; provided, however, that nothing in this sentence shall limit the obligations of Owner and Operator under Article 15 to indemnify the other Party with respect to claims by third parties otherwise covered by the provisions of Article 15.

20.2 Aggregate Limitation of Operator's Liability. Operator's aggregate cumulative liability to Owner during the Term of this Agreement, including liability for matters resulting from Operator's Misperformance, but excluding claims by third parties covered by the provisions of Article 15, breaches of confidentiality, and any liability arising out of Operator's activities pursuant to Section 3.2(m), shall in no event exceed [*] of the compensation paid to Operator under this Agreement; provided, that the foregoing limitation of liability shall not apply if and to the extent that any liability of Operator hereunder is funded by the proceeds of the insurance maintained by Operator or Owner pursuant to Article 16 (nor shall such proceeds count toward such aggregate

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limitation of liability). The parties agree that, except for such liability, Owner's sole remedy for breach of this Agreement by Operator, or for the failure of Operator to perform the Services in accordance with the terms and conditions hereof, shall be to terminate this Agreement pursuant to Article 13.

20.3 Release of Liability for Property Damage. Owner hereby releases Operator, its Affiliates, partners, members, agents, subcontractors, suppliers, vendors and their employees, of any tier, from any and all liability for loss or damage in excess of [*] to the Project or the Project site.

20.4 Application of Limitations of Liability. The parties further agree that the waivers and disclaimers of liability, indemnities, releases from liability, and limitations on liability expressed in this Agreement shall survive termination or expiration of this Agreement, and shall apply (unless otherwise expressly indicated), whether in contract, equity, tort or otherwise, even in the event of the fault, negligence, including sole negligence, strict liability, or breach of contract or warranty of the Party indemnified, released or whose liabilities are limited, and shall extend to the partners, principals, members, directors, officers and employees, agents and related or affiliated entities of such Party, and their partners, principals, members, directors, officers and employees.

20.5 Disclaimer. EXCEPT AS EXPRESSLY PROVIDED IN THIS AGREEMENT, NEITHER PARTY MAKES ANY WARRANTIES OR GUARANTEES TO THE OTHER, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE PROJECT OR THE SUBJECT MATTER OF THIS AGREEMENT, AND BOTH PARTIES DISCLAIM AND WAIVE ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES IMPLIED BY LAW.

ARTICLE 21. INVALIDITY

The invalidity or unenforceability of any particular provision of this Agreement shall not affect the other provisions hereof, and this Agreement shall be construed in all respects to carry out its purposes to the maximum extent legally possible, including, if necessary, as if such invalid or unenforceable provision were omitted.

ARTICLE 22. PROPRIETARY AND CONFIDENTIAL INFORMATION

22.1 Confidential Information. During the performance of the Services hereunder, it will be necessary for each Party to make its or its Affiliates' confidential technical, business or other information ("**Confidential Information**") available to the other Party. Each Party agrees to use all such Confidential Information provided by the other Party solely for the performance of this Agreement, including the operation and maintenance of the Project, and to hold all such Confidential Information in confidence and not to copy or disclose any such Confidential Information to any third party without the prior written consent of the other Party. The Owner hereby consents to limited disclosure of its Confidential Information to subcontractors, vendors, consultants, accountants and attorneys, and other agents, advisors and representatives of Operator to the extent necessary for such parties to perform their work in connection with the Services so long as such parties and their

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employees are obligated to Operator in a manner consistent with Operator's obligations under this Article 22 concerning Confidential Information. Operator hereby consents to limited disclosure of its Confidential Information to subcontractors, consultants, accountants and attorneys, and other agents, advisors and representatives of the Owner to the extent necessary for such parties to perform their work in connection with the Project so long as such parties and their employees are bound to Owner in a manner consistent with Owner's obligations under this Article 22 concerning Confidential Information. Operator and Owner each are responsible for the breach of this Article 22 by any of its own subcontractors, vendors, consultants, accountants and attorneys, and other agents, advisors and representatives. All Confidential Information shall be promptly returned to the disclosing Party or, at such Party's option, destroyed, upon any expiration or termination of this Agreement, except that the Owner may retain copies of the Confidential Information of Operator to the extent necessary in connection with the ownership, operation, maintenance, repair, and replacement of the Project and Operator may retain copies of the Confidential Information of the Owner to the extent necessary to fulfill its obligations hereunder and to document the performance of the Services.

22.2 Public Statements. Each Party shall not (i) use the names or marks of the other Party and its Affiliates in any advertisements, marketing materials, product endorsements, press releases or any other publications, documentations or announcements, including announcements about this Agreement or the activities contemplated hereunder, or (ii) photograph or video tape at the Owner's premises or at the Project, in each case without such other Party's prior written approval (except that this limitation shall not apply to the Owner with respect to the Owner's premises excluding the Project and except that this limitation shall not apply to either Party with respect to the Project so long as such photographs or video tapes are themselves considered Confidential Information and subject to the terms of Section 22.1). Operator shall not publish or publicly release any information, announcement or press release about the Project without Owner's prior written consent. Owner may publish or release any information, announcement or press release about the Project without using the names or marks of Operator in its sole discretion.

22.3 Exclusions and Required Disclosure. Except as expressly permitted herein, neither Party shall disclose to any third party any Confidential Information about the Project, including without limitation the Services and the terms and conditions of this Agreement, without the prior written consent of the other Party. The term "Confidential Information" with respect to a Party shall not include, and obligations of confidentiality herein shall not apply to, information that: (i) the other Party had in its possession at the time of disclosure to such Party hereunder; (ii) the other Party obtains from a third party who is not under an obligation of confidentiality to the disclosing Party with respect to such Confidential Information; (iii) is or becomes part of the public domain through no act or omission of other Party in violation hereof; or (iv) is independently developed by the other Party. If a Party is required by law, regulation, including rule of stock exchange, or a court or entity with competent jurisdiction to disclose Confidential Information of the other Party, such Party shall, prior to any disclosure, promptly notify the other Party in writing of such required disclosure, including the terms and circumstances thereof. An appropriate protective order may be sought by the other Party and such Party shall cooperate with the other Party in seeking such protective order. In the absence of such an order or upon the

receipt of a waiver by the other Party with respect to compliance with the provisions hereof for purposes of the required disclosure, a Party shall disclose only that portion of Confidential Information that it is advised by its counsel is legally required, it shall give the other Party written notice of what will be disclosed as far in advance as possible, and it shall take all reasonable and lawful actions to obtain confidential treatment for such disclosure.

ARTICLE 23. REPRESENTATIONS AND WARRANTIES

23.1 General Representations and Warranties. Each Party represents and warrants to the other Party that: (a) such Party has the full power and authority to execute, deliver and perform this Agreement and to carry out the transactions contemplated hereby; (b) the execution and delivery of this Agreement by such Party and the consummation by such Party of the transactions contemplated hereby have been duly authorized by all requisite corporate or, as applicable, partnership or company action, and this Agreement has been duly executed and delivered by such Party, and is enforceable against it in accordance with the terms hereof, subject, as to enforceability of remedies, to limitations imposed by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the enforcement of creditor's rights generally and to general principles of equity; (c) no authorization, consent, approval or order of, notice to, or registration, qualification, declaration or filing with, any governmental authority, is required for the execution, delivery and performance by such Party of this Agreement or the consummation by such Party of the transactions contemplated hereby, other than regulatory and similar approvals and permits needed for the construction and operation of the Project facilities; and (d) none of the execution, delivery and performance by such Party of this Agreement, the compliance with the terms and provisions hereof, and the consummation of the transactions contemplated hereby, conflicts or will conflict with or results in a breach or violation of any of the terms, conditions, or provisions of any Law, governmental rule or regulation or the charter or other organizational documents, as amended, of such Party or any applicable order, writ, injunction, judgment, or degree of any court or governmental authority against such Party or by which it or any of its properties is bound, or any loan agreement, indenture, mortgage, bond, note, resolution, contract or other agreement or instrument to which such Party is a Party or by which it or any of its properties is bound, or constitutes or will constitute a default thereunder or will result in the imposition of any lien upon any of its properties.

23.2 Additional Representations. In addition to the foregoing:

(a) Operator represents to Owner that Operator is an experienced and qualified operator of solar facilities similar to the Project and that it (i) has examined the Project Documents (as they apply to or affect the performance of Services under this Agreement) thoroughly and become familiar with their terms; and (ii) has ascertained the nature and location of the Project, the general character and accessibility of the Project site, and other general and local conditions and Laws (including labor Laws) which might affect its performance of the Services or the cost thereof and has performed such other examination and investigation as would normally be conducted by an operator and manager considering entering into an agreement such as

this Agreement to verify conditions which might affect its performance of the Services or the cost thereof.

ARTICLE 24. GOVERNING LAW

This Agreement shall be construed and enforced in accordance with the Laws of the State of California, exclusive of conflicts of laws provisions.

ARTICLE 25. ENTIRE AGREEMENT; AMENDMENTS

This Agreement, including the Exhibits hereto, which are incorporated herein by this reference, constitutes the entire agreement of the parties with respect to its subject matter as of the date hereof and shall supersede any and all prior agreements or understandings related to the same subject matter. This Agreement may be amended only by a writing signed by a duly authorized representative of each Party. Nothing in this Agreement shall modify any obligation of BSCM under the MSA or any provision of the MSA.

ARTICLE 26. NOTICES

All notices, requests, offers, reports and other communications required or permitted to be made under this Agreement shall be in writing, and shall be given by first class, registered or certified mail, postage prepaid, or by courier, or facsimile copier. All notices shall be addressed as follows:

To Operator:	BrightSource Operating Services, LLC 1999 Harrison Street, Suite 2150 Oakland, CA 94612 Attention: Chevron Solar-to Steam Project Manager Telephone: Telecopy:
With copies to:	BrightSource Energy, Inc. 1999 Harrison Street, Suite 2150 Oakland, CA 94612 Attention: Daniel T. Judge, General Counsel Telephone: (510) 250-8154 Telecopy: (510) 409-2386
To Owner:	Chevron Technology Ventures, a division of Chevron USA, Inc. 3901 Briarpark Drive Houston, TX 77042 Attention: Sergio Hoyos Telephone: (713) 954-6380 Telecopy: (713) 954-6016

With copies to: Chevron Technology Ventures, a division of Chevron USA, Inc.
3901 Briarpark Drive
Houston, TX 77042
Attention: Legal Department
Telephone:
Telecopy:

Chevron Technology Ventures, a division of Chevron USA, Inc.
3901 Briarpark Drive
Houston, TX 77042
Attention: Contracts Manager
Telephone:
Telecopy:

or at such other address or addresses as either Party may designate from time to time in writing by like notice to the other Party. Notices shall be deemed duly given at the time delivery is received at the addresses provided for above.

ARTICLE 27. COUNTERPARTS

This Agreement may be executed in counterparts, and any number of counterparts signed in the aggregate by the parties hereto shall constitute a single original document.

ARTICLE 28. NOT FOR BENEFIT OF THIRD PARTIES

Except with respect to the rights of Indemnitees under Article 15, the covenants contained herein are made solely for the benefit of the Parties and their successors and permitted assigns and shall not be construed as having been intended to benefit any third party not a Party to this Agreement.

ARTICLE 29. TITLE TO MATERIALS

Title to all materials, equipment, supplies, consumables, spare parts and other items purchased or obtained by Operator for the Project on a Reimbursable Expense basis pursuant to this Agreement shall pass immediately to and vest in Owner upon the passage of title from the vendor or supplier thereof. All materials and documents prepared or developed by Operator or its employees, representatives or Subcontractors in connection with the Project or the performance of the Services, including all manuals, programs, procedures, data, plans, specifications, reports, and accounts, and for which Operator has been compensated, shall become the property of Owner when prepared, provided, that Operator and its Subcontractors may use such materials and documents for its business purposes. All such materials and documents, together with any materials and documents furnished to Operator or to its Subcontractors by Owner, shall be delivered or turned over to Owner upon expiration or termination of this Agreement and before final payment is made to Operator.

ARTICLE 30. HEADINGS

The headings in this Agreement are for reference only and shall not affect the construction of this Agreement.

ARTICLE 31. ADDITIONAL PROVISIONS

31.1 Chevron Technology Ventures Status. Chevron Technology Ventures (“**CTV**”) is an unincorporated division of Chevron U.S.A. Inc., a Pennsylvania corporation. CTV is authorized and empowered pursuant to the Amended and Restated Articles of Incorporation and Bylaws of Chevron U.S.A. Inc. and resolutions duly adopted by the Board of Directors of Chevron U.S.A. Inc., acting through any officer of CTV, to execute for and on behalf of Chevron U.S.A. Inc. papers requiring execution in the name of Chevron U.S.A. Inc. in connection with this Agreement. By execution of this Agreement as set forth below, CTV is doing so pursuant to its authority to execute agreements on behalf of Chevron U.S.A. Inc. with the purpose and effect that this Agreement is a direct agreement by and between Chevron U.S.A. Inc. and Operator and this Agreement is enforceable directly against Chevron U.S.A. Inc. in accordance with its terms, including Articles 18 and 26 hereof. Except for this Section 31.1, each reference herein to the Owner includes Chevron U.S.A. Inc. as part of that reference.

31.2 Gifts. No director, employee or agent of Operator or of any Subcontractor or vendor of Operator shall give or receive any commission, fee, rebate, or gift or entertainment of significant cost or value in connection with the Services, or enter into any business arrangement with any director, employee or agent of the Owner or any Affiliate, other than as a representative of the Owner or its Affiliate, without the Owner’s prior written agreement. Neither Operator nor its directors, employees, agents, subsidiaries and Affiliated entities or their directors, employees or agents shall make any payment or give anything of value to any official of any government or public international organization (including any officer or employee of any government department, agency or instrumentality) to influence his or its decision or to gain any other advantage for the Owner or Operator in connection with the Services performed hereunder. Operator shall promptly notify the Owner of any violation of this Section and any consideration received as a result of such violation shall be paid over or credited to the Owner. Any representatives authorized by the Owner may audit any and all applicable records of Operator for the sole purpose of determining whether there has been compliance with this Section. Operator shall require all Subcontractors and vendors, in all agreements in connection with the Services, to agree to the inclusion therein of the provisions of this Section, excepting the final sentence hereof.

31.3 Compliance with Laws.

(a) *Generally*. Operator shall comply with all applicable Laws as they may be modified from time to time, to the extent such modifications are applicable to the Services provided hereunder. Operator acknowledges that Owner is an unincorporated division of Chevron U.S.A. Inc., a United States company, and further acknowledges that performance by Operator under this Agreement may be subject to regulations on international trade and U.S. export control laws and regulations and, in particular,

the restrictions pertaining to the export and re-export to non-United States destinations. All of Owner's obligations in connection with this Agreement are subject to applicable Laws, including, export and import controls and U.S. anti-boycott laws. Neither Owner nor Operator shall be obliged to perform any obligations hereunder if and to the extent that such performance in connection therewith would be in conflict with applicable Laws.

Import/Export. Operator is responsible for importing all property, supplies, materials or technology (hereinafter "**Export/Import Items**") that it requires to perform its obligations under this Agreement, including exporting any Export/Import Item from its country of origin, manufacture or supply and, if required by law, for exporting any Export/Import Item when no longer needed to perform the Services. Operator is responsible for securing any necessary permits, licenses, authorizations and clearances for the export and import of any Export/Import Item. If any such license or other authorization is issued which, by its terms, restricts the further distribution of the Import/Export Item, Operator must provide Owner with a full and complete copy of said license or authorization. Operator is responsible for paying any necessary customs or import duties or taxes, and all other proper and lawful charges related to port or customs clearances or charges on the import or export of goods, including, but not limited to, pilotage, agent fees, broker fees, handling charges and port dues. Operator represents that in the event that it imports or exports any Export/Import Item to comply with the terms of this Agreement, Operator's price or fee for any products or Services provided to Owner under this Agreement shall not be increased as a result of any import or export by Provider. All temporary import and export bonds shall be administered by and provided at the sole cost of Operator.

(b) *Conflict of Interest.* Neither Party shall give any director, employee or representative of the other Party any commission, fee, rebate, gift or entertainment of significant cost or value in connection with this Agreement, or enter into any other business arrangement with any director, employee or representative of the other, without prior written notification to the other Party.

(c) *Antibribery.* Neither Party nor its employees, agents, subsidiaries or Affiliates, or their employees or agents, shall make any payment or give anything of value to any official of any government or public international organization (including any officer or employee of any government department, agency or instrumentality) to influence his or its decision, or to gain any other advantage for Owner or Operator in connection with this Agreement.

(d) *Data Privacy.* Without limiting the generality of the foregoing, Operator shall comply with all reasonable written requests of the Company with respect to protecting personal data of the Owner's employees, customers and suppliers that Operator receives in connection with its performance of this Agreement, including but not limited to, following the Owner's instructions in connection with processing such personal data, implementing adequate security measures to protect such personal data commensurate with such measures Operator has in place to protect personal data of its own employees, customers and suppliers, not disclosing such personal data to any third party without the Owner's written permission, and complying with all applicable data privacy laws.

(e) *Workplace Policies.* When visiting any Owner sites or facilities, Operator shall, and shall cause its employees, Affiliates, agents, representatives, subcontractors and vendors to, comply and act in accordance with Exhibit E-1 and H and all Owner policies and procedures furnished to Operator prior to any such visit.

(f) *Permits.* The Owner shall be responsible for and obtain all the environmental permits required by any environmental Law for the installation of the Project, including biological, archeological and other applicable permits. Operator shall be responsible for all licenses and building permits required for its performance of the Services.

(g) *Federal Compliance.* To the extent applicable to this Agreement, the following clauses contained in the Code of Federal Regulations are incorporated herein by reference: 48 C.F.R. §52.203-6 (Subcontractor Sales to Government); 48 C.F.R. §52.203-7 (Anti-Kickback Procedures); 48 C.F.R. §§52.219-8 (Utilization of Small Business Concerns); 48 C.F.R. §52.219-9 (Small Business Subcontracting Plan); 48 C.F.R. §§22.804-1 and 52.222-26 and 41 C.F.R. §60-1.4 (Equal Opportunity); 48 C.F.R. §52.222-21 (Prohibition of Segregated Facilities); 48 C.F.R. §§52.222-35 and 52.222-37 and 41 C.F.R. § 60-250.4 (Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans); 48 C.F.R. §52.222-36 and 41 C.F.R. § 60-741.5 (Workers With Disabilities); 48 C.F.R. §52.223-3 (Hazardous Material Identification and Material Safety Data); 48 C.F.R. §52.223-14 (Toxic Chemical Release Reporting); 48 C.F.R. §52.225-13 (Restrictions on Certain Foreign Purchases); and 48 C.F.R. §§52.227-1 and 52.227-2 (Patent Authorization & Patent and Copyright Infringement). Operator covenants that none of its employees, or employees of its subcontractors, who provide Work to Owner pursuant to this Agreement are unauthorized aliens as defined in the Immigration Reform and Control Act of 1986. Operator shall insert the substance of the foregoing provisions of this Section into all non-exempt subcontracts or purchase orders as required. "Non-exempt" subcontracts are covered "subcontracts" under Executive Order No. 11246 (30 Fed. Reg. 12319), as amended by Executive Order No. 11375 (32 Fed. Reg. 14303) and Executive Order No. 12086 (43 Fed. Reg. 46501); Section 502 of the Rehabilitation Act of 1973 (29 U.S.C. § 793); Section 402 of the Vietnam Era Veteran's Readjustment Assistance Act of 1973, as amended (38 U.S.C. § 4212), and the regulations implementing these laws.

(h) *Notification.* Each Party shall immediately notify the other Party of any material violation of this Section 31.3 by such Party and in the case of a violation of Section 31.1(c), shall immediately reimburse the other Party an amount equal to the amount of the payment or the value of the gift to such an official which gives rise to such violation. Each Party shall hold the other Party harmless for all losses and expenses arising out of violations of this Section 31.3.

(i) *Universal Provisions.* Owner represents to Provider that Section 31.3(g) is a standard provision, and that it, or a substantially similar provision, is required by its corporate policies to be placed in every negotiated contract that it enters into in which United States Federal laws may apply, and Owner acknowledges and agrees that by its mere presence no implication is intended and no inference shall be drawn that the laws and regulations thereby incorporated by reference are applicable to the performance by Operator of its obligations hereunder.

IN WITNESS WHEREOF, the Parties hereto have caused this Operating and Maintenance Agreement to be executed by their officers or representatives thereunto duly authorized as of the Effective Date.

OWNER:

Chevron Technology Ventures, a division of Chevron
U.S.A. Inc., a Pennsylvania corporation

By: /s/ Dana Flanders

Name: Dana Flanders

Title: President

OPERATOR:

BrightSource Construction Management, Inc. a
California corporation

By: /s/ Israel Kroizer

Name: Israel Kroizer

Title: President

**OPERATING AND MAINTENANCE AGREEMENT
EXHIBIT A
OPERATOR MONTHLY REPORTS**

MONTHLY OPERATIONS REPORT

EXECUTIVE SUMMARY

OPERATIONS

- Production Statistics
- Unit Outage Summary
- Reports from all uninterruptible power supply (UPS) and backup generator run tests
- Reports from all equipment inspections during period
- Progress towards Acceptance Test and Annual Production Test (report performance record and make right costs applied towards applicable test)
- All weather and input data recorded at Project used to measure expected performance in the Performance Model (solar resource, wind, relative humidity and inlet service feedwater temperature)
- Account of all Forced Outage periods
- Performance Model predicted performance

SERVICE PROVIDED

- Manhours required for repair and maintenance itemized by activity
- Itemized quantity and costs for materials, equipment and spares used
- Amounts and costs for all water treatment chemicals used or purchased
- Water usage, itemized by amounts for blow down and mirror washing
- Reports of all mirror washing program activities, including washing frequency, if applicable
- Parasitic load electricity usage
- Spare parts inventory and replenishment costs
- Costs for sanitary services

MAINTENANCE (Significant Milestones)

- Major Maintenance Status (Planning & Scheduling Activities)

ENVIRONMENTAL HEALTH AND SAFETY (per Safety Program)

- NOV's or NOV's Reported
- Agency Visits
- Recordable Spills
- Permit Exceedances
- Lost Time Accidents
- OSHA Recordable Incident Rate
- Total Recordable Incident Rate
- Days Away from Work
- Monthly Leadership Behavior Based Observations

OPERATING AND MAINTENANCE AGREEMENT
EXHIBIT B
PROJECT SAFETY MANAGEMENT PLAN (PSMP)
Per MSA PSMP with consideration of applicability

B-1

[This Exhibit B is Identical to Exhibit E-1 to the Master Services Agreement.]

OPERATING AND MAINTENANCE AGREEMENT
EXHIBIT C
HEALTH, ENVIRONMENTAL AND SAFETY GUIDELINES
Per MSA HES with consideration of applicability

C-1

[This Exhibit C is Identical to Exhibit E to the Master Services Agreement.]

OPERATING AND MAINTENANCE AGREEMENT
EXHIBIT D
TRAINING PLAN FOR OWNER'S OPERATING PERSONNEL

The Parties acknowledge Operator's training of Owner's personnel is crucial to the successful transition to Owner of all Project operation and maintenance responsibilities after the Term. The purpose of the training plan for Operator's personnel (the "Training Plan"), set forth hereunder, is to ensure Operator (i) sufficiently trains Owner's personnel and (ii) makes available to Owner all Project-specific information, both as required for Owner's preparation to operate and maintain the Project efficiently, safely, and effectively.

Operator, in consultation with BSCM and Owner, shall develop the Training Plan. Operator's development of the Training Plan will begin as of the Effective Date, utilizing then existing BSCM training documentation as a starting point, and continue through the Term of the Agreement. After the Commencement Date, Operator shall meet with Owner quarterly to establish any upcoming training activities, if needed, and review the Training Plan.

The Training Plan will include the following:

- Guidelines for Owner representation and participation in equipment manufacturer training, if any.
- Guidelines and schedules for Owner's personnel to shadow and learn from Operator's personnel during Operator's operation and maintenance activities.
- Provisions for training sessions facilitated by Operator, if deemed applicable by both Parties, during which Operator will provide tutorials to Owner's personnel on selected operation and maintenance activities.
- Requirements for a Certification Program, jointly developed by Operator and Owner, that will set forth minimum requirements for Owner's personnel to conduct operations and maintenance activities at the Project. The Certification Program will, as practical and if applicable, include requirements of Owner's personnel for the following: (i) minimum hours of shadowing of Operator personnel during selected activities, (ii) Operator training sessions, (iii) Project specific safety training, (iv) sections of the Operation Plan and/or Maintenance Plan to be reviewed, (v) other Project Documents to be reviewed, and (vi) any other activities, qualifications or training requirements to be completed.

Owner's participation in Training Plan activities shall not interfere with Operator's ability to fulfill the obligation of its requirements under the Agreement.

**OPERATING AND MAINTENANCE AGREEMENT
EXHIBIT E
LIST OF PROJECT DOCUMENTS**

This list is to be developed by Operator in consultation with Owner.

- A. Agreements
- B. Permits

Confidential

Execution Copy

EXHIBIT A-5
MILESTONE SCHEDULE

<u>Milestone</u>	<u>Date or Weeks from Effective Date</u>
90% Design Package Submission	[*]
Pre-Engineering Buildings Substantially Complete	[*]
Tower Foundations Complete	[*]
Heliostat Reflector & Support Assembly (Start)	[*]
Solar Boiler Installation Mechanically Complete	[*]
Tower Piping Substantially Complete	[*]
Mechanical Completion	[*]
Startup Test Complete	[*]
* Confidential Treatment Requested	

Confidential

Execution Copy

EXHIBIT A-6

MAJOR EQUIPMENT – PURCHASE AGREEMENT RELEASE LIST

1. Solar Boiler, including Receiver Block (B-301), Boiler Drum (E-301), and Boiler Circulation Pumps (P-301 A/B/C)
2. Elevator (K-802)
3. Boiler Makeup Pumps (P-802 A/B)
4. Heliostats
5. Water Treatment System

*Confidential**Execution Copy***EXHIBIT B****SCHEDULE OF MILESTONE PAYMENTS**

Progress payments shall be made under the Agreement upon achievement of the following milestones as set forth in the Agreement, based upon the lump sum Contract Price of \$26,000,000. (Progress payments need not be sequential, but shall be made upon achievement of each milestone.)

1. Payment of [*] within ten (10) days of execution of the MSA, net of the amount paid to date for engineering, including the engineering scope change: [*].
2. [*] upon delivery to the site of 50% +/- 5% in value (as set forth in Exhibit B-1) of the Solar Field Equipment (excluding the control system): [*].
3. [*] upon delivery of substantially all of the balance of the Solar Field Equipment (excluding the control system): [*].
4. [*] upon substantial completion of the concrete works: [*].
5. [*] upon substantial completion of installation of the Solar Field Equipment: [*].
6. [*] upon substantial completion of tower erection and boiler installation: [*] (completion does not include connection of the balance of plant piping and associated items to the boiler and boiler insulation and cladding).
7. [*] upon satisfactory completion of the Acceptance Test, or if such Test is not passed, upon termination of this Agreement pursuant to Section 23(g): [*].
8. [*] upon satisfactory completion of the Annual Production Test or payment (which can be taken as a credit against the amount due below) of the liquidated damages in Exhibit F for failure to pass such Test: [*]. (Provider can receive these funds upon successful completion of the Acceptance Test if it provides a bond or letter of credit for this amount, which will be held by Company until satisfactory completion of the Annual Production Test.)

* Confidential Treatment Requested

* Confidential Treatment Requested

*Confidential**Execution Copy*

EXHIBIT C
DISCOUNT SCHEDULE

Delivery Delinquency Discount Schedule

<i>Timing of Contract Execution ⁽¹⁾</i>	<i>Delivery Delinquency Discount Amount ⁽²⁾</i>
Less than or equal to 24 months	<i>One time discount of [*] plus [*] every month thereafter</i>
Greater than 24 months, Less than or equal to 36 months	<i>One time discount of [*] plus [*] every month thereafter</i>
Greater than 36 months, Less than or equal to 48 months	<i>One time discount of [*] plus [*] every month thereafter</i>
Greater than 48 months, Less than or equal to 60 months	<i>One time discount of [*] plus [*] every month thereafter</i>

- (1) Months after completion of the Acceptance Test, as defined in Exhibit F, by which a contract for a Commercial-Scale Facility is executed between the Parties or their respective Affiliates.
- (2) If time of delivery is greater than 20 months after execution of a contract for a Commercial-Scale Facility, Provider, or its Affiliate, will pay Company, or its Affiliate, the one-time discount plus the corresponding monthly discount for every month of delinquency thereafter.

Delivery Delinquency Discount Example

[*]

* Confidential Treatment Requested

Confidential

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EXHIBIT D
AREAS OF EXCLUSIVITY

[*]

* Confidential Treatment Requested – Two Pages Omitted

Confidential**Execution Copy****EXHIBIT E****HEALTH, SAFETY AND ENVIRONMENTAL GUIDELINES**

Attached hereto is the Independent Contractor Health, Environmental and Safety Guidelines applicable, as amended as set forth below, to the Scope of Work under the Master Services Agreement dated as of December 17, 2008 by and between Chevron Technology Ventures, a division of Chevron U.S.A. Inc. and BrightSource Construction Management, Inc.

The attached document is hereby amended as set forth below for all purposes under said Agreement. Each such amendment is hereby made because the topic is covered elsewhere in the Contract Documents or is otherwise inapplicable to the Scope of Work. No implication is intended and no inference shall be drawn that the substance of the provisions hereby excluded are either included or not included elsewhere in the Contract Documents.

<u>Page(s) Number</u>	<u>Section(s) Number</u>	<u>Action</u>
1	1.2, 1.3, 1.4	Not Applicable
4	8	Not Applicable
8	15.11	Not Applicable
23	26.3(H)	Not Applicable
28-30	30	Not Applicable
33	32	Not Applicable

INDEPENDENT CONTRACTOR HEALTH, ENVIRONMENTAL AND SAFETY GUIDELINES

COMPANY is committed to providing a safe, healthy workplace for its employees and those of its contractors and subcontractors. The safety and well-being of those with whom we work is of paramount importance to COMPANY. Job safety is considered a critical driver in our aim to achieve operational excellence and incident-free operations through safe, reliable, efficient and environmentally sound operations.

CONTRACTOR shall comply with the following Independent Contractor Health, Environmental and Safety Guidelines when performing work for COMPANY. These guidelines are to be considered as minimum standards. These guidelines are intended to supplement, not replace, CONTRACTOR's safety program. It is CONTRACTOR's responsibility to develop and implement a program to assure exemplary workplace health, environmental and safety protection. CONTRACTOR's compliance with these guidelines in no way alters CONTRACTOR's status as an independent contractor or CONTRACTOR's liability and indemnity under this Contract.

1. RESPONSIBILITY FOR COMPLIANCE

- 1.1 CONTRACTOR shall communicate these guidelines, as well as any other health, environmental and safety requirements provided by COMPANY, to all of its employees, subcontractors, and the employees of its subcontractors. Additionally, CONTRACTOR shall ensure that all such employees and subcontractors are made aware of the content of the guidelines and any other requirements prior to beginning work. CONTRACTOR shall maintain written documentation of its fulfillment of this responsibility.
- 1.2 CONTRACTOR shall comply with all applicable health, environmental and safety laws, regulations, rules, and standards and any other requirements specified by COMPANY in connection with the performance of work for COMPANY.
- 1.3 CONTRACTOR shall also require its subcontractors to comply with such health, environmental and safety laws, rules, regulations and standards and any other requirements specified by COMPANY in connection with the performance of work for COMPANY and shall be responsible for ensuring such compliance by its subcontractors.
- 1.4 Prior to the commencement of any work activity, CONTRACTOR shall provide COMPANY with the name of its qualified representative(s) and those of its subcontractors who will be responsible for health, environmental and safety protection at the job site(s).
- 1.5 CONTRACTOR shall have in place a comprehensive Health, Environmental and Safety (HES) program with a strong focus on continuous performance improvement. At any time and from time to time, COMPANY may require CONTRACTOR to furnish COMPANY with a copy of CONTRACTOR's HES program together with complete details concerning the implementation of such program. COMPANY shall have the right to audit CONTRACTOR's HES program. These guidelines are intended to supplement,

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not replace, CONTRACTOR's HES program, for which CONTRACTOR remains responsible.

2. HEALTH, ENVIRONMENTAL AND SAFETY PROTECTION

- 2.1 Prior to the performance of work, COMPANY will tell CONTRACTOR if a HES Protection Work Plan is required, the scope of the Plan, and the required submission date to COMPANY.
- 2.2 If required by COMPANY, CONTRACTOR shall submit a HES Protection Work Plan to COMPANY for review. The Plan shall describe the health, environmental and safety issues and risks associated with the work, and CONTRACTOR's and its subcontractors' safety and environmental programs in place to address these issues.
- 2.3 CONTRACTOR's HES Protection Work Plan shall be based on, and comply with, applicable laws, decrees, administrative rules and regulations, relevant COMPANY policy and operating procedures, and oil field best practices
- 2.4 Prior to starting work, CONTRACTOR's on-site manager shall participate in a safety and environmental protection orientation with the designated COMPANY representative.
- 2.5 Prior to starting project, the Contractor shall meet with the Company representative to discuss emergency procedures, alarm systems, shutdown controls, H₂S precautions, protective clothing and equipment, fire protection equipment and hazardous chemical precautions.
- 2.6 Prior to starting work, the COMPANY representative may review CONTRACTOR's HES Protection Work Plan and either accept it, or return it to CONTRACTOR with notice of deficiencies.
- 2.7 CONTRACTOR shall not start work without a HES Protection Work Plan, if required, that has been accepted by COMPANY.
- 2.8 Prior to starting any non-routine or safety critical work, CONTRACTOR shall perform a Daily Job Safety Analysis ("JSA") as directed by the COMPANY. The JSA shall (i) carefully study and record each step of a job, (ii) identify existing and/or potential equipment, environmental, or action-generated job hazards, and (iii) determine the best way to perform the job to reduce or eliminate hazards. The JSA shall be communicated to and fully understood by all persons who will participate in the performance of the work. CONTRACTOR shall, upon COMPANY's request, furnish COMPANY with a copy of each JSA and documentation showing that the JSA has been communicated to and fully understood by all workers.
- 2.9 CONTRACTOR shall participate in a Behavioral Based Safety Process which shall include training personnel to observe co-workers for safe (and at-risk) performance and provide feedback after the completion of the observation.

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3. ENTRANCE TO PROPERTY

- 3.1 COMPANY will advise CONTRACTOR of security requirements imposed during travel to COMPANY facilities and while performing work on COMPANY premises. CONTRACTOR and its subcontractors shall comply with all security requirements.
- 3.2 CONTRACTOR and its subcontractors shall ensure that only those persons having authorized business in connection with the Contract are allowed on the work site.
- 3.3 CONTRACTOR's employees may be required to enter areas which are hazard posted for concentrations of Hydrogen Sulfide (H₂S). CONTRACTOR shall provide its employees and subcontractors with an H₂S monitor to take into such areas after instructing its employees and subcontractors in its use. Said employees shall be qualified to use Supplied Air Breathing Apparatus (SABA). CONTRACTOR's employees and subcontractors shall immediately leave any such area and notify COMPANY if 10 parts per million H₂S or higher concentration is detected by the monitor. Entering confined or enclosed spaces without SABA shall not be undertaken if the atmosphere is over 10 ppm H₂S. All CONTRACTOR's employees shall conform to COMPANY H₂S Personnel Policy pursuant to CAL/OSHA General Industry Safety Order 5144(c). THERE WILL BE NO EXCEPTIONS.

4. TRAFFIC AND VEHICLES

- 4.1 All CONTRACTOR and subcontractor traffic on COMPANY property shall observe the posted speed limit, or if not posted, a safe speed in light of existing conditions and shall follow any other safe driving practices as may be established by COMPANY.
- 4.2 CONTRACTOR and its subcontractors shall ensure that all vehicles, cranes and rigging, vessels, and equipment they provide are maintained in safe operating condition and that operators are properly qualified, licensed and/or certified.
- 4.3 CONTRACTOR and subcontractor-provided vehicles shall be equipped with appropriate seat belts for driver and passengers. CONTRACTOR and its subcontractors shall ensure that vehicle seat belts are always used.
- 4.4 COMPANY prohibits CONTRACTOR and subcontractors from using a cell phone, whether hand-held or hands-free, while driving or operating heavy equipment. In addition, CONTRACTORS and subcontractors are discouraged from and to the maximum extent possible shall avoid, engaging in other forms of "multi-tasking" such as the use of two-way radios and pagers, eating, or taking notes while operating a motor vehicle. This policy applies when on COMPANY property or when using a COMPANY-owned or leased vehicle, rental vehicle, or personal vehicle for COMPANY business or while engaged in the operation of heavy equipment on COMPANY's premises.

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5. SMOKING

- 5.1 Smoking is permissible only in designated areas. Smoking is prohibited in all areas containing crude oil or fuel storage, gas processing and compression equipment, and separation or treating equipment.
- 5.2 COMPANY shall have the right to order persons observed smoking in unauthorized areas to cease smoking, or to leave such area.
- 5.3 Smoking is prohibited in COMPANY-provided aircraft.

6. MATCHES AND LIGHTERS

- 6.1 "Strike anywhere" matches and plastic disposable lighters shall not be carried or used in hazardous areas. Safety matches are preferred, but facility or work site rules shall apply and control in case of conflict.

7. WORK PERMITS

- 7.1 If CONTRACTOR or its subcontractors perform any hot work operations, CONTRACTOR and its subcontractors shall have a written hot work program. Before any hot work operations are conducted, CONTRACTOR and its subcontractors shall determine whether a hot work permit is required in compliance with either CONTRACTOR's, its subcontractors' or COMPANY's hot work program. If such permit is required, CONTRACTOR and its subcontractors shall properly issue or obtain such permit and shall comply with all conditions of such permit.
- 7.2 CONTRACTOR and its subcontractors shall have written safe-entry procedures and obtain prior approval from the appropriate COMPANY representative for any work involving entry into confined spaces, limited access vessels, or below grade pits.
- 7.3 CONTRACTOR and its subcontractors shall ensure that a total energy deactivation system (lock-out / tag-out) is implemented while performing work on any equipment or machinery where there is a possibility of injury or property damage.
- 7.4 In areas that have general work permits, CONTRACTOR is required to follow the procedure in effect at the work location.

8. PRESSURE TESTING

- 8.1 CONTRACTOR and its subcontractors shall not test pipes or pressure vessels using compressed air or gas or service fluid, except after prior approval from COMPANY.

9. EXPLOSIVES AND HAZARDOUS MATERIALS

- 9.1 If CONTRACTOR or its subcontractors require the use of explosives in performance of the work, they shall provide COMPANY with written notification regarding the proposed

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use, storage and handling of such explosives prior to the start of the blasting operations, and shall ensure that the blaster is properly qualified for the type of work being done.

- 9.2 CONTRACTOR and its subcontractors shall ensure the safe and environmentally sound storage, transportation, identification, security and handling of hazardous materials used in performance of the work.
- 9.3 CONTRACTOR and its subcontractors shall maintain Material Safety Data Sheets (MSDSs) for all chemicals and other hazardous materials used in performance of the work, and shall perform all work consistent with the use specifications and other information in such MSDSs. MSDSs shall accompany chemicals and other hazardous materials at all times.

10. FIRE PROTECTION

- 10.1 CONTRACTOR and its subcontractors shall take all reasonable precautions to prevent fires.
- 10.2 CONTRACTOR and its subcontractors shall dispose of paper, rags, trash, and other combustible materials only in safe containers.
- 10.3 CONTRACTOR and its subcontractors shall transport and store flammable liquids, such as gasoline, kerosene, and fuel oil, in industry-approved metal containers designed specifically for handling these liquids. Such flammable liquids shall be stored away from possible sources of ignition.
- 10.4 CONTRACTOR and its subcontractors shall not alter or tamper with fire protection equipment or render it inaccessible.
- 10.5 CONTRACTOR and its subcontractors shall not open or close hydrants or main water valves except after prior notice to the appropriate COMPANY representative or in the case of emergency.
- 10.6 CONTRACTOR and its subcontractors shall immediately report to designated COMPANY personnel any leak or indication of gas around piping or vessels. CONTRACTOR and its subcontractors shall assure that all "hot work" in the area ceases immediately on the discovery of the hazard.
- 10.7 CONTRACTOR and its subcontractors shall use for cleaning purposes only cleaning solvents that have a high flash point (above 140°F, or 60°C) and are non-toxic.
- 10.8 CONTRACTOR and its subcontractors shall be responsible for the safety and fire protection training of their employees.
- 10.9 CONTRACTOR and its subcontractors shall provide their own fire protection equipment unless otherwise agreed with COMPANY in writing.

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- 10.10 CONTRACTOR and its subcontractors shall shut down internal combustion engines before they are refueled, except where the refueling point is sufficiently remote from the engine to allow safe refueling.
- 10.11 In case of fire, CONTRACTOR and subcontractor personnel in the area shall immediately take all practical measures to protect the safety of all personnel and to extinguish the fire. The first priority shall be the safety of all personnel. CONTRACTOR or subcontractor shall notify the COMPANY representative of the fire as soon as possible.
- 10.12 In case of fire, CONTRACTOR and its subcontractors shall shut down all equipment and remove it from the fire location if feasible and shall clear access routes.
- 10.13 Motors, compressors, pumps, and other equipment are permitted inside tank dike areas only in accordance with COMPANY hot work permit procedures.

11. MEDICAL AID

- 11.1 CONTRACTOR and its subcontractors shall provide their own first aid personnel, equipment, and supplies unless otherwise agreed by COMPANY in writing.

12. PERSONAL PROTECTIVE EQUIPMENT

- 12.1 CONTRACTOR and subcontractor personnel on the job site shall wear appropriate personal protective equipment, including but not limited to, fall protection, steel-toed safety shoes, hard hats, safety glasses (with side shields, if required by local policy) and additional personal protective equipment (e.g. FRC, hearing protection, respiratory protection, face shields, hand protection) as may be required by the nature of the work and/or as specified by regulations or the COMPANY. CONTRACTOR and its subcontractors shall pay for and provide such equipment unless otherwise agreed by COMPANY in writing. CONTRACTOR and its subcontractors shall post signs specifying where personal protective equipment use is required.
- 12.2 All personal protective equipment shall be used and maintained by CONTRACTOR and its subcontractors in accordance with manufacturer recommendations. Contractors shall provide their personnel with all needed safety equipment including respiratory, hearing, eye, foot, hand and head protection. Special circumstances may require a deviation from the practices and procedures contained herein. Any deviation must be approved in writing by the Business Unit Manager (or designated representative) prior to commencement of work. Contractors may use Company's safety equipment only during an emergency and shall report such use to the Company representative.
- 12.3 CONTRACTOR shall provide fall protection rescue equipment and personnel trained in its use.

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13. HOUSEKEEPING

- 13.1 CONTRACTOR and its subcontractors shall maintain good housekeeping at all times and shall keep all working areas clean and free of obstructions. Tripping hazards shall be clearly identified and marked.
- 13.2 CONTRACTOR and its subcontractors shall keep access to emergency exits clear at all times.

14. INCIDENT REPORTING

- 14.1 CONTRACTOR and its subcontractors shall promptly and accurately report all on-the-job accidents/injuries to the proper governmental authorities, where required, and to the appropriate COMPANY representative. CONTRACTOR shall report and document all potential hazards, unsafe conditions, and unsafe acts through a near-miss program. All near-miss reports shall be provided to the appropriate COMPANY representative.
- 14.2 CONTRACTOR and its subcontractors shall immediately report all incidents to COMPANY and confirm the report in writing within twenty-four (24) hours after the incident occurs. This includes fatalities, injuries, fires, releases of hazardous substances, motor vehicle accidents, and damages to COMPANY equipment.
- 14.3 CONTRACTOR and its subcontractors shall maintain and file required accident forms pursuant to COMPANY procedures or as required by law, decree, administrative rule or regulation, or other legally binding policy interpretation or pronouncement of a legal jurisdiction or authority.
- 14.4 CONTRACTOR and its subcontractors shall promptly send to the appropriate COMPANY representative copies of all governmental health, environmental or safety citations against CONTRACTOR or its subcontractors while performing the work.
- 14.5 CONTRACTOR and its subcontractors shall provide written summaries of all incidents affecting safety and spills to the COMPANY safety representative monthly, unless otherwise specified by COMPANY. CONTRACTOR shall have personnel trained to perform a Root Cause Analysis (RCA). At COMPANY's request CONTRACTOR shall commence a RCA within three (3) days after the occurrence of an incident and provide a copy to COMPANY.

15. ENVIRONMENTAL PROTECTION

- 15.1 CONTRACTOR and its subcontractors shall prevent spills or releases of oil or chemical substances on land, water or air. Pollution prevention shall be a routine part of CONTRACTOR's and its subcontractors' business and work activities.
- 15.2 CONTRACTOR and its subcontractors shall exercise all necessary care to protect and preserve the environment, including flora, fauna and other natural resources or assets at any location where the work is performed. CONTRACTOR and its subcontractors shall minimize and mitigate unavoidable impacts to the local environment.

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- 15.3 CONTRACTOR and its subcontractors shall assess the environmental hazards of materials and supplies used in conjunction with the work and shall use substitute materials presenting less risk whenever possible.
- 15.4 CONTRACTOR and its subcontractors shall keep a reasonable degree of order by properly disposing of accumulated rubbish and waste materials. CONTRACTOR and its subcontractors shall start site cleanup and remediation immediately upon completion of work at that site
- 15.5 Unless otherwise approved by an authorized COMPANY representative, CONTRACTOR and its subcontractors shall prohibit their employees from hunting, disturbing, or capturing native birds, fish or other animals in the vicinity of the work site.
- 15.6 CONTRACTOR and its subcontractors shall not remove trees and vegetation to an extent greater than is necessary for the work, as determined by COMPANY or in accordance with the applicable permit. Whenever reasonably feasible, CONTRACTOR and its subcontractors shall stockpile topsoil for subsequent use in site restoration.
- 15.7 CONTRACTOR and its subcontractors shall use only above-ground steel tanks that are properly grounded as fuel storage tanks. CONTRACTOR and its subcontractors shall assure that loading and drainage connections to fuel storage tanks are either plugged or locked in the closed position when not in use, and that fuel dispensing nozzles are self-closing.
- 15.8 All onshore, above-ground fuel, oil and chemical storage tanks used by CONTRACTOR or its subcontractors shall have secondary containment with a capacity of one hundred ten percent (110%) of the capacity of the largest single tank. Secondary containment impounds may have a drain connection for removal of storm water, provided the drain discharge is normally plugged or equipped with a valve normally locked closed. In those areas governed by Federal or State SPCC plans, CONTRACTOR is expected to comply with those requirements.
- 15.9 CONTRACTOR and its subcontractors shall not discharge oil, solvents, chemicals, etc. to water bodies or onto land.
- 15.10 CONTRACTOR and its subcontractors shall protect fossils and antiquities found at job sites from damage or disturbance. CONTRACTOR and its subcontractors shall report the location to COMPANY and cease work at that location pending further instructions.
- 15.11 CONTRACTOR and its subcontractors shall comply with all federal, state and local laws, rules, regulations, agency policies and guidance documents relating to pollution or protection of the public health and the environment including, but not limited to, the emission, discharge, release, manufacture, processing, distribution, use, treatment, handling, storage, disposal, or transportation of substances, materials, pollutants, contaminants, chemical, solid waste, and/or hazardous substances. Among the laws and regulations with which CONTRACTOR and its subcontractors shall comply are: The Resource Conservation Recovery Act; The Comprehensive Environmental Response, Compensation, and Liability Act; the Federal Water Pollution Control Act; the Safe

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Drinking Water Act; the Toxic Substances Control Act; the Emergency Planning and Community Right to Know Act of 1986; the National Environmental Policy Act; the Occupational Safety and Health Act; the Pollution Prevention Act of 1990; the Oil Pollution Act of 1990; the Clean Air Act; and the Hazardous Materials Transportation Act, as well as the amendments to any of the foregoing.

- 15.12 For CONTRACTORS working in the San Joaquin Valley, Santa Barbara County, Monterey County and Ventura County: CONTRACTOR is required to comply with the Air Pollution Control District's rules and regulations regarding permitting of portable equipment brought onto Company property. CONTRACTOR is held responsible for determining which of his equipment qualifies for permitting.

16. MISCELLANEOUS

- 16.1 CONTRACTOR shall ensure full compliance with COMPANY's Drug and Alcohol Policy which is Section 26 to this Contract.
- 16.2 CONTRACTOR and its subcontractors shall assure that compressed gas cylinders are secured in place on a regular cart or chained to a support in an upright position, that all cylinders not in use are protected with protective valve caps, and that compressed oxygen and flammable gases are not stored together or near combustible materials, but stored in accordance with facility safety procedures.
- 16.3 No firearms, ammunition, or deadly weapons are permitted on COMPANY property except as may be authorized by COMPANY for security purposes to ensure adequate protection of property and employees.
- 16.4 All CONTRACTOR- and subcontractor-provided safety equipment shall be properly maintained and operable in accordance with manufacturer's instructions and legal regulations.
- 16.5 CONTRACTOR and its subcontractors shall provide employees properly trained and qualified to perform the work and to properly use all applicable safety equipment.
- 16.6 Upon completion of work, CONTRACTOR and its subcontractors shall review the site to determine that hazards related to the work site have been removed in accordance with COMPANY requirements.

17. SUSPENSION OF THE WORK

- 17.1 Both COMPANY and CONTRACTOR shall have the right to stop work by CONTRACTOR or its subcontractors at any time the work environment is imminently hazardous to persons, property, or the environment.

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18. BARRICADES AND OPEN HOLES

- 18.1 CONTRACTOR and its subcontractors shall assure that all ditches, holes, excavations, overhead work, etc. are properly barricaded and, where necessary, provided with warning lights.

19. SHORT SERVICE EMPLOYEES

- 19.1 A short service employee means an individual who has been employed by CONTRACTOR for less than six (6) months or has been in a like job by CONTRACTOR for less than six (6) months. No one person crew may be staffed by an SSE. Only one SSE is allowed on a 2-4 person crew and on crews of 5 persons or more no more than 20% may be SSE's. CONTRACTOR shall notify COMPANY of any SSE's on its crews. A qualified mentor must be assigned to each SSE to monitor the SSE's job performance. Exceptions to the SSE policy may be made only with COMPANY's prior approval.

(See end of section A for SSE form and frequently asked questions)

20. SAFETY REPORTS

- 20.1 CONTRACTOR shall complete COMPANY's Safety Questionnaire ("SSQ"). A new Safety Questionnaire shall be submitted annually.
- 20.2 In addition to the Safety Questionnaire, within ten (10) days after the end of each calendar month, CONTRACTOR shall provide COMPANY with a report of total manhours worked during the preceding month and incidents that occurred.

21. TRAINING

- 21.1 CONTRACTOR and subcontractor personnel shall be fully trained in compliance with appropriate health, environmental and safety training codes, standards, laws and regulations of all governmental or regulatory agencies having jurisdiction at the work site (e.g., MMS, USCG, DOT, OSHA). Training shall cover potentially dangerous conditions, safe work practices and procedures, and the use and maintenance of personal protective equipment. CONTRACTOR and its subcontractors shall inform their employees of the training required to perform tasks and ensure that their employees shall not perform any job for which specific training is required until such training is successfully completed. All training shall be documented. Upon Company's request, Contractor and its subcontractors shall provide Company with a letter of certification that validates training requirements are met and maintained.
- 21.2 CONTRACTOR shall implement a Preventative Maintenance Program that identifies and prioritizes maintenance for safety critical items.
- 21.3 COMPANY representatives shall have the right, at any time, to require CONTRACTOR and its subcontractors to remove and bar from the work site any personnel whose conduct could jeopardize the safety of any person or operation.

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22. LOCKOUT/TAGOUT

- 22.1 CONTRACTOR shall have a written Lockout/Tagout Program that specifies procedures for workers to secure all power sources when performing maintenance or service on equipment. Types of power include electrical, pneumatic, hydraulic, thermal, chemical and all forms of potential stored energy.

23. CONFINED SPACE

- 23.1 Under no circumstances shall CONTRACTOR or its subcontractors permit any worker to enter a permit-required confined space without a properly completed entry permit approved by the COMPANY representative. Confined spaces include, but are not limited to, storage tanks, process vessels, mud tanks, rig cellars, and open-top spaces more than four (4) feet in depth. CONTRACTOR and its subcontractors shall develop, implement and train their employees in a Confined Space Entry Program that is acceptable to COMPANY.

24. SHORT SERVICE EMPLOYEE (SSE) PROCEDURE AND FREQUENTLY ASKED QUESTIONS FOR CHEVRON SJVBU SUPERVISORS AND BUSINESS PARTNERS

CNAEP Contract Addendum (SSE portion only):

24.1 Short Service Employees

- (A) A short service employee means an individual who has been employed by CONTRACTOR for less than six (6) months or has been in a like job by CONTRACTOR for less than six (6) months. No one person crew may be staffed by an SSE. Only one SSE is allowed on a 2-4 person crew and on crews of 5 persons or more no more than 20% may be SSEs. CONTRACTOR shall notify COMPANY of any SSEs on its crews. A qualified mentor must be assigned to each SSE to monitor the SSE's job performance. Exceptions to the SSE policy may be made only with COMPANY's prior approval.

24.2 What this means:

- (A) Chevron expects Business Partners (BPs) to have a short service employee process.
- (B) Chevron Location Supervisors must be notified of SSEs and exceptions must be approved by the Chevron representative.
- (C) A form is attached for both notification & exception purposes. BPs should retain the document.
- (D) The BPs Short Service Employee process will be reviewed as part of Chevron's safety management audit process.

24.3 Frequently Asked Questions

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- (A) **What is the objective of this policy?** Section 19.00 Short Service Employees, is in place to ensure that personnel new to the oil and gas industry work safely, are identified, appropriately supervised, and trained in order to prevent incidents such as injury, environmental damage or property damage.
- (B) **If an individual has many years of experience, but is new to the company or position, are they considered a SSE?** No. Prior experience with the same company or different company can be applied towards meeting the six month requirement. This type of experience could include journeymen or experience with another company in a similar job category. It is the responsibility of the Business Partner to ensure sufficient experience and craft skills. The BPs SSE process is evaluated during the safety management audit.
- (C) **What if I have one man operations or single service provider?** If the BP has a proficiency process (either written or demonstration) that address craft skills, hazard identification and peer evaluation, then the BP employee is allowed to work individually.
- (D) **Can individuals be released from the SSE requirements prior to six months?** Yes, if the business partner has a program for assessing competencies *and* documents that the individual has demonstrated the BPs required craft skills. The program and supporting documentation will be subject to safety management audit review.
- (E) If an individual has been employed by the BP for many years, but was recently promoted to a new position, are they considered a SSE? No.
- (F) If an individual changes companies and then is rehired at a later date, is the person considered a SSE upon rehire? No.
- (G) **Who must be notified of the SSE?** The Chevron Location Supervisor, *or delegate*, must be notified. Delegates are listed in Table 1 below.
- (H) Who will approve SSE crew exceptions (>20% SSE crews or single person SSE crews)? The Chevron Location Supervisor, *or delegate*, must approve. Refer to Item 2, 3, 4 and 5, above.

Table 1. SJVBU Delegation of Authority for BP SSE Notification & Exception Approval (X=SJV-wide)

Delegate	Maintenance Superintendent	COS Supv/Leader	Operations Supervisor	TT/ADT Leader (incl. WEO,IT)
Shift Supv.			X	
Process* Supv.	X	X	X	X
Planner	X	X		

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Prod. Tech (PT)			X	
Head Operator	X	X	X	
Constr. Reps	X		SA/COA	X
Drilling/Workover Reps				X
Other	If formally providing coverage/relief for one of above			

* Process = Thermal, Repair, Electrical, Workover, Infrastructure Support

- (I) **What if I have a seven (7) person crew – can I “round up” and have two (2) SSEs?** More than 20% SSE in a crew of 5 or greater requires an exception approval. Refer to Item 3 and 5, above.
- (J) **Will notification forms & exception forms be needed?** Yes. Attached is the form which must be used for notification and/or exception requests. The form is available on the SJVBU Contractor Safety Management (CSM) website <http://sjvbu.Chevron.com/safety/prejob.asp>.
- (K) **Can this be done electronically?** Yes. Forms can be electronically approved. For added security, individuals with SMARTBadges can add digital signatures to the documents.
- (L) **What if I have a large number of SSEs, for example due to a rapid expansion or due to vendors merging?** The information can be provided in a spreadsheet format for efficiency.
- (M) **Can SSE notifications & exception requests be made when the SSE arrives on site?** Notification & exception requests must be approved by the Chevron Location Supervisor *prior* to the SSE commencing work.
- (N) **How often will an exception need to be re-issued?** An exception will not have to be re-issued.
- (O) **What if the SSE moves to another area?** The notification is good for work throughout SJVBU.
- (P) **If a non-SSE moves to another location, are they considered a SSE?** No.
- (Q) **Who keeps the completed forms? For how long?** The Business Partner. Minimum until the person is off the SSE list.
- (R) **Who is a qualified mentor? What are the mentor’s responsibilities?** The BP’s SSE Program must outline the mentor process. The mentor should have more experience than the SSE and be able to answer questions, assess and coach the SSEs safe work practices.
- (S) **Does the mentor have to be onsite with the SSE?** No. The mentor should be available to fulfill the responsibilities outlined in the BPs SSE mentor process.

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- (T) **What about subcontracted or 3rd party employees?** Chevron SJVBU BPs are required to manage their sub-contractors in alignment with the Chevron contract, which includes Section 19.00 Short Service Employee.
- (U) **What are the visibility requirements?** The BP is responsible for providing the means to identify SSEs.
- (V) **How will compliance be tracked and monitored?** The Chevron safety management audit process has been modified to ensure periodic review of the BPs process.
- (W) **I have more questions, where do I get more answers?** The SJVBU Contractor Safety Management (CSM) website may have some of the answers you need. The link is listed below:
<http://sjvbu.Chevron.com/safety/prejob.asp>. Otherwise, please don't hesitate to contact your Chevron Business Partner Safety Advisor (Jeff Gurican, CTN654-7298) with your questions, concerns or suggestions for improvements.

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CONTRACTOR SHORT SERVICE EMPLOYEE FORM

Contractor must complete and submit form to the operator location supervisor for approval prior to arrival on location. The operator location supervisor (field supervisor, drilling supervisor, OIM) must approve the individual SSE before he/she arrives on location.

1. SSE Information

Contractor Company Name:

Request Date:

SSE Name:

Date of Employment:

Current Job Title:

Years Related Experience:

Experience in Current Position:

Yrs

Months

Is this employee in compliance with your Substance Abuse Policy?

Yes

No

Have site owner, contractor and HES policies been reviewed with SSE?

Yes

No

Who has been assigned as the SSE's mentor?

Mentor's Experience:

Yrs

Months

List all training provided to the SSE:

List any previous special training:

SSE(s) identified by: ☐ Hard Hat – Hi Vis. Orange ☐ Other – Describe**II. SSE Crew Composition Requirements**

Choose one of the crew types below. If any of the stated limitations are exceeded, proceed to the variance form on the back of this sheet.

☐ Single person crew – cannot be an SSE (Variance Required)☐ 2 – 4 person crew – no more than one SSE☐ 5 or more person crew – no more than 20% SSE(s) per crew☐ Exceeding 20% SSE per crew (Variance Required)**III. SSE Review and Approval**

Contractor Manager:

Date:

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Operator Location Supervisor:

Date:

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This form is to be filled out whenever the conditions on the front of this form or any other element of the Short Service Employee Policy cannot be met.

IV. Variance Information

Variance Justification

(What are the current circumstances and what will be done to ensure an acceptable level of risk?)

Alternatives to Variance

(If the variance is denied, what are the alternatives to completing the scope of the work? Briefly detail the cost and operational impact of the alternatives.)

List the steps to be taken to manage/mitigate the SSE risk to an acceptable level:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

V. Variance Review and Approvals

Variance Expiration Date: _____

Operator Location Supervisor

__ Approves __ Denies

Signed: _____ Date: _____

Contractor Manager/Supervisor

__ Approves __ Denies

Signed: _____ Date: _____

Note: For large jobs, please use a separate sheet to list all SSEs on the crew by name and job title.

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25. OSHA HAZARDOUS MATERIAL COMMUNICATION

- 25.1 COMPANY and CONTRACTOR will take the necessary steps to comply with the OSHA “Hazard Communication Standard”. In this regard, COMPANY shall make available to CONTRACTOR and its employees all Material Safety Data Sheets (MSDS) for all chemicals under COMPANY’S control that may be encountered in the work place by CONTRACTOR and its employees. MSDS are available from COMPANY Representative.
- 25.2 In complying with the “Hazard Communication Standard”, CONTRACTOR shall:
- (A) Ensure all of CONTRACTOR employees are aware of the “Hazard Communication Standard”.
 - (B) Be aware of contents of Material Safety Data Sheets of chemicals reasonable expected to be encountered in the work place.
 - (C) Make MSDS readily available to CONTRACTOR employees.
 - (D) Take necessary precautionary steps identified in the MSDS to protect CONTRACTOR employees with respect to chemicals encountered in the work place.
 - (E) Supply COMPANY with copies of MSDS for all chemicals it proposes to furnish for use on COMPANY’S premises prior to bringing the chemicals on such premises.
- 25.3 CONTRACTOR’S failure to comply with COMPANY’S policy on hazard communication may result in termination of this Agreement.

26. DRUG, ALCOHOL, AND SEARCH POLICY

26.1 Notice to Contractor Employees

- (A) **Policy.** The Policy of COMPANY and its affiliated companies regarding illegal drugs
- (1) The use, possession, distribution, purchase, transportation, or sale of any illegal drugs or other controlled substances or alcohol by CONTRACTOR, its subcontractors or their employees while on COMPANY premises, engaged in COMPANY business or while operating COMPANY equipment is prohibited.
 - (2) The use of any illegal drug or other controlled substance or alcohol which causes or contributes to unacceptable job performance or unusual job behavior is prohibited. Being under the influence of any illegal drug or alcohol while on COMPANY premises, engaged in COMPANY business or while operating COMPANY equipment is prohibited.

- (3) The use, possession, transportation, or sale of explosives, unauthorized flammable materials, firearms, or other weapons by CONTRACTOR, its subcontractors or their employees while on COMPANY premises, engaged in COMPANY business or while operating COMPANY equipment is prohibited.
- (B) CONTRACTOR's and subcontractors' employees shall abide by this Policy. Any person violating this Policy shall be removed from Company premises and may be denied future access to premises of COMPANY and its affiliated companies. In addition, COMPANY may suspend work or terminate a contract as a result of violation of this Policy. In appropriate cases, local law enforcement agencies may be advised of violations.
- (C) **Company's Right to Require Searches/Tests.** In support of this Policy, COMPANY may conduct or require searches and tests as follows:
 - (1) **Search.** Unless prohibited by applicable law, without prior announcement, and at any time, COMPANY may carry out reasonable searches of individuals and their personal effects when entering COMPANY premises, while on COMPANY premises, and when leaving COMPANY premises, and COMPANY may require CONTRACTOR to search its employees or subcontractor's employees before entering COMPANY premises, engaging in COMPANY business, operating COMPANY equipment, or leaving COMPANY premises. Entry onto COMPANY premises constitutes consent to a search of the person and his/her personal effects, including, without limitation, packages, briefcases, purses, lunch boxes and vehicle, or any office, locker, closet or desk. An individual may elect to decline to cooperate; however, refusal to cooperate shall be cause for not allowing that individual on premises of COMPANY or its affiliated companies.
 - (2) **Testing.** Unless prohibited by applicable law, COMPANY may request CONTRACTOR to conduct a controlled substance and/or alcohol test(s) on any of its employees or subcontractors' employees while on COMPANY premises, engaged in COMPANY business, or operating COMPANY equipment. In addition, COMPANY may request CONTRACTOR to conduct a controlled substance and/or alcohol test(s) on any of its employees or subcontractors' employees before entering COMPANY premises, engaging in COMPANY business, or operating COMPANY equipment. Prior written consent shall be obtained from any person who is to be tested. A positive test on a CONTRACTOR or subcontractor employee or failure to give written consent for a test shall be cause for removal from COMPANY premises and shall result in the CONTRACTOR or subcontractor employee being restricted or disqualified from performing services for COMPANY or its affiliated companies.

(3) Definitions

- (a) **Controlled substance.** As used herein, “controlled substance” includes, but is not limited to, the following classes of drugs: amphetamines, barbiturates, benzodiazepines, cannabinoids, cocaine, opiates, phencyclidines; and prescription drugs which are not obtained and used under a prescription lawfully issued to the person possessing them or which are not authorized by the COMPANY Medical Staff; and any other substance which is included in the Federal Controlled Substances Act or its regulations or which is unlawful under applicable law.
- (b) **Controlled substance or alcohol test.** As used herein, “controlled substance or alcohol test” means any test using blood, urine, breath, or other samples to determine the presence of controlled substances or alcohol in the body.
- (c) **Company premises.** As used herein, “COMPANY premises” is used in the broadest sense, and includes, but is not limited to, all land, property, buildings, structures, installations, COMPANY-operated service stations (but not COMPANY-owned stations operated by independent dealers), vehicles, equipment, aircraft, and water craft owned, leased, or in any other manner being used by COMPANY for any purpose.
- (d) **Under the influence of alcohol.** As used herein, “under the influence of alcohol” is defined as having a blood alcohol concentration (%BAC) of 0.02% or above.
- (e) **Positive test or testing positive.** As used herein, a “positive test” or “testing positive” for controlled substances or alcohol is defined as detecting controlled substances or alcohol in levels equal to or greater than those set forth in Section 26.4 of this Exhibit B.

26.2 Minimum Contractor Controlled Substance and Alcohol Program Requirements

- (A) **Written Policy.** Unless prohibited by applicable law, CONTRACTORS and their subcontractors are required to have a written drug, alcohol, and search policy and implementation program that, at a minimum, meets the following requirements:
- (B) **Training.** CONTRACTORS’ and subcontractors’ employees shall receive communication and training on at least the following topics:
 - (1) COMPANY’S and CONTRACTOR’S drug and alcohol policies, including legally mandated Department of Transportation requirements.
 - (2) The effects and consequences of controlled substance and alcohol use on personal health, safety, and work environment.

- (3) The details of CONTRACTORS' employee assistance program, if any, and available treatment resources.
- (4) The consequences to CONTRACTORS' and subcontractors' employees for failing to comply with CONTRACTOR'S and COMPANY'S policies. In addition, CONTRACTOR's supervisors shall receive training on the physical, behavioral, and performance manifestations that may indicate controlled substance or alcohol use or abuse. CONTRACTOR shall develop and conduct its own training programs for all of its supervisors and employees on at least an annual basis.
- (C) **Employee Assistance.** COMPANY encourages CONTRACTOR to make Employee Assistance Programs (EAP) and rehabilitation for chemical dependency and alcohol available to its employees.
- (D) Definitions
 - (1) **Controlled substance.** As used herein, "controlled substance" includes, but is not limited to, the following classes of drugs: amphetamines, barbiturates, benzodiazepines, cannabinoids, cocaine, opiates, phencyclidines, and prescription drugs which are not obtained and used under a prescription lawfully issued to the person possessing them or which are not authorized by the COMPANY's Medical Staff, and any other substance which is included in the Federal Controlled Substances Act or its regulations or which is unlawful under applicable law.
 - (2) **Controlled substance or alcohol test.** As used herein, "controlled substance or alcohol test" means any test using blood, urine, breath, or other samples to determine the presence of controlled substances or alcohol in the body.
 - (3) **COMPANY premises.** As used herein, "COMPANY premises" is used in the broadest sense, and includes, but is not limited to, all land, property, buildings, structures, installations, COMPANY-operated service stations (but not COMPANY-owned stations operated by independent dealers), vehicles, equipment, aircraft, and water craft owned, leased, or in any other manner being used by COMPANY for any purpose.
 - (4) **Under the influence of alcohol.** As used herein, "under the influence of alcohol" is defined as having a blood alcohol concentration (%BAC) of 0.02% or above.
 - (5) **Safety sensitive position.** As used herein, "safety sensitive position" means a job position in which the employee performing the duties of the position has the ability to create hazards or danger to other individuals, the community, equipment, or the environment.
 - (6) **Positive test or testing positive.** As used herein, a "positive test" or "testing positive" for controlled substances or alcohol is defined as

detecting controlled substances or alcohol in levels equal to or greater than those set forth in Article III. herein.

- (7) **Search.** CONTRACTOR shall have the right to perform reasonable unannounced searches of its employees, including personal vehicles and personal effects, before entering COMPANY premises, engaging in COMPANY business, operating COMPANY equipment, or leaving COMPANY premises. Prior to conducting a search of its or subcontractors' employees on COMPANY premises, CONTRACTOR shall notify the local COMPANY facility manager.
- (8) **Pre-Work Testing, Safety Sensitive Position.** CONTRACTORS shall conduct a pre-work controlled substance and alcohol test on their employees prior to assigning them to work under this contract in a COMPANY facility in a safety sensitive position. CONTRACTOR shall not assign any individual to perform any services under this Contract who has tested positive for controlled substances or alcohol within six (6) months prior to such assignment without COMPANY's consent in writing. COMPANY shall have the right to withhold such consent in its sole discretion. Pre-work testing shall not be required for individuals already working in a COMPANY facility at the time this contract provision becomes effective.
- (9) **Random Testing, Safety Sensitive Positions.** Where legally permissible, CONTRACTOR and its subcontractors shall conduct unannounced random testing for controlled substances and alcohol of employees in safety-sensitive positions. Such testing shall be performed pursuant to a random selection method with a **minimum** annual testing rate of fifty percent (50%) of the total population working under the Contract in safety-sensitive positions. Employees testing positive or failing to participate in the requested testing shall be subject to the provisions of Exhibit B, Article 26.2(D)(8).
- (10) **For-Cause Testing.** CONTRACTOR shall have the right to perform controlled substance and alcohol tests based on a reasonable belief by CONTRACTOR or COMPANY that an individual is using alcohol or drugs on the basis of specific physical, behavioral, or performance indicators.
 - (a) CONTRACTOR shall have the right to remove any employee from performing work if the individual exhibits unusual job behavior or unacceptable job performance and it is believed by CONTRACTOR or COMPANY that he/she may be using controlled substances or presently under the influence of alcohol.
- (11) **Post-Accident Testing.** CONTRACTORS shall conduct an immediate preliminary evaluation into the circumstances of all accidents, injuries, and mishaps. This evaluation shall include a review of the conduct and behavior of appropriate individuals following any unexplainable incident or near-miss to determine whether those incidents could have been

caused or contributed to by drug or alcohol use or abuse. Whether an injury or illness occurs as a result of the incident is not the controlling factor. When that evaluation reveals reasonable cause, alcohol and/or drug test(s) shall be requested by CONTRACTOR.

- (a) Post-accident testing should be considered for the following circumstances when the preliminary evaluation indicates appropriate procedures, precautions, work set-up, or judgment were not employed.
 - (b) Serious incident causing injury to self and/or other(s).
 - (c) Motor vehicle accident, whether or not there was significant damage to personal or private property.
 - (d) Significant release, which fouls the environment (air, land, or water).
 - (e) Any serious near-miss incident that could have caused injury to persons or the environment.
- (12) **Testing at COMPANY Request.** Should COMPANY request that CONTRACTOR perform or have performed a controlled substance and/or alcohol test on any of CONTRACTOR's or its subcontractors employees while on COMPANY premises, engaged in COMPANY business or operating COMPANY equipment, CONTRACTOR shall immediately suspend the services of such individual under the Contract and remove such individual from COMPANY premises. Such individual shall not be returned to perform services under the Contract until CONTRACTOR has requested reinstatement and received COMPANY's consent to reinstate such individual. Such request for reinstatement shall be in writing signed by CONTRACTOR's authorized representative and shall include if applicable:
- (a) a certification by CONTRACTOR that the individual tested negative on the requested test for controlled substance and/or alcohol and the date and time that the specimen was collected,
 - (b) if such individual was not tested for controlled substances or alcohol an explanation of the reasons such individual was not tested,
 - (c) a certification by CONTRACTOR that the individual is participating in or has completed a rehabilitation program for substance abuse, and
 - (d) any additional information CONTRACTOR wishes COMPANY to consider.

- (e) COMPANY shall reimburse CONTRACTOR for direct, actual out-of-pocket expenses for such test requested by COMPANY to be performed on specific employees, however COMPANY shall not reimburse CONTRACTOR for lost time for an individual who tests positive or refuses, delays, or fails to have a requested test or for time spent in rehabilitation programs and the like. All reimbursable expenses shall be evidenced by documentation satisfactory to COMPANY.
- (f) COMPANY shall have the sole discretion to determine whether the individual will be reinstated to perform services under the Contract.

26.3 General Requirements

- (A) CONTRACTOR and its subcontractors shall comply with COMPANY's Drug, Alcohol, and Search Policy as described in NOTICE TO CONTRACTOR EMPLOYEES (Section 26.1, Exhibit B).
- (B) CONTRACTOR shall provide a copy of NOTICE TO CONTRACTOR EMPLOYEES (Section 26.1, Exhibit B) to all of its employees and to employees of any subcontractor and advise them of the COMPANY's right to search prior to assigning them to work under this Contract.
- (C) CONTRACTOR shall have in place controlled substance and alcohol policies that meet or exceed the requirements specified herein. Nothing in this Exhibit B shall be construed to require CONTRACTOR to violate any federal, State or local laws, ordinances or regulations.
- (D) Prior to conducting a search and/or testing of its or subcontractors' employee on COMPANY premises, CONTRACTOR shall notify the local COMPANY facility manager.
- (E) CONTRACTOR shall immediately remove from COMPANY premises any of its or its subcontractors' personnel found to be in violation of COMPANY's Drug, Alcohol, and Search Policy. Such personnel may be denied future access to COMPANY premises. Any illegal or unauthorized drugs, intoxicating beverages, firearms, weapons or COMPANY property discovered as a result of COMPANY searches may be confiscated and may be turned over to law enforcement agencies.
 - (1) Failure of CONTRACTOR or employees of CONTRACTOR or subcontractors to comply with COMPANY's Policy, may result in termination of this Contract.
- (F) CONTRACTOR shall keep books and records of all of its activities intended to bring CONTRACTOR in compliance with the terms of this Exhibit B, and CONTRACTOR shall maintain such books and records for a period of at least twenty-four (24) months after termination of this Contract. COMPANY or its representatives shall have the right to audit such books and records in the same

manner provided for other books and records under the *Records and Audits* provisions of this Contract; provided, however, that COMPANY or its representative shall not have access to individual controlled substance or alcohol test results where such access is prohibited by applicable law.

- (G) Ninety (90) days after execution of this Contract and on that date every year thereafter, CONTRACTOR shall provide COMPANY with a written report of its activities under this Exhibit B. Such report shall state:
- (1) The number of pre-work tests performed,
 - (2) The number of other tests performed,
 - (3) The number of positive test results,
 - (4) The number of individuals who declined to be tested, and
 - (5) The number of individuals who were removed from service pursuant to this Exhibit B.
- (H) If CONTRACTOR or its subcontractors fail to comply with the provisions of this Exhibit B, COMPANY shall have the right to terminate this contract for material breach.
- (I) CONTRACTOR shall not assign any individual who has been in violation of COMPANY's drug and alcohol testing requirements by refusing or failing to complete a requested test or by testing positive for drugs and/or alcohol, to perform services under any contract with COMPANY or its affiliate companies until CONTRACTOR has first notified the Facility contract office. Such notification shall include information about the employee's previous disqualification from performing services for COMPANY or its affiliate companies for violation of drug or alcohol policies and information about whether the employee has participated in or completed a substance abuse rehabilitation program. COMPANY shall have the right to exclude such individual from performing services under any such contract in its sole discretion.
- (J) CONTRACTOR shall meet all Department of Transportation (DOT) requirements for controlled substance and alcohol testing if CONTRACTOR and/or its subcontractor employees are performing DOT regulated work. DOT-covered CONTRACTOR personnel may also be required to submit to a test for controlled substances and/or alcohol under COMPANY's Drug, Alcohol, and Search Policy at the time the DOT-required test is administered.

26.4 Minimum Testing Requirements

- (A) **Controlled Substance Tests.** At a minimum, the controlled substance tests conducted under the CONTRACTOR's policies shall be capable of detecting the following classes of drugs: amphetamines, barbiturates, benzodiazepines, cannabinoids, cocaine, opiate metabolites, phencyclidine, and alcohol. The

CONTRACTOR shall use as a guideline the Department of Health and Human Services, Guidelines for Federal Workplace Drug Testing Programs (53FR11970). These guidelines cover specimen collection procedures, chain-of-custody procedures, laboratory qualifications, testing methods, and cut-off levels.

- (B) CONTRACTORS engaged in DOT-regulated work might be subject to additional or different requirements.
- (C) All positive tests from an enzyme multiplied immunoassay technique (EMIT) shall be confirmed by a second test using gas chromatography/mass spectrometry (GC/MS). CONTRACTORS shall use only laboratories certified by the National Institute of Drug Abuse (NIDA).
- (D) The cut-off levels for the CONTRACTOR's drug testing program shall be no greater than those listed below:

<u>Substance</u>	<u>Screening Test (EMIT)</u>	<u>Confirmation Test (GC/MS)</u>
Amphetamines	300 ng/ml	
amphetamines, methamphetamine		260 ng/ml
MDMA/MDA (ecstasy)	300 ng/ml	300 ng/ml
Barbiturates	300 ng/ml	
amobarbital		100 ng/ml
butalbarbital		100 ng/ml
pentobarbital		100 ng/ml
phenobarbital		100 ng/ml
secobarbital		100 ng/ml
Benzodiazepines	300 ng/ml	100 ng/ml
Cannabinoids	20 ng/ml	10 ng/ml
Cocaine	300	
benzoylecgonine		150 ng/ml
Opiates	300 ng/ml	
codeine, morphine		100 ng/ml
heroin as morphine		100 ng/ml
hydrocodone, hydromorphone		100 ng/ml
oxycodone, oxymorphone		100 ng/ml
Methadone	300 ng/ml	100 ng/ml
Methaqualone	300 ng/ml	200 ng/ml
Phencyclidine	25 ng/ml	25 ng/ml
Propoxyphene	300 ng/ml	
norpropoxyphene		200 ng/ml
Ethanol	0.02% BAC by breathalyzer	0.02% BAC by breathalyzer

** Blood alcohol concentration (BAC) level as determined by Breathalyzer test.

-
- (1) CONTRACTOR may utilize on-site testing techniques as a preliminary indication of possible drug use, provided that individuals testing positive has the option of providing a urine specimen for testing as provided above. A positive result on an on-site test shall be treated as a positive test result unless subsequent confirmation testing is negative for controlled substances.

27. CALIFORNIA PROPOSITION 65 - HAZARDOUS SUBSTANCES CONTRACTOR WARNING

- 27.1 California law (Proposition 65, California Health and Safety Code Section 25249.6) requires a warning for exposure to specific listed chemicals at concentrations which pose a significant risk. COMPANY operates its facilities and produces crude oil and natural gas under numerous health, safety and environmental laws which protect employee, contractor and public health. Many of these laws require work place warnings regarding the hazards of certain chemicals. Since there is no generally acceptable scientific definition of significant risk, the following warning is provided.
- 27.2 Detectable amounts of some chemicals known to the State of California to cause cancer, birth defects or other reproductive harm are found in and around facilities that produce, handle, transport or store crude oil or natural gas. These facilities include, for example, oil and gas wells, oil and gas treating plants, oil and chemical storage tanks, tank trucks and loading and unloading facilities.
- 27.3 Detectable amounts of some chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm may be found in crude oil, natural gas, produced water, or other fluids, chemicals or materials utilized in oil and gas drilling and production. Read and follow label directions or material safety data sheets and use care when handling or using these products.

28. ENVIRONMENTAL PROTECTION

- 28.1 Drip and Spill Containment
- (A) Equipment brought onto Company property shall be equipped with drip pans or similar types of containment devices where there is a potential for drips or leaks. Where leaks do occur, attempts must be made to eliminate them by improved maintenance practices. Drip pans must be checked and emptied regularly and the contents disposed of according to the applicable regulatory requirements.
- (B) Dikes, berms or drainage conveyances must be constructed, if practical, around equipment or containers to contain and control spills. All such spills shall be promptly reported to a Company representative.
- 28.2 **Spill Reporting.** All spills from any type of equipment shall be reported immediately, or as soon as possible without compromising the clean-up effort or the safety of responders, to the Company representative. This includes, but is not limited to, spills from tanks, vessels, flowlines, transports, piping, drums, sumps, pits, and any type of equipment. Spills are not limited to crude oil and produced water, but include treating chemicals,

cleaning solvents, liquid wastes, solid wastes, and excessive air emissions that are released into the environment.

- 28.3 **Waste Management.** All solid and liquid waste generated on a Company location shall be handled in accordance with all applicable local, state, and federal regulations. RCRA exempt wastes are to be segregated from non-exempt wastes. Company can provide guidance regarding the classification of wastes and the proper handling and disposal options. Company strongly supports waste minimization through source reduction and recycling. No waste materials are to be left on site unless specifically authorized by a Company representative.
- 28.4 **Container Handling and Disposal.** All containers of chemicals, products, or field treating fluids shall be properly labeled and marked indicating the contents. A material safety data sheet (MSDS) shall be provided with each product brought onto Company property. No empty drums or containers shall be left on-site. All empty drums or containers shall be taken back by the vendor, supplier or Company Contractor who brought the container onto the site.
- 28.5 **Clean Up.** Waste or spills shall be cleaned up in a timely manner by the party responsible for the waste or spill at its expense. Company may be able to provide guidance, to ensure that the impacted media is handled and disposed of according to the applicable local, state, and/or federal regulations. All spills and releases shall be addressed in a timely manner with a high priority placed on reducing exposure to the public and to environmental receptors such as surface water and groundwater.

29. OPERATING MOTOR VEHICLES

29.1 Driver Responsibilities

- (A) The driver of any vehicle operating on Company property is responsible for:
- (1) Operating the vehicle in a safe manner.
 - (2) Using the vehicle only for the purposes for which designed.
 - (3) The safety of his passengers or helpers.
- (B) The driver is also responsible for the safety of Contractors helping load or unload, or otherwise working on or around the vehicles, unless a supervisor is in complete charge of the loading-unloading operations.
- (C) All drivers shall operate their equipment in accordance with the law and maintain a valid driver's license. Drivers are personally responsible for the consequences of violations.
- (D) Drivers should routinely check the condition and operation of the following: seat belts, tires, horn, brakes, windshield wipers, steering gear, windshields, headlights, taillights, turn signals, stop light, gasoline, oil, radiator, transmission, and battery fluid levels.

- (E) Drivers shall not operate equipment which is defective or not in compliance with the law.

29.2 Safe Driving Principles

- (A) Contractors shall operate vehicles in a defensive manner, i.e., being always on the alert and trying to anticipate what might occur under the existing conditions and driving in such a manner as to avoid hazards.
- (B) Contractors operating vehicles shall be considerate of, and courteous to, the traveling public and/or pedestrians and shall yield the right-of-way to avoid accidents.
- (C) Contractors shall drive at speeds consistent with surrounding conditions, such as weather, ranging cattle, etc.
- (D) Drive at all times with sufficient space around your vehicle to provide time to see conflicts arising, to react quickly and to stop.

29.3 **Safe Starting.** The driver should walk around the vehicle before starting to check for possible obstructions or unfavorable conditions.

29.4 Safe Backing

- (A) When entering a field facility or location make every attempt to part where you do not have to back up. Exception is made when parking in a designated parking lot.
- (B) If a facility/location has access that prohibits turning around without backing up, park off the main road and cover the facility on foot.
- (C) If you must back up, do the following:
 - (1) Walk behind your vehicle first making sure there are no obstacles in your intended route of travel.
 - (2) Obtain a flagman if necessary to avoid hazards.
 - (3) While backing, continually check clearance.
 - (4) Back slowly.

29.5 Safe Parking

- (A) Do not park behind another vehicle, or in such a position that places your vehicle in another vehicle's "blind spot."
- (B) Vehicles are to be parked off the roadway where they will not be an obstruction to other vehicles or traffic.

- (C) Doors are to be closed.
- (D) For vehicles parked on decline or incline:
 - (1) Front wheels properly turned to curb or bank, and
 - (2) Pickups, i.e., field operators, welders, etc., shall have rear wheels properly “chocked.”
- (E) For vehicles without air or electric brakes-unattended:
 - (1) Turn ignition “off,”
 - (2) Place automatic transmission in “park” position, or standard transmission in “lowest gear” opposite the direction of incline, and
 - (3) Set parking brake.
- (F) For vehicles with air or electric brakes with power take off in use:
 - (1) Set parking brake and micro-brake (if so equipped), and
 - (2) Properly chock rear wheels.
- (G) For vehicles with air or electric brakes, power takeoff not in use-unattended:
 - (1) Turn ignition “off,”
 - (2) Place transmission in “lowest gear,” and
 - (3) Set parking brake or micro-brake (if so equipped).

29.6 **Seat Belt Usage.** The driver and all the passengers shall have their seat belts fastened whenever a motor vehicle is in motion. The driver is responsible for the passenger’s seat belts being fastened.

30. MINIMUM RECORD KEEPING REQUIREMENTS - CONTRACT SERVICES

- 30.1 **Invoice Requirements.** All invoices submitted for payment should reference and be supported by contractor’s copy of the appropriate work tickets. The invoice should provide the following information:
- (A) Brief description, date, and location of work performed
 - (B) Total units (hours, days, etc.) unit rate, and extended amount for each labor classification used.
 - (C) Description and size, total units, unit rate, and extended amount for each type or size of equipment used.

- (D) Quantity and description of materials furnished, unit prices, and extended amounts
- (E) If more than one job is shown on an invoice, each job should be separately detailed and totaled

30.2 **Work Ticket Requirements.** Contractor's supervisor on the job must complete and sign daily work tickets and furnish a copy to the Company representative responsible for the job at the end of each day for his review and signature. Work tickets are to be individually numbered with non-recurring numbers for ease of matching to invoices.

- (A) Brief description of work performed including a description of unusual conditions affecting work completion.
- (B) Name, classification and hours worked for each contractor's employee
- (C) Lease name and well number or facility on which work was performed
- (D) Size and type of equipment used and equipment identification number including hours used
- (E) Quantity and description of materials furnished
- (F) Arrival and departure time on location
- (G) Material and quantity, equipment, or services furnished by a third party

30.3 Internal Accounting Records

- (A) All labor charges should be documented by the following:
 - (1) Payroll register listing all payroll expenses for all contractor employees working at Company and other companies.
 - (2) Payment to employees in the form of a check.
 - (3) Evidence of payment of all payroll taxes, unemployment insurance, etc.
- (B) Material charges should be supported in the following manner:
 - (1) Evidence of cost or valuation of all material charged to Company on a cost-plus basis.
 - (2) Evidence of payment by contractor of all third party invoices charged in whole or in part to Company.
- (C) The following records should be maintained as support for equipment charges:
 - (1) Detailed list of all equipment owned and/or used by contractor.

-
- (2) Log of all equipment used (where, when or whom).
 - (3) Evidence of payment by contractor (third party subleased to Company) of all rented equipment charged to Company.
 - (D) All subcontractors' charges included in billings by contractor to Company should be supported by a paid invoice from the subcontractor, a copy of the contract between contractor and subcontractor and documentation for labor, materials and equipment charges as outlined above.
 - (E) A description of entertainment expenses (i.e., lunches, outings, event tickets, etc.) should include the following:
 - (1) Individuals involved and company affiliation
 - (2) Total cost
 - (3) Business purpose
 - (F) Records of any gifts given should include:
 - (1) Name and company affiliation of individual receiving the gift
 - (2) A description and cost
 - (3) Business purpose

31. SAN JOAQUIN VALLEY BUSINESS UNIT CONTRACTOR ENVIRONMENTAL & SAFETY PROGRAM

31.1 Your firm has been identified as a company with an active contract with the San Joaquin Valley Business Unit. Periodically, your company has employees working at one or more of our Company's facilities performing general oilfield related work and/or may be involved in confined space entry and/or job tasks related to confined space entry (line breaking, blinding, lockout). As such, your field employees are expected to have minimum safety training including, but not limited to, the topics referenced below. During the course of their work or prior to beginning their work, they may be asked to show proof of such training. Additional company specific training may be required by Chevron in which case we will provide you prior written notice and a list of providers of such training.

31.2 Topics

- (A) California Oil Producers Contractor Safety Video and Test
- (B) Hazard Communication
- (C) Hydrogen Sulfide

-
- (D) Asbestos
 - (E) Personal Protective Equipment
 - (F) Control of Noise Training
 - (G) Lockout/Tagout*
 - (H) Blinding*
 - (I) Line Breaking*
 - (J) Confined Space Awareness*
 - (K) Crane Safety
 - (L) Slings and Taglines
 - (M) Code of Safe Work Practices
 - (N) Producer's Permit Procedure*
 - (O) Fall Protection
 - (P) Fire Safety
 - (Q) Emergency Action Plan
 - (R) Producer's Safety Requirements
 - (S) Proposition 65
 - (T) Lead
 - (U) Flange Spreaders
 - (V) Job Safety Analysis/Job Safety Permit
 - (W) Field Hazards

* Only required if employees are engaged in job tasks related to these activities.

31.3 You may provide your own training program provided you first provide Chevron with an outline of your training program. As these requirements are consistent with training programs provided locally by ABC/WESTEC you may utilize their courses, or you may qualify by obtaining equivalent training from other knowledgeable providers.

31.4 Attached is an outline of the Passport training provided at ABC/WESTEC.

<u>Topic</u>	<u>Content of Main Points</u>
1. California Oil Producers Contractor Safety Video	COPS video on hazards encountered in oilfields.
2. Hazard Communication	Contractor responsibilities, Employee responsibilities, NFPA labels, HMIS Label, DOT categories
3. Hydrogen Sulfide	Locations, H2S characteristics, air monitors.
4. Asbestos	Where found, How to recognize, health hazards. Not to remove asbestos without prior approval.
5. Personal Protective Equipment	Routine PPE required at all times: HH, SG, Boots, Leather gloves, Pants, shirt with sleeves.
6. Control of Noise Training	Use ear protection where required: posted, high noise areas
7. Lockout/Tagout	Electrical and Mechanical energy source. At least one contractor lock required, tag with information, verify system de-energized before beginning work.
8. Blinding	Appropriately rated blinds, basic applications.
9. Line Breaking	Hazards within pipe: pressure, gases, H2S, use of gaskets and bolts, Review LOTO, blinding.
10. Confined Space Awareness	Description of spaces, typical spaces, avoid unless authorized entrant.
11. Crane Safety	Areas to avoid, general work site procedures, Look up and Live Red Flag Policy.
12. Slings and Taglines	Typical slings, how to attach load, use of taglines. Crane safety with slings/taglines.
13. Code of Safe Work Practices	General Safety Rules from Oil Producers and Construction Safety Orders (Safety booklets)
14. Producer's Permit Procedures	Hot Work, Safework, and Confined Space Permit conditions.
15. Fall Protection	Attaching ladders, when to use, lanyard length.
16. Fire Safety	Fire Triangle, use of hot work permit, classes of fires, combustible material (flammable liquid, grass), removing hazard.
17. Emergency Action Plan	Review General Action Guide, Spill Action Guide, Fire Action Guide. Who to call, responsibilities.
18. Producer's Safety Requirements	Review main points of all topics.
19. Proposition 65	Hazard determination, forms of warning.
20. Lead	Location, identification, health hazards.
21. Flange Spreaders	Description, associated safety hazards.
22. Job Safety Analysis/Job Safety Permit	Description, basic procedure, completing a JSA, when a JSA is required.
23. Field Hazards	Location, identification, associated hazards.

32. SUBCONTRACTING LIST OF SUBCONTRACTORS AND SUPPLIERS

- 32.1 CONTRACTOR intends to perform all Work covered by this Contract, herein for which CONTRACTOR has nominated Subcontractors.
- 32.2 CONTRACTOR agrees to advise COMPANY in writing, prior to any Subcontractor commencing Work, the names and contact information of CONTRACTOR's senior personnel who will supervise the Work of any such Subcontractor.
- 32.3 CONTRACTOR agrees to provide a list of all subcontractors to Supply Chain Management within 30 days of execution of contract. Any additions, substitution, modification or change to this list of Subcontractors, or the Work to be performed by Subcontractors, without the written permission of COMPANY.
- 32.4 CONTRACTOR agrees to be responsible for the performance of subcontracted Work and shall be liable to COMPANY for the performance of subcontracted Work as if CONTRACTOR performed such Work.
- 32.5 CONTRACTOR agrees to provide management for all Subcontractors.
- 32.6 CONTRACTOR agrees to pre-qualify and select subcontractor based on Health, Environment, and Safety performance. Records of HES prequalification and selection shall be made available for auditing by Chevron.

Confidential

Execution Copy

EXHIBIT E-1
PROJECT SAFETY MANAGEMENT PLAN
Attached.

Project Safety Management Plan (PSMP)

**Solar to Steam Demonstration
Coalinga, California**

**By & Between
Chevron Technology Ventures,
BrightSource Construction Management, Inc
& BrightSource Operating Company, LLC**

Solar to Steam Demonstration
Project Safety Management Plan

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A. Definitions (for purposes of this PSMP only)

Company: Chevron U.S.A., Inc., as limited to the business units involved in the management and supervision of the “Project”. Chevron business units referenced in this Project Safety Management Plan include:

- Chevron Technology Ventures (CTV)
- Chevron North America Exploration and Production - San Joaquin Valley Business Unit (CNAEP SJVBU)
- Chevron Energy Solutions (CES)

Provider: BrightSource Construction Management, Inc (BSCM), a California corporation, the entity under contract with the Company for the design and construction of the Project or BrightSource Operating Services, LLC, the entity under contract with the Company for the initial operation and maintenance of the Project.

Project or Demo Plant: Refers to the Solar-to Steam Demonstration Plant being designed and constructed at the Company’s oil production facility in Coalinga, California.

Project Safety Management Plan (PSMP): This document including all referenced appendices and attachments.

Subcontractor: Any and all entities under contract with the Provider for the performance of any aspect of the Project on Company property.

B. Company and Provider Management Teams

Company Management Team

Company Project Manager:	Sergio Hoyos (CTV)
Company Management HES Representatives:	Jeff Gurican (SJVBU)
	Sandra Barnes (SJVBU)
Company Site HES Representative:	Larry Torres (SJVBU)
Company Construction Manager:	Michael Walneuski (CES)
Company Construction Superintendent:	Manny Mendez (CES)

Provider Management Team

Provider Project Manager:	Arieh Amit
Provider Construction Manager:	TBD
Provider Project Safety Manager:	TBD
Provider Lead Operator	TBD

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C. Purpose of the Project Safety Management Plan

The purpose of this Project Safety Management Plan (PSMP) is to provide a listing of Company and Provider established and recommended safe work practices and guidelines to be followed during the construction and initial operation and maintenance of the Project. This document defines the minimum expectations required for this project as it is supplemental to the Chevron Blue Book as defined in Section G(3).

D. Safety Objectives, Guiding Principles, Operational Excellence

1. Safety Objectives

The overall safety objective for the Project is to have everyone working on the Project return home safely every night. In order to meet this objective, all project personnel must be completely committed to performing every aspect of the Project in a safe manner.

2. Guiding Principles

The guiding principles to assist the project team in meeting the overall safety objectives are:

- **Safety is Value-Based, not just Priority-Based** – Safety is not in competition with organizational priorities of cost or schedule. Safety is never compromised for any circumstance or in any situation. If we can't do it safely, then we will not do it.
- **Partnership** – Effective safety implementation and improved safety performance requires a partnership between the Company and Provider Management Teams and by demonstrating their commitment through effective leadership behaviors.
- **Incident Free Operations Culture** – Company and Provider Management Teams along with workers have a strong commitment to participate in promoting an incident and injury free culture. They all work together to eliminate barriers and obstacles.
- **Value of People and Workers** – Company and Provider Management Teams demonstrate the value of its people and focuses on continuous improvement of safety behaviors, by involving the entire work force from craft workers to Company and Provider management. Every task is performed with a concern for the safety of ourselves, our fellow employees, contractors, visitors, vendors, customers and the communities in which we are working. A successful process focuses on people versus numbers or statistics.

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- **Safety Best Practices and Processes** – All team members must commit to and implement the selected Safety Best Practices and processes in a proactive manner to prevent injuries and incidents

The Objectives and Guiding Principles above shall be communicated to, and accepted by, all project personnel. Adherence to these principles will build a strong foundation for safety management, and will be the starting point for planning and performing all project work.

3. Operational Excellence

Company and the Provider agree that the following principles and tenets of Chevron Operational Excellence (OE) will be adhered to during the execution of the project.

i. OE Principles

Do it safely or not at all.

There is always time to do it right.

ii. OE Tenets

Always

1. Operate within design or environmental limits.
2. Operate in a safe and controlled condition.
3. Ensure safety devices are in place and functioning.
4. Follow safe work practices and procedures.
5. Meet or exceed customers' requirements.
6. Maintain integrity of dedicated systems.
7. Comply with all applicable rules and regulations.
8. Address abnormal conditions.
9. Follow written procedures for high-risk or unusual situations.
10. Involve the right people in decisions that affect procedures and equipment.

E. Safety Metrics and Project Safety Targets

Company and the Provider have agreed upon the following metrics, metric definitions, and safety targets for the Project.

<u>Metric</u>	<u>Target</u>
Total Recordable Incident Rate (TRIR)	0
Days Away from Work Incident Rate (DAFWR)	0
Monthly Leadership Observations (BBS)	1

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Definitions

Total Recordable Incident Rate (TRIR) – the total number of recordable incidents (fatalities, days away from work, restricted activity, other medical cases)

Days Away from Work – when an employee or contractor is away from work one or more days after the day of a work-related injury or illness. Incidents are still considered to be a DAFW even if the first day of work missed is several days/weeks /months after the initial date of the incident.

Monthly Leadership Observations (BBS) – Behavior Based Observations conducted by Senior Leadership from Company, Provider, and other onsite management on a monthly basis. This will result in 3-4 observations completed per month.

Injury/Illness Incident Rates

<u>Item</u>	<u>Description/Equation</u>
Total Recordable Incident Rate (TRIR)	<p>The total number of recordable incidents (fatalities, days away from work, restricted activity, other medical cases), multiplied by 200,000, divided by the total number of employee and contractor hours worked. 200,000 hours represents 100 full-time equivalent workers at 40 hours per week and a 50-week year.</p> $TRIR = (200,000 / \text{Hours Worked}) \times (\text{Fatalities} + \text{Days away from work cases} + \text{Restricted activity cases} + \text{other medical cases})$
Days Away From Work Incident Rate (DAFWR or DAFWIR)	<p>The number of days away from work incidents (excludes fatalities and restricted duty), multiplied by 200,000, divided by the total number of employee and contractor hours worked.</p> $DAFWR = (200,000 / \text{Hours Worked}) \times (\text{Days away from work cases})$

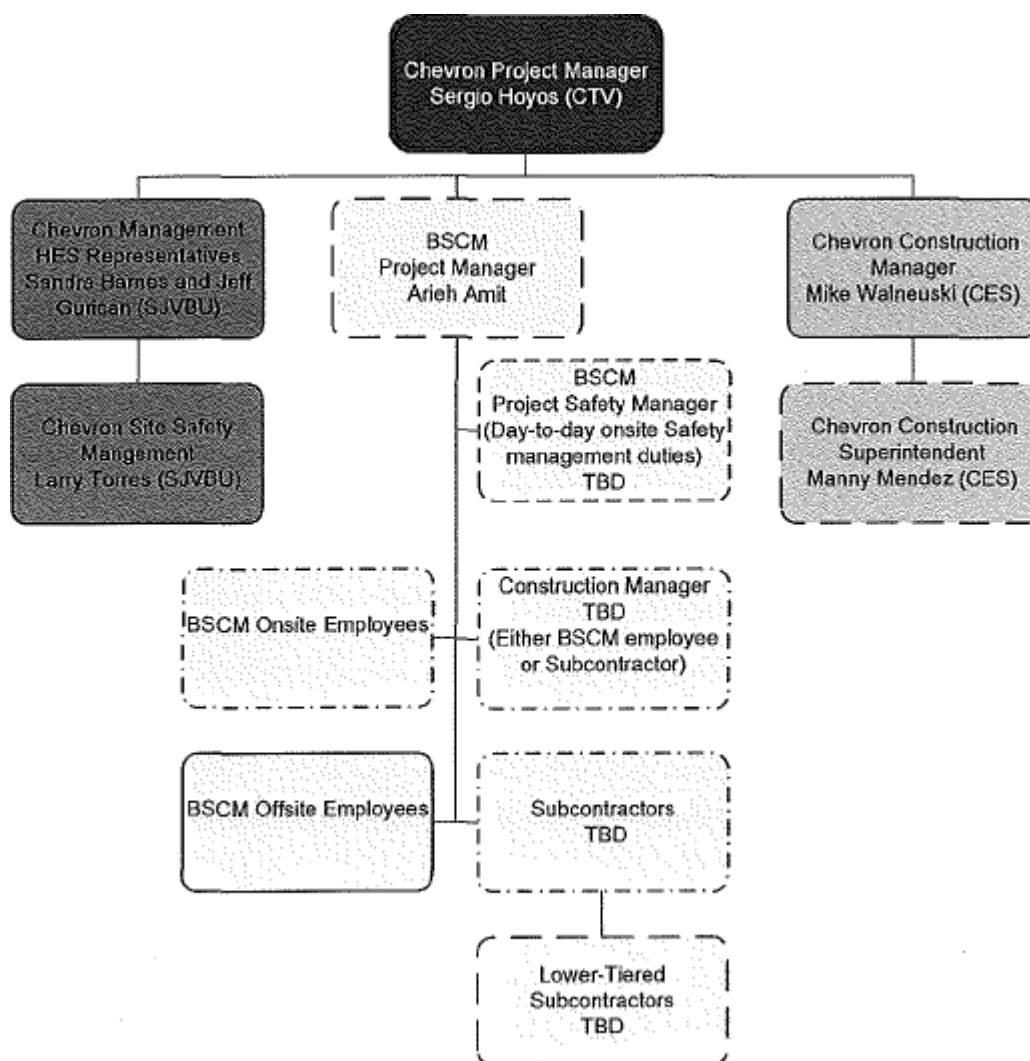
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F. Organization Chart

The Project organization chart below will be updated as personnel and structure changes are made. All Provider changes in designated personnel and Subcontractors will be made in accordance with the guidelines in this PSMP and the Agreement between Provider and Company.

* *Note: The safety organization chart for the initial operation and maintenance stage of the project will be built at a later date.*



Note 1: All safety/HES personnel shall have HES reporting access to Company and Provider Management Teams at any time.

Note 2: Personnel in dashed boxes are expected to be onsite full-time.

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G. Employee Orientation and Training

1. Purpose of Orientation

The Company's goal is to develop a safety culture that enables our own employees as well as those of our Business Partners (i.e. Provider) to adopt safety as a core value that guides their everyday activities. To that end, we work to gain introduction and alignment of this culture through orientation and various training events.

The Provider and all its Subcontractors shall ensure that their on-site employees are adequately trained to meet safe performance requirements for their assignments prior to commencing work. Said employees shall be educated and trained in the policies and procedures outlined in this Project Safety Management Plan as well as any applicable safe work procedures prior to commencing work.

Safety and occupational health information will be conveyed to workers by Company and Provider Management Teams via formal briefing sessions, informal meetings and/or written bulletins. It is the responsibility of the Provider to ensure that their employees are familiar with the health and safety requirements at the SJVBU site.

2. Training

Provider is responsible for ensuring that all its personnel and the personnel of all its Subcontractors have received the required training and that the training is up-to-date. It is the responsibility of the Company HES Representative and/or Company Construction Superintendent to audit the training records of the Provider and its Subcontractors. Below is the training required for the various levels of operation:

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	Required Training by Employment Role					
	<u>Passport Orientation/ Training</u>	<u>Orientation w/18+ & Overhead Power line</u>	<u>Person Leading Work Training</u>	<u>OELS Module 18/19</u>	<u>Operational Excellence Leadership Seminar</u>	<u>OPL Refresher (Every 2 years)</u>
Business Partner directing the work activities of operations personnel on Company properties (Crew chiefs, crew pushers, head operators, operators, electricians, mechanics, operations personnel)	Yes	Yes	Yes	Yes		Yes
Leader, manager performing work on Company Properties (Superintendents, supervisors, team leaders, project managers, engineers, planners, technicians, safety professionals)	Yes	Yes		Yes	Yes	Yes
Duration Times	1 Day	5 hours 6:45am-11:45am	1 Day/ 8 hours	6 hours	2 days at 8 hours a day	1 hour 15 minutes 6:45am-11:45am

The following two training requirements must be completed by all personnel prior to performing any onsite work. The training shall include items contained in, but not limited to, OSHA CFR 1926.00 Standards, and pertinent OSHA CFR 1910.00 Standards.

- i. *Passport Training for California Oil Producers:* One day, nine and a half hour class on oil field safety principles and practices in the San Joaquin Valley. Conducted by WESTEC in Shafter, California. Schedule and course details can be found at www.westec.org or by calling 661-387-1055. * *This training is not required of Chevron employees but all Business Partners must complete this training.*
- Passport Orientation conducted by ABC:* An alternative training course to the one referenced above offering courses in Bakersfield, California. This training is conducted by Associated Builders and Contractors (ABC), and is held every Wednesday, Friday and Saturday from 8:00 am to 4:00 pm. Schedule and course details can be found at

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www.abccentralcal.org or by calling 661-392-8729 for orientation information.

- ii. *SJVBU Business Partner Orientation*: A five hour course covering Overhead Power line (OPL) Rules and Requirements, Stop Work Authority, Tenants of Operation as well as Site Specific Orientation for all Business Partners.

At the end of this training event, attendees will receive a card that confirms their completion of the orientation. This card should be kept on the Business Partner's person while working on Company properties. In addition, they will also receive a sticker for their hard hat which is an external indicator of their having completed the training. This training must only be completed *one time* with the exception of Overhead Power line Refresher training which is necessary to complete every two years. Contact Debbie Rodriguez at 661-392-3039 for schedule of orientations.

In addition to the two training requirements above, the following training requirements must be completed by all onsite managers as defined below prior to performing and/or directing any work onsite.

- i. *SJVBU Operational Excellence Leadership Seminar*: A two - day leadership training course targeting company and business partner superintendents, supervisors, team leaders, project managers (including engineers), planners, technicians and safety professionals. After completing this training, Business Partners will need to take the subsequent class entitled OELS Module 18/19 to finalize their training requirements.
- ii. *Persons Leading Work (PLW) in Field Operations*: A one - day class that is required for Business Partners holding positions such as crew chiefs, crew pushers, head operators, operators, electricians, mechanics and any other operations personnel. After completing this training, the Business Partners will need to take the subsequent class entitled OELS 18/19 to finalize their training requirements. Business Partners must also attend orientation.
- iii. *OELS Module 18/19*: Represents the next generation of OELS evolution: Internalization (Module 18) and Incident Free Operations Leadership Skills (Module 19). Session 18 addresses the personal internalization of safety, how leaders and organizations demonstrate behaviors and incorporate practices that commit to safety as a value. Module 19 describes behaviors that demonstrate caring leadership.

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3. Chevron Employee & Business Partner Safe Work Practices Handbook (“Chevron Blue Book”)

At the conclusion of the SJVBU Business Partner Orientation, all personnel will receive a copy of the Chevron Employee & Business Partner Safe Work Practices Handbook (or the “Chevron Blue Book”) (*Appendix A*).

All personnel working on Company property are required to read and sign the Chevron Blue Book. The Provider and each Subcontractor must maintain on file a record of all personnel who have received, read, and signed the Chevron Blue Book.

This Project Safety Management Plan, acts as a supplemental guide to the Chevron Blue Book. The Provider and each Subcontractor must comply with at all times the requirements in the Chevron Blue Book.

4. Site Safety Plan

In addition to the Project Safety Management Plan, the project will also have a written Site Safety Plan (see *Appendix H for template*). This plan will be created by and kept on site by the Provider with a copy distributed to and kept on site by the Company Construction Superintendent.

5. Onsite Solar to Steam Safety Orientation

Prior to performing any work at the S2S site on 19C, all Personnel MUST receive an orientation to the site rules and processes. It is the responsibility of the Provider to ensure that all onsite personnel and visitors receive this orientation.

The Onsite Safety Orientation shall contain the following:

- Incident reporting procedures
- Personal Protective Equipment Policies
- Safety aspects of the particular job/operation being done
- Fall protection policy
- Drug & alcohol policy
- Site specific biological orientation

The Onsite Safety Orientation will be conducted by the onsite Provider Project Safety Manager for the duration of the Project.

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H. Communication

Clear and concise communication between all stakeholders is essential to ensure the health and safety of all project personnel.

In order to ensure this communication occurs, a number of communication processes will be implemented during this project. Communication efforts will include, but will not be limited to:

1. Daily Pre-Job Safety Meetings or Tailgate Safety Meetings

Prior to the start of each workday or new tasks, a Pre-Job Safety Meeting (also called Tailgate Safety Meetings) will be led by the Provider and involve all persons leading work on-site to discuss and identify risks associated with the day's work.

All activities discussed at these meetings should be communicated to all personnel to ensure that adjacent workers performing activities are made aware of the potential work hazards around them. Each crew will develop a site specific Job Safety Analysis (JSA) outlining the potential hazards and the steps taken to mitigate those hazards. All on-site workers that are associated with leading work to be carried out will attend the Pre-Job Safety Meetings.

A record of all Pre-Job Safety Meetings shall be kept on file at the site by the Provider Project Manager and should include a copy each JSA as required for the job at hand.

2. Bi-Weekly Project Safety Meetings

On a weekly basis, a Project Safety Meeting will be held to discuss the state of current health and safety and to plan for future activities. These meetings will be led by the Provider Project Safety Manager and Provider Construction Manager. The following personnel should attend the Weekly Project Safety Meetings:

- Company Construction Superintendent
- Company Site HES Representative (if available)
- Provider Project Manager
- Provider Construction Manager
- Provider Project Safety Manager
- Provider Lead Operator (during initial operation and maintenance)
- All onsite crew and personnel

These Weekly Project Safety Meetings will be used to:

- Exchange information between project personnel regarding hazards, safety concerns, and safety performance
- Focus on proactive approaches to safety issues and concerns

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- Discuss Lessons Learned from the job
- Review all Incident or Near Miss investigations
- Safety topics related to the work that is underway or immediately upcoming such as:
 1. Emergency response plan
 2. Job Scope and flow of events and simultaneous operations
 3. Lockout/tagout blockout procedures
 4. Hot work, Pinch point/line of fire, Back Safety
 5. Wind shifts and appropriate action
 6. Function testing of safety showers/eyewashes
 7. Evacuation Procedures and Plot Plan
- Recognize those individuals with outstanding safety performance

Each individual that attends these safety meetings shall sign their signature documenting attendance. Along with the attendance sheet, minutes of this meeting will be recorded by on site rep with copies supplied to Contractors and Project Binders.

3. Monthly Management Team Meetings (During construction phase only)

The Monthly Management Team Meeting will be held at the Coalinga facility and will include the Project Management Team as well as all of the onsite Company and Provider management teams. These meetings are intended to update the Project Management Team of the monthly activities as they pertain to the safety metrics and progress of the operation. The Company and Provider Construction Managers will lead this meeting and provide a detailed agenda prior to the meeting date each month.

I. Personal Protective Equipment

Personal Protective Equipment (PPE) requirements will be established for the project through completion of Job Hazard Assessments (JHAs). All personnel entering the job site must wear the required PPE at all times. Appropriate use of PPE will protect personnel from the potential hazards to the respiratory system, skin, eyes, face, hands, feet, head, body and hearing that may be encountered on the job site.

Provider must ensure that all protective clothing and equipment are kept in good condition and stored and maintained in a proper manner.

Where possible, hazards must be evaluated for the opportunity of elimination and appropriate engineering or administrative controls as mitigation techniques. If this cannot be achieved, PPE is used to protect the worker.

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1. Minimum PPE Requirements

Minimum required PPE (Must be worn at all times when entering the construction job site (See Blue Book Sec J.5):

- Safety Glasses with side shields and
- Approved Foot Wear (Steel toed shoes)
- Hard Hat
- Work Gloves (appropriate for the task being performed)
- Long pants and short sleeve shirts (at minimum)
- UV protection (as appropriate)
- H₂S Monitors

PPE requirements will be reviewed and evaluated for all job tasks that are performed as part of the Job Safety Analysis (JSA).

Provision of all PPE will be the responsibility of the Provider and each of its Subcontractors. Ensuring the proper use and fit of the equipment will be the shared responsibility of the Provider Project Safety Manager, the Company HES Representative, and the Company Construction Superintendent to audit and inspect the use of PPE to ensure

2. Additional PPE Requirements (Might be required on the Project site)

i. Respirators

Respiratory protection may be required by workers who are or may be potentially exposed to harmful concentrations of air contaminants. Air contaminants may include but are not limited to welding fumes, organic vapors, and dusts and particulate matter. Should a potential for use of respiratory protection be identified, a review of the work process/environment must be conducted to ensure proper selection and use of respirators. Where use is ultimately required, workers must be medically cleared, and trained and enrolled in a respiratory protection program as required by Cal/OSHA.

ii. Hearing Protection

Hearing protection is required at all times when work activity creates potentially hazardous noise levels (above 85 dBA). Provider will provide proper hearing protection equipment.

iii. Other PPE:

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- Face Shield
- Chemical Resistant Gloves
- Project Chaps

J. Audits

The management teams of both Company and Provider will jointly conduct monthly audits of site conditions, facilities and equipment, and activities to ensure that sound health and safety practices are being followed in all areas of the project site. The Field Inspection Checklist (Appendix I) can be used as a guideline for the inspections. A copy of all completed inspection checklists will be submitted to the Provider Project Manager and Provider Project Safety Manager for review.

The Provider Project Safety Manager will also conduct daily workplace inspections of site conditions, facilities and equipment, and activities within their area of responsibility to ensure that sound health and safety practices are being followed.

Audits will be performed monthly by the Company Construction Manager, Company Construction Superintendent, and/or Company HES Representative to:

- Demonstrate the importance of health and safety to the Project
- Provide technical input as needed
- Identify successes and best practices
- Identify opportunities for improvement

Deficiencies identified by the Company Construction Manager, Company Construction Superintendent, and/or Company HES Representative will be corrected by the Provider as soon as possible and corrective actions will be documented. Safety inspection documentation and follow-up actions will be reported to the Project Managers and Provider Project Safety Manager and Company HES Representatives.

K. General Rules

1. Unique Solar Construction Challenges

a. Assembly and Erection of Solar Field

- Throughout project, the level of H₂S will be closely monitored in the construction site.

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- Please refer to the proper procedures of emergency evacuation that will be created by Provider in the Site Safety Plan should any environmental release occur.
- During the assembly & erection of the Heliostats, all workers working around rough or sharp edges are required to employ appropriate PPE, including but not limited to, hand gloves at the minimum.
- All employees working around the Heliostat pylon erection are to employ proper PPE, including but not limited to, ear plugs.
- All employees working in the Assembly Shed will need proper training to be provided by the Provider to operate jigs, cranes and equipment involved in the assembly of the Heliostat components.
- Competency verification will need to be conducted
- Details for this activity will be further defined in the Site Safety Plan

b. Erection of Solar Boiler & Structural Tower

- No work will be allowed under the Structural Tower while the tower erection is in progress.
- No work will be allowed under and around the Solar Boiler area while the Solar Boiler is delivered, hoisted and erected.
- Details for this activity will be further defined in the Site Safety Plan

c. Clean up of Heliostats during Assembly and Installation

- Provider will provide Safe Work Practices for clean up of broken or cracked mirrors during heliostat assembly and installation. This will be added to the JSA and Site Safety Plan when applicable.

2. Housekeeping

Good housekeeping is essential to a safe work environment. Workers are injured from slips and falls more than any other occupational hazard. By adhering to good housekeeping principles, a majority of slip/trip injuries can be avoided. Everyone is expected to ensure good housekeeping on their own work sites.

i. Housekeeping Requirements

Tools and Equipment

- Pick up and/or clean tools and equipment after use and store in designated areas
- Store tools and equipment in an area away from the main work area
- Tool and equipment storage areas should be kept neat and tidy

Trash and Spills

- Onsite trash disposal canisters will be provided and maintained by Provider

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- Pick up and/or clean up waste material generated from work activities promptly
- Clean up all spills immediately (gasoline, hydraulic fluids, etc)
- Provide trash cans in areas prone to accumulation of trash and debris

Walkways

- Ensure that walkways and passageways are kept clear of equipment and debris
- Identify trip/slip hazards with flagging, tape, or cones

ii. Periodic Clean Up and Inspections

One way of maintaining good housekeeping is to implement clean up routines that occur throughout the day's activities. Set aside a few minutes at periodic times throughout the day to inspect and ensure that the work site is clean from potential housekeeping hazards. Site superintendents should also conduct periodic inspections of the site to address any housekeeping issues.

In addition, time should be given at the end of the day to clean up the work area. Not only will this help improve housekeeping, it will make starting work the next day much easier.

3. Stop Work Authority

All employees of Company, the Provider, and all Subcontractors on site are expected to stop work if conditions become immediately dangerous or violate any of the Company Tenants listed in Section D of this PSMP. (*See Appendix C for Stop Work Authority Release*).

4. Hot Work

- Fire watch will be notified and present at all welding locations.
- All open holes will be covered and tested. Flammable materials will be removed from area.
- The fire watch will determine the flammability of the atmosphere before any welding is permitted.
- All workers in the area will wear proper tinted eye protection if they are in the welding area and subject to arc flashes.
- Electrical equipment will be protected from damage due to cutting grinding and welding.

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5. Working at Heights

If working on a ladder over 6 feet, the ladder will be required to be tied-off. If a worker is working over 6 feet above grade level and/or in a personnel basket, a full body safety harness must be used. It is the responsibility of the Provider to ensure compliance. If scaffolding is to be used, the setup must meet Company Engineering Standards and approved by either the Company Construction Superintendent or the Company HES Representative prior to starting work. A daily inspection of the scaffolding is to be performed and documented by the Company Construction Superintendent and/or the Company HES Representative.

Provider should create a fall protection plan to be used when working at heights.

** NOTE: When using fall protection, workers must be tied off to a suitable anchor as defined by Company Engineering Standards. The anchor must support a minimum of 5,000 lbs. The top rail of the scaffolding is not a suitable anchor.*

6. Line of Fire / Pinch Points

Workers shall never walk or stand under suspended loads. Workers shall remain alert at all times and remain out of the line of fire of moving equipment and tools. While handling heavy equipment and pipe, care should be taken to avoid pinch points (fitting of pipe, use alignment tools, tag lines, installation of filter units etc).

7. Simultaneous Operations

Provider and subcontractor personnel shall be issued a safe work permit and be aware of on-going new construction through the daily pre job safety and tail-gating communication meetings. Provider shall issue a simultaneous operations plan.

8. Underground Piping and Electrical Lines

Provider will communicate all desired requirements to contractors prior to auguring, trenching, excavating or digging on site location, and all underground metallic, non-metallic, and electrical lines are to be identified.

9. Heavy Lifts

A lifting plan will be provided by Provider for heavy lifts and shall include a site plot plan, anticipated loads, directions for lift, and language consistent with the proposed lift. This plan is to be discussed on the day of the lift and include the scope of work and hazards identified. Once reviewed by Provider Project Safety Manager, Company HES

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Management Representatives, Company Construction Manager, and Company Construction Superintendent, the lift activity can commence.

10. Lockout / Tagout Procedures

All lockout/tagout requirements will be as per the Chevron Blue Book Section IV. Prior to any job, which requires a lockout/tagout, the Company Construction Superintendent shall be notified and a safe isolation procedure/process shall be agreed upon that follows the Chevron Blue Book. All affected persons as well as project managers shall be notified prior to implementation.

11. Short Service Employees (SSE)

The Short Service Employee program has been adopted from the San Joaquin Valley Business Unit. Please see Appendix D for further clarification on Short Service Employees. Provider will develop a training procedures to ensure SSEs on the Project site can perform tasks safely and effectively. Provider shall transmit training procedures to Company Construction Manager and Company HES Management Representatives for review and approval.

12. Heat Illness Prevention

Heat illness is a serious concern in the San Joaquin Valley. Provider shall ensure access to drinking water and shaded rest areas for all onsite workers. The Provider Project Safety Manager will be responsible for outlining heat illness prevention methods and encouraging worker adoption of the methods.

L. Emergency Procedures

In Case of an Emergency

1. Protect (1) life and (2) property at risk.
2. **Call 911** immediately where appropriate. Tell the operator the nature of emergency. This would include, but not be limited to, collapse of a structure, fire, explosion, equipment failure such as collapse of crane, release of toxic vapors, or smoke, the presence of gas or other explosive vapors, hazardous material spill, bomb threat, etc.

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3. For medical emergencies, render assistance and seek medical help for the injured. Provider must insure that there is one person for every twenty (20) people performing work that have completed CPR and first aid training.
4. For fires, leaks, spills, or bomb threats, evacuate all personnel. Provider, with Company input, is responsible for creating all evacuation plans. Provider is also responsible for ensuring all Provider personnel and Subcontractors are accounted for after an evacuation.
- * *NOTE: Evacuation plans shall be communicated to all personnel during the safety orientation, and included in the Site Safety Plan presented by the Provider. Provider will be responsible for creating evacuation plans for each major work activity.*
5. If at any time, an H₂S area or personal monitor alarms, take the following actions:
 - a. Stop what you are doing and verify wind direction.
 - b. If in a vehicle, turn off any ignition sources.
 - c. Evacuate on foot crosswind and upwind of the suspected release
 - d. Notify the Provider Construction Manager, Provider Project Manager, and Company Construction Superintendent
 - e. If necessary, barricade access to the site. Re-entry to an area, in which there has been a suspected release to either isolate equipment or assist other potentially injured personnel requires following the Re-entry Procedure Guidelines found in the Blue Book.
 - f. If necessary, personnel may re-enter the area only with supplied air and two four – gas meters, with a qualified person standing by in a safe area.
6. Assist emergency response personnel as requested.
7. The Coalinga operations representative will decide when it is safe to return to the facility.

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Emergency Contacts

Call Sequence	Chevron U.S.A. Inc.	Name	Office Phone	Mobile Phone
1	Provider Project Manager	Arieh Amit		[*]
1	Company Construction Superintendent	Manny Mendez		[*]
2	Provider Project Safety Manager	TBD		
2	Provider Construction Manager	TBD		
2	Provider Lead Operator	TBD		
2	Company HES Site Representative	Larry Torres	[*]	[*]
3	Company HES Management Representative	Sandra Barnes	[*]	[*]
3	Company HES Management Representative	Jeff Gurican	[*]	[*]
3	Company Construction Manager	Mike Walneuski	[*]	[*]
3	Coalinga OE Specialist	Steve Tinajero	[*]	[*]
4	Company Project Manager	Sergio Hoyos	[*]	[*]
4	Coalinga HES Supervisor	Bob Long	[*]	[*]
4	Facilities Engineer (Process Unlimited)	Manual Urbano	[*]	[*]

M. Incident Reporting and Investigation Guidelines**1. Incident Reporting**

All accidents shall be reported to both the Provider Construction Manager and Company Construction Superintendent as soon as possible. It will be the responsibility of the Provider Construction Manager to report the accident to the Company HES Site Representative and Company HES Management Representatives as quickly as possible after taking the appropriate action to get medical help, if required. Incident reporting procedures will be covered in the morning tail-gating meetings as well as documented for easy reference. (See Appendix J for Incident Investigation Flow Chart)

2. Incident Investigation Procedure

Whenever an accident, incident or near miss occurs the main focus must be to find the root cause, and to take the appropriate measures to prevent any re-occurrence. This can be accomplished through an effective Incident Investigation Process. It is vital that all accidents, incidents and near misses be reported immediately so the investigation can be started as soon as possible. Provider Management is responsible for performing investigation and preparing the incident report.

The purpose of having an incident Investigation Procedure is to:

- Document and investigate any employee report of an alleged accident or incident.
- Alert all Provider and Company Management of any possible hazard or unsafe condition.

* Confidential Treatment Request

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- Provide a standard system of identifying causes to help prevent future occurrences.
- Provide information necessary to complete documentation and forms by all effected parties.
- Communicate the findings of all investigations to all affected personnel.
- Investigate any mechanical failure or malfunction or human error to determine cause and to initiate preventive measures.
- Document and share lessons learned.

As outlined in the incident Investigation Flow Chart in Appendix J, when any onsite personnel report an accident or incident, the personnel must immediately notify his/her immediate team lead who will then notify the Provider Construction Manager. The Provider Construction Manager will notify the Company Construction Superintendent.

The Company Construction Manager and Company Project Managers are responsible for reviewing the Provider's investigation report, and all applicable provisions of the SJVBU Incident Investigation Process relevant to the event.

Local SJVBU HES representatives will facilitate the II&R Processes 5 Why and Why Tree in the event an incident occurs

<u>Level of Investigation</u>	<u>Level 3</u>	<u>Level 2</u>	<u>Level 1</u>
Root Cause method	“Why Tree”	“Why Tree”	• “Five Why” or <i>SBU Discretion</i>
Team Membership and Sponsorship*	<ul style="list-style-type: none"> • Investigation team required (e.g., people involved in incident, first line supervisor, internal and external subject matter experts (SMEs) as needed) • Outside team leader suggested • Management sponsorship of investigation team required 	<ul style="list-style-type: none"> • Local investigation team required (e.g., people involved in incident, first line supervisor, internal SMEs as needed) • Local management sponsorship of investigation team required 	<ul style="list-style-type: none"> • Individual or Team at <i>SBU Discretion</i> • First line supervisor sponsorship

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Facilitator	Qualified root- cause analysis (RCA) facilitator required	Qualified RCA facilitator required	Investigation done by supervisor or designee
Time for Report Completion	One month, or as needed based on complexity or severity	Two weeks, or as needed based on complexity	One week
Documentation Criteria	<ul style="list-style-type: none"> • SiteSafe™ • Detailed investigation report • Summary (IF)* report 	<ul style="list-style-type: none"> • SiteSafe™ • Detailed investigation report • Summary (IF)*report** 	<ul style="list-style-type: none"> • Incident report in SiteSafe™ • Investigation Report (if applicable) in SiteSafe™

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N. Safety Metrics Reporting

The following metrics shall be reported to the Project on a monthly basis:

- Behavior Based Safety (BBS) Observations (number and data collected)
- Number of employees and the associated work hours
- Number of first aids
- Number of near misses
- Number of recordable incidents
- Number of lost time incidents
- Number of days away from work
- Number of motor vehicle accidents

Provider and all its Subcontractors will report this information to the Company Construction Manager during Monthly Management Team Meetings and in Provider's Monthly Progress Reports to Company.

O. Environmental Management

- Provider Construction Manager will maintain onsite an updated copy of all relevant construction and environmental permits, consents, approvals, evaluations, and plans. Provider Construction Manager will provide updated copies of all such material to Company Construction Superintendent or as requested by Company.
- Provider shall comply with and enforce all recommendations outlined in the Biological Resource Evaluation prepared by McCormick Biological, Inc – Section 4.0 Recommendations (*See Appendix G*). Provider and its Subcontractors shall exercise all necessary care to protect and preserve the environment, including flora, fauna and other natural resources or assets at any location where the work is performed. Provider and its subcontractors shall minimize and mitigate unavoidable impacts to the local environment. Provider and its Subcontractors shall prohibit their employees from hunting, disturbing, or capturing native birds, fish or other animals in the vicinity of the work site. Provider and its Subcontractors shall not remove trees and vegetation to an extent greater than is necessary for the work, as determined by Company Construction Superintendent. Whenever reasonably feasible, Provider and its Subcontractors shall stockpile topsoil for subsequent use in site restoration.
- Provider shall follow, enact, and enforce all recommendations outlined in Provider's Storm Water Pollution Prevention Plan (SWPPP) to minimize the effects of storm water discharge from the Project's construction site.
- Provider shall enact and enforce all recommendations outlined in the Project Dust Control Plan Modification to minimize the presence of PM10 dust particulates as a result of Project construction activities.

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- Provider and its Subcontractors shall assess the environmental hazards of materials and supplies used in conjunction with the work and shall use substitute materials presenting less risk whenever feasible.
- Provider and its Subcontractors shall keep a reasonable degree of order by properly disposing of accumulated rubbish and waste materials. Provider and its subcontractors shall start site cleanup and remediation immediately upon completion of work at that site
- Provider and its Subcontractors shall use only above-ground steel tanks that are properly grounded as fuel storage tanks. Provider and its Subcontractors shall assure that loading and drainage connections to fuel storage tanks are either plugged or locked in the closed position when not in use, and that fuel dispensing nozzles are self-closing.
- All above-ground fuel, oil and chemical storage tanks used by Provider or its Subcontractors shall have secondary containment with a capacity of one hundred ten percent (110%) of the capacity of the largest single tank. Secondary containment impounds may have a drain connection for removal of storm water, provided the drain discharge is normally plugged or equipped with a valve normally locked closed. In those areas governed by Federal or State SPCC plans, Provider is expected to comply with those requirements.
- Provider and its Subcontractors shall not discharge oil, solvents, chemicals, etc. to water bodies or onto land.
- Provider and its subcontractors shall protect fossils and antiquities found at job sites from damage or disturbance. Provider and its subcontractors shall report the location to Company and cease work at that location pending further instructions.

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Appendix A. Chevron Employee & Business Partner Safe Work Practices Handbook (“Chevron Blue Book”)

**CHEVRON EMPLOYEE AND
BUSINESS PARTNER
SAFE WORK PRACTICES HANDBOOK**

**SAN JOAQUIN VALLEY
BUSINESS UNIT**

CHEVRON AND BUSINESS PARTNER EMPLOYEES:

This handbook has been prepared with your safety and well being in mind. It contains good, sound information with which you should be familiar. You are expected to read it in its entirety and follow it as you perform your daily work assignments. By doing so, you will create a safer place to work and fulfill your responsibility to your Company.

**I acknowledge receipt of and have read the
Safe Work Practices Handbook.**

Signature _____

Printed Name _____

Date _____

(After signing, detach this page and give it to your supervisor.)

FOREWORD

The intent of this manual is to provide each Chevron and Business Partner employee with the basic rules, regulations and instructions needed to perform work safely. These Safe Work Practices are based on Federal, state, and local laws and the experience of our Company and the oil industry.

As it is impossible to cover every situation which may arise, only the basics are covered here. Ask your supervisor or check operating manuals and/or the San Joaquin Valley Business Unit Safety Manual for more information. It is every employee's responsibility to apply safe behaviors to their work and personal habits. In addition it is your responsibility to comply with the Safe Work Practices Handbook. If a Business Partner practice exceeds these requirements, their work practices will apply to their operations.

7/01/07

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Section I — Safety Responsibilities

A. Operational Excellence

Operational Excellence is how we conduct our business to achieve our vision and is an integral part of our day-to-day activities.

Tenets are the overarching code of conduct used by employees to guide daily decisions and activities. They apply to all employees and Business Partners all the time. We should frequently discuss how the Tenets apply to our work.

We Always:

1. Operate within design or environmental limits.
2. Operate in a safe and controlled condition.
3. Ensure safety devices are in place and functioning.
4. Follow safe work practices and procedures.
5. Meet or exceed customers' requirements.
6. Maintain integrity of operating systems.
7. Comply with all applicable procedures, rules, and regulations.
8. Address abnormal conditions.
9. Follow written procedures for high-risk or unusual situations.
10. Involve the right people in the decisions that affect people, procedures, and equipment.

Chevron strives for Operational Excellence in our safety and environmental performance and in the reliability of our operations. The goal of these efforts is an incident-free workplace. Through these principles we empower our workforce, both employees and business partners, to make safety a core value.

Three simple principles frame our efforts to achieve this goal:

1. Do it safely or not at all.
2. There is always time to do it right.
3. Protect the environment.

B. Employee Responsibilities

1. Each employee shall work in a safe manner while watching

out for the safety of his/her fellow employees and business partners.

2. Employees are responsible for recognizing hazards and immediately correcting or reporting any unsafe condition or practice observed to their supervisor. Each employee is empowered to stop work when conditions are deemed immediately dangerous to life or health (Stop Work Authority).
3. Immediately report all incidents, injuries and near misses to your supervisor. Before seeking non-emergency medical treatment, your supervisor must be notified, and he/she will arrange for a visit to a Company designated doctor.
4. Each employee shall comply with training requirements, federal, state, and local laws, and Company written and oral instructions while performing job duties. He/she will immediately report possible violations of laws, procedures and guidelines to his/her immediate supervisor.
5. Each employee shall be familiar with emergency procedures applicable to the job, including response to fire and/or injuries.
6. When the employee has any doubt regarding his/her job procedure or the safety involved, he/she should consult his/her supervisor before proceeding.
7. Employees shall participate in routine inspection and servicing of all safety equipment (including but not limited to fire water systems, fire alarms, fire extinguishers, gas testing equipment, safety showers and eye wash facilities, emergency shutdown systems, supplied air breathing equipment, etc.). Records of the inspections shall be maintained at the facility.
8. All equipment shall be installed and operated in accordance with Company standards, manufacturer's labeling, and applicable federal, state, and local codes and regulations.
9. Everyone must participate in safety and environmental

meetings, processes, and training.

10. Assist in investigating incidents, injuries, and significant near misses.
11. Employees shall perform a hazard assessment prior to starting a job, which includes identifying the work to be performed, the hazards associated with that work, and how to mitigate or eliminate the hazards.

C. Business Partner Responsibilities

1. All personnel are empowered and expected to stop work if any person's safety or the environment is at risk (Stop Work Authority).
2. Business Partner operations will be performed in accordance with the elements of the Employee/Business Partner Safe Work Practices (Blue Book) and HES requirements in the active contract.
3. The term "contractor" also includes sub-contractors and vendors.
4. Business partners shall comply with all Company and governmental safety rules and regulations. Disregard for safety rules is grounds for removal from worksite and/or termination of contract.
5. Business partners are responsible for assuring their personnel and subcontractors are appropriately trained and qualified to perform assigned tasks.
6. Business partners shall provide their personnel with all required safety equipment. Special circumstances may require a deviation from the practices and procedures contained herein. Any deviation must be approved in writing by the Area Manager (or designated representative) prior to the commencement of work. Business partners may use Company's safety equipment only during an emergency and shall report such use to a Company representative.

7. All accidents involving Business partners shall be reported immediately to the Company representative in charge of the project. All OSHA reportable injuries and severe near misses should be thoroughly investigated by a Company/business partner team as soon as possible after the incident. The incident investigation team should consist of the Business partner's designated safety representative, the Company supervisor for the work, and additional resources as needed. The team should jointly sign off on an investigation report that identifies the "root cause" and corrective action. This report should be submitted to the Company line manager in a timely manner. The business partner must provide a completed employer's first report of injury for each OSHA recordable injury. Any additional injury, fire, motor vehicle incident, property damage or hazardous substance spill report form should be completed and provided to the Company representative within the normal reporting period for such incidents.
8. Prior to starting work, business partners shall have Passport or equivalent training or orientation and general and site specific SJVBU safety orientations. Business partners shall establish a check in/check out process prior to commencing work.
9. Business partners shall ensure that short service employees (SSE) are identified to Chevron supervision, appropriately supervised, trained, and managed to prevent incidents. An SSE is defined as an individual that has been employed by or has been in a like job with contractor for less than 6 months. Business partners shall participate in a Behavioral Based Safety (BBS) process which shall include training personnel to observe co-workers for safe and at-risk performance and provide feedback after completion of the observation.
10. Business partners shall implement a pre-job safety analysis process, which includes identifying the work to be performed, the hazards associated with that work, and how to mitigate or eliminate the hazards.

D. Company Supervisor Responsibilities

1. Supervisors are responsible for giving safety, environmental compliance, and loss prevention primary consideration with other factors that affect daily business decisions by:
2. Creating and stimulating an atmosphere in which safety and environmental issues can be proactively discussed and resolved.
3. Demonstrating leadership that supports the incident free operations mindset.
4. Setting safe examples.
5. Enforcing safety rules/standards, and environmental requirements.
6. Reporting and investigating near misses, incidents, and injuries, and promptly correcting unsafe conditions.
7. Ensuring initial and ongoing orientation, training, and instruction in correct work procedures is given to all employees under their direct supervision.
8. Ensuring routine inspection and servicing of all safety equipment (including but not limited to fire water systems, fire alarms, fire extinguishers, gas testing equipment, safety showers and eye wash facilities, emergency shutdown systems, supplied air breathing equipment, etc.). Records of the inspections shall be maintained at the facility.
9. Ensuring that business partners conducting work on Chevron property are active in the approved contractor database.
10. Ensuring that a visitor log is maintained at all staffed facilities (e.g., gas plants, cogens, etc.) and visitors receive proper site specific facility orientation, including emergency equipment and procedures appropriate for the facility.

Section II — Safe Work Practices & Procedures

A. Behavioral Based Safety

A corner stone of our safety effort is the Behavioral Based Safety Observation Process. The safety efforts and energy placed in providing a safe work environment will greatly benefit all personnel. The Behavioral Based Safety Observation Process uses positive reinforcement to maintain safe behaviors and eliminate unsafe behaviors. The process includes:

1. Employee participation for continuous improvement
2. Hazard/task analysis to identify critical safety behaviors
3. Feedback to reinforce safe behaviors

By working together, communicating openly, and guiding each other in safe actions, we will achieve the level of safety performance we will all be proud of.

B. Safe Conduct Requirements

1. Practical jokes, wrestling, water righting, and all other forms of horseplay are prohibited in any company facilities, including parking lots and change rooms.
2. Never enter a designated chemical handling area without adequate protective equipment and training.
3. Pits, depressions or low spots in the ground that contain any pipelines, valves, containers or equipment may pose hazards such as flammable gases, toxic vapors, oxygen deficiency, hazardous liquids and egress difficulties.
4. Do not reach into any enclosure until you have assured yourself that it does not contain spiders, snakes, or biting animals.
5. Look for and observe all warning, caution and danger signs.
6. Do not climb any structures except on established ladders,

stairwells, or walking surfaces, unless appropriate safeguards such as lifelines, safety nets, etc., are used. Do not walk or climb on piping, valves, fittings or any other equipment not designated as a walking surface.

7. Step or climb down from all elevated locations. Do not jump down! Always maintain three points of contact climbing or descending,
8. Keep wind direction and ground slope in mind at all times when in H₂S areas, or around LPG storage vessels, or in chemical areas. In the event of fire or an unexpected discharge, your best route of escape is away from the problem in an uphill and upwind direction. Windsocks should be installed in such locations to guide personnel.
9. Keep out of the line of fire of moving or movable objects.
10. Do not remove, displace, tamper with, or destroy any safety devices, safeguards, notices or warnings unless authorized. Notify your supervisor of any defective equipment.
11. Never walk under loads being lifted by a crane or other lifting equipment. Always use tag lines to position load.
12. Flammable liquids shall not be used as a cleaning solvent and must be stored properly.
13. No Company or business partner employee shall perform any duty for which they have not been properly trained. Examples include, but are not limited to, use of SCBA, fire extinguishers, forklifts, gas detectors, and participation in lockout/tagout, confined space, and fire watch duties.

C. Smoking

1. Smoking shall not be permitted in any buildings, plant facilities, or outside locations that are posted "No Smoking." Smoking will be confined to designated areas.

2. Smoking is also prohibited:

- a. Within 50 feet of any well
- b. Within 50 feet of a trap or tank setting unless otherwise posted at a greater distance
- c. Within 50 feet of any part of a drilling rig's facilities except where specifically designated.

Note: Distances (a., b., & c.) may be extended from sources emitting hydrocarbon vapors depending on conditions.

- d. Inside yards, natural gasoline plants, laboratories or other buildings and facilities handling flammable liquids or gases.
 - e. Within urban drill sites, or in gas and oil processing facilities, except in designated areas.
6. Discard matches, cigarettes, cigars, etc., into properly designated containers.

D. Drugs, Alcohol and Weapons

- 1. Possession and/or use of illegal or unauthorized drugs, drug paraphernalia, alcohol, fireworks, firearms or other weapons are prohibited on company premises, including company/ business partner/private vehicles on company premises. The Company will exercise its right to search.
- 2. Employees shall not report to work under the influence of alcohol or drugs. The use or possession of alcohol or drugs is prohibited on Company premises (excludes prescription drugs when authorized by a physician). Employees shall notify their supervisor when using prescription drugs authorized by a doctor. Vehicles and/or equipment shall not be operated by anyone under the influence of alcohol or drugs. Violators shall be subject to disciplinary procedures up to and including termination.

3. All employees are strongly encouraged to obtain assistance from the Employee Assistance Program (EAP) before substance or alcohol problems affect performance or lead to disciplinary action.

E. Safety Equipment

All safety equipment must meet Chevron guidelines prior to purchase and use. All safety equipment shall be maintained and must be used per manufacturer's recommendations.

F. Ergonomics/Proper Lifting/Safety In Motion

The objective of ergonomics is to design the workplace layout, work methods, machines and equipment so the assigned tasks are within the worker's capabilities and limitations.

Tools or equipment that do not meet the ergonomic objectives should be evaluated to see if modifications can be made to it to fit the work so that it is in line with task.

In order to make a better lift:

1. Never attempt a lift if you have any pain or strain.
2. Stay in your Line of Strength and Balance (LOSB); avoid your Line of Weakness (LOW).
3. Big Load - Big Toe (two hands, flex your knees, tilt load towards big toe, break eye contact).
4. Little Load - Little Toe (one hand; same side hand and foot, flex your knees, build a bridge with other hand).

In order to make a proper pull:

1. Better - Forward for speed and distance
2. Best - Sideways to start pulling or apply full force
3. Stressed - Backward.

Proper workstation set-up:

1. Keep elbows in the Green zone (by your side) while typing.
2. Keep arms and wrists in a neutral position; avoid planting your wrists.
3. Take frequent breaks.
4. Thighs should be parallel to the floor and feet should be supported on floor or foot rest,
5. Keep frequently used items within easy reach.

G. Stairs, Walkways and Walking Surfaces

1. Walkways and grating shall be kept in good condition. Damaged walkways or grating shall be roped off or closed until repairs can be made.
2. Stairways, walkovers or ramps shall be installed and used where personnel must walk or step over pipe in the course of their normal duties.
3. All temporary openings in floors, decks, grating, etc., must be barricaded to prevent accidental falls.
4. Never store tools, supplies or materials on any walking or working surface where workers can pass under.

H. Emergencies

1. All personnel shall familiarize themselves with the Emergency Response Plan procedures regarding fires, explosions, or other emergencies and be prepared to take action in a quick and orderly manner.
2. Applicable emergency procedures will be available and posted at all asset locations, structures, and other facilities.
3. A list of approved doctors, hospitals, transportation services

and ambulances with telephone numbers and, directions, and addresses shall be posted in a conspicuous place near telephones at all facilities.

4. Notify supervisor of an emergency immediately.
5. All manned facilities shall annually conduct and document hypothetical emergency drills.
6. News media releases shall be coordinated through a designated Company Public Affairs representative.

I. Fire Fighting Response

1. In every case of fire, three primary responsibilities exist for the first person at the scene:
 - a. Ensure the safety of yourself and others,
 - b. Isolate and deny entry.
 - c. Call for help. (Call 9-911. Notify your Supervisor.)
4. At no time should employees unnecessarily expose themselves to risk. For small fires, after calling for assistance, employees may attempt to extinguish the fire using portable fire extinguishers if properly trained.

For larger fires the recommended actions after calling for help and if it is safe to do so are:

- a. Activate emergency shutdown devices.
- b. Close all valves on lines providing fuel to the fire.
- c. Depressurize (but do not vent) equipment in the vicinity of the fire.
- d. Provide information (e.g., MSDSs, chemical inventory, etc.) for the fire department so they can contain and extinguish the fire.

5. All major facilities (including gas plants, offices, large compressor stations, urban sites, large oil cleaning facilities, etc.) shall have a pre-fire plan tailored for that facility. Hypothetical fire drills shall be conducted at least annually.

J. Personal Protective Equipment (PPE)

1. General Required PPE:
 - a. ANSI approved hardhat (except metal and/or cowboy styled), safety glasses with side shields or side shield protection, and safety boots.
 - b. Shirt with sleeves (full or half), full length pants without holes or tears, and appropriate gloves for the job task.
 - c. Cotton and wool clothing is preferable due to its fire-resistant qualities.
 - d. Hearing protection (e.g., ear plugs, ear muffs, etc.) where required.
 - e. Loose, ragged clothing or defective shoes should not be worn. Rags must not dangle/protrude from pockets since they can be a hazard near rotating machinery.
 - f. Visitors will be provided with all suitable/required PPE as appropriate.
 - g. Each employee shall inspect their PPE prior to its use and will replace defective equipment immediately.
 - h. PPE shall only be used per manufacturer's recommendations.
2. Additional PPE:
 - a. Goggles and face shield for grinding, chipping, wire brushing, or mixing chemicals where splash hazards exist.

- b. Aprons for splash protection must be worn when handling chemical/hazardous substances.
- c. Protective coveralls for confined space entry and hazardous materials exposure.
- d. Safety harnesses shall be worn and tied off with lifelines when exposed to possible falls while working 6 feet or more above grade, floor, or an approved work surface, such as platforms or scaffolds.
- e. The Company does not supply personal protective equipment to business partners.

3. Head Protection

Approved hard hats are required personal protective equipment to be worn as per manufacturer's instructions on all job tasks. Hard hats must be worn at all field locations and facilities.

4. Eye Protection

- a. Employees needing prescription glasses are required to wear only prescription safety glasses while at work in field facilities.
- b. Proper goggles and face shields shall be worn while grinding, welding, cutting, chipping, scaling, pouring babbitt, handling acids or caustics, working on chains, pins, wireline, and in other operations as required by company supervisors.
- c. Safety glasses are not safety goggles. Wear safety goggles over prescription eyewear when work performed requires safety goggles.
- d. If the work requires a face shield, proper goggles must be worn under the face shield. Face shields alone do not provide adequate protection and are required when welding and grinding and when within designated or

yellow lined chemical handling areas.

- e. Employees wearing contact lenses shall wear the appropriate eye protection (e.g., glasses, goggles, etc.) over the contact lenses. When using full-face piece respirators, only non-gas permeable hard contact lenses are prohibited. Soft contact lenses and gas permeable hard contact lenses may be worn. The Company will provide prescription lenses for use with full-face piece respirators if sight correction is necessary to perform the job.
- f. Welders shall be equipped with extra pairs of welding goggles and face shields to be worn by their assistant.
- g. See Personal Protective Equipment Guidance Table located at the end of Section II.

5. Foot Protection

- a. Safety footwear is mandatory at all field locations for all employees and business partners. Field locations include all sites other than office buildings and parking lots. Any supervisor or designated Company representative may exempt a person(s) from having safety footwear for a single visit limited to safe areas (i.e., tours).
- b. Any style of safety shoe or boot meeting the American National Standard Institute (ANSI) Z41 specifications for protective footwear is acceptable with the following exceptions:
 - 1) Western style boot with riding heel (this style has a curved sole/heel arrangement that interferes with obtaining firm footing when climbing).
 - 2) Tennis style shoes with canvas side and/or crepe soles (these materials do not provide proper puncture, impact, or chemical resistance, nor do they support the toe cup).

6. Hand Protection

- a. Remove all jewelry, rings and wristwatches when working in areas where they could catch on moving objects or sharp protrusions or come in contact with electrical circuits.
- b. Approved gloves shall be worn for appropriate jobs. Gauntlets (green sleeves) are required for work performed by electricians, linemen, pipe wrappers, and those working around steam and other hot equipment. Appropriate gloves shall be worn when handling chemicals and petroleum products (see MSDS PPE requirements).
- c. Caution should be taken when wearing gloves around unguarded moving machinery (e.g., pipe threaders).
- d. When direct skin contact with hydrocarbons and other substances is unavoidable, employees shall use gloves. Barrier creams shall not be used in place of gloves.

7. Hearing Protection

- a. Hearing protection is mandatory for use in areas where the noise level exceeds 85 dBA. Areas where the noise levels have been measured to exceed 85dBA shall be posted with signs that state "Hearing Protection Required".
- b. Employees who are part of a hearing conservation program shall have annual training and must have their hearing tested annually.

8. Respiratory Protection

- a. General Requirements
 - 1) Appropriate respiratory protective equipment shall be used when employees are required to work in atmospheres that are oxygen deficient (less than

19.5% O₂) or contain harmful concentrations of toxic contaminants.

- 2) When respiratory protection equipment is required the Supervisors shall ensure the employees are: 1) medically evaluated, 2) trained, and 3) fit-tested.

b. Facial Hair

Personnel required to wear respiratory protective equipment are not permitted to have beards, mustaches, or sideburns in the face piece sealing area upon donning respirators. Emergency response personnel must be clean shaven in the seal area upon arrival to work.

c. Special Precautions

When entering atmospheres immediately dangerous to life and health (IDLH), e.g., oxygen deficient and/or containing harmful concentrations of toxic contaminants, at least one standby person shall be present. Consideration for additional standby persons should be taken depending upon the job requirements. The standby person shall have equivalent respiratory protective equipment available to assist the respirator wearer in case of emergency. Communications (visual or vocal) shall be maintained between the standby person and the respirator wearers. The standby person shall be current in First Aid/CPR, emergency rescue procedures and shall not engage in any other site activities while entry is in progress.

Work in atmospheres that are immediately dangerous to life and health are not permitted, except during emergency situations, and then only under strict controls, such as a backup with SABA. No entry is allowed in the following conditions:

LEL > 10%

O₂ level < 16.5% or > 23.5%

H2S > 300 ppm
Temperature > 110°F

d. Respirator Selection

Only the following types of respiratory protective equipment are acceptable for use:

1) Supplied Air Breathing Apparatus (SABA) Respirators:

- Self-contained breathing apparatus (SCBA)
- Hose line respirators equipped with a pressure demand type regulator and an emergency egress bottle

2) Air Purifying Respirators:

- Cartridge Type
- Filter Type
- Combination Cartridge and Filter

Personnel must ensure that the air-purifying respirator chosen is fitted with the proper cartridges for the specific atmospheric contaminants.

9. Fire Resistant Clothing

- a. Fire resistant (FR) clothing shall be worn by all persons working in areas designated as requiring this type of protection.
- b. FR clothing issued to an employee is the property of the Company and should not be used for non-company business. Employees are responsible for all FR garments issued in their name.
- c. FR clothing is intended to be a burn injury reducing form of personal protection. It is not intended to be used as a fire-fighting garment, and it should not be used in place of turnout gear,
- d. FR clothing shall normally be the outermost garment

worn by personnel to ensure maximum protection. Only during rainy weather, or when working with hazardous substances, may additional non-FR clothing be worn as the outer garment. When required, flotation devices may be worn over FR clothing.

- e. FR clothing shall not be modified by an employee. Long sleeves shall not be rolled up nor shall zippers be left down as this reduces protection.
- f. Employees may not wear FR clothing that is excessively soiled, or damaged as this compromises the protective capabilities of the garments.

K. Operating Motor Vehicles

1. Driver Responsibilities

- a. Incident free driving on Company business is a key job responsibility. It requires the attitude of a professional defensive driver.
 - 1) “Driving on Company business” includes driving Company owned, leased, or rented vehicles, or vehicles otherwise designated as “Company”, including personal vehicles used for Company business. Company vehicles are not to be used for non-Company activity.
 - 2) The professional defensive driver’s behavior is evidenced through responsibilities for:
 - Pre-trip inspections of the vehicle and its emergency equipment
 - Passenger safety to include everyone uses safety belts
 - Reporting defects for corrective action
 - Journey planning
 - Anticipating delays
 - Eliminating distractions (cell phone/radio usage, eating, drinking, etc)
 - Obeying traffic laws

- Cab housekeeping
 - Being a defensive driver
- 3) A defensive driver drives to prevent incidents in spite of weather conditions, the actions of others, road conditions, etc.
- b. A preventable motor vehicle crash (MVC) is one in which the driver failed to do what was reasonable to avoid the incident.
- c. The driver of a Company vehicle is also responsible for the safety of passengers or employees helping load or unload, or otherwise working on or around the vehicles.
- d. All drivers of Company or rental vehicles must complete an initial defensive driving course, participate in the commentary drive program, and participate in BBS observations. Drivers shall take the refresher defensive driving course as required.
- e. All drivers shall drive company equipment in accordance with the law and maintain a valid driver's license. Drivers are personally responsible for the consequences of violations,
- f. Drivers of Company vehicles must perform a pre-trip check for:
- 1) A current vehicle registration
 - 2) Accident/repair procedures
 - 3) Accident reporting instructions
 - 4) Crawford claims mini-directory
 - 5) Company certificate of self insurance
 - 6) Hazardous Materials Transport license

- 7) The condition and operation of the following: seat belts, tires, horn, brakes, windshield wipers, steering, windshields, headlights (high and low), taillights, turn signals, stop lights, gasoline, oil, radiator, transmission, battery fluid levels, first aid kit and fire extinguisher
 - 8) SCBA equipment must be inspected monthly on those vehicles so equipped
 - g. Drivers shall not operate company equipment which is defective or not in compliance with the law.
 - h. Follow the San Joaquin Valley Business Unit Safety Manual policy when using cell phones.
2. Defensive Driving Principles
- The Defensive Driving Principles of Space Cushion driving are applied to the job of driving. Adequate space for the vehicle + adequate visibility = time to predict the actions of others and to isolate yourself from danger and communicate to others your presence and/or intentions.
- The keys to Space Cushion driving are summarized as follows:
- a. Aim High in Steering
 - b. Get the Big Picture
 - c. Keep Your Eyes Moving - All Four Sides of Vehicle Plus Overhead
 - d. Leave Yourself An Out
 - e. Make Sure They See You
3. Safe Vehicle Operations
- a. Make every attempt to position your vehicle so your

first move is forward.

- 1) Plan ahead to park so you can continue forward when leaving.
 - 2) When backing into a parking spot use a spotter/ passenger if available.
- b. If first move forward parking is not possible and your first move has to be backwards, use a spotter and/or walk around your vehicle to make sure the space is clear.
- c. Personnel should walk around the vehicle before starting the engine to check for possible obstructions or unfavorable conditions.

4. Safe Parking

- a. Do not park behind another vehicle or in such a position that places your vehicle in another vehicle's blind spot.
- b. Vehicles are to be parked off the roadway where they will not be an obstruction to traffic.
- c. The engine shall be turned off, parking brake set, transmission set in park, and all doors closed.
- d. For vehicles parked on steep decline or incline:
 - 1) Front wheels properly turned to curb or bank
 - 2) Vehicles 1 ton and above, e.g., welders, hydrocranes etc., shall have wheels properly chocked
 - 3) Parking brake engaged
- e. Ensure all proper procedures are followed when operating vehicles with air or electric brakes.

- f. Follow the Vehicle Positioning Policy.

4. Seat-Belt Usage

The driver and all the passengers shall have their seat-belts fastened whenever a company vehicle is in motion. The driver is responsible for the passengers' seat-belts being fastened.

5. Emergency Situations

- a. In the event of a breakdown vehicles shall be parked with all wheels off the main roadway if possible.
- b. If you are out of vehicle, stay to the front of the disabled vehicle. Don't get between oncoming traffic and the disabled vehicle.
- c. If disablement occurs within 500 feet of a curve, crest of a hill or other obstruction to view, the driver shall place the warning devices (e.g., reflective triangles) in that direction to give traffic ample warning. Warning devices shall be placed no less than 100 feet or more than 500 feet from the disabled vehicle. When placing triangles, keep them between you and oncoming traffic to alert other drivers you are on the roadway.
- d. If disablement occurs on a divided or one-way highway, the warning devices shall be placed so that one is 200 feet and another 100 feet to the rear and the third not more than 10 feet to the rear and in no case less than 2 feet to the roadside of the widest portion of the vehicle or load.
- e. Drivers shall report vehicle accidents to their supervisor as soon as possible.

The MVC form, or the insurance form, both of which are carried in the vehicle, should be used to gather essential information at the scene of the accident.

- f. When a vehicle accident occurs, ensure all appropriate on-scene safety precautions are taken. These include:
 - 1) Pull off road, if possible, to avoid obstructing traffic
 - 2) Report the accident to police
 - 3) Make no admission of liability
 - 4) Gather all pertinent information

L. Safe Field Maintenance Practices

- 1. The supervisor or designated representative (Authorized Permit Issuer - API) is responsible for maintenance or construction jobs on any location or plant where an operating crew or other crews are already at work. The API shall coordinate with the business partner supervisor or designated representative (Person Leading Workcrew - PLW) so that necessary safety precautions can be taken.
- 2. No repairs shall be made on any machinery (engines, pumps, compressors, etc.) until provisions have been made to properly depressurize/isolate the machinery. (See Section IV - Lockout/Tagout/Blockout) This does not prevent minor adjustments from being made, such as tightening packing glands, making adjustments to fuel injectors and valve tappets by authorized personnel.
- 3. Any trench or excavation work shall be inspected by a “competent person” (trained and demonstrates knowledge in excavation and trenching techniques) to determine and implement shoring, bracing, and/or other requirements of the Cal-OSHA Trenching and Excavating Standard. Before trenching or excavating, care should be taken to locate and identify all underground lines, such as Underground Services Alert, 1-800-227-2600.
- 4. Avoid working above or below personnel whenever possible. To avoid possible accidents to those working on a lower

level, all personnel shall take precautions to secure and place tools and material so they will not fall.

5. The supervisor or designated representative shall examine the locale of each job where electric lines could present a hazard and shall lay out the work so that no part of a crane and its load, power shovel, truck or its A-frame, etc., can possibly enter the 10 foot corridor of electric or communication lines. If clearance is not feasible, contact a company electrician and/or HES Specialist for proper procedures and guidance to de-energize electrical lines as needed.
6. Pressure shall be bled to a slight positive pressure (1 oz.) in a gas line before drilling into the line (except where hot taps are made through valves). Use hand drill, air drill or drill with explosion proof motor when tapping. Vacuum lines shall be pressured to at least one-ounce positive pressure prior to and during welding and hot tapping.
7. All guards and safety devices must be replaced or restored to original manufactured design prior to placing equipment back in service.
8. Use proper lubricating oil in air compressors that are used to start internal combustion (I/C) engines where the air is introduced in the combustion chamber. Consult your supervisor for the proper lubrication.

M. Tank/Vessel Opening Procedure

This procedure should be used for all tank/vessel openings for inspection, cleaning, repairs, and modifications whether or not entry is anticipated. The procedure describes the general steps involved. The supervisor or designated representative (Authorized Permit Issuer - API) shall determine the specific details for each step of the procedure for a particular facility based on the unique design, construction and operation of that facility. The following steps should be performed in sequence.

1. PRE-PLANNING

Before beginning the job, the supervisor or designated representative (API) will inspect the facility containing the tank/vessel to be opened. The API will determine the special equipment required and any special safeguards to be used. The API will then prepare a GENERAL WORK PERMIT and arrange for any special equipment to be used. These steps must be done in communication with the Person Leading Workcrew (PLW).

2. AREA ISOLATION

The API and PLW of the job will inspect the area around the tank/vessel (usually 50 feet) to identify possible sources of ignition and paths of entry for unauthorized people or vehicles. All sources of ignition should be removed from the area (all personnel should leave smoking material outside the area, even if not in use). All roads and pathways should be barricaded, roped off, etc., and designated as DANGER — DO NOT ENTER WITHOUT AUTHORIZATION.

3. SHUTDOWN AND DRAIN

The facility should be shut down using normal procedures. Be certain the area to receive the drained/vented material is free of potential ignition sources and personnel before opening the drains and vents. Drains and valves on vents should be opened to depressurize the equipment and remove as much material as possible. The tank/vessel should not be unbolted and opened at this time. Water flushing through the normal piping may be used to remove additional material. If a vacuum truck is used for draining, be certain the truck is grounded and also bonded to the tank/vessel.

4. SAFETY MEETING

The Person Leading Workcrew (PLW) must hold a tailgate safety meeting with all personnel involved in the job and document it. The Authorized Permit Issuer (API) must also

attend this tailgate meeting. The meeting should adequately explain the following items:

- a. The steps involved in the job
- b. Potential hazards and safeguards to control the hazards
- c. Special personal protective equipment to be used
- d. Gas testing requirements
- e. Availability of fire fighting equipment and its use
- f. The need for, responsibilities, duties, and training of entry supervisor (PLW), entrants, attendants (standbys), fire watches, etc.
- g. Emergency and rescue procedures

5. EQUIPMENT ISOLATION

Implement all required hydraulic, electrical, mechanical and pneumatic isolation (see Section IV. Lockout/Tagout/Blockout). Double-check that all lines, electrical and mechanical equipment have been isolated by approved methods. Where available, an isolation checklist and/or Standard Operating Procedures (SOPs) should be used to assure completed isolation methods.

6. VENTILATION

Open the tank/vessel at a minimum of two locations, air intake and exhaust. Set up an appropriately rated ventilator. Ensure the ventilator is grounded (bonded) to the tank/vessel prior to purging. Duct the exhaust to a safe area before starting ventilation. Continue to ventilate until the vapor in the tank/ vessel tests below 10% LEL (0% preferred). Continuously monitor and ventilate to maintain less than 10% LEL during work. Monitor for appropriate toxics and maintain their concentrations below the PEL. Test for appropriate

7. OPEN TANK/VESSEL

Open the tank/vessel and prepare to perform job. If tank/ vessel entry is necessary, a CONFINED SPACE ENTRY PERMIT is required; (contact Authorized Permit Issuer), All conditions on the CONFINED SPACE ENTRY PERMIT must be satisfied before personnel enter the tank/vessel. If hot work is necessary, a HOT WORK PERMIT is also required (contact Authorized Permit Issuer). Provide for temporary cover of openings if unattended.

8. CLOSE TANK/VESSEL AND REMOVE ISOLATION

When the work has been completed on the tank/vessel, close the equipment and remove unnecessary tools. Remove the isolation (blinds, misaligned piping, locked/closed valves, double block and bleeds, lockout/tagout, etc.). Refill and pressurize equipment carefully. Check for leaks and correct any deficiencies. Both the API and PLW must sign off on Return To Work section of Permits.

9. START UP

If API is not facility operator, call facility operator for startup using normal procedures.

N. Job Safety Analysis

Job Safety Analysis (JSA) is a systematic method that is used to identify the hazards or potential accidents associated with each step of the job and that is used to develop solutions that will eliminate, nullify, or prevent such hazards.

There are four basic steps involved in completing a JSA:

- 1) Select the job to be analyzed.
- 2) Break the job down into steps.
- 3) Identify the hazards or potential accidents.

4) Develop solutions for the potential accidents.

JSAs should be performed for all non-routine jobs and for any routine job with identified hazards.

The JSA should be performed on-site immediately prior to beginning work and should include all personnel who will take part in the job.

An existing JSA may be reviewed prior to starting a job (including discussion of site-specific issues such as weather, facility condition, etc.) in lieu of generating a new JSA.

Utilize meet and greet process to review the site hazards with visitors.

Personal Protective Equipment Guidance Table*

	Hard Hat	Safety Glasses with side shield	Safety Goggles	Face Shield **	Welding Helmet ***	Welding Goggles	Blasting Hood	Ear Protection	Rubber Boots	Work Gloves	Chemical Gloves	Chemical Apron	Body Harness	Safety Boots	Moisture
General Production Area	X	X						X	X	X				X	
Field Leases & Facilities	X	X						X		X				X	
General Plant Area	X	X						X		X				X	
Confined Space	X	X						X		X			X	X	
Civil Construction	X	X						X		X				X	
Warehouse	X	X								X				X	
Welding / Garage / Mechanical Shop	X	X		X	X	X		X		X				X	
Generator/Compressor Area	X	X						X						X	
Blasting & Painting	X		X	X			X	X		X				X	
Working at Heights	X	X								X			X	X	
Drilling & Workover Rigs	X	X						X		X				X	
Mud Pits	X	X						X	X	X					
Chemical Handling /Laboratory	X		X	X					X		X	X		X	
Buffing/Grinding	X		X	X				X						X	
Wire Brushing/Chipping	X		X	X										X	
Acetylene-Burning / Cutting / Welding	X					X		X						X	

* This table is to be used as a general guidance only. The job task to be performed should always be assessed to determine specific PPE needs. For more information, including required PPE, please refer to Section II J, of this Blue Book.

** Face shields alone do not provide adequate eye protection.

*** Welding hoods alone do not provide adequate eye protection.

Section III — Permitting**A. General Work Permit Requirements**

1. The Authorized Permit Issuer (API) shall prepare a GENERAL WORK PERMIT which gives special instructions, precautions, and procedures to be followed when preparing for a job, during a job and after a job. A GENERAL WORK PERMIT is not a hot work (fire) permit or confined space entry permit. If hot work or entry into tanks, vessels or other enclosed or confined spaces is necessary, then these additional permits are also required.
2. A time limit shall be established on the GENERAL WORK PERMIT by the parties concerned. The nature of the work, probable duration, possible hazards and feasible means of maintaining effective controls must be considered first. If the time limits established on the original permit must be exceeded, extension of the permit may be approved by the Authorized Permit Issuer (API).

GENERAL WORK PERMIT is required for all maintenance operations (excluding routine lubrication, adjustments, and calibration, unless required by local plant rules). A GENERAL WORK PERMIT is required for, but not limited to, the following jobs:

- a. Hot Work
- b. Confined Space Entry preparation for entering into any piece of equipment, vessel, tank or other confined space and its associated flushing, purging, opening, blinding, cleaning, ventilation, etc
- c. Vehicle entry into classified hazardous areas subject to the release of hydrocarbon vapors, such as bermed tank settings and gas plants
- d. Work on H₂S gas or chemical system
- e. Work performed within gas plants, on natural gas

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- handling systems, urban sites, platforms, field booster buildings, etc
 - f. Excavations deeper than five feet
 - g. Wherever maintenance or troubleshooting is performed within a designated Chemical Handling area for acids, caustics, ammonia, chlorine, etc.
 - h. Vehicles or vehicles with loads in excess of 14' vertical

B. Hot Work Requirements and Permits

1. A Hot Work Permit is required before beginning any work that could generate a source of ignition in an area where flammable gases or combustible material may be present.
Possible ignition sources include:
 - a. Fixed and portable lights.
 - b. Welding, burning or soldering.
 - c. Sparks from power tools, grinding.
 - d. Electric equipment not approved for hazardous areas.
 - e. Motorized equipment used in process areas and areas where vapors may accumulate.
 - f. Smoking. A hot work permit does not allow smoking.
 - g. Exposing pyrophoric (metallic sulfides) material to air.
 - h. Explosive/chemical fire hazards.
 - i. Static electricity from sprayer, sandblasters, etc.
2. All Hot Work Permits shall be issued by the appropriate Authorized Permit Issuer.
3. The work location must be at a safe distance (normally fifty

feet) from any sources of combustible or flammable liquids, gases or vapors. Drains and underground vents must be sealed or sandbagged.

- 4/ Gas testing with a combustible gas detector must be conducted prior to any hot work. Follow-up testing (usually continuous) is required at sufficient intervals to ensure that any change of condition will be detected. This interval must be specified on the Hot Work Permit. Hot Work is not permitted where there is a gas or vapor concentration greater than 10% LEL.
5. Suitable fire extinguishing equipment must be readily available to employees or business partners working in the area.
6. Each permit must specify the starting and expiration time of the permit and limits of the area for which it is issued. Permit extensions require authorization by the Authorized Permit Issuer (API).
7. Upon completion of the Hot Work, steps shall be taken to assure the area is clear of hot sparks, etc. The area must be inspected a minimum of 30 minutes after the ignition source has stopped.
8. A fire watch is required for welding, burning, open flame, soldering and grinding activities. The fire watch must not have any other duties while the Hot Work is in progress.

C. Confined Space Entry Permit

CONFINED SPACE ENTRY PERMITS are required prior to entry into any confined space such as: water softeners, tanks, steam generators, sumps, valve boxes, casing collection equipment, locations deeper than 5 feet, vessels, heater treaters, oil and gas separators, gasoline plant towers, or other equipment or spaces (such as well cellars, mud pits) where a toxic atmosphere may be present, or access or egress for suddenly disabled employees would be impeded. The confined space Entry Permit must be posted at the confined space during the Work-in-Progress stage.

1. A sign/tag reading “Danger Permit Required Confined Space, Do Not Enter” or similar wording shall be affixed at each opening when:
 - a. It is not safe to enter
 - b. Prior to issuance of a CONFINED SPACE ENTRY PERMIT
 - c. At the end of a shift when the space is not closed/ returned to service, or when an unsafe condition arises and the CONFINED SPACE Entry Permit tag is removed.
2. Air testing inside the space shall be conducted before entry and at sufficient intervals (no greater than 30 minutes) to ensure the atmosphere remains free of flammable hydrocarbons, toxins, and/or oxygen deficiency.
3. Portable powered equipment, e.g., engines, motors, pumps, etc., should be located outside the space at a safe distance so as not to create a potential ignition source during gas/vapor freeing and so their exhaust or flammable vapors are not pulled inside the space.
4. If an unsafe condition arises or an emergency occurs at the facility, all persons inside shall exit the space immediately, and the CONFINED SPACE ENTRY PERMIT tag shall be removed. Each CONFINED SPACE ENTRY PERMIT must specify the starting and expiration time. Permit extension requires authorization by the Authorized Permit Issuer (API).
5. Any time the job site will be left unattended the space must be secured to prevent entry. The CONFINED SPACE ENTRY PERMIT shall be removed and replaced by “Danger Permit Required Confined Space, Do Not Enter” or similar wording tags. A new CONFINED SPACE ENTRY PERMIT and air testing is required before resuming work.
6. Persons working in spaces which last contained substances that are corrosive or can be absorbed through the skin shall

wear impervious protective clothing as specified by the permit API and PLW.

7. Only lighting and electrical equipment that have been approved for the area electrical classification shall be used. In addition, to minimize shock hazards, such lighting and equipment shall be operated at 12 volts, or less, or be protected by an approved ground fault circuit interrupter,
8. Some type of warning device, e.g., megaphone, air/car horn, radio, etc., shall be available immediately outside the space to summon assistance if the need arises. This requirement may be waived by the API/PLW if there will be ample people in the area in case an emergency arises.
9. If welding fumes or other hazardous atmospheres are present inside or if the temperature in the space exceeds 100° F, the space must be ventilated by an eductor or blower capable of maintaining a continuous flow of air across the breathing zone of all personnel working in the space. The eductor or blower should be mounted and grounded/bonded on the roof or as near the top of the space as possible to maximize ventilation. Means should be taken to reduce vibration noise caused by the eductor setting on metal surface, i.e., bolting it to a flange.
10. Personnel entry should be through side openings whenever possible. Side openings are those less than 3-1/2 feet above the inside working surface.
11. Whenever entry requires the wearing of respiratory protection, is through a top opening, or a side opening greater than 3-1/2 feet above the inside working surface, persons entering shall wear a safety harness with an attached lifeline unless internal parts of the confined space will present a greater hazard. The harness shall be the type capable of suspending a person in the upright position. Wristlets shall not be used.

The lifeline shall be a rope of a minimum 1/2-inch diameter and 5,400-pound test with the free end anchored outside the space. For top entry, a manual hoisting device or other effective means shall be provided for lifting persons out of

the space. The lifeline shall be attached to the safety harness at a suitable point so that when rescued, the entrant presents the smallest possible profile (for example, at the center of the entrant's back near shoulder level, or above the entrant's head).

12. The lifeline requirement may be waived if the configuration inside the space is such that the lifeline could become tangled and hinder rescue. This waiver can be granted only by the Authorized Permit Issuer and Person Leading Work crew (specified on permit).
13. An attendant (standby) person is always required when entry is to be made into a space requiring a CONFINED SPACE ENTRY PERMIT.
14. As required, the following tests shall be conducted prior to approving the CONFINED SPACE ENTRY PERMIT and entry shall be limited by the following:
 - a. OXYGEN
Safe Entry Level: minimum 19.5% oxygen without SABA (Supplied Air Breathing Apparatus) to 23.5%. SABA required 16.5% to 19.5% oxygen. No entry allowed less than 16.5% or greater than 23.5% oxygen.
 - b. FLAMMABLE OR EXPLOSIVE VAPORS
Safe Entry Level: 0% Lower Explosive Limit (LEL) without respiratory protection. Entry is allowed at <10% LEL only with the permission of the API and Person Leading Workcrew and SABA must be worn (an organic cartridge respirator may be worn at LEL levels less than 2% in lieu of SABA). No entry is allowed above 10% of LEL.
 - c. HYDROGEN SULFIDE (H₂S)
Safe Entry Level: <10 ppm without SABA. SABA required at 10-300 ppm. No entry allowed >300 ppm.
 - d. LIGHT HYDROCARBON INHALATION EXPOSURE (GASOLINE-LIKE VAPORS)

Safe Entry Level: maximum of 1,000 ppm with organic cartridge respirator. >1,000 ppm requires SABA. For gasoline 1,000 ppm = 2% LEL.

e. TEMPERATURE

Safe Entry Level: 100° F or less inside the space unless ventilation is provided to cool employees and time in the space is limited to not more than 30-minute periods (with 15-minute breaks in between). No entry is allowed at 110°F or above.

f. OTHER TOXIC/COMBUSTIBLE MATERIALS Lead compounds, carbon monoxide, benzene, aromatics, pyrophoric iron, radiation, etc., can be present in the space. The Authorized Permit Issuer and Person Leading Work crew shall identify all other known or suspected toxins, combustible materials, chemicals, etc., that may be encountered in the space prior to commencement of job. Contact the HES department to determine acceptable testing methods, entry limitations and precautions necessary for entry.

D. Gas/Vapor Freeing

Once positive methods of isolation have been performed, pipelines, equipment, vessels, tanks, etc., should be freed of flammable or hazardous vapors before other work is undertaken. Gas/Vapor freeing results in replacement of contained hydrocarbon vapors with fresh or inert air. During the initial stages of gas/vapor freeing, other work in the area should be kept to a minimum. The primary consideration in gas/vapor freeing is the disposal of displaced vapor to minimize the possibility of a hazardous condition in the surrounding area. Effective disposal and the precautions required depend to a large extent on whether vapors are to be displaced by mechanical or natural ventilation.

1. Mechanical Ventilation

Several methods of mechanical ventilation are quick and are considered safe for medium to large vessels and tanks. Vapors may be drawn from top manways by eductors or fans, or air

may be forced through bottom shell manways by air, steam or electric-motor-driven fans suitable for hazardous locations. In each case, the air mover should be electrically bonded to the tank.

2. Natural Ventilation

This is the least safe method of ventilation and can require excessive time to remove hydrocarbon vapors from the tank/ vessel. This method should only be used on small vessels/ tanks when entry is prohibited and on relatively windy days. Since the direction and velocity of vapor leaving the vessel/ tank cannot be controlled, the area around the vessel/tank must be clear of ignition sources and personnel.

E. Gas Testing

Before any work can be performed in an area where general work permits, hot work permits, and/or confined space entry permits are required, gas testing is required to establish that the area is free of flammable or toxic vapors and that sufficient oxygen is present.

1. All gas testing shall be performed by qualified personnel experienced in gas testing and the use of the instrument being used to conduct the test, Gas test instruments are available in various makes and models, each with unique design characteristics, intrinsically safe expressed functions, operating procedures and limitations. Due to the sensitivity of atmospheric testing and the importance of accurate measurements, it is imperative that personnel be totally familiar with the instrument prior to actual use.
2. Only after the area has been established as “safe” can permits (general work, hot work, confined space) be approved by the Authorized Permit Issuer and Person Leading Work crew.
3. If necessary a qualified gas tester shall be stationed on the job, particularly if the operations are such that “safe” conditions are subject to change. Gas testing must continue during the operations in these instances.

4. If conditions become “unsafe” (indicated by gas tests), all persons must be cleared of the area and a report made to the Authorized Permit Issuer immediately. No one should be permitted to re-enter until the area is determined “safe” (refer to the SJVBU H2S Alarm Response Guideline).
5. Gas test equipment shall receive routine maintenance and calibration as required by the manufacturer’s guidelines, (at least monthly).

F. Reclassification to Non-Permit Confined Space

Reclassification is allowed when gas testing and isolation confirm the absence of a potential hazardous atmosphere.

Section IV— Lockout/Tagout/Blockout

The purpose of the established lockout/tagout/blockout (LO/TO/BO) procedure is to prevent the unexpected release of hazardous energy such as, electrical, hydraulic, pneumatic or mechanical.

A. Area Isolation

Area isolation (typically 50 to 150 feet) is required surrounding the maintenance activity to assure no entry by unauthorized personnel or vehicles. Area isolation is accomplished by road barricades, warning signs, posting guards, roping off areas, etc.

B. Hydraulic Isolation

Hydraulic isolation is required to prevent liquid and gas from entering a pipeline, piece of equipment, vessel or tank during maintenance work. Failure to isolate could result in activating equipment or introducing flammable or toxic materials.

1. Before the piping, equipment, vessels or tanks are isolated, and all residual product should be pumped or drained to the lowest possible level through the water draw or pump out connection. This pumping or draining may be augmented by the addition of water through existing piping connections for the purpose of floating out any remaining products.
2. After all possible residual material has been removed, all piping connected to the equipment including steam, foam and similar lines — should be isolated as close to the equipment, vessel or tank as possible to prevent the entrance of hydrocarbon vapors or liquids from the lines.
3. Acceptable positive methods of hydraulic isolation include blocking, blinding, double block and bleed, or disconnect and misaligning the piping.
4. During compressor maintenance/repair, continuous monitoring must be provided for combustible vapor seepage past closed

valves and work must be stopped if seepage is detected.

5. Expandable pipeline plugs and butterfly valves are not acceptable hydraulic isolation.
6. If the piping configuration does not allow the use of acceptable hydraulic isolation methods, the procedure used must be approved in writing by the Operations Supervisor.
7. DANGER DO NOT OPERATE tags and locks shall be attached to valves and misaligned piping used for isolation. The attachment device shall be of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds.

C. Electrical Isolation

Electrical isolation is required to prevent ignition sources and unintentional operation of mixers, blenders, agitators, etc. If equipment, vessels or tanks are cathodically protected, shut off and lockout rectifier current, allow current to bleed off, and a bond wire shall be used when disconnecting pipe flanges. If radioactive level gauges or similar instruments are present, they must be removed or shielded. DANGER DO NOT OPERATE tags and locks must be used when electrical lockout and disconnects are made.

1. Electrical Disconnect - A physical disconnect is necessary whenever electrically or pneumatically power driven equipment is not equipped with lockable controls, or is not adaptable to lockable controls. A physical disconnect is also required when personnel may be exposed to possible injury by moving equipment or parts. A qualified electrician must be called when it is necessary to disconnect power cables, pull fuses or knife blade disconnects.
2. Electrical Lockout - The physical locking of switches on control boxes in the off position is an acceptable safeguard only if all steps in the lock-out procedure are followed.

D. Physical and Pneumatic Isolation

Employees who operate, clean, service, adjust or repair machinery and equipment should be aware of the hazards associated with working around machinery. Hazards exist any time protective guards are removed, equipment is put into an unusual position, moving machinery is adjusted, or during similar operation. Locking-out and blocking-out are the only sure ways to prevent accidental start up or movement of machinery or equipment. DANGER DO NOT OPERATE tags shall be used with lockout and blockout.

1. Lockout - placement of a padlock or similar locking device on energy sources to prevent personnel from attempting to start equipment before job is complete and safe to do so. See Electrical Isolation above and Section VII for further information on Electrical lockout safe practices.
2. Blockout - to place a device in such a way as to block (prevent) movement of machinery and equipment.

E. Hazardous Energy Control Isolation Tags

Tags are used to warn personnel not to return equipment to service until all work is complete. DANGER DO NOT OPERATE tags and locks shall be installed on all valves, misaligned piping, electrical lockout and disconnects, locked switches and controls, and blocked equipment used for isolation.

1. Tags shall be clearly marked with the installer's name, organization and the date installed.
2. Tags will be color-coded to identify work discipline:
 - Blue — Craft Mechanics
 - Red — Craft Electricians
 - Yellow — Operators
3. Tags shall only be removed by the person who installed the

tag.

4. The tag attachment device shall be of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds.

F. Lockout Tagout Sequence

1. Identify all energy sources and isolation devices,
2. Communicate with affected employees.
3. Shut down the equipment.
4. Isolate the energy sources from the equipment.
5. Lock and Tag energy isolating devices.
6. Dissipate or restrain the stored energy.
7. Verify equipment isolation.
8. Perform repair or maintenance.
9. Inspect the area and notify all affected employees.
10. Remove restraints (blocks), locks and tags.
11. Restore energy.
12. Return equipment to normal service.
13. Advise affected employees.

G. Operational Information Locks & Tags

The purpose of Operational Information Locks & Tags is to provide information and positive isolation pertaining to the machine/ equipment status where the unauthorized opening of a valve, or start up of equipment could cause injury to others, damage to equipment, operational upset or environmental damage. Examples include isolating equipment before work occurs relating to the Control of Hazardous Energy or closing a valve and locking it shut after the equipment it services has been removed.

Operational Locks (keyed alike) and Operational Information Tags (white tags) shall be easily recognizable and different

from those used for Hazardous Energy Control, Lockout/ Tagout Procedure (Red American Lock and colored LO/TO tags). Operational Locks can be removed by someone other than the person installing and utilized in a variety of applications. Operational Informational Tags can be used without a lock when communicating information and the hazards are minimal.

Section V — Hazard Communication

A. General

1. All new chemicals coming into the workplace must be evaluated through the Product Acceptance Program. Contact your supervisor for the specifics of this program.
2. Written program shall be available at the work location.
3. Chemicals shall be handled with caution as outlined in the Material Safety Data Sheets (MSDS) and according to directions for appropriate use. Proper personal protective equipment shall be worn by personnel working with potentially hazardous substances.
4. Readily available portable or fixed eyewash stations and/or safety showers must be available in areas where chemicals are used. Report to your supervisor any area where you believe eye wash and/or safety shower capability is needed.

Consult your supervisor if you are in doubt about how to handle a specific chemical.

B. Labeling

1. Chemical containers shall be properly labeled. The product name shall be visible on the container. Use of the HMIS, NFPA, or DOT labeling system may also be used to identify products hazards.
2. All hazardous chemical storage areas will be designated by a yellow line around the area, across walkways, edges or pipe trenches, etc. Where it is impractical to paint yellow lines due to lack of paving, appropriately worded signs will be placed on all four sides, 10 feet from the container or storage area. No one shall enter these areas without wearing the minimum personal protective safety equipment required for the hazard.

C. Training

Training to acquaint employees with the potential hazards associated with materials in the workplace and the safe methods of working with them shall be conducted for current and newly hired employees.

D. Chemical Inventory

A chemical inventory and MSDSs shall be readily available for chemicals handled, stored or produced at each facility or location where employees report to work. These publications include information on health, emergency care, first aid procedures, special precautions, fire and environmental protection. MSDS also contain information on handling the chemicals and the proper personal protective equipment to wear.

E. Solvents, Cleaning Agents, Acids and Caustics

1. Personnel handling solvents, acids or caustics must wear chemical goggles, face shields, and chemical resistant gloves. When breaking lines, opening equipment, etc., chemical resistant suits and boots are also required. Personnel using solvents, cleaning agents, and caustics shall refer to MSDS for the material before use.
2. Before working with acid or caustic facilities, personnel shall locate the safety shower and eyewash stations and ensure it is operating properly. Personnel should also ensure that emergency services could be quickly notified in the event of an emergency as part of the worksite emergency response plan.
3. When high concentration of vapors may be present, approved respiratory protection must be worn.

Section VI — General Industrial Hygiene

A. Hydrogen Sulfide

1. H₂S monitors shall be worn by all personnel, including business partners and visitors, when working in H₂S designated areas. Should a personal H₂S monitor alarm take the following actions:
 - a. Stop what you are doing and check the wind direction at the closest windsock if available.
 - b. Evacuate crosswind and then upwind of the suspected release.
2. H₂S is an extremely toxic and irritating colorless gas, 1.2 times heavier than air, soluble in water, with the odor of rotten eggs in low concentrations. It is produced in toxic concentrations along with crude oil, water, and gas in certain producing fields.
3. Supervisors shall arrange to periodically test for the presence of H₂S in all operating facilities. The frequency of testing shall be based on the concentration of H₂S, operating pressures, type of equipment and maintenance/operating practices. All facilities containing H₂S at concentrations less than 300 ppm, shall be tested annually until a sufficient history has been developed to assure that the H₂S concentrations are not increasing. An annual review of the H₂S levels in the H₂S equipment listing is required, and the list must be updated as needed.
4. Training
 - a. All personnel working at least 1 day per week on average in H₂S areas shall be trained on the hazards of H₂S, approved methods for detecting and monitoring, use of self contained breathing apparatus (SCBA), and emergency methods of rescue and first aid.
 - b. Refresher training is required annually or more frequently if necessary.

5. Signage

- a. All facilities with equipment containing more than 300 ppm H₂S and areas with 10 ppm or greater in the atmosphere, shall be posted and the equipment shall be labeled.
 - 1) Entries to the property shall be posted with a sign stating “Notice — Entering Potential H₂S Poisonous Gas Area.”
 - 2) All facilities having H₂S in concentrations greater than 10 ppm shall be posted with a sign stating “Caution — H₂S Poisonous Gas May Be Present, Continuous Monitors Must Be Worn Beyond This Point.” Employees and business partners shall carry portable monitors.
 - 3) All equipment containing more than 300 ppm H₂S shall be labeled “Danger — Deadly Levels of H₂S Are In This Equipment, Supplied Air Breathing Apparatus Must Be Worn When Opening Any Part.”
- b. All employees not wearing supplied air breathing apparatus shall evacuate any area when monitors alarm at 10 ppm or more in the atmosphere.
 - 1) Wind socks must be placed with maximum visibility to personnel.
 - 2) Re-entry is allowed only after verification that H₂S levels are below 10 ppm.

6. Equipment Access

The minimum safety requirements for opening any piece of equipment containing more than 300 ppm H₂S are:

- a. The wearing of a continuous monitor and SABA by the person opening the equipment

- b. At least one other SABA qualified and equipped person shall be in attendance until the equipment is open and a level lower than 10 ppm is verified. After verification of safe working levels, the second person may be released and SABA is no longer required for the first person

(The only exception from wearing SABA and having backup is during routine opening of sample valves 1 inch or smaller on crude storage tanks providing a continuous monitor is used and there is no more than 10 ppm H₂S in the breathing zone.)

B. NORM

1. Naturally Occurring Radioactive Material (NORM) is a low-level radiation source that may be present in scale that results from extracting oil and gas from the earth. NORM can be found in piping, tubing, sludge pits, brine, and sand filters, salt-water disposal injection wells, and equipment.
2. When scale or a thin film is present, or if NORM contamination is suspected, contact a Chevron representative to confirm whether NORM exists in the area and to receive site-specific NORM procedures.
3. Business partners and employees may be exposed to possible external or internal NORM. Limiting exposure time can control external exposure. The internal hazards occur when airborne radioactive materials are inhaled, ingested, or enter the skin through open wounds. These hazards can be minimized by properly wearing an approved respirator, by practicing good personal hygiene, and by protecting wounds and cuts. Wetting the loose material on clothing with water can also prevent inhalation.
4. Coordinate storage of NORM-contaminated materials.
5. Contact the on-site Chevron representative to coordinate disposal with the HES Coordinator on before shipping NORM

for disposal.

6. Only trained personnel may handle piping, equipment, junk iron or solids containing NORM.

C. Asbestos

1. Asbestos was generally used in the past as pipe and vessel insulation, in brake pads, and on structural materials such as transit panels, floor tiles, and roofing felts.
2. It is often difficult to differentiate between asbestos and non-asbestos without laboratory equipment.
3. Asbestos may remain in some older facilities.
4. Asbestos can be dangerous if not handled properly. Breathing asbestos dust is very hazardous. Asbestos insulation that is not damaged or friable (hand pressure can crumble, pulverize, or reduce it to powder when it is dry) generally does not produce asbestos fibers at a dangerous level, especially on non-enclosed structures.
5. To minimize health risks, it is important not to drill, cut, remove, tear, step on, brush against, hammer on, or in any way disturb suspected asbestos.
6. If necessary to disturb any suspected asbestos, or if you notice any deterioration in the condition of the suspected asbestos, contact a Chevron representative. Only trained personnel with proper equipment shall disturb or remove asbestos.

D. Benzene

1. Benzene, a liquid found in most crude oil and condensate, can also be found in produced gas in a gaseous form.
2. Benzene is known to cause cancer in humans, so it is important that you limit your exposure to it.

3. Chevron locations that are known to have dangerous levels will be posted.
4. You can reduce exposure and risk by keeping your work area and your clothing as clean as possible. Leather gloves or clothing saturated with liquid containing benzene should be removed and cleaned or discarded to prevent prolonged skin exposure.

E. Lead

1. Overexposure to lead can result in serious short-term (acute) or longer-term (chronic) health effects. Inorganic lead may be absorbed into the body by ingestion or inhalation. Lead is most commonly found in paints and coatings.
2. Tasks such as abrasive blasting or burning of painted surfaces probably pose the greatest potential for lead exposure. Interim protection must be used until an exposure assessment has been done to determine whether exposures exceed the Action Level, which triggers specific monitoring, training, and medical surveillance requirements.
3. Business partner companies whose workers will be exposed to lead must have a written program in place to monitor their workers' blood-level exposure. The program will be reviewed by Chevron before starting the project.

F. Heat Stress

1. Drink cool water. Avoid alcohol, coffee, tea, and caffeinated soft drinks, which cause dehydration.
2. Dress appropriately. Wear lightweight, light-colored, loose-fitting clothing and change clothing if it is completely saturated. Use sunscreen.
3. Work in ventilated areas. Good airflow increases evaporation of sweat, which cools the skin.

4. Supervisors should assign a lighter workload and longer rest periods during days of intense heat. Short, frequent work-rest cycles are best. Longer rest periods should be held in a cooler area. Schedule heavy work for cooler parts of the day.
5. Ask how workers are feeling.
6. Know the signs of heat stress and take prompt action.
7. Reduce work for anyone at risk.

G. Fatigue

1. Fatigue can be a factor in incidents or risk to employees.
2. When they feel fatigued, employees should notify their supervisor and handle appropriately.
3. Supervisors should monitor employee activities and behavior to determine if an employee should be removed from the work site in order to obtain rest.

Section VII — Electrical Safety

A. General

1. Only qualified* and trained personnel (electricians, electrical engineers, and electrical supervisors) shall work on or alter electrical circuits, extension cords, tools or any other type of electrical equipment. All electrical work shall conform to the NEC and any state, local, or Company approved practices.

*QUALIFIED PERSON - LOW VOLTAGE (0-600 VOLTS): A person, designated by the employer, who by reason of experience or instruction has demonstrated familiarity with the operation to be performed and the hazards involved.

*QUALIFIED ELECTRICAL WORKER - HIGH VOLTAGE (>600 VOLTS): A qualified person who has a minimum of two years of training and experience with high-voltage circuits and equipment and who has demonstrated by performance familiarity with the work to be performed and the hazards involved.

2. When working around electrical equipment, personnel shall move deliberately to avoid accidental contact with the energized equipment.
3. Arc flash protection shall be worn as directed by Electrical Safety Work Practices noted in 1389a.
4. Power shall be turned off, locked out or isolated (leads removed from bottom of breaker), and tagged out before working on electrical equipment to ensure that power cannot be accidentally restored. When working on a motor or circuit, the circuit switch/breaker must be open, then locked (if possible) and the switch properly tagged (i.e., "Danger - Do Not Operate") to warn others that someone is working with the equipment. Wire leads must be removed from the power source prior to working on electrical equipment and voltage checks performed. After tag-out has been completed, one should double-check to be sure that the circuit is de-energized

by pushing start button and that it cannot be re-energized by someone else.

The lockout/tagout policy applies when you are required to place any part of your body into an area where a danger exists during a machine operating cycle. When working on overhead power lines or voltages above 600 volts a detailed switching plan must be implemented and utilized. Man on line tags must be installed and all switches, breakers, and other sources of energy must be tagged out and locked out.

Lockout is the preferred procedure. Use tagout alone only when lockout is not an option; however, you must make the equipment energy free - zero energy state. Refer to Isolation Procedures - Section IV.

5. High-voltage points shall be grounded before maintenance begins.
6. Extreme care shall be exercised not to touch electrical equipment while standing in water, on metal floors, damp concrete, or other well-grounded surfaces. Likewise, electrical equipment shall not be operated while wearing wet shoes, damp clothing, or while skin surfaces are damp.
7. Non-explosion proof electrical equipment or any other source of ignition should not be allowed in any area (including buildings) or facilities where the area is classified (Division 1 or Division 2) in accordance with Recommended Practice #1 and API RP 500B without a Hot Work Permit.
8. When opening and closing a breaker, the person should stand on the non-hinged side of the enclosure in the event of an explosion.
9. All electrical equipment operated at greater than 600 volts must be posted with DANGER - HIGH VOLTAGE signs.
10. Do not wear rings, watches, bracelets, necklaces, etc., while working on electrical equipment.

B. Electrical Power Tools

1. Power tools must be grounded or double insulated. Personnel shall make sure that all portable power tools not double insulated are equipped with a three-wire, grounded conductor cord and that the three-pronged plug makes effective contact with the service outlet. The grounded conductor shall be mechanically secured to the frame of the electric tool and to the grounding pin of the plug and contained in the same jacket as the two power conductors. Be certain every service outlet is grounded before using.
2. Most portable electrical tools contain a motor which, when running makes sparks hot enough to ignite a methane-air mixture. Electrical tools shall not be used where gas or fuel vapors may exist, unless the tool is approved by a Nationally Recognized Testing Laboratory for the area classification. In using these types of electrical tools, the same precautions must be taken as are taken during normal operations. Pneumatic tools may generally be used where flammable gases or vapors are present. If possible, use safety low voltage equipment when working in damp or wet locations. All portable electrical tools must be GFCI protected. Approved portable GFCI devices are also permitted.
3. Double-insulated tools are designed so that the inner electrical parts are isolated physically and electrically from the outer housing. The housing is non-conductive. Particles of dirt and other foreign matter from tool use may enter the housing through the cooling vents and become lodged between the two shells thereby increasing the risk of electrical shock.
 - a. Double-insulated tools and equipment should be inspected and tested the same way as any other piece of electrical equipment.
 - b. Double-insulation does not protect against defects in the cord, plug, and receptacle.

C. Extension Cords

1. Extension cords are designed for and will be used for ONLY TEMPORARY USE (less than 60 days). These cords must be marked for extra hard usage. All other electrical connections will be made permanent by proper construction methods.
2. Extension cords shall not exceed 50 feet in length. Cords longer than 50 feet shall be constructed by or approved by qualified electrical personnel. All extension cords shall include a grounding conductor within the cable jacket and shall be equipped at each end with either explosion-proof or non-explosion-proof three-wire, grounded receptacles and plugs (but not with one of each), depending on the location and intended use. (No “hybrid,” ungrounded or external ground wire extension cords are allowed.)
3. If a cord is damaged, it shall be replaced or shortened by an electrician – never patched with electrical tape.
4. Cords shall be protected against contact with oil, hot surfaces and chemicals.
5. Cords should not be hung over nails or other sharp edges or placed where vehicles may run over them. Cords shall not be run through door or window openings that can be closed.
6. Adapter cords, often referred to as cheater cords, should be provided to incorporate an explosion-proof plug on one end and a three-wire grounding type receptacle on the other. The non-explosion-proof receptacle must be of the locking type or means must be provided so that it cannot be accidentally disconnected. These cords should be yellow and it is preferred that the plug be metal. They should be no longer than two feet in length.

D. Electrical Fuses

1. Only qualified personnel shall replace fuses. Blown fuses shall not be replaced with fuses having a higher amperage or lower voltage rating. Fuses shall be replaced in kind to maintain

proper circuit protection. A fuse puller shall be used to remove fuses.

2. Bridging of fuses or circumventing the normal operation of circuit breakers is prohibited.
3. Circuits should be de-energized before attempting to replace fuses.

E. Static Electricity

1. Tanks storing hydrocarbon products should not be splash filled. Overhead fill lines should have down spouts extending to the bottom of the tank. Any filter screen should be placed well forward of the outlet to permit the charge to dissipate before reaching the tank. Tank must be bonded to earth ground.
2. Trucks, barges and tanks shall be electrically bonded to the loading or unloading lines before hoses are hooked up and hatch covers are opened. Reinforcing wire in hoses must be bonded to nozzles. Damaged hoses should not be used.
3. Vacuum trucks shall be bonded to tanks or vessel with a static line before any loading or emptying starts.
4. If steam is used to clean oil storage tanks and separators, nozzles shall be bonded to the tank.
5. Sandblasting nozzles should be bonded electrically to vessels being blasted.
6. Plastic buckets shall not be used to collect hydrocarbons. A metal bucket with a metal handle can be used provided the handle of the bucket does not have a plastic or wood grip. The metal bucket must be in contact with the dispensing valve during filling, or a bond wire be installed between the two. (The plastic or wood grip prevents the bucket from being bonded to the valve or other metal parts and static charges generated cannot dissipate.)
7. Conductive type hoses shall be used in all loading or unloading

operations in conjunction with a bond wire for hydrocarbon service.

8. Fuel trucks shall be grounded to fuel tank carrier prior to filling fuel tank.

F. Overhead Powerline Policy (OPP)

The Chevron SJVBU Overhead Powerline Policy applies to all overhead conductors, regardless of voltage and requires areas to:

1. Ensure employees are not placed in proximity to Overhead Powerlines. Proximity is defined as within 10 feet up to 50 kilovolts, and 4 inches for every 10 thousand volts above 50 kilovolts.
2. Inform employees of the hazards and precautions when working near Overhead lines.
3. Post warning decals on cranes and similar equipment regarding **10-foot minimum clearance**.
4. Ensure that when equipment is working within the proximity of overhead lines a ‘spotter’ is designated and observes for safe working clearances around all overhead lines and directs the operator accordingly.
5. Use warning cones as visible indicators of the Chevron **10-foot safety zone** when working within the proximity of overhead powerlines.

***Note:** “Working within the proximity” is defined as working within a distance from any OPL which is less than combined height of the lifting device, the associated had length, and the required minimum clearance distance (as define in Item #1., above).*

Required Clearance = Lift Equipment Height + Load Length + At Least 10 feet

6. Notify the local area Electrical Shop at least 24 hours before any work begins which requires the local area Electrical Shop to identify voltages and clearances, or de-energize, apply safety grounds, or relocate lines.
7. Vehicles or vehicles with loads in excess of 14' vertical should refer to Section III A 2. h.
8. For more detailed information, please refer to Safety Manual SJVBU OPP.

Section VIII — Tools and Equipment Usage

A. General Hand Tool Practices

1. Do not use damaged or modified tools.
2. Do not use defective tools. The employee should inspect tools before use to determine if they are the proper size and in good condition. If they are not in good condition, the employee shall take the appropriate steps to correct the defect including replacement.
3. Do not carry sharp tools in pockets.
4. Upon completion of a job, tools should be cleaned, and returned to the toolbox or storage area.
5. Wrenches shall have a good bite before pressure is applied. Brace yourself by placing your body in the proper position so that in case the tool slips you will not fall. Make sure hands and fingers have sufficient clearance in the event the tool slips. When possible pull on a wrench.
6. Never use a wrench as a hammer.
7. Never use a tool with a “mushroom” head.
8. Never use a screwdriver for a chisel.
9. Pressure equipment such as grease guns, paint and garden sprayers shall be directed away from the body and other personnel in the area. The person operating any equipment such as this, which has a potential for eye injury shall wear protective eyewear.
10. All utility air shall be regulated to maintain maximum allowable working pressures of the equipment being used.

B. Engineered Extensions (Snipes)

1. Employees using extensions shall exercise care and judgment,

making sure that both extension and wrench are suitable for the job at hand.

2. Extensions shall not be used on spanner/crescent wrenches.
3. Extensions shall be less than twice the length of the wrench handle and shall lie the wrench handle closely over its entire length.
4. Employees shall not stand, jump, or jerk on tools or extensions when breaking or making up connections.

C. Ladders

1. Before using a ladder, visually inspect it; a defective ladder shall not be used and shall be removed from service and tagged, "Caution - Do Not Use." Replace ladder with one in safe condition.
2. When ascending or descending, always face the ladder and have both hands free for climbing. Tools should be carried in a belt or raised/lowered by rope.
3. When working on or near electrical equipment, never use metal ladders.
4. Ladders shall be set at the correct angle. The base should be out one-fourth the distance of the height and never less than 3 feet from the wall or structure.
5. Ladders shall be on a firm base and against a non-moving object. Single and extension ladders should be equipped with anti-slip safety feet, extend 3 feet above the top support, and be tied off to prevent slipping. Someone should steady the ladder, if needed.
6. When working from a ladder, both feet should be kept on the rungs.
7. Long reaches should be avoided; move the ladder first so as to keep hips between the ladder side rails.

8. Never climb a single or extension ladder higher than the third rung from the top (second rung from the top on step ladders).
9. Wood ladders shall not be painted. Paint covers cracks and other defects.
10. Do not use ladders as scaffolding components. Staging ladders should be clamped to the scaffold.
11. Allow only one person at a time on ladders.
12. Never place a ladder in front of a door unless the door is locked, blocked, or guarded.

Section IX — Miscellaneous Production Equipment Safety

A. Fired Equipment

1. Fired equipment is to be started only by trained, authorized personnel.
2. Thoroughly purge the firebox before attempting to light fired equipment (treated, line heater, boiler, steam generator). Open all dampers that may be on stacks, burners or pilots. Check fuel supply and be sure that it is available at the proper pressure. Make sure there is no condensate in the fuel line by opening the appropriate bleed valve(s). Check to see that all burner fuel valves are closed. If there is no purge system, allow at least ten minutes airing time.
3. Activate pilot phase. When pilot is lit, open main burner valve slowly.
4. If it is necessary to shut off the burners after fuel valves have been opened, the firebox must again be thoroughly purged before attempting to relight the heater.
5. Flame arrestors shall be cleaned and inspected annually.

B. Pressure Gauges

1. Gauges shall never be installed directly into a tap in a vessel or line. They shall be installed into a valve which has been installed into the tap. Special gauge valves with bleed ports are preferred.
2. Pressure gauges shall be equipped with safety plugs or safety backs.
3. Pressure gauges should never be tightened or loosened while gauge is under pressure. Never service a pressure gauge under pressure. Always isolate gauge from pressure source.
4. Where the service permits, install a restricting orifice of

1/8-inch size under all pressure gauges.

C. Pressurized Cylinders

1. Slings, ropes or chains shall not be used to lift a cylinder. Cylinders shall not be lifted by caps, and caps shall be in place when cylinders are not in use.
2. Compressed gas cylinders shall not be stored near highly flammable substances such as oil, gasoline or chemicals. Cylinders shall not be placed where they might become a part of an electric circuit. Cylinders shall not be subjected to a temperature above 125° Fahrenheit, subjected to an open flame, and/or exposed to areas where heavy equipment is being moved.
3. Keep the cylinder valve closed at all times, except when the cylinder is in active use. Open cylinder valves slowly with valve pointing away from personnel.
4. Compressed gas cylinders shall not be used as rollers, supports or for any other purpose other than to contain the content as received. Hand trucks shall be used to move cylinders, if possible, to prevent sliding or dragging.
5. Compressed gas shall never be used to remove dust from clothing, as this may cause serious injury to the eyes or body or create a fire hazard.
6. No cylinders shall be used which have been defaced or had any markings, labels, decals, tags or stencil marks removed which are used for identification by supplier.
7. Regulators, gauges, hoses or other appliances provided for use with a particular gas or group of gases shall not be used on cylinders containing gases having different properties. Properly fitted and recommended wrenches shall be used with cylinder valve accessories.
8. All cylinders shall be secured in the upright position to prevent them from being knocked over or damaged.

9. Oxygen and Acetylene

- a. Oxygen cylinders should be stored in shaded areas. Before moving cylinders, make sure the valve protector cap is securely in place. The protector cap shall be in place when cylinders are not being used.
- b. Oxygen supports combustion. It will not burn. When oxygen comes in contact with oil or grease, a spontaneous explosion and fire is likely to occur. Keep oxygen and hydrocarbons separated. For example, never lubricate or allow oil or grease to get on oxygen connections; never use oxygen in place of compressed air or as a source of pressure.
- c. Acetylene cylinders should always be used and stored in an upright position to prevent the acetone (a stabilizing agent) from draining into the valves or fittings. All acetylene bottles that have been transported on their side or laid down for other reasons should be allowed to sit upright for 15 minutes prior to use to redistribute the stabilizing agent. Acetylene should never be used at a hose pressure exceeding 15 pounds per square inch gauge). Above 15 psig, acetylene is extremely unstable, and the possibility of an explosion exists.
- d. Oxygen and acetylene cylinders in storage shall be at least 20 feet apart or if stored together shall be separated by a metal wall, 5 feet high, 1/4 inch thick, and as wide as the storage rack.
- e. Do not use copper tubing in acetylene service. If steel tubing is used, it must be grounded.

D. Pressurized Production Equipment

1. Pressure should be bled off before tightening threaded or flanged connections.
2. Pressure should be bled off from any line, vessel, engine

cylinder, wellhead equipment and other producing equipment before starting repair work. (Hot tapping is an exception.) Extreme care should be exercised to ensure that the pressure has been bled off. Generally speaking, this can be accomplished by the following preferred order:

- a. Locate and open other bleed sources to the equipment
- b. Unbolt flanges carefully by loosening nuts (furthest away) and separating flanges before removing the nuts
- c. Unscrew threads slowly and shake them as they are turned

Hot tapping may also be used in lieu of b. and c.

3. Personnel shall stand to one side and away from possible flow direction as flanges are parted and fittings removed.
4. Bleed lines shall be securely anchored to prevent movement.
5. In bleeding down flow lines where the formation of hydrates is a possibility, allow sufficient time for the ice plugs to thaw before starting work on the line.
6. Valves controlling bleed operations shall be opened or closed slowly.
7. Before blowing down gas lines or drip pots, it shall be determined by the person performing the work that the area is free from ignition sources.
8. Neither lines nor fittings under pressure shall be hammered.
9. When re-pressurizing lines and equipment, open valves slowly. Everyone along a line or in front of the equipment should stand clear and remain so until normal operating pressures are reached.
10. When pressure testing is required, lines and vessels shall be tested with a liquid, preferably fresh (not salt) water.

E. Protecting Personnel from Hot Surfaces

1. Steam at high pressure is a high-pressure gas, and all requirements for safety for high-pressure gas apply equally to steam.
2. Hot surfaces having an external surface temperature 140°F and located within 7 feet vertically from floor or working level or 15 inches horizontally from floor, Working level, stairs, ramps or fixed ladders shall be insulated or otherwise guarded against accidental contact.
3. Uninsulated hot lines shall be labeled with caution signs. Steam lines can be at temperatures of over 500° F. Severe burns will result with momentary contact. Guards shall be installed if contact is likely.
4. Insulated gloves shall be worn when handling hot equipment or when working where there is a danger of hot surfaces.
5. The fact that a steam line is cold is not an indication that there is no pressure on it. Pressure is to be removed before repairs or other work is done on a line or fitting.
6. When steam is entered into a cold line, the valve should be opened slowly and care exercised to allow the line to gradually assume its working pressure and position. Steel expands approximately $\frac{3}{4}$ inches per 100 feet per 100° F change in temperature. Changes of 3 inches or 4 inches per 100 feet can be expected.

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Appendix B. Subcontractor Safety Qualifications Procedures and SJVBU Pre-Qualification Safety Form

Safety Pre-Qualification Form

A. General

- (1) **Contractor Name** _____
- (2) **Address** _____
- (3) **Brief description of the type of work your company performs:**
- (4) **Number of Employees
working in California** _____
- (5) **BLS SIC or NAICS Code** _____
- (6) **California Contractor
License Number** _____
- (7) **Year Company Name Was
Chartered** _____
- (8) **Federal Taxpayer ID
Number** _____

B. Contact Information

- (1) **Company Safety Representative**
- Name** _____
- Title** _____
- Telephone Number () -** _____

Last revision date: 12/15/2008

Safety Pre-Qualification Form

C. Total Recordable Incident Rate (TRIR) – Company-Wide – California Operations Only

The following information is for CALIFORNIA ONLY statistics, if California data doesn't exist, please provide nationwide statistics (# of recordables x 200,000 / man-hours worked).

	<u>123108</u>	<u>123107</u>	<u>123106</u>
(1) TRIR for Injuries, as Defined by OSHA, for:			
(2) Number of Man Hours Worked			
(3) List the number of ALL occupational injuries and illnesses for the years shown. NOTE: If any fatalities occurred, provide full details on an attached sheet explaining the circumstances.			
	<u>123108</u>	<u>123107</u>	<u>123106</u>
(a) Number of Days Away From Work Cases			
(b) Total Number of Day Away from Work			
(c) Number of Job Transfer / Restricted Duty Cases			
(d) Total number of days of Job Transfer / Restricted Work			
(e) Number of Other Recordable Cases			
(f) Number of First Aid Cases			
(g) Number of Fatalities			
(h) Number of OSHA Citations			
(i) Number of Other Regulatory Citations			

**D. Total Recordable Incident Rate (TRIR) – Chevron and McFarland Energy, Inc. Properties
– San Joaquin Valley Business Unit Only**

The following information is for work conducted solely on SJVBU properties for Chevron and McFarland Energy, Inc. jobs for the years shown (# of recordables x 200,000 / man-hours worked).

Have you ever worked on any of the San Joaquin Valley fields? YES NO

If yes, please state the location:

If applicable, Were any of the Total Recordable Incidents identified in Section C in the San Joaquin Valley fields? (If yes please continue below, if no move on to section E)

YES NO

	<u>123108</u>	<u>123107</u>	<u>123106</u>
(1) TRIR for Injuries, as Defined by OSHA, for			
(2) Number of Man Hours Worked			

Last revision date: 12/15/2008

Safety Pre-Qualification Form

D. Total Recordable Incident Rate (TRIR) -San Joaquin Valley Business Unit Only (cont)

(3) List the number of ALL occupational injuries and illnesses for the years shown.

NOTE: If any fatalities occurred, provide full details on an attached sheet explaining the circumstances.

<u>Category</u>	<u>123108</u>	<u>123107</u>	<u>123106</u>
(a) Number of Days Away From Work Cases	_____	_____	_____
(b) Total Number of Day Away from Work	_____	_____	_____
(c) Number of Job Transfer / Restricted Duty Cases	_____	_____	_____
(d) Total number of days of Job Transfer / Restricted Work	_____	_____	_____
(e) Number of Other Recordable Cases	_____	_____	_____
(f) Number of First Aid Cases	_____	_____	_____
(g) Number of Fatalities	_____	_____	_____
(h) Number of OSHA Citations	_____	_____	_____
(i) Number of Other Regulatory Citations	_____	_____	_____

(4) List your firm's Worker's Compensation Insurance Experience Modification rate (EMR or X-Mod) for:

<u>123108</u>	<u>123107</u>	<u>123106</u>
_____	_____	_____

Please do not return this questionnaire without the OSHA logs attached

E. Safety Programs

	Check One	<u>YES</u>	<u>NO</u>
(1) Does your firm have an incident sharing process? (e.g. near miss, motor vehicle incidents, first aid cases)	
(2) Are formal safety meetings held for all employees?			
(a) If yes, how often?)	<u>Weekly</u>	<u>Bi-Weekly</u>	<u>Monthly</u>

(3) Do your work crews participate in jobsite safety meetings? (e.g. JSAs, JSPs, pre-job safety meetings)			
(a) If yes, how often?	<u>Daily</u>	<u>Weekly</u>	<u>As Needed</u>

(4) Are field safety inspections conducted? (e.g. field audits, BBS observations, management visits)			
	

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Safety Pre-Qualification Form

(5) Does your firm establish annual HES targets?

(a) If yes, what are they: Safety _____ Environment _____ Health _____
Check One

(6) Does your firm have a written safety program?

(7) How many designated safety coordinators or professionals does your firm have?

(8) Does your firm have a written Drug and Alcohol Policy which includes testing for pre-employment, random, post accident and probable cause?

(9) Does your firm have a Short Service Employee (SSE) program which controls the number of Short Service Employees on a crew and provides mentoring?

(10) Does your firm conduct specialized safety training for newly hired personnel that includes your Safety Program, HPP, Drug and Alcohol Policy, and New Employee Orientation?

(11) Does your firm have a written safety recognition program?

(12) Does your firm have a process in place to ensure employees and/or subcontracted employees are accounted for at the end of each work shift?
(e.g. check-in/check- out process, dispatch process, or end of shift headcount)

(13) What is the average years of experience for your field employees?

(14) Does your firm have a written ENVIRONMENTAL program?

(15) Does your firm have a behavior-based observation program (BBS, BST, or other) that includes training personnel to observe co-workers for safe (and at risk) performance and provide feedback after observation?

(16) Does your firm conduct Industrial Hygiene (IH) monitoring on your employees?

(17) How frequently does your work include the conditions listed below? For new contracts, please estimate the frequency.

<u>Job Task</u>	<u>Routinely (Daily)</u>	<u>Occasionally (3 times a week)</u>	<u>Sometimes (Once a week)</u>	<u>Rarely (Less than once a week)</u>	<u>Never (Do not do this type of task)</u>
(a) Hot Work
(b) Confined Space Entry
(c) Trenching and Excavation
(d) Lock Out/Tag Out/Block Out
(e) High Temp (> 140 deg F)
(f) High Pressure (> 400 psig)
(g) Elevated Work (> 6 feet)
(h) H ₂ S (> 300 ppm)

Last revision date: 12/15/2008

Safety Pre-Qualification Form
E. Safety Programs (con't)

<u>Job Task</u>	<u>Routinely (Daily)</u>	<u>Occasionally (3 times a week)</u>	<u>Sometimes (Once a week)</u>	<u>Rarely (Less than once a week)</u>	<u>Never (Do not do this type of task)</u>
(i) Chemicals
(j) Pinch Points
(k) Line of Fire
(l) Flammable Gases and Liquids (FP< 100 deg F)
(m) Overhead Power Lines (minimum 10 ft corridor)
(n) High Voltage Electrical (>50v)

(18) Please list any/all specialized training programs provided for your employees and the topics covered:

(19) Please attach one copy of each of the following if selected as the preferred vendor:

<u>Attached?</u>	<u>YES</u>	<u>NO</u>	<u>If no, why not?</u>
(a) Injury and Illness Prevention Program (IIPP)	_____
(b) Safety Program	_____
(c) Employee Orientation Program	_____
(d) OSHA 300 Logs	_____
(e) EMR Letter from Insurance Carrier	_____
(f) Environmental Program	_____
(g) Safety Recognition Program	_____

Please return completed
questionnaire to: _____

Signature: _____ Date: _____

Name: _____

(print or type) _____ Title: _____

Last revision date: 12/15/2008

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Appendix C. Chevron Stop Work Authority Release

STOP WORK AUTHORITY

Every Employee, Contractor and Sub-Contractor at the SJVBU Project work site has the right and responsibility to immediately stop the work of another co-worker if the working conditions or behaviors are considered unsafe.

These conditions or behaviors shall be immediately brought to the attention of the Contractor Project Manager, the Contractor Project Safety Manager, Chevron Construction Representative and the Contractor Construction Manager for resolution. Work shall be restarted with the authorization of the Chevron Construction Superintendent, Contractor Project Manager, and the Contractor Construction Manager when the working conditions or behaviors have been corrected and it is safe to do so.

If anyone is discouraged from exercising the “Stop Work Authority” or are penalized for doing so, they should report this action to Sergio Hoyos

/s/ Sergio Hoyos

Sergio Hoyos, Chevron Project Manager

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Appendix D. Short Service Employee FAQ

Short Service Employee (SSE) Procedure and Frequently Asked Questions For Chevron SJVBU Supervisors and Business Partners

CNAEP Contract Addendum (SSE portion only):

19.00 Short Service Employees

- 19.01 A short service employee means an individual who has been employed by CONTRACTOR for less than six (6) months or has been in a like job by CONTRACTOR for less than six (6) months. No one person crew may be staffed by an SSE. Only one SSE is allowed on a 2-4 person crew and on crews of 5 persons or more no more than 20% may be SSEs. CONTRACTOR shall notify COMPANY of any SSEs on its crews. A qualified mentor must be assigned to each SSE to monitor the SSE's job performance. Exceptions to the SSE policy may be made only with COMPANY'S prior approval.

What this means:

- Chevron expects Business Partners (BPs) to have a short service employee process.
- Chevron Location Supervisors must be notified of SSEs and exceptions must be approved by the Chevron representative.
- A form is attached for both notification & exception purposes. BPs should retain the document.
- The BPs Short Service Employee process will be reviewed as part of Chevron's safety management audit process.

Frequently Asked Questions:

1. What is the objective of this policy?

Section 19.00 Short Service Employees, is in place to ensure that personnel new to the oil and gas industry work safely, are identified, appropriately supervised, and trained in order to prevent incidents such as injury, environmental damage or property damage.

2. If an individual has many years of experience, but is new to the company or position, are they considered a SSE?

No. Prior experience with the same company or different company can be applied towards meeting the six month requirement. This type of experience could include journeymen or experience with another company in a similar job category. It is the responsibility of the Business Partner to ensure sufficient experience and craft skills. The BPs SSE process is evaluated during the safety management audit.

3. What if I have one man operations or single service provider?

If the BP has a proficiency process (either written or demonstration) that address craft skills, hazard identification and peer evaluation, then the BP employee is allowed to work individually.

4. Can individuals be released from the SSE requirements prior to six months?

Yes, if the business partner has a program for assessing competencies and documents that the individual has demonstrated the BPs required craft skills. The program and supporting documentation will be subject to safety management audit review.

5. If an individual has been employed by the BP for many years, but was recently promoted to a new position, are they considered a SSE?

No.

6. If an individual changes companies and then is rehired at a later date, is the person considered a SSE upon rehire?

No.

7. Who must be notified of the SSE?

The Chevron Location Supervisor, or delegate, must be notified. Delegates are listed in Table 1 below.

8. Who will approve SSE crew exceptions (>20% SSE crews or single person SSE crews)?

The Chevron Location Supervisor, or delegate, must approve. Refer to Item 2, 3, 4 and 5, above.

Table 1. SJVBU Delegation of Authority for BP SSE Notification & Exception Approval (X=SJV-wide)

<u>Delegate</u>	<u>Maintenance Superintendent</u>	<u>COS Supv/Leader</u>	<u>Operations Supervisor</u>	<u>TT/ADT Leader (incl. WEO,IT)</u>
Shift Supv.			X	
Process* Supv.	X	X	X	X
Planner	X	X		
Prod. Tech (PT)			X	
Head Operator	X	X	X	
Constr. Reps	X		SA/COA	X
Drilling/Workover Reps				X
Other	If formally providing coverage/relief for one of above			

*Process= Thermal, Repair, Electrical, Workover, Infrastructure Support

9. What if I have a seven (7) person crew – can I “round up” and have two (2) SSEs?

More than 20% SSE in a crew of 5 or greater requires an exception approval. Refer to item 3 and 5, above.

10. Will notification forms & exception forms be needed?

Yes. Attached is the form which must be used for notification and/or exception requests. The form is available on the SJVBU Contractor Safety Management (CSM) website <http://sjvbu.Chevron.com/safety/prejob.asp>.

11. Can this be done electronically?

Yes. Forms can be electronically approved. For added security, individuals with SMARTBadges can add digital signatures to the documents.

12. What if I have a large number of SSEs, for example due to a rapid expansion or due to vendors merging?

The information can be provided in a spreadsheet format for efficiency.

13. Can SSE notifications & exception requests be made when the SSE arrives on site?

Notification & exception requests must be approved by the Chevron Location Supervisor prior to the SSE commencing work.

14. How often will an exception need to be re-issued?

An exception will not have to be re-issued.

15. What if the SSE moves to another area?

The notification is good for work throughout SJVBU.

16. If a non-SSE moves to another location, are they considered a SSE?

No.

17. Who keeps the completed forms? For how long?

The Business Partner. Minimum until the person is off the SSE list.

18. Who is a qualified mentor? What are the mentor’s responsibilities?

The Bp’s SSE Program must outline the mentor process. The mentor should have more experience than the SSE and be able to answer questions, assess and coach the SSEs safe work practices.

19. Does the mentor have to be onsite with the SSE?

No. The mentor should be available to fulfill the responsibilities outlined in the BPs SSE mentor process.

20. What about subcontracted or 3rd party employees?

Chevron SJVBU BPs are required to manage their sub-contractors in alignment with the Chevron contract, which includes Section 19.00 Short Service Employee.

21. What are the visibility requirements?

The BP is responsible for providing the means to identify SSEs.

22. How will compliance be tracked and monitored?

The Chevron safety management audit process has been modified to ensure periodic review of the BPs process.

23. I have more questions, where do I get more answers?

The SJVBU Contractor Safety Management (CSM) website may have some of the answers you need. The link is listed below:

<http://sjvbu.Chevron.com/safety/prejob.asp>

Otherwise, please don't hesitate to contact your Chevron Business Partner Safety Advisor (Jeff Gurican, CTN654-7298) with your questions, concerns or suggestions for improvements.

Contractor Short-Service Employee Form

Contractor must complete and submit form to the operator location supervisor for approval prior to arrival on location. The operator location supervisor (field supervisor, drilling supervisor, OIM) must approve the individual SSE before he/she arrives on location.

I. SSE Information

Contractor Company Name: _____

Request Date: _____

SSE Name: _____

Date of Employment: _____ Current Job Title: _____

Years Related Experience: _____ Experience in Current Position: _____ Yrs _____ Months

Is this employee in compliance with your Substance Abuse Policy? ☐ Yes ☐ No

Have site owner, contractor and HES policies been reviewed with SSE? ☐ Yes ☐ No

Who has been assigned as the SSE's mentor?

Mentor's Experience: _____ Yrs _____ Months

List all training provided to the SSE: _____ List any previous special training: _____

_____	_____
_____	_____
_____	_____
_____	_____

SSE(s) identified by: ☐ Hard Hat – Hi Vis. Orange ☐ Other – Describe _____

II. SSE Crew Composition Requirements

Choose one of the crew types below. If any of the stated limitations are exceeded, proceed to the variance form on the back of this sheet.

☐ Single person crew – cannot be an SSE (Variance Required)

☐ 2 – 4 person crew – no more than one SSE

☐ 5 or more person crew – no more than 20% SSE(s) per crew

☐ Exceeding 20% SSE per crew (Variance Required)

III. SSE Review and Approval

Contractor Manager: _____

Date: _____

Operator Location Supervisor: _____

Date: _____

This form is to be filled out whenever the conditions on the front of this form or any other element of the Short Service Employee Policy cannot be met.

IV. Variance Information**Variance Justification**

(What are the current circumstances and what will be done to ensure an acceptable level of risk?)

Alternatives to Variance

(If the variance is denied, what are the alternatives to completing the scope of the work? Briefly detail the cost and operational impact of the alternatives.)

List the steps to be taken to manage/mitigate the SSE risk to an acceptable level:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

V. Variance Review and Approvals

Variance Expiration Date:

Operator Location Supervisor

☐ Approves ☐ Denies

Signed: _____ Date: _____

Contractor Manager/Supervisor

☐ Approves ☐ Denies

Signed: _____ Date: _____

Note: For large jobs, please use a separate sheet to list all SSEs on the crew by name and job title.

Solar to Steam Demonstration
Project Safety Management Plan

Appendix E. Job Safety Analysis Form

Master Services Agreement

In case of an

Job/Task: _____ Date: _____ Supervisor: _____
 Work Location: _____ " New Safety: _____
 Employee(s): _____ " Revised _____

- What is the most hazardous part of this job and what are you going to do to control the hazard? _____
- Are you properly trained to complete these tasks? _____
- What do you need to ensure this job is completed incident and injury free? _____
- What conditions, job changes or distractions could call for the need to use Stop Work Authority? _____

Sequence of Job Steps	Potential Hazard(s)	Recommended Action/Procedure	
			Examine each step carefully to find and identify hazards or potential dangers that could lead to injury, illness or damage. Consider the following: Chemical Hazard: _Inhalation _Skin Contact _Absorption _Injection _Ingestion Biological Hazards _Bloodborne Pathogens _Mold _Valley Fever _Plant/Insect/Animal Physical Hazards _Electrical _Fire/Explosion _Noise _Radiation _Thermal Stress _Pinch Point/Line of Fire _Slips/Falls _Strike against/Struck by
Additional Personal Protective Equipment Req'd	" face shield " chemical goggles " chemical protective clothing " rubber boots " chemical resistant gloves " leather gloves " cut resistant gloves " respiratory protection _____ " hearing protection " fall protection " Other _____		
Required Permits/Safe Work Plans	" General SWP " Hot Work Permit " Confined Space Entry " Excavation and Trenching " Lift Plan/Crane Ops " Work in proximity to Overhead Conductors " Simultaneous Operations		Ergonomic Hazards: _Repetition _Forceful exertion _Awkward Posture _Contact Stress _Vibration _Work Area Design
Gas Detection	" H ₂ S monitor " LEL, O ₂ H ₂ S, CO Monitor " Other _____		
Equipment Needed			
List hazardous substances	_____		
MSDS reviewed? "yes "n/a	_____		
Site Control	" barricades " post signs " caution tape " designated area for vehicles " heavy equipment spotter " establish meet and greet process		
Environmental Conditions	Weather: _____ Terrain: _____ Wildlife: _____		
Hazardous Energy Control	" LO/TO checklist complete " LO/TO devices in place " energy isolation verified " electrical " hydraulic " pneumatic " mechanical " thermal " chemical		
Tools and Equipment	" pre-use inspection complete " trained in use of tool/equipment List tools/equipment being used: _____		

Solar to Steam Demonstration
Project Safety Management Plan

Appendix F. Investigation Reporting Forms

1. Initial Incident Form
2. Investigation Details Form
3. Fire or Explosion Form
4. Cost of Incident Form
5. Motor Vehicle Collision Form
6. Property Damage or Loss Form
7. Spill or Release Form

SiteSafe Initial Incident Form**How to name and save your initial incident reports:****SJVBU**

- 1st – Define the Asset Area: **KR: MWSS: LH; CO; or SA**
 2nd – ID company & rig no. **N-XXXX; GSD-XX; FracOPS; or “Other” OPS**
 3rd – Define the month and day numerically : **7-25** (the year is not needed)
 4th – Describe form type: **NM; Ini; Injury; MVC; Spill; Prop; or Fire.**

Example: **“KR-N1087 7-26 NM”**For a July 26th near miss the occurred on Nabors 1087, while it was in Kern River!

INCIDENT DATE	INCIDENT TIME	REPORTED DATE	REPORTED TIME
---------------	---------------	---------------	---------------

FIELD LOCATION
(Select Location)

Exact location on structure/rig/off-site

WEATHER CONDITIONS
(Weather Conditions)

FACILITY TYPE
(Facility Type)

On Chevron premises? Accident address (street, city, state, postal code)

☐ Yes ☐ No

Names of witnesses

- 1.
- 2.
- 3.

INCIDENT CONSEQUENCES (select all that apply)

- | | | |
|---|---|---|
| <input type="checkbox"/> Environmental Impact | <input type="checkbox"/> Motor Vehicle Crash | <input type="checkbox"/> Spill or Release |
| <input type="checkbox"/> Fire/Explosion | <input type="checkbox"/> Near Miss | <input type="checkbox"/> Other: |
| <input type="checkbox"/> Injury or illness | <input type="checkbox"/> Property/Equip damage/loss | |

INCIDENT DETAILED DESCRIPTION – Please answer the following questions in your description:

1. What activity was in progress when the incident occurred?
2. What specifically cause the incident to occur?
3. What resulted from the incident occurrence?
4. Please include details on all conditions that may have influenced the incident or its outcome.

IMMEDIATE ACTIONS TAKEN

RECOMMENDED REMEDIAL ACTION (S) TO PREVENT REOCCURRENCE

ACTION ITEM	RESPONSIBLE PARTY	TARGET DATE
1.		
2.		
3.		

CONTRIBUTING FACTORS

ROOT CAUSE (select all that apply)

- | | | |
|--|---|--|
| <input type="checkbox"/> Procedures- faulty/insufficient | <input type="checkbox"/> Equipment- different design needed | <input type="checkbox"/> People-body mechanics/lifting |
| <input type="checkbox"/> Procedures-not aware | <input type="checkbox"/> Equipment- proper tool not available | <input type="checkbox"/> People- PPE not worn |
| <input type="checkbox"/> Procedures- not followed | <input type="checkbox"/> Equipment- faulty | <input type="checkbox"/> People- training |
| <input type="checkbox"/> Environment | <input type="checkbox"/> People- inattention | <input type="checkbox"/> People- pinch points |
| <input type="checkbox"/> Equipment- maintenance | <input type="checkbox"/> People- eyes on path | <input type="checkbox"/> People- line of fire |
| <input type="checkbox"/> Other: | | |

OE TENET ALIGNMENT OR MISALIGNMENT

Operate within design or environmental limits	<input type="checkbox"/> Aligned	<input type="checkbox"/> Misaligned
Operate in a safe and controlled condition	<input type="checkbox"/> Aligned	<input type="checkbox"/> Misaligned
Ensure safety devices are in place and functioning	<input type="checkbox"/> Aligned	<input type="checkbox"/> Misaligned
Follow safe work practices and procedures	<input type="checkbox"/> Aligned	<input type="checkbox"/> Misaligned
Meet or exceed customer's requirements	<input type="checkbox"/> Aligned	<input type="checkbox"/> Misaligned
Maintain integrity of dedicated systems	<input type="checkbox"/> Aligned	<input type="checkbox"/> Misaligned
Comply with all applicable rules and regulations	<input type="checkbox"/> Aligned	<input type="checkbox"/> Misaligned
Address abnormal conditions	<input type="checkbox"/> Aligned	<input type="checkbox"/> Misaligned
Follow written procedures for high-risk or unusual situations	<input type="checkbox"/> Aligned	<input type="checkbox"/> Misaligned
Involve the right people in the decisions affecting procedures and equipment	<input type="checkbox"/> Aligned	<input type="checkbox"/> Misaligned

Form updated 7/27/2005



- For a July 26th near miss that occurred on Nabors 1087, while it was at Kern River!

SiteSafe Investigation Details Form**How to name and save your Investigation Details reports:**

SJVBU

- 1st – Define the Asset Area: **KR: MWSS: LH; CO; or SA**
 2nd – ID company & rig no. **N-XXXX; GSD-XX; FracOPS; or “Other” OPS**
 3rd – Define the month and day numerically : **7-25** (the year is not needed)
 4th – Describe form type: **NM; Ini; Injury; Investigation; MVC; Spill; Prop; or Fire.**

Example: “**KR-N1087 7-26 NM**”For a July 26th near miss that occurred on Nabors 1087, while it was at Kern River!

INCIDENT CAUSES- Select a value from the Following List, followed by the relating Causal Factor and Root Cause Description (Below):

Environment Contributing Factors

- “ Animal
- “ Housekeeping Poor
- “ Inadequate assessment of conditions
- “ Insect
- “ Lighting/visibility poor
- “ Plants
- “ Reptile
- “ Restricted work area
- “ Walking / working surfaces
- “ Weather conditions adverse

Equipment Contributing Factors

- “ Barriers and guards not in place
- “ Design faulty or inadequate / not suited to the task
- “ Equipment used incorrectly / outside normal operating range
- “ External corrosion
- “ Hazards not identified
- “ Installation faulty or less than adequate
- “ Internal corrosion
- “ Maintenance inadequate
- “ Mechanical failure

People Contributing Factors

- “ Attention lapse
- “ Body mechanics / lifting
- “ Communications non-existent, less than adequate or misunderstood
- “ Eyes on path
- “ Eyes on work / hands
- “ Horseplay
- “ Line of fire
- “ Mistake – Lack of knowledge to select the appropriate course of action
- “ Pinch point
- “ Supervision less than adequate or not provided
- “ Training not provided or less than adequate
- “ Turnover less than adequate
- “ Violation - Intentional deviation from understood and appropriate course of action

Procedures Contributing Factors

- “ Ascending / descending
- “ Corrective actions not fully implemented from previous incident
- “ Inspection inadequate or not conducted
- “ JSA insufficient or did not address hazards
- “ JSA not conducted
- “ JSA not followed
- “ Lock out / tag out
- “ Materials handling / storage inadequate
- “ Personnel transfer
- “ Procedures followed incorrectly – out of sequence
- “ Procedures have no formal risk assessment
- “ Procedures inadequate or faulty
- “ Procedures not followed
- “ Procedures not in place
- “ Procedures not linked to management of change process
- “ Procedures not understood
- “ Standards, policies or controls not in place
- “ Standards, policies or controls not used

Personal Protective Equipment

- “ Eye / face protection
- “ Fall protection
- “ Foot protection
- “ Hand protection
- “ Head protection
- “ Hearing protection
- “ Personal floatation device
- “ PPE standards not complied with
- “ PPE worn but failed to protect
- “ Respiratory protection
- “ Work attire inadequate / inappropriate

CAUSAL FACTOR

- 1.)
- 2.)
- 3.)

ROOT CAUSE DESCRIPTION

- 1.)
- 2.)
- 3.)

SiteSafe Fire or Explosion FormHow to name and save your Fire or Explosion reports:

SJVB

- 1st – Define the Asset Area: **KR: MWSS: LH; CO; or SA**
 2nd – ID company & rig no. **N-XXXX; GSD-XX; FracOPS; or “Other” OPS**
 3rd – Define the month and day numerically : **7-25** (the year is not needed)
 4th – Describe form type: **NM; Ini; Injury; MVC; Spill; Prop; or Fire.**

Example: “**KR-N1087 7-26 NM**”For a July 26th near miss that occurred on Nabors 1087, while it was at Kern River!

Incident Date:

Created By:

SHORT DESCRIPTION OF FIRE/EXPLOSION

START DATE

START TIME

END DATE

END TIME

Materials involved- what was burning?

Operating temperature and unit of measure

Equipment type – where did the fire start?

SOURCE OF FUEL

SOURCE OF IGNITION

Source of oxygen (if other, describe)

☐ Air ☐ Other:

Responsible party

☐ ChevronTexaco ☐ Contractor ☐ 3rd Party

Describe why the initiating event of ignition was in proximity to the flammable mixture. Why did the fire start?

Events, discovery and control/extinguishment of fire

What were the escalation factors of the fire? What contributed to making the fire worse?

What systems failed and thereby contributed to the fire?

ARE YOU REQUIRED TO REPORT THIS FIRE TO MMS?

☐ Yes ☐ No

SiteSafe Cost of Incident FormHow to name and save your Cost of Incident reports:

SJVB

- 1st – Define the Asset Area: **KR: MWSS: LH; CO; or SA**
 2nd – ID company & rig no. **N-XXXX; GSD-XX; FracOPS; or “Other” OPS**
 3rd – Define the month and day numerically : **7-25** (the year is not needed)
 4th – Describe form type: **NM; Ini; Injury; MVC; Spill; Prop, COI; or Fire.**

Example: **“KR-N1087 7-26 NM”**For a July 26th near miss that occurred on Nabors 1087, while it was at Kern River!

Incident Date:

Created By:

INCIDENT DETAILS (link to existing incident?)

Facility/Location	Incident Date	Operational Relationship
		“ Company Owned/Operated “ Non Op Joint Venture
Contact person/number		Controllable or non-controllable incident
		“ Controllable “ Non-controllable

Incident Category

- “ Damaged Catalyst “ Equipment Failure – Fired “ Equipment Failure – Fixed
 “ Equipment Failure – I & E “ Equipment Failure – Rotating “ Equipment Failure – Sub Sea
 “ Equipment Failure – Subsurface “ Missed Product Deliveries/Run Outs
 “ Off Test/Misrouted Products “ Other

PLAN PRICES

Before Tax – Estimated “Cost of Incident” Impact by Category (CVX Share Basis):

Revenue (lost production X price) or Gross Margin (lost product sales – raw materials) Impact US\$	Revenue – Cost Elements
--	-------------------------

Expense Impact – Variable Cost, Property Damage, Incremental Costs – US \$	Expense Impact – Cost Elements
--	--------------------------------

Incremental Capital Impact (Portion of Capital Expenditures in lieu of repair or replacement expense): US \$	Incremental Capital Impact – Cost Elements
--	--

After tax – Estimated Earnings Impact (CVX Share Basis):

Estimate of Potential Impact to CVX Earnings as Equity Share or Working Interest – After Tax – US \$	Estimate of Potential Impact – Cost Elements
--	--

ACTUAL PRICES

Before Tax – Estimated “Cost of Incident” Impact by Category (CVX Share Basis):

Revenue (lost production X price) or Gross Margin (lost product sales – raw materials) Impact US\$	Revenue – Cost Elements
--	-------------------------

Expense Impact – Variable Cost, Property Damage, Incremental Costs – US \$	Expense Impact – Cost Elements
--	--------------------------------

Incremental Capital Impact (Portion of Capital Expenditures in lieu of repair or replacement expense): US \$	Incremental Capital Impact – Cost Elements
--	--

SiteSafe Cost of Incident Form
**How to name and save your Cost of Incident reports:**

SJVBU

- 1st – Define the Asset Area: **KR**; **MWSS**; **LH**; **CO**; or **SA**
 2nd – ID company & rig no. **N-XXXX**; **GSD-XX**; **FracOPS**; or “*Other*” **OPS**
 3rd – Define the month and day numerically : **7-25** (the year is not needed)
 4th – Describe form type: **NM**; **Ini**; **Injury**; **MVC**; **Spill**; **Prop**; **COI**; or **Fire**.

Example: “**KR-N1087 7-26 NM**”For a July 26th near miss that occurred on Nabors 1087, while it was at Kern River!

 After Tax – Estimated Earnings impact (CVX Share Basis):

Estimate of Potential Impact to CVX Earnings as Equity Share Estimate of Potential Impact – Cost Elements
 or Working Interest – After Tax – US \$

Note: If either the plan or actual total cost (revenue + expense impact + incremental capital impact) is greater than US \$500,000 and there is not existing incident, you will be navigated to the detail report.

ADDITIONAL INCIDENT DETAILS

If the cost of incident impacts a business unit other than the business unit originally responsible for the incident, please fill out the appropriate information in this section.

Business Unit

Impact Date

UPSTREAM ONLY

Lost Production

Lost Production Units

Lost Production – Cost Elements

SiteSafe Motor Vehicle Collision (MVC) Form**How to name and save your Motor Vehicle Collision (MVC) reports:**

SJVBU

- 1st – Define the Asset Area: **KR: MWSS: LH; CO; or SA**
 2nd – ID company & rig no. **N-XXXX; GSD-XX; FracOPS; or “Other” OPS**
 3rd – Define the month and day numerically : **7-25** (the year is not needed)
 4th – Describe form type: **NM; Ini; Injury; MVC; Spill; Prop; or Fire.**

Example: **“KR-N1087 7-26 NM”**For a July 26th near miss that occurred on Nabors 1087, while it was at Kern River!

Incident Date:

Created By:

DETAILED DESCRIPTION OF CRASH (NOT DESCRIPTION OF VEHICLE DAMAGE)

Posted speed limit Location (streets, road, area, city, county, state)
 MPH

General location Exact location

Surface Condition Grade Road Curve

Has the accident been reported to a regulatory agency?
 (if required) Agency name and report #

☐ Yes ☐ No ☐ N/A

Fire due to accident? Local/inter-city trip?
☐ Yes ☐ No ☐ Local ☐ Inter-City

Company or Contractor Vehicle

DRIVER'S NAME Work Schedule

DOES THE DRIVER HAVE A VALID LICENSE? Driver License No

☐ Yes ☐ No

Expiration Date State Providing License

WAS THE DRIVER ON COMPANY BUSINESS? Number of Continuous Hours Driving

☐ Yes ☐ No

PROFESSIONAL DRIVER? Number of Hours on Duty Prior to Accident

☐ Yes ☐ No ☐ N/A

Has the Driver had Company Approved Defensive Driver
 Training? Date Attended Defensive Driver Training

☐ Yes ☐ No

Has the Driver been Subject to a Commentary Review? ☐ Yes ☐ No

Length of Service

How Long Has Driven Motor Vehicles

How Long Has Driven This Type of Vehicle

How Long Has Driven This Vehicle

Driver Physical Condition

Effects of Condition

Distractions

Visibility

Time of Day

Seat Belts

SiteSafe Motor Vehicle Collision (MVC) Form**How to name and save your Motor Vehicle Collision (MVC) reports:**

- 1st – Define the Asset Area: **KR: MWSS: LH; CO; or SA**
 2nd – ID company & rig no. **N-XXXX; GSD-XX; FracOPS; or “Other” OPS**
 3rd – Define the month and day numerically : **7-25** (the year is not needed)
 4th – Describe form type: **NM; Ini; Injury; MVC; Spill; Prop; or Fire.**

SJVBU

Example: **“KR-N1087 7-26 NM”**For a July 26th near miss that occurred on Nabors 1087, while it was at Kern River!

VEHICLE TYPE	Was the vehicle with driving monitor? .. Yes .. No
Make	Year
Vehicle License Plate No.	State Issuing License Plate
VEHICLE OWNERSHIP	Equipment Number
NUMBER OF PASSENGERS	
Describe Damage to Vehicle	
Condition of Vehicle	Date Last Service or Inspection
What was the speed at the beginning of the event?	Speed at point of accident
Movement of Vehicle	Direction of Travel
Was the Trip Necessary?	How far from hazard when first noticed?
Length of Skid Marks (if any)	
What was done to prevent accident?	
What signals were given?	If not employee, has proper insurance company form been sent to insurance division? .. Yes .. No
Referred to insurance division? .. Yes .. No	

Third Party Vehicle/Pedestrian (if applicable)

THIRD PARTY LAST NAME	THIRD PARTY FIRST NAME	Apparent Age
Birth Date	Gender .. Male .. Female	Occupation
Phone Number	Employed by	Driver License Number and State
Third Party Address		
Employer Address		
TYPE OF THIRD PARTY		
Driver or pedestrian physical condition	Effects of condition	

SiteSafe Motor Vehicle Collision (MVC) Form



How to name and save your Motor Vehicle Collision (MVC) reports:

- 1st – Define the Asset Area: **KR: MWSS: LH; CO; or SA**
- 2nd – ID company & rig no. **N-XXXX; GSD-XX; FracOPS; or “Other” OPS**
- 3rd – Define the month and day numerically : **7-25** (the year is not needed)
- 4th – Describe form type: **NM; Ini; Injury; MVC; Spill; Prop; or Fire.**

SJVBU

Example: **“KR-N1087 7-26 NM”**

For a July 26th near miss that occurred on Nabors 1087, while it was at Kern River!

Vehicle Type

Vehicle Owner Name

Vehicle Owner Address

License Plate Number

License Plate State

Number of Passengers

Condition of Vehicle

Name of Insurance Company

Describe Damage to Vehicle

Approximate Repair Cost

If out of service, where is the vehicle now?

Movement of Vehicle

Direction of travel

Speed at point of accident

Distance of hazard when noticed

Length of skid marks (if any)

What was done to prevent accident?

What signals were given?

Any violations of motor vehicle laws?

.. Yes .. No

If yes, provide details

SiteSafe Property Damage or Loss Form
**How to name and save your Property Damage or Loss reports:**

- 1st – Define the Asset Area: **KR: MWSS; LH; CO; or SA**
 2nd – ID company & rig no. **N-XXXX; GSD-XX; FracOPS; or “Other” OPS**
 3rd – Define the month and day numerically : **7-25** (the year is not needed)
 4th – Describe form type: **NM; Ini; Injury; MVC; Spill; Prop; or Fire.**

SJVBU

Example: **“KR-N1087 7-26 NM”**For a July 26th near miss that occurred on Nabors 1087, while it was at Kern River!

**** Short Description of Property/Equipment Damage or Loss**
**** Classification**

.. Damage .. Loss

**** Related to which consequence?**

(Undefined)

Equipment Description

Equipment Number

Is damaged equipment used for firefighting or primary lifesaving?

.. Yes .. No

Owner

.. (Undefined)

.. CVX

.. Contractor

.. 3rd Party.. Other 3rd Party**** Owner Details****** Estimated Company Structures/Equipment US\$**

Estimated Non-Company Structures/Equipment US\$

**** Estimated Product US\$****** Estimated Business Interruption US\$ - optional**

**IF MORE THAN ONE PROPERTY/EQUIPMENT DAMAGE OR LOSS, FILL OUT AN ADDITIONAL
 “PROPERTY DAMAGE OR LOSS” FORM**

SiteSafe Spill or Release Form**How to name and save your Spill or Release reports:**

SJVBU

- 1st – Define the Asset Area: **KR**: MWSS: **LH**; **CO**; or **SA**
 2nd – ID company & rig no. **N-XXXX**; **GSD-XX**; **FracOPS**; or “*Other*” **OPS**
 3rd – Define the month and day numerically : **7-25** (the year is not needed)
 4th – Describe form type: **NM**; **Ini**; **Injury**; **MVC**; **Spill**; **Prop**; or **Fire**.

Example: “**KR-N1087 7-26 NM**”For a July 26th near miss that occurred on Nabors 1087, while it was at Kern River!

Created By:

SHORT DESCRIPTION OF SPILL OR RELEASE

START DATE

START TIME

END DATE

END TIME

DESCRIBE HOW RELEASE OCCURRED OR WAS DISCOVERED

DESCRIBE AREA IMPACTED BY RELEASE

Remedial Action Planned

DESCRIBE DISPOSAL METHOD OF ANY RECOVERED MATERIAL

RESPONSIBLE PARTY

In Waters of US?

CLEAN-UP RESPONSE INITIATED?

POTENTIAL TO CROSS ANY
REGULATORY/JURISDICTIONAL BORDERS?

.. Yes .. No

.. Yes ..No

POTENTIAL IMPACT TO PUBLIC WATER SUPPLIES?

MEDIA ATTENTION?

.. Yes .. No

.. Yes ..No

Estimated Clean-Up Cost

Estimated Damage Cost

PROCESS UNIT / EQUIPMENT TYPE

Equipment Details (equipment number, etc.)

EQUIPMENT COMPONENT

Lease No.

Section

Location Township

Range

Meridian

SiteSafe Spill or Release Form**How to name and save your Spill or Release reports:****SJVBU**

- 1st – Define the Asset Area: **KR**; **MWSS**; **LH**; **CO**; or **SA**
 2nd – ID company & rig no. **N-XXXX**; **GSD-XX**; **FracOPS**; or “**Other**” **OPS**
 3rd – Define the month and day numerically : **7-25** (the year is not needed)
 4th – Describe form type: **NM**; **Ini**; **Injury**; **MVC**; **Spill**; **Prop**; or **Fire**.

Example: “**KR-N1087 7-26 NM**”For a July 26th near miss that occurred on Nabors 1087, while it was at Kern River!**Primary Impact**

Latitude:	Degrees	Minutes	Seconds	.. North
				.. South
Longitude:	Degrees	Minutes	Seconds	.. North
				.. South

Secondary impact

Latitude:	Degrees	Minutes	Seconds	.. North
				.. South
Longitude:	Degrees	Minutes	Seconds	.. North
				.. South

Location Description

Wind Direction

(from/to)	Wind Speed	Visibility distance	Cloud Ceiling
-----------	------------	---------------------	---------------

Person to contact for further information (name, telephone number)

Material Released	Receiving Medium (s)	Specific Receiving Medium (s)
-------------------	----------------------	-------------------------------

VOLUME

RELEASED	UNITS	VOLUME RECOVERED	UNITS
----------	-------	------------------	-------

IMMEDIATE ACTION START DATE	END DATE
-----------------------------	----------

ROOT CAUSE ANALYSIS PERFORMED?

.. Simple .. Formal .. Not Required

Causes (required for simple investigation)

Failure description (required for simple investigation)

Reportability-Serious Event?

.. Yes .. No

Government Reportable?

.. Yes .. No

Solar to Steam Demonstration
Project Safety Management Plan

Appendix G. Biological Resource Evaluation

**Biological Resource Evaluation for
60-acres within the Northwest $\frac{1}{4}$ of Section 7,
Township 29 South, Range 22 East, M.D.B. & M.
Kern County, California**

March 2008

Prepared for:
Chevron Technology Ventures, LLC
3901 Briarpark Drive
Houston, TX 77042

Prepared by: McCormick Biological, Inc.
P.O. Box 80983
Bakersfield, California 93380

1.0 Summary

This report has been prepared at the request of Chevron Technology Ventures, LLC (CTV). The following sections evaluate special-status biological resources that may be affected by the development of a proposed solar facility. The proposed project site is located at the eastern edge of a moderate to high density oilfield northwest of Coalinga in Fresno County, California. The potential for occurrence and the potential for significant adverse impacts on biological resources are analyzed in the following sections. In addition, recommendations to reduce potentially significant project-related impacts are also included if deemed necessary.

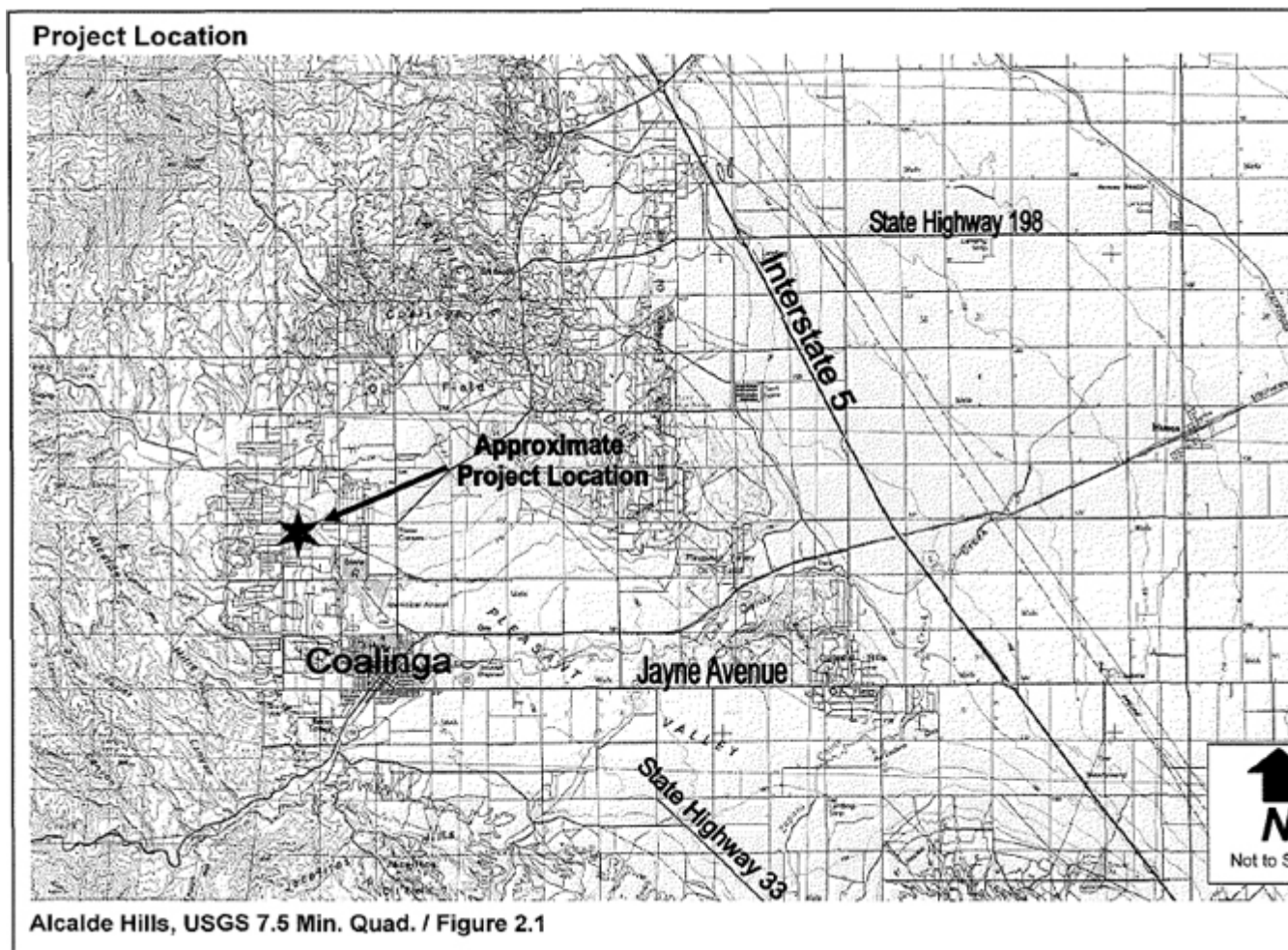
2.0 Background

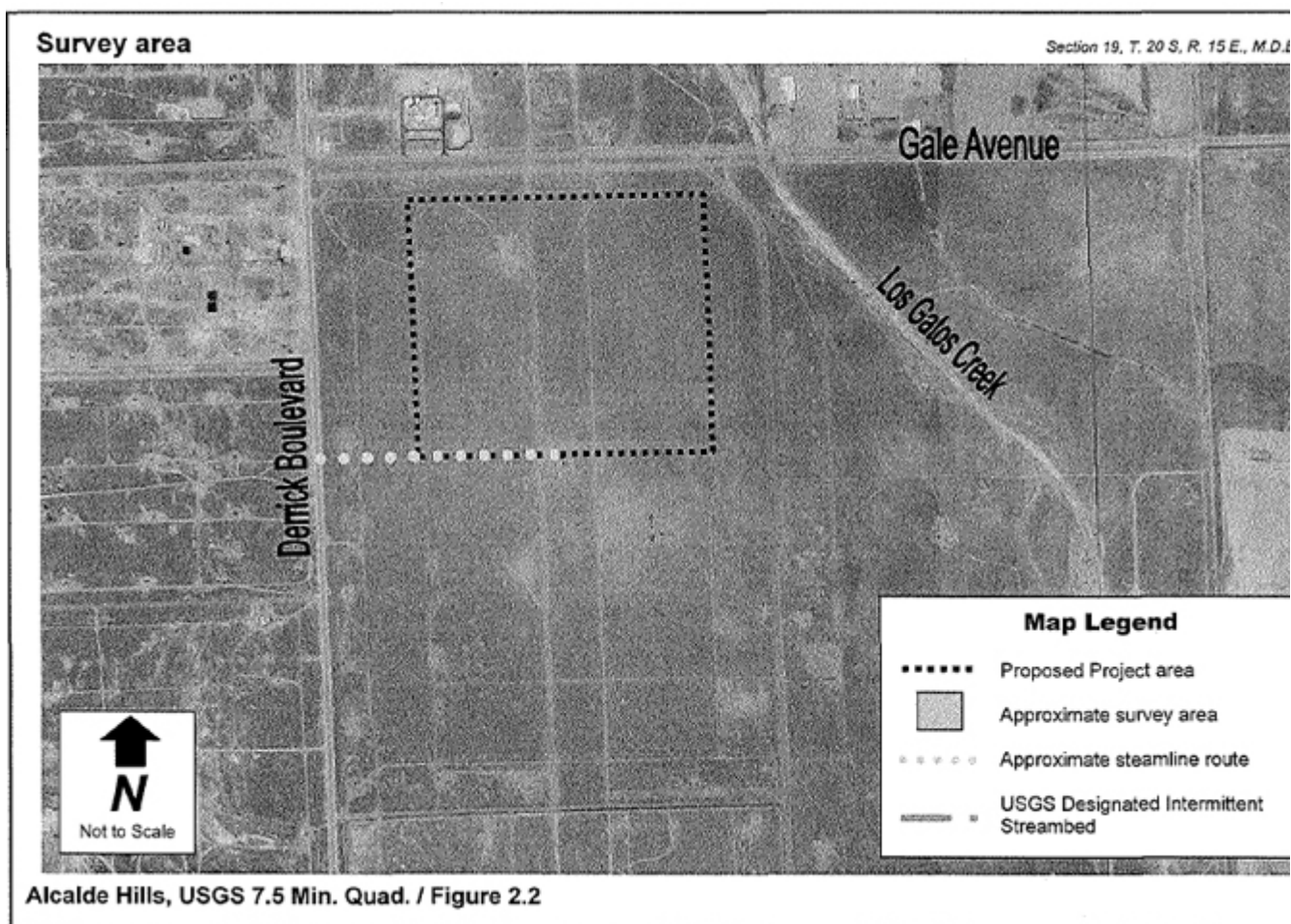
2.1 Purpose

Biological surveys were conducted for a proposed solar facility on an approximately 200-acre parcel of land located within the west $\frac{1}{2}$ of Section 19, Township 20 South, Range 15 East, M.D.B. and M., northwest of Coalinga, California (Figure 2.1). The purpose of this report is to assist with project planning and documentation of the biological surveys. This document is not intended for permitting purposes and may not contain adequate information to support environmental permit applications (*i.e.*, California Environmental Quality Act). The proposed project was evaluated for potential impacts to sensitive biological resources, primarily state- or federal-listed threatened and/or endangered species (Figure 2.2).

The proposed project site is located within the range of several threatened and/or endangered wildlife taxa, including; San Joaquin kit fox (*Vulpes macrotis mutica*), blunt-nosed leopard lizard (*Gambelia sila*), California tiger salamander (*Ambystoma californiense*), giant kangaroo rat (*Dipodomys ingens*), and Nelson's antelope squirrel (*Ammospermophilus nelsoni*). In addition, listed plant taxa that may occur in the vicinity of the site include California jewelflower (*Caulanthus californicus*) and San Joaquin woollythreads (*Monolopia congdonii*), among others.







Listed plant and animal species are protected primarily through the Federal Endangered Species Act (FESA) and/or California Endangered Species Act (CESA). Each of these laws, among other provisions, prohibits “take” of listed threatened and endangered species. Although the definition of “take” under each law varies somewhat, in general, injuring or killing listed species without a permit issued from the U.S. Fish and Wildlife Service (USFWS) and/or California Department of Fish and Game (CDFG) is unlawful. Under FESA, significant habitat destruction could also be considered “take” requiring a permit. The California Fish and Game Code also contains a provision for “fully protected” species. “Take” permits cannot be issued for species within this category.

Several other state and federal laws apply to biological resource protection. The most significant of these include Migratory Bird Treaty Act, Bald Eagle Protection Act, and California Fish and Game Code sections pertaining to raptors, migratory birds, fully protected species, and streambed alteration. Compliance with these regulations is discussed if deemed necessary.

Several special-status species that are not listed as threatened or endangered may occur in the vicinity of the proposed project, including: burrowing owl (*Athene cunicularia*), San Joaquin coachwhip (*Masticophis flagellum ruddockii*), loggerhead shrike (*Lanius ludovicianus*), and western spadefoot toad (*Spea hammondi*), among others.

The potential occurrence of all special-status species is discussed more thoroughly in section 3.2.

2.2 Project Description

CTV proposes to construct a small-scale solar to steam demonstration plant to test the efficacy of renewable solar energy to produce steam for enhanced oil recovery operations. The site selected for the demonstration plant is a pie-shaped footprint of approximately 60 acres on wholly-owned Chevron land.

As currently planned, the concentrating solar thermal technology is based on a Distributed Power Tower (DPT). DPT systems consist of a fixed receiver mounted on a tower surrounded by a array of mirrors called heliostats. The heliostats track the sun on two axes to concentrate solar radiation onto the absorber of the receiver. The concentrated solar energy heats water producing steam to be injected into the existing distribution system. The DPT for this demonstration project would measure approximately 329 feet in height.

2.3 Methods

A current list of special-status species that could potentially occur in the vicinity of the project site was compiled by accessing the CNDDDB, CNPS online inventory, USFWS online data, and by consulting pertinent literature.

Reports were generated from the CNDDDB/Rarefind 3.1.1, USFWS online data, and CNPS online inventory for the project site. These reports included a query of the Alcalde Hills United States Geological Survey 7.5-minute topographic quadrangle in which the proposed project site is found as well as the immediate eight surrounding topographic quadrangles (Coalinga, Curry Mountain, Domengine Ranch, Joaquin Rocks, Kreyenhagen Hills, Santa Rita Peak, Sherman Peak, and Smith Mountain quadrangles). The CNDDDB (CDFG 2007a) contains records for

special-status species, as well as sensitive natural communities that have been reported to the CDFG and the USFWS online data generates a list of federally listed species with the potential to occur within the quadrangle. The CNPS online inventory contains information regarding state and federal listed plant species and those considered by the CNPS to be sensitive. The potential for the occurrence of each species in these reports was evaluated.

Other sources of information regarding special-status species in California were subsequently reviewed given that the CNDDDB records are not necessarily inclusive of all special-status species that may occur in an area. A review of the CDFG's List of Special Animals (October 2007) (CDFG 2007b) and List of Special Plants (October 2007) (CDFG 2007c) was conducted to determine if any other special-status species have the potential to occur in the vicinity of the project site. The literature review was based on the professional experience of McCormick Biological, Inc. within the region and elsewhere in California, and included review of other published and unpublished sources with information regarding special-status species occurrence in this region of California.

Focused surveys for blunt-nosed leopard lizard were conducted based on CDFG's May 2004 *Approved Survey Methodology for the Blunt-nosed Leopard Lizard*. The full text of the approved methodology is contained in Appendix B. Specifically, the surveys were conducted by walking 50 to 100-foot wide transects within the project site while stopping frequently to scan for lizards. On the initial site evaluated, surveys were conducted for 12 days between May 21 and June 29, 2007 consistent with the guidelines for conducting surveys within the recommended adult survey time period. In addition, five survey days were conducted within the project site and buffer between September 4 and September 12, 2007 consistent with the guidelines required during the optimal time period for observation of blunt-nosed leopard lizard hatchlings. All blunt-nosed leopard lizard surveys were conducted by teams of two surveyors before 2:00 p.m. when recorded air temperatures ranged between 25° and 35°C.

During surveys for blunt-nosed leopard lizards, the property was evaluated for potentially-occurring special-status plants and direct observations of special-status wildlife species, important habitat elements for special-status species, and "sign" (scat, tracks, tail drags, burrows, dens, etc.) were noted if encountered. Information from field survey forms and GPS points were used to map special-status species observations and sign. All plant and wildlife taxa observed during the surveys were identified to the extent possible.

3.0 Results and Impacts

3.1 General Site Conditions

The entire survey area is currently non-native grassland which has been used intermittently for livestock grazing. No evidence of recent livestock grazing was observed during the surveys. The project area is along the eastern edge of a highly disturbed portion of the Coalinga oilfield. A minor amount of historic surface disturbance from petroleum production activity was evident. Roads, tank batteries, power lines and pumping units were present within the survey area and vicinity. The site is not fenced and vehicles were observed using site roads on an infrequent basis. The project site is bordered on three sides by active petroleum production areas, low density areas to the north and south and a high density area to the west. Non-native grassland

habitat borders the project area in all directions. Los Gatos Creek crosses northwest to southeast on the northeast corner of the survey area. However, project construction would not encroach on the bed, bank, or channel of Los Gatos Creek.

The non-native grassland natural community observed on the project site has likely been maintained by some type of historic surface disturbance. Annual vegetation was observed to be dense of primarily ruderal species typical of areas that have been disturbed. No evidence of listed plant species was observed within the survey area. Although the surveys were not conducted at an appropriate time for detection of early spring special-status annual species, site conditions were considered very poor for the potential occurrence of these species. All species of plants and wildlife observed during the site visits were typical of those commonly seen in similar areas. Tables 3.1a and 3.1b contain plants and wildlife observed during the surveys.

3.2 *Special-status Biological Resources*

Lists of potentially-occurring special-status plant and wildlife species was developed through the literature review conducted for this project. Table 3.2 and 3.3 show these species and their corresponding status with an occurrence/impact analysis. The analysis shown in Table 3.2 was based on known life history of the subject special-status species, professional experience of MBI regarding these species in the vicinity of the project site, observations of plants and wildlife at the site, and habitat characteristics recorded during the surveys. Although the potential for impacts to many of the special-status species is low, measures have been proposed to further reduce this potential for impacts. With the implementation of measures contained in section 4.0, impacts to any of the species shown in Table 3.2 and 3.3 are not anticipated. The following paragraphs describe observations and potential impacts to those species for which further discussion was deemed necessary based on the preliminary evaluation.

3.2.1 *Listed Wildlife*

Nelson's antelope squirrel (*Ammospermophilus nelsoni*) is a small, yellow-brown squirrel with two distinguishing white stripes along dorsal side of the body and when running, it holds its tail over the back, exposing the white undertail. In contrast to other listed mammals in their range, these squirrels are diurnal and are active year-round except in heavy fog or when temperatures drop below around 50 °F. Young are apparently born in March and appear above ground in early April (Kakiba-Russell, et al 1991).

Nelson's antelope squirrels are most often found in grasslands or open shrublands. Associated shrubs include saltbush, ephedra, bladder pod (*Isomeris arborea*), goldenbush (*Isocoma acradenius*= *Haplopappus a.*), snakeweed (*Gutierrezia bracteata*), among others. Nelson's antelope squirrels are omnivorous, with a diet consisting primarily of grass, herb seeds, and insects (USFWS 1998). Nelson's antelope squirrels rarely occupy burrows they have dug; instead, they tend to use burrows dug by kangaroo rats. In grassy, shrubless areas, Harris and Stearns (1990) found Nelson's antelope squirrels only in areas with high kangaroo rat densities.

Nelson's antelope squirrels were not observed during surveys on the project site. Although historically this species was present in the vicinity of Coalinga, the nearest location was south of the town of Coalinga. The nearest recorded location for the species north of the project site is

Table 3.1a
Plants Observed Within an Approximately 200-acre Portion of the West 1/2 of
Section 19, T. 20 S., R. 15 E., M.D.B. and M., Fresno County, California
During Surveys Conducted between June and September 2007

<i>Scientific Name</i>	<u>Plants</u>	Common Name
<i>Amsinckia</i> sp.		Fiddleneck
<i>Avena fatua</i>		Common wild oat
<i>Ambrosia acanthicarpa</i>		Annual burweed
<i>Bromus diandrus</i>		Ripgut brome
<i>Bromus madritensis</i> ssp. <i>rubens</i>		Red brome
<i>Centaurea melitensis</i>		Tocalote
<i>Chamaesyce prostrata</i>		Prostrate spurge
<i>Datura wrightii</i>		Jimsonweed
<i>Eremocarpus setigerus</i>		Doveweed
<i>Eriogonum</i> sp.		Annual buckwheat
<i>Erodium cicutarium</i>		Red-stem filaree
<i>Gutierrezia californica</i>		California matchweed
<i>Helianthus annuus</i>		Annual sunflower
<i>Hirschfeldia incana</i>		Summer mustard
<i>Lessengia glandulifera</i>		Valley lessengia
<i>Matricaria matricarioides</i>		Pineapple weed
<i>Salsola tragus</i>		Russian thistle
<i>Stephanomeria</i> sp.		Wire lettuce
<i>Trichostema lanceolatum</i>		Vinegarweed



Table 3.1b
Wildlife Observed Within an Approximately 200-acre Portion of the West 1/2 of
Section 19, T. 20 S., R. 15 E., M.D.B. and M., Fresno County, California
During Surveys Conducted Between June and September 2007

<u>Reptiles</u>	
<i>Scientific Name</i>	<i>Common Name</i>
<i>Cnemidophorus tigris</i>	Western whiptail
<i>Uta stansburiana</i>	Side-blotched lizard
<u>Birds</u>	
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Cathartes aura</i>	Turkey Vulture
<i>Corvus corax</i>	Common raven
<i>Falco mexicanus</i>	Prairie Falcon
<i>Falco sparverius</i>	American kestrel
<i>Sturnella neglecta</i>	Western meadowlark
<i>Tyrannus verticalis</i>	Western kingbird
<i>Zenaida macroura</i>	Mourning dove
<u>Mammals</u>	
<i>Lepus californicus</i>	Black-tailed jackrabbit
<i>Sylvilagus audubonii</i>	Desert cottontail
<i>Taxidea taxus</i>	American badger (dead)



Table 3.2
Special-status Plant Species that may occur in the Vicinity
of the Proposed Coalinga Solar Energy Site

Scientific Name ¹	Common Name	Flowering Period	Impact Evaluation ²	Status Federal/State/Other
Plants				
<i>California macrophylla</i>	Round leaved filaree	March-May	A	None/none/CNPS 1b
<i>Camissonia benitensis</i>	San Benito evening-primrose	May-June	B	FT/none/CNPS 1b
<i>Caulanthus californica</i>	California jewelflower	February-May	*	FE/SE/CNPS 1b
<i>Caulanthus coulteri</i> var. <i>lemmonii</i>	Lemmon's jewelflower	March-May	A	None/none/CNPS 1b
<i>Chorizanthe biloba</i> var. <i>immemora</i>	San Benito spineflower	May-September	B	None/none/CNPS 1b
<i>Deinandra halliana</i>	Hall's tarplant	April-May	B	None/none/CNPS 1b
<i>Delphinium recurvatum</i>	Recurved larkspur	March-June	C	None/none/CNPS 1b
<i>Eriogonum eastwoodianum</i>	Eastwood's buckwheat	June-July	D	None/none/CNPS 1b
<i>Fritillaria viridea</i>	San Benito fritillary	March-May	B	None/none/CNPS 1b
<i>Layia discoidea</i>	Rayless layia	May	B	None/none/CNPS 1b
<i>Layia heterotricha</i>	Pale-yellow layia	March-June	D	None/none/CNPS 1b
<i>Madia radiata</i>	Showy madia	March-May	A	None/none/CNPS 1b
<i>Malacothamnus aboriginum</i>	Indian Valley bush mallow	April-October	B	None/none/CNPS 1b
<i>Monardella antonina</i> ssp. <i>antonina</i>	San Antonio Hills monardella	June-August	B	None/none/CNPS 3
<i>Monolopia congdonii</i>	San Joaquin woollythreads	February-May	*	FE/none/CNPS 1b
<i>Navarretia nigelliformis</i> ssp. <i>radians</i>	Shining navarretia	May-July	B	None/none/CNPS 1b

OTHER (pertinent regional lists)

CNPS 1b Plants that are rare or endangered in California and elsewhere

CNPS 2 Plants that are rare or endangered in California, more common elsewhere

¹ NOMENCLATURE: Plants (Hickman 1993)

² IMPACT EVALUATION EXPLANATION

A Within known range but unlikely due to poor habitat conditions

B Out of current known range of species and/or potential habitat absent from project site.

C Survey area within range; however, appropriate soils and/or other microhabitat features not present.

D Within known range; surveys conducted at appropriate time for detection of species and it was not detected.

* Species discussed in text.



Table 3.2 (cont.)
Special-status Wildlife Species that may occur in the Vicinity of the
Proposed Coalinga Solar Energy Site

Scientific Name ¹	Common Name	Impact Evaluation ²	Status Federal/State/Other
Invertebrates			
<i>Branchinecta lynchi</i>	Vernal pool fairy shrimp	A	FE/none/none
<i>Coelus gracillis</i>	San Joaquin dune beetle	A	None/none/CNDDB
<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle	A	FT/none/none
<i>Eucerceris ruficeps</i>	Redheaded sphecid wasp	A	None/none/CNDDB
<i>Linderiella occidentalis</i>	California linderiella	A	None/none/CNDDB
<i>Lytta hoppingi</i>	Hopping's blister beetle	B	None/none/CNDDB
<i>Lytta morrisoni</i>	Morrison's blister beetle	B	None/none/CNDDB
<i>Protodufourea wasbaueri</i>	Wasbauer's protodufourea	B	None/none/CNDDB
Fish			
<i>Hypomesus transpacificus</i>	Delta smelt	C	FT/ST/AFST
Amphibians			
<i>Ambystoma californiense</i>	California tiger salamander	A	FT/CSC/none
<i>Rana boylei</i>	Foothill yellow-legged frog	A	None/CSC/none
<i>Rana aurora draytonii</i>	California red-legged frog	A	FT/CSC/none
<i>Spea (=Scaphiopus) hammondi</i>	Western spadefoot toad	A	None/CSC/none
Reptiles			
<i>Actinemys marmorata</i>	Western pond turtle	A	None/CSC/none
<i>Anniella pulchra pulchra</i>	Silvery legless lizard	A	None/CSC/none
<i>Gambelia sila</i>	Blunt-nosed leopard lizard	*	FE/SE,SFP/none
<i>Masticophis flagellum ruddocki</i>	San Joaquin coachwhip	D	None/CSC/none
<i>Phrynosoma coronatum frontale</i>	Coast horned lizard	*	None/CSC/none
<i>Thamnophis gigas</i>	Giant garter snake	E	FT/ST/none
<i>Thamnophis hammondi</i>	Two-striped garter snake	A	None/CSC/none

FEDERAL

FE Federally listed as Endangered
 FT Federally listed as Threatened

STATE

ST State listed as Threatened
 SFP State Fully Protected Species
 CSC California Department of Fish and Game Designated "Species of Concern"

OTHER (Pertinent and/or regional organization lists)

AFST American Fisheries Society Threatened species
 CNDDB Appears on CNDDB list but has no official listingCNDDB

¹ Nomenclature follows CDFG 2007b

² IMPACT EVALUATION EXPLANATION

A Species is known to occur in Fresno County; however, potential habitat is absent from the survey area.
 B Very little known about species distribution; unlikely impacts due to generally low quality habitat.
 C Aquatic species that occurs outside of Fresno County; however, USFWS recommends consideration of potential for downstream impacts; this project would have no downstream impacts.
 D Species may occasionally forage on the site, may occur in low numbers on the site, and/or may occur in the vicinity; significant impacts not anticipated; implementation of mitigation measures would further reduce potential impacts.
 E The project site is out of the known range or current known distribution for the species.
 * Species discussed in text



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*Coalinga Solar Energy Project
Section 19, T. 20 S., R. 15 E., M.D.B. & M*

Table 3.2 (cont.)
Special-status Wildlife Species that may occur in the Vicinity of the
Proposed Coalinga Solar Energy Site

Scientific Name ¹	Common Name	Impact Evaluation ²	Status Federal/State/Other
Birds			
<i>Accipiter cooperi</i>	Cooper's hawk (nesting)	D	None/CSC/none
<i>Accipiter striatus</i>	Sharp-shinned hawk (nesting)	D	None/CSC/none
<i>Aquila chrysaetos</i>	Golden eagle (nesting and wintering)	D	BEPA/CSC, SFP/none
<i>Asio flammeus</i>	Short-eared owl (nesting)	D	None/CSC/none
<i>Athene cunicularia hypugaea</i>	Burrowing owl (burrow sites)	*	None/CSC/none
<i>Buteo regalis</i>	Ferruginous hawk (wintering)	D	None/CSC/none
<i>Buteo swainsoni</i>	Swainson's hawk (nesting)	D	None/SE/none
<i>Charadrius montanus</i>	Mountain plover (wintering)	D	None/CSC/none
<i>Chondestes grammacus</i>	Lark sparrow (nesting)	D	None/none/CNDDB
<i>Circus cyaneus</i>	Northern harrier (nesting)	D	None/CSC/none
<i>Elanus leucurus</i>	White-tailed kite (nesting)	D	None/SFP/none
<i>Eremophila alpestris actia</i>	California horned lark	*	None/CSC/none
<i>Falco mexicanus</i>	Prairie falcon (nesting)	D	None/CSC/none
<i>Gymnogyps californianus</i>	California condor	D	FE/SE, SFP/none
<i>Haliaeetus leucocephalus</i>	Bald eagle (nesting and wintering)	D	FT, BEPA/SE, SFP/none
<i>Lanius ludovicianus</i>	Loggerhead shrike (nesting)	D	None/CSC/none
<i>Toxostoma lecontei</i>	LeConte's thrasher	D	None/CSC/none
<i>Toxostoma redivivum</i>	California thrasher	D	None/none/CNDDB

FEDERAL

- FE Federally listed as Endangered
 FT Federally listed as Threatened
 BEPA Bald Eagle Protection Act

STATE

- SE State listed as Endangered
 ST State listed as Threatened
 SFP State Fully Protected Species
 CSC California Department of Fish and Game Designated "Species of Concern"

OTHER (Pertinent and/or regional organization lists)

- CNDDB Appears on CNDDB list but has no official listing

¹ Nomenclature follows CDFG 2007b

² IMPACT EVALUATION EXPLANATION

- A Species is known to occur in Fresno County; however, potential habitat is absent from the survey area.
 B Very little known about species distribution; unlikely impacts due to generally low quality habitat.
 C Aquatic species that occurs outside of Fresno County; however, USFWS recommends consideration of potential for downstream impacts; this project would have no downstream impacts.
 D Species may occasionally forage on the site, may occur in low numbers on the site, and/or may occur in the vicinity; significant impacts not anticipated; implementation of mitigation measures would further reduce potential impacts.
 E The project site is out of the known range or current known distribution for the species.
 * Species discussed in text

Table 3.2 (cont.)
Special-status Wildlife Species that may occur in the Vicinity of the
Proposed Coalinga Solar Energy Site

Scientific Name ¹	Common Name	Impact Evaluation ²	Status Federal/State/Other
Mammals			
<i>Ammospermophilus nelsoni</i>	Nelson's antelope squirrel	*	None/ST/none
<i>Dipodomys ingens</i>	Giant kangaroo rat	*	FE/SE/none
<i>Dipodomys nitratoideus brevinasus</i>	Short-nosed kangaroo rat	D	None/CSC/none
<i>Dipodomys venustus elephanti</i>	Big-eared kangaroo rat	E	None/CSC/none
<i>Eumops perotis californicus</i>	Western mastiff bat	D	None/none/CNDDDB
<i>Taxidea taxus</i>	American badger	D	None/CSC/none
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	*	FE/ST/none

FEDERAL

- FE Federally listed as Endangered
- FT Federally listed as Threatened
- BEPA Bald Eagle Protection Act

STATE

- SE State listed as Endangered
- ST State listed as Threatened
- SFP State Fully Protected Species
- CSC California Department of Fish and Game Designated "Species of Concern"

OTHER (Pertinent and/or regional organization lists)

- CNDDDB Appears on CNDDDB list but has no official listing

¹ Nomenclature follows CDFG 2007b

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- E The project site is out of the known range or current known distribution for the species.
- * Species discussed in text.



several miles to the north. Appropriate habitat is present throughout the project vicinity; however, MBI has not observed Nelson's antelope squirrel over several years of surveying nearby (approximately 5 mile radius) project sites. Based on these survey results, the project is not expected to result in impacts to Nelson's antelope squirrel. Measures in section 4.0 that are intended to reduce and/or avoid potential impacts to wildlife would further reduce the potential for impacts.

Giant kangaroo rats (*Dipodomys ingens*) occupy annual grasslands and sparse shrublands with well-drained, usually loamy or sandy loam soils. This species favors flat gently sloping terrain with low annual precipitation, typically 5 inches (13 centimeters) or less in the southwestern San Joaquin Valley and adjacent plateaus and valleys in the Inner Coast Ranges. The species is found from elevations of about 300 to 2900 feet; however, little extant habitat remains at elevations below 650 feet. Few colonies are located above 2500 feet.

The giant kangaroo rat originally occurred throughout the San Joaquin Valley from southern Merced County to southwestern Kern County and northern Santa Barbara County. Conversion of native valley grassland habitats to agricultural uses has reduced extant giant kangaroo rat distribution to approximately 2 to 3 percent of its historic range (Williams 1980). The remaining habitat has been broken into six major geographic units, including the Cuyama Valley. The Cuyama Valley is the farthest south of the identified extant populations of this species (USFWS 1998).

This species is the largest species in the genus and can be determined from co-occurring species by the body mass and hind foot toe numbers (versus *D. nitratooides*) or size (versus *D. heermanni*). The hind legs are elongated and serve as the principal means of locomotion. A long tufted tail, comprising about one-half of the total length of the animal, provides balance. Coloration is brownish above, changing to whitish ventrally. The underside of the tail is also white in coloration with a brownish tip at the end of the tuft (USFWS 1998).

Giant kangaroo rat burrow systems (precincts) are distinctive because of the size and orientation of the individual entrances and the presence of cleared vegetation in the vicinity of the system. Precincts may include one to several burrow openings and a colony may consist of two to thousands of precincts. Burrows of two types may be observed within giant kangaroo rat precincts. Horizontal burrow openings are typical in appearance compared to other kangaroo rats; however, these openings are usually quite large in comparison to other species. Giant kangaroo rats also may construct vertical burrow openings. Other characteristics of giant kangaroo rat precincts include tracks from their distinctively large feet and tail drags, "haystacks" of seeds drying near the burrows, and large scat near the burrow entrances. Individual precincts are usually connected to other precincts by well-worn paths and are relatively easy to detect, even from a distance (Williams 1980).

No burrow systems typical of this species or possible sign of site occupation were observed during the surveys. Historic records of this species are known from the vicinity of Coalinga; however, no recent records are reported by the CNDDDB. Based on these survey results, the project is not expected to result in impacts to giant kangaroo rat. Measures in section 4.0 that are intended to reduce and/or avoid potential impacts to wildlife would further reduce the potential for impacts.

Blunt-nosed leopard lizard (*Gambelia sila*) is a state and federal listed endangered species that may be present in the vicinity of the proposed project. This species is also fully protected by the State of California. Blunt-nosed leopard lizard occurs in open saltbush scrub and grassland habitats, roads, and open dry washes that are infrequently inundated across the San Joaquin Valley, Carrizo Plain, and Elkhorn Plain. The species is additionally found in suitable areas within the Inner Coast Ranges in the Kettleman Hills and Panoche Hills. In general, blunt-nosed leopard lizards are not found in areas of steep slopes, dense vegetation, or areas subject to seasonal flooding (USFWS 1998).

Blunt-nosed leopard lizards feed primarily on insects and other lizards. They use small rodent burrows to escape predators and temperature extremes, typically kangaroo rat or ground squirrel burrows. This species will infrequently dig shallow tunnels in earthen berms or under rocks in habitat where small mammal burrows are unavailable. Seasonal activity of this species is correlated with weather, primarily temperature. The optimal temperature range for above-ground activity is between 74 and 104 degrees Fahrenheit. Adults are seasonally active, emerging from burrows during March or April until June or July. After July, most adults are not observed above-ground. Hatchlings and sub-adults may be active as late as mid-October or early November (USFWS 1998).

CNDDDB records indicate that blunt-nosed leopard lizards were observed along Los Gatos Creek approximately 0.6 miles east of the project site in 1989 (CDFG 2007a). In general, the habitat along the portion of Los Gatos Creek in the vicinity of Coalinga consists of fairly dense non-native grassland up to the bank of the creek. In areas of flow within the main channel and areas that have been subject to bank overflow, vegetation is sparse and provides very good habitat for this species. Much of the bank area is a steep drop-off from the surrounding habitat to the channel. Within the survey area, the creek area was altered by construction of the bridge along Gale Road. Although the construction occurred many years ago, the area still appears to have been highly impacted by this construction.

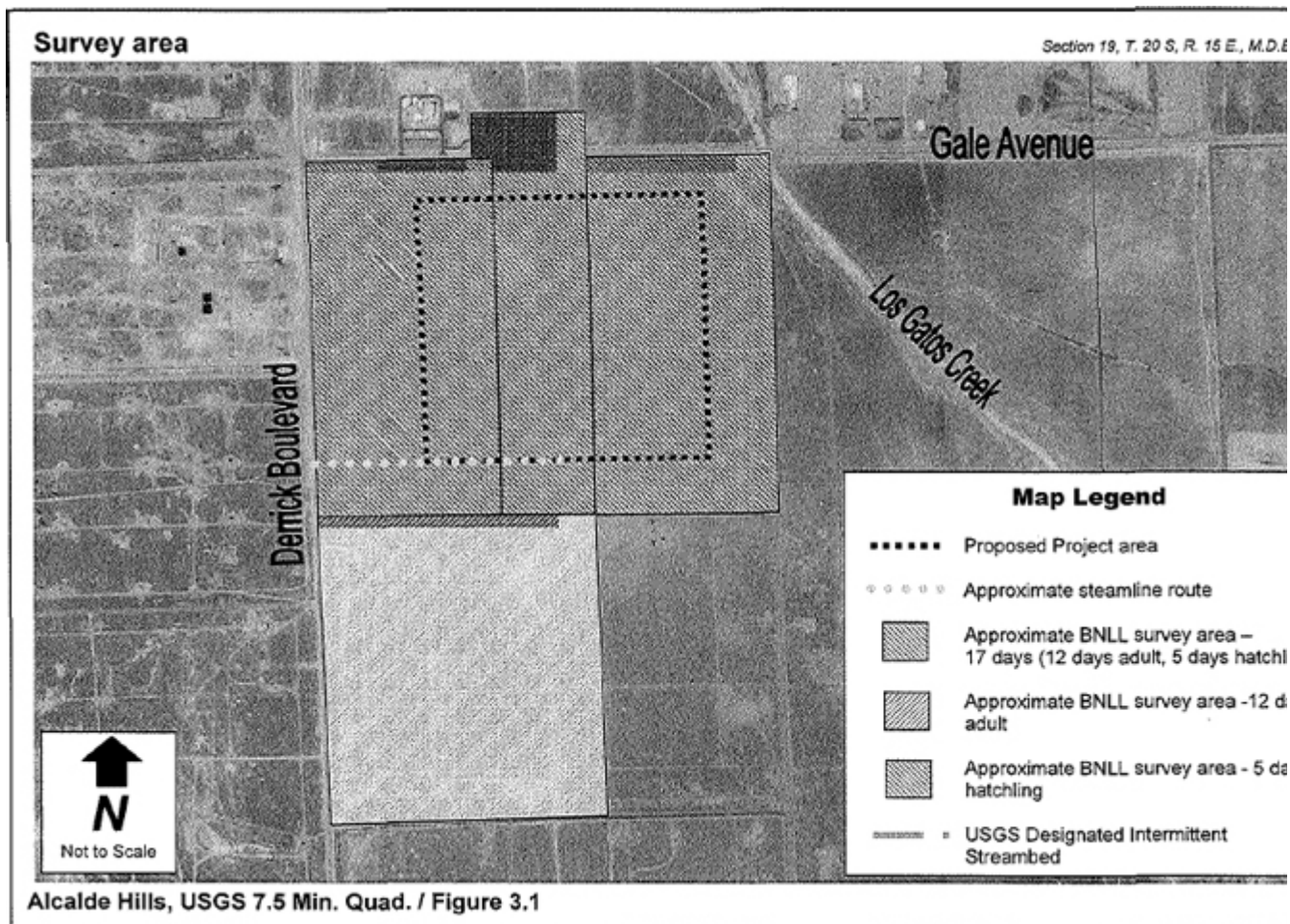
The southern portion of the survey area represented marginally higher quality habitat for this species than the northern portion. The vegetation density generally increased while small mammal burrow availability decreased within the grassland areas moving south to north on the parcel. However, small mammal burrow density along site roads was higher in the northern portion of the survey area. In the northern portion of the area, small mammal burrows included Botta's pocket gopher (*Thomomys bottae*) in the non-native grassland with kangaroo rat (*Dipodomys* sp.) and mouse (*Peromyscus* sp., *Perognathus* sp., etc) along roads. Some California ground squirrel burrows were observed in the southern portion of the survey area. One exception to the general pattern of vegetation was the non-native grassland area along the eastern edge of the project site and within the eastern buffer area. The vegetation density in this area was generally lower than other areas of the site; however, an extremely low density of small mammal burrows were observed in this area. Very few small mammal burrows were observed within the identified project site.

Species-specific surveys for blunt-nosed leopard lizard were conducted within the survey area May 21 through September 12, 2007 (Table 3.3). Although 17 days of surveys were conducted within the survey area, all survey days did not cover the same portion of the survey area due to changes in the project boundary during the course of the survey season. The full protocol of

Table 3.3
Field Observations Recorded During Blunt-nosed Leopard
Lizard Surveys Conducted Within the Proposed Project Area (2007)

Survey Date	Start time/air temperature	End time/air temperature	Reptile Observations ¹
May 21, 2007	11:42am / 86.5°F	12:40pm / 88.5°F	side-blotched lizard (1)
May 22, 2007	10:36am / 87.2°F	11:45am / 88.5°F	side-blotched lizard (4)
May 23, 2007	10:53am / 83.5°F	11:49am / 84.5°F	side-blotched lizard (4)
May 24, 2007	12:00pm / 90.1°F	1:03pm / 92.3°F	none
June 12, 2007	9:15am / 85.3°F	10:35am / 91.4°F	western whiptail (1)
June 13, 2007	8:26am / 88.9°F	9:36am / 94.6°F	side-blotched lizard (5)
June 14, 2007	8:18am / 90.0°F	9:12am / 93.6°F	side-blotched lizard (1)
June 15, 2007	6:00am / 78.4°F	7:00am / 83.1°F	none
June 26, 2007	9:40am / 89.7°F	10:43am / 94.8°F	side-blotched lizard (3)
June 27, 2007	9:10am / 88.9°F	10:05am / 90.0°F	side-blotched lizard (2)
June 28, 2007	9:45am / 83.7°F	10:40am / 88.9°F	side-blotched lizard (3)
June 29, 2007	9:15am / 83.1°F	10:15am / 84.3°F	side-blotched lizard (3)
September 4, 2007	9:24am / 82.0°F	10:26am / 85.1°F	side-blotched lizard (4)
September 5, 2007	9:16am / 80.2°F	10:20am / 84.2°F	side-blotched lizard (2)
September 10, 2007	10:30am / 85.4°F	11:48pm / 88.8°F	side-blotched lizard (4)
September 11, 2007	11:16am / 90.5°F	12:25pm / 93.7°F	side-blotched lizard (2)
September 12, 2007	10:54am / 87.6°F	12:02pm / 89.2°F	side-blotched lizard (4)

¹ Number shown in parentheses (#) is number of each reptile species recorded during survey; mammals and birds were documented but not counted. A list of wildlife observed is shown in Appendix B.



survey-days were conducted on the portion of the project shown in Figure 3.1, with varying survey days conducted within other portions of the survey area.

No blunt-nosed leopard lizards were observed during surveys conducted on the site during 2007. In addition, no sign of large lizards (scat, tracks, tail drags) was observed. Even though the complete CDFG protocol was not conducted over the entire project site, a portion of the project site was surveyed per the protocol and partial protocol surveys were conducted over a fairly large area adjacent to the project site. Based on the surveys conducted, habitat conditions, and lack of sign of the species, MBI has concluded that there is a low probability that blunt-nosed leopard lizards occupy the project site at this time.

There is a low probability that individual blunt-nosed leopard lizards would be subject to injury and/or mortality due to vehicle traffic and land clearing that would be associated with the project. Because no “take” of this species is allowed under state law even with endangered species act permits, measures have been proposed in section 4.0 that are intended to avoid potential impacts and further minimize the likelihood of unlawful “take” of this species on the site. With the implementation of appropriate measures impacts to this species should be avoided.

San Joaquin kit fox (*Vulpes macrotis mutica*) resembles a small lanky dog in appearance, with disproportionately large ears containing an abundance of large, white inner guard hairs. The San Joaquin kit fox is the largest subspecies of kit fox, with adults weighing 4.5 to 5 pounds (2-2.3 kg). Total length is about 32 inches, including up to a 12-inch black-tipped tail. Coloration ranges from light buff to grayish along the back and tail, gray, rust, or yellowish along the sides, and white on the belly (USFWS 1998).

San Joaquin kit fox occur in a variety of open grassland, oak savannah, and shrub vegetation types/habitats as well as agricultural areas in the San Joaquin Valley. In the southern San Joaquin Valley portion of the range, San Joaquin kit fox are generally found in sparse annual grassland and scrub communities (e.g., non-native grassland, saltbush scrub). Den characteristics of the taxon vary across its range. In the southern portion of its range the taxon often creates dens with two entrances. Natal dens generally have multiple entrances. Entrances are usually 8 to 10 inches in diameter and are normally higher than wide, but kit foxes can utilize dens with entrances as small as four inches in diameter. Kit foxes do not typically excavate their own dens, but rather enlarge burrows of other species, such as California ground squirrels (*Spermophilus beecheyi*) and change dens on a regular basis. One kit fox was tracked to 70 dens during a two-year study. Home ranges for the taxon have been reported by several authors to range from 1 to 12 square miles (USFWS 1998).

San Joaquin kit fox are known to den and forage in non-native grassland areas of Fresno County. No potential or known kit fox dens were observed; however, it is likely the kit fox at least forage in the survey area. This species is highly mobile and, although not suspected to be present on the site currently, the species may establish den sites in the survey area at any time.

Individual San Joaquin kit fox foraging on the site may be subject to injury and/or mortality due to vehicle traffic and land clearing that would be associated with the project. In general, construction equipment and related project activities pose a danger to wildlife. Dens subsequently established on the site may be crushed by earthmoving equipment or by

unauthorized offroad vehicle traffic. Measures have been proposed in section 4.0 that are intended to avoid these potential impacts and minimize the likelihood of unlawful “take” of this species on the site should the site become occupied by San Joaquin kit fox prior to project construction. With the implementation of appropriate measures direct impacts to this species should be avoided.

3.2.2 *Special-status Plant Species*

Several special-status and listed plant species may occur in western Fresno County in habitat similar to that surrounding the proposed project site. Information for the following descriptions is from Hickman (1993) unless otherwise noted.

California jewelflower (*Caulanthus californicus*), a member of the mustard family (Brassicaceae), is an herbaceous annual. Foliage is gray-green, with heart-shaped clasping stem leaves and wavy margined strap-shaped basal leaves. Unopened flowers appear deep maroon in color. Open flowers are white to greenish-yellow. Suitable habitat for this species is non-alkaline to slightly alkaline sandy loam soils of relatively undisturbed grassland communities below an elevation of 1,000 meters.

Historically, the range of the species included the upper San Joaquin and adjacent valleys from Coalinga in the northwest to the Cuyama Valley in the southwest. Of 55 historical locations, approximately twenty extant populations remain (Skinner and Pavlik 1994). Recently, extant populations have been found on the Carrizo Plain in San Luis Obispo County, and in the Kreyenhagen Hills of Fresno County.

This species was not observed during the surveys. It is possible that this species has been extirpated from the southern San Joaquin Valley and impacts are not anticipated.

San Joaquin woollythreads (*Monolopia congdonii*), a member of the Asteraceae family, are a small, inconspicuous annual which may reach 1 to 10 inches in height at maturity. San Joaquin woolly threads are found in valley grassland habitat types with silty sand or sandy loam soils at elevations ranging from 60 meters to 800 meters. Valley saltbush is often the dominant shrub in these habitat types. The preferred microhabitat for this species consists of areas with reduced annual grass competition. It is generally not found where annual grasses are extremely dense and tall (Taylor 1987). This species is somewhat prostrate, allowing it to persist under grazing pressure. Known extant populations in Kern County occur along the Kern River near Interstate 5, near Lost Hills, and on the Belridge Plain.

3.2.3 *Other Special-status Species*

American badgers (*Taxidea taxus*) are low, squat animals with conspicuous silver-tipped pelage dorsally and a short, black-tipped tail. The most striking visual feature of this species is its striped face, consisting of a median white stripe proceeding from the tip of its nose to the back of its head. This stripe is flanked by alternating white and dark stripes giving way to bright, white-outlined ears. The badger’s wide flattened body is supported by short but powerful legs. The front feet are fitted with noticeably long claws that are especially well-suited for digging out the burrows of the rodents on which it feeds.



Historically, badgers are thought to have been fairly widespread in the open grassland habitats of the lower San Joaquin Valley. Their modern San Joaquin Valley distribution is essentially restricted to the limited, often isolated and remote tracts of native grassland and shrubland habitats. Cultivated lands have been reported to provide little usable habitat for this species, and badgers are believed to be declining throughout California (Williams 1986).

Badgers are solitary animals. They usually forage for burrowing prey such as gophers, ground squirrels, marmots, and kangaroo rats, although they are known to take a variety of nesting mammals, reptiles, and birds.

Badger sign was observed during the surveys but no burrows suspected of being occupied by the species were observed. Badger burrows subsequently established on the site may be crushed by earthmoving equipment or by unauthorized offroad vehicle traffic. Measures have been proposed in section 4.0 that are intended to avoid these potential impacts should the site become occupied by American badger prior to project.

In addition to the species observed during the surveys, many migratory bird species and bat species may be present in the vicinity of the project site. Birds and bats can be subject to collisions with tall facilities, associated guy wires, and/or other supports. In addition, bright night lighting may attract insects on which both birds and bats forage. The project includes construction of an approximately 300 foot tower and power lines that could subject birds and bats to collisions as well as electrocution hazards. Other project-related structures lower in height will also be constructed.

Birds that fly into the reflected sunlight between the heliostats and the power towers could be impacted. In general, bird migration activities occur at night, typically at a high altitude. Ground structures located in flat terrain, such as the tower and power lines associated with the project, do not typically represent a significant hazard to migrating birds. Existing powerlines in the vicinity of the project are not known to be a significant source of mortality for migrating birds. Additionally, the project area is not known to be a significant flyway for migrating birds. There are no topographic features or wetlands that would attract birds specifically to the project site or vicinity. Therefore the potential for bird collisions with any facilities at the site would be very low.

Powerlines and associated transformers represent a potential electrocution hazard, to raptors as well as other bird species known to be present in the vicinity of the project site. Recommendations are included in section 4.0 that are intended to minimize the potential electrocution hazard to migratory birds.

No bat roosting sites are known from the vicinity of the project site and there are no habitat features in the vicinity that would be typical of large roost sites. Large numbers of bats are not anticipated to be present or use the site area. Shielded night lighting will reduce the potential for avian and bat collision by reducing the potential for prey and subsequent attraction to nocturnal insectivores. Therefore, the potential for bird and/or bat night collisions with tall structures associated with the project would be considered low, provided that the measures recommended in section 4.0 are implemented.

3.3 Project Effects Discussion

3.3.1 Direct Injury, Mortality, etc.

Wildlife injury and mortality could occur as a result of project activities including vehicular collisions on site during construction and operation; entrapment of individuals in open trenches during construction, the crushing of burrows and/or dens during construction activities, and electrocution and/or collisions with project structures.

No dens or burrows of any special-status species were identified within the project site. Small mammal burrows that were not likely to be occupied by any special-status species were observed throughout the survey area. Measures in section 4.0 are intended to result in avoiding “take” of listed species and avoidance of significant impacts to any other special-status species that may occur within the project site.

The potential for wildlife collisions and electrocution are more thoroughly discussed in section 3.2.3.

3.3.2 Habitat Disturbance

The project site has historically been used for oil production purposes and has likely had other surface disturbance. The site currently consists of non-native grassland. The proposed project site area that would be subject to impacts is not currently suspected to be occupied by special-status species. This area provides some value to special-status species as it is currently open space. The wildlife occupying the site is somewhat limited based on survey observations. Evidence of Botta’s pocket gopher, kangaroo rat, and deer mouse was observed and several bird species were seen during surveys.

The loss of 60 acres of previously disturbed non-native grassland in an area adjacent to active oil production areas is not a significant loss of this natural community in the region. Non-native grassland is prevalent in fallow fields and the low foothills in the vicinity of Coalinga and along the west side of the San Joaquin Valley. No further mitigation measures are recommended.

3.3.3 Wildlife Movement and/or Migration

No evidence that the site is important as a migratory or movement corridor was observed or has been documented. Although migratory birds move through this portion of the San Joaquin Valley and may occasionally utilize the project site, the site has not been documented to be an important stopover or resting place for migratory birds.

San Joaquin kit fox is a highly mobile species that likely forages and potentially dens in the vicinity of the project site. This species is likely to freely move through the non-native grassland areas associated with adjacent open space and oil production areas. Kit foxes have been documented to be highly tolerant of human activities (Bjurlin *et al* 2005) and this project is not likely to significantly affect kit fox movement through the vicinity.

No further measures related to this potential effect have been recommended.

3.3.4 Noise

Noise thresholds have not been established for any of the special-status species included in this report. The project site is located adjacent to existing noise sources including a cogeneration facility and various oil production facilities. In addition, the site is located within approximately 4.5 miles of an airport. Typical noise in the area associated with aircraft use would include commercial jetliners at high altitude, crop dusting aircraft, and small fixed wing aircraft that may use the nearby airport. The project is not expected to result in an increase in the ambient noise level in the vicinity.

Wildlife in the vicinity of the project site are likely to be habituated to the existing noise level, and it is unlikely that the existing pattern of habitat use would be changed due to noise levels created by the project. Noise levels are not expected to result in any direct or indirect impacts to wildlife species.

3.3.5 Nighttime Lighting

The project site will include minimal night lighting associated with site security. Design will include features such as shielding and directional type lighting. No impacts to biological resources are anticipated as a result of nighttime lighting.

3.3.6 Traffic

The onsite speed limit during construction and operation of the project will be 20 miles per hour or slower. Speed limits will be posted and clearly visible by all guests and personnel. The project is not expected to result in significant additional traffic on local public roads.

The special-status species that could be most susceptible to traffic related impacts would be San Joaquin kit fox. The primary roads that would be used by project-related traffic are likely to be used or crossed infrequently by other special-status species that may occur in adjacent habitat. The documented risk to San Joaquin kit fox being struck by vehicles on two-lane roads is generally low. In populations that have been monitored, the mortality rate from vehicle strikes rarely exceeds 10% on roads with moderate traffic volumes (Cypher *et al* 2005).

The potential for traffic-related impacts to biological resources is very low.

4.0 Recommendations

Most of the special-status species identified during the literature review as potentially occurring within the region of the project site are unlikely to be impacted by the construction and operation of the proposed solar facility. The measures listed in the following paragraphs should be implemented as precautions to address potential impacts to special-status species that may occur in the vicinity of project site.

4.1 Recommendations Regarding Special-status Species

- 1) It would be preferable that full CDFG protocol surveys for detection of blunt-nosed



leopard lizard be conducted on the selected project site and all ancillary facilities prior to initiation of site construction.

- 2) A pre-activity survey should be conducted by a qualified biologist prior to any ground disturbance in areas subject to project construction impacts to determine whether any potential or known San Joaquin kit fox dens or other evidence of special-status species (e.g. burrowing owl) site occupation are present or have subsequently been established. The pre-activity survey shall be conducted at least 60 days before ground disturbing activities are initiated with a follow-up survey no more than 14 days prior to construction. Results of the pre-activity survey will be used to implement the applicable mitigation measures included herein.
- 3) The disposition of San Joaquin kit fox dens shall be according to USFWS guidelines (1999) or per requirements of applicable project permits. Known dens shall not be excavated unless FESA permit coverage for San Joaquin kit fox has been obtained.
- 4) All pipes, culverts, or similar structures with a diameter greater than 4 inches shall be capped or blocked to prevent entry by San Joaquin kit fox and other wildlife. If pipe is not capped (i.e. short pipe segments stockpiled prior to use), it should be inspected for kit fox. If any kit fox are observed within pipe, they shall be allowed to escape unimpeded;
- 5) All employees, contractors, or other persons involved in initial site grading and preparation for construction shall attend an orientation session informing them of the biological resource protection measures which will be implemented for the project. The orientation shall be prepared by a qualified biologist and presented as part of standard operating procedures. The orientation shall include information regarding the life history of the protected species, reasons for special status, a summary of applicable environmental law, and measures intended to reduce impacts. After initial construction has been completed, all employees and contractors shall participate in the standard Chevron San Joaquin Valley Business Unit biological resource orientation program.
- 6) All trash and food waste shall be disposed of in closed containers and regularly removed from the project site during construction. Absolutely no deliberate feeding of wildlife shall be allowed.
- 7) No pets shall be allowed on the site during project activities.
- 8) The project site and all work areas shall be clearly delineated by stakes, flagging, fencing or other material approved by a qualified biologist to minimize inadvertent degradation or loss of adjacent wildlife habitat during project activities.
- 9) The applicant shall establish and issue traffic restraints and signs to minimize temporary disturbances. Signs shall include information regarding speed limit and presence of special-status species. All project-related vehicle traffic should be restricted to established roads, designated access roads and routes, project activity areas, storage areas, and staging and parking areas. Off-road traffic outside of designated project areas shall be prohibited. A 20-mph speed limit should be observed in all other project areas except on county roads and state and federal highways.

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- 10) All equipment storage and parking during project activities should be confined to the designated construction area or to previously disturbed offsite areas that are not habitat for listed species.
 - 11) Site grading and/or clearing involving new habitat disturbance shall be limited to daylight hours.

4.2 Recommendations Regarding Migratory Birds

Occupied native bird and raptor nests and individual birds are protected under the Migratory Bird Treaty Act. If possible, all site grading which could directly impact native bird and/or raptor nests (including burrowing owl) should be conducted between September 1 and January 31, during the non-breeding season for most bird species. The following measures will be implemented to reduce potential impacts to native birds and raptors;

1. In compliance with Sections 3503 and 3503.5 of the California Fish and Game Code, if grading is to occur during the native bird and raptor nesting breeding season (February 1 through August 31), a qualified biologist shall determine the presence of any native bird and raptor nests during the pre-activity survey conducted per #2 above. In addition, CDFG will be contacted to obtain and comply with all appropriate procedures relative to grading operations if any active nests are identified in the vicinity of the project site. Resulting mitigation measures may include restricting construction activities near native bird and raptor nesting sites during the breeding season.
2. The pre-activity survey shall include a survey for burrowing owl. If active burrowing owl burrows are detected outside of breeding season (September 1 through January 31), burrows should be avoided by a suitable buffer distance as determined by a qualified biologist. This distance would vary depending on season, existing disturbances, etc. During nesting season, burrow avoidance should continue until young have fledged. As an alternative, passive and/or active relocation efforts may be undertaken if approved by CDFG and USFWS.
3. All overhead power lines should include raptor perch guards to minimize perching locations and electrocution hazards to birds.
4. Overhead power lines appropriately spaced to minimize the potential of raptor electrocution using the current recommendations for line spacing.
5. Security lighting should be directed downward to reduce light pollution and consist of bulbs that minimize insect attraction and subsequently minimize the potential for avian and bat attraction and collision.

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Solar to Steam Demonstration
Project Safety Management Plan

Appendix H. Site Safety Plan

BrightSource Energy
JOB SITE SAFETY PLAN

Solar to Steam (S2S)

Revised: 1/29/2008

Rev. 00

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Print Date: 10/23/2008

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Attachments:

- 1.
- 2.
- 3.
- 4.
- 5.

1.0 General Information**Developed for:** **Chevron Pipe Line Company** **Date:** _____**Location:** _____ **City:** _____ **State:** _____**Job ID:** _____**Job Description:**

	<u>Name</u>	<u>Telephone</u>	<u>Cell Phone</u>
CPL Contact			
Contractor Foreman			
Contractor Project Manager			
Contractor Safety Representative			
Subcontractors			
Third-Party Contacts			
Regulatory Agency Contacts			
Non-Governmental Organizations (NGO) Contacts			
Additional Contacts			

2.0 Project Tenets and Principles**We Believe All Incidents Are Preventable:**

- Do it safely or not at all.
- There is always time to do it right.
- When in doubt, find out.

Always:

1. Operate within design or environmental limits.
2. Operate in a safe and controlled condition.
3. Ensure safety devices are in place and functioning.
4. Follow safe work practices and procedures.
5. Meet or exceed customers' requirements.
6. Maintain integrity of dedicated systems.
7. Comply with all applicable rules and regulations.
8. Address abnormal conditions.
9. Follow written procedures for high risk or unusual situations.
10. Involve the right people in decisions that affect procedures and equipment.

3.0 Responsibilities

Employees, Contractors and/or Visitors:

1. Be familiar with and abide by the:
 - tenet principles for CPL;
 - rules and practices contained in the *CPL Safety Handbook*;
 - posted safety regulations in the workplace;
 - written and oral company instructions to perform their jobs safely;
2. Comply with all applicable rules, regulations, codes, covenants, restrictions, etc. (e.g. country, federal, state, and local regulations).
3. Comply with provisions set forth in this Job Site Safety Plan (JSSP).

Contractor Management:

1. Develop and keep an up-to-date statement of the contractor's policy for Health, Environment, and Safety (HES), and ensure that it is brought to the notice of all employees. Communicate philosophy and commitment that set levels of expectations for safety performance.
2. Maintain overall control for safety.
3. Ensure established safety policies are properly administered and enforced.
4. Arrange for adequate resources (e.g. funds, facilities, and personnel) to meet the requirements of the contractor's HES Policy.
5. Ensure that field operations personnel are aware of and implement policy and associated processes, programs, procedures, and safe work practices established to safely control the work.
6. Prepare instructions for the organization and methods for carrying out the contractor policy, to make each person aware of their responsibilities, and the means by which they will carry them out.
7. Know the appropriate statutory requirements affecting the contractor's operations for whatever locale the work is being carried out.
8. Ensure that appropriate training is given to all staff prior to arriving at job site.
9. Ensure that there is liaison on HES matters between the contractor and others working on the site.
10. Institute incident reporting and investigation process to eliminate hazards and implement appropriate corrective actions, utilizing lessons learned to avoid recurrence. Promote analysis of investigations to discover trends and weaknesses in the system of controls.
11. Discipline, re-educate/train, or replace (or a combination thereof) any member of staff failing to satisfactorily discharge responsibilities for HES.
12. Set a personal example when visiting sites by wearing appropriate PPE, and following applicable rules.
13. Arrange for regular reports to be reviewed to analyze safety performance, incident statistics, losses, and training standards. Metrics tracked and analyzed in reporting should include both leading and lagging indicators.
14. Conduct periodic job site visits to validate effectiveness of contractor's HES Policy and JSSP implementation.
15. Identify trends as they develop and modify plans and procedures accordingly.

Supervisors/Foreman Must:

1. Verify all personnel are fit for duty.
2. Know and apply the contractor's Safety Policy, and relevant occupational health and safety rules and regulations that are brought to the attention of personnel under your control. Ensure that all employees work in a safe manner and use all protective devices and procedures required by the contractor, in accordance with legislation, to protect their health and safety.
3. Advise all employees of any potential or actual dangers and how to isolate, prevent, or remove them.
4. Arrange for medical treatment as required, in the case of injury or illness including transportation to a doctor or hospital as detailed in this JSSP.
5. Report all incidents immediately, investigate all incidents fully, and advise management on how to prevent similar incidents in the future.
6. Carry out regular inspections of the work place to ensure a safe and healthy work environment, and establish provisions for equipment/tool inspection and ongoing maintenance to confirm safety and integrity.
7. Evaluate an employee's performance to determine whether the employee is competent at the required work task. Direct supervision should be given to an employee unfamiliar with certain tasks.
8. Know the regulations applicable to the work and insist that these regulations are followed.
9. Incorporate safety instructions in routine orders and see that they are obeyed.
10. Not allow personnel to take unnecessary risks.
11. Ensure that new and short service employees (SSE) are shown the correct method of working and are advised of all safety precautions applicable to their work.
12. Ensure that any special rules applying on the site are being implemented correctly and check that Safe Work Permits are being complied with.
13. Commend personnel who, by action or initiative, eliminate hazards.
14. Not allow "horse-play" or practical jokes, and discipline those who consistently fail to consider their own safety or that of others around them.
15. Report immediately any defects of plant or equipment.
16. Respond appropriately to incidents reported by employees, however minor, and report incidents as delineated in the JSSP and through the chain of command.
17. Set a personal example by wearing protective clothing and by carrying out all work in a safe manner.
18. Look for and suggest ways to eliminate hazards and encourage employees to do the same. Bring to the notice of supervision any improvement or addition to the Company Safety Policy that you feel should be made.

Welders, Fitters, and All Other Skilled Craftsmen Must:

1. Read and understand the company's Safety Policy and carry out work in accordance with its requirements.
2. Report to your superintendent or foreman any defects in plant or equipment discovered while carrying out servicing on site.
3. Use the correct tools and equipment for the job and report any defect noted in tools and equipment.
4. Work in a safe manner at all times. Wear suitable footwear and protective clothing. When required, ask for, and use, safety equipment such as welding goggles, hearing protection, respirators, safety goggles, etc.
5. Not carry out repairs or service of plant or equipment while operating, unless absolutely necessary and only with the proper precautions. Ensure that any guards removed to carry out repairs are properly replaced prior to operation. Equipment and machinery must always be fit for purpose.
6. Suggest to Supervision ways of improving safety and eliminating hazards.
7. Mentor new employees and warn them of known hazards and safe work practices.
8. Report any incident or damage, however minor, to Supervision.
9. Take all personal hygiene measures necessary to prevent job related health effects (e.g. dermatitis).

All Personnel Must:

1. Perform assessment for personal safety (e.g. TIF) before beginning any activity/task/job.
2. Read, understand, and comply with the contractor's Safety Policy, safe work practices, procedures, and rules.
3. Develop and/or review Job Safety Analysis (JSA) prior to commencing work.
4. Wear the safety equipment, personal protective devices, and clothing required by regulations and Chevron.
5. Complete pre-use inspection on all tools and equipment prior to commencing work.
6. Immediately notify supervisor of any unsafe conditions or acts that may be of danger to workers or others.
7. Take all reasonable precautions to protect the safety of workers and others.
8. Report all incidents and injuries to supervisor immediately.
9. Attend all scheduled safety meetings.
10. Openly communicate on issues related to safety. Use Stop Work Authority as necessary to ensure each individual's personal safety and all co-workers.
11. Notify supervisor of prescription and non-prescription medication use prior to coming on job site.

4.0 Job Scope Overview

Describe the major elements or tasks for the project or job.

Task#	Activity
1	
2	
3	
4	
5	

5.0 Risk Assessment and Hazard Identification

Risk/Hazard	Applicable Task # (N/A, All, 1, etc.)	Mitigation
Access/Egress		
Allergic Reactions		
Animals and Insects		
- Snakes		
- Spiders		
- Bees and Wasps		
- Endangered Species		
- Other		
- Other		
Blasting (Hydro, Abrasive, etc.)		
Crossings		
Cables		
- Railroads		
- Road		
- Water		
- Pipeline		
Electrical		
- Overhead Power Lines		
Emergency		
- Hurricane		
- Tornado		
- Flood		
- Monsoon		
- Explosion		
- Fire		
- Earthquake		
- Pipeline Leak		
- Community Disaster		
- Toxic Gas Release		
- Spill		
- Medical		
- Loss Of Power		
Hot Work/Fire		
Human Factors		
- Fatigue		
- Illness		
- Fitness		
- Lighting		
Air Quality		
Confined Space		

Risk/Hazard	Applicable Task # (N/A, All, 1, etc.)	Mitigation
Earthwork		
- Excavation		
- Blasting		
- Trenches		
- Cave-In		
- Fall-In		
- Buried Hazards		
+ Sewers		
+ Cables		
+ Power Lines		
+ Grounding		
Systems		
+ Pipe		
Ergonomics		
Existing Facilities Hazards		
Fabrication, Laydown Areas		
Falling Objects		
Fumes		
Hazardous Material		
- Asbestos		
- Benzene		
- TMA		
- Silica Dust		
- Cement Dust		
- Lead		
- H ₂ S		
Language/Communication		
Lifting		
- Crane		
- Manual		
- Come Along		
- Tuggers		
- Spreader Bar		
- Winches		
- Lines		
- Chains		
Lifting Near Live Equipment		
Location Safety Culture		
Material Handling and Storage		
Medications (prescription and non-prescription)		
Moving and Transportation		
Equipment		
Moving/Rotating Equipment		
Noise		

Risk/Hazard	Applicable Task # (N/A, All, 1, etc.)	Mitigation
Overhead Obstruction		
Political Security		
Power Tools		
Radiation		
Sanitation (Port-A-Potty and Hand Washing Facilities, etc.)		
Security Incident		
Startup Considerations		
- Combustibles		
- Burns		
- Hazardous Material		
- Spills and Releases		
- Pressure (Hydraulic, Pneumatic)		
- Equipment Heat		
- Equipment Cold		
- Mechanical Integrity (NDE Testing)		
- Control Systems		
- Hazardous Waste		
- Scaffolding Hazard		
Shutdown Considerations		
- Spills and Releases		
- Isolation (Elec., Process, Line Breaking, etc.)		
- Hazardous Waste		
- Fall Hazards		
- Burns (Thermal, Chemical)		
- Hazardous Material		
- Confined Space		
- Scaffolding Hazards		
- Process Safety Hazards		
Toxic Chemicals		
Traffic Safety		
- Control Onsite Vehicular Traffic		
- Local Traffic Safety Control		
- Construction Traffic		
- Permitted Loads		
- Detours		
Tripping, Slipping, Collision		
Vegetation (e.g. poison ivy)		
Visibility		
Waste Disposal		

Risk/Hazard	Applicable Task # (N/A, All, 1, etc.)	Mitigation
Weather		
- ice		
-Mud		
-Storm		
(Hurricane/Typhoons)		
-Heat		
-Cold		
-Seas		
-Fog		
-Wind		
- Lightning		
Other		
Other		
Other		
Other		
Other		
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6.0 Relevant Safety Programs and Procedures

Check (ii) Safety Programs directly involved in job, and provide a brief narrative to describe how they will be effectively applied

Programs/Procedures	Narrative (Describe applicable program/procedure and provide documentation onsite)
<ul style="list-style-type: none"> .. Asbestos .. Abrasive Blasting .. BBS .. Boat Safety .. Change Management Review and Approval .. Confined Space .. Cranes/Hoists .. Electrical Safety .. Excavation .. Equipment Inspection .. Fall Protection .. Hand/Power Tools .. Haz Com .. HAZWOPER .. Hearing .. Heat/Cold Stress .. Hot Work .. H₂S .. Lead .. Lifting/Rigging .. LOTO .. Pipeline Repair .. Pipeline Locate .. Radiation .. Respiratory .. Safe Work Permit .. Safety Meetings .. Site Inspections .. Tank Cleaning .. Vehicle Safety .. Other .. Other .. Other .. Other 	

7.0 Education and Training

<u>Description</u>	<u>ü Applicable</u>	<u>Narrative</u> (Describe applicable training and provide documentation onsite)
Abrasive Blasting	..	
Back Injury Prevention	..	
Basic New Employee Orientation	..	
Basic Principles of Safety (e.g. OELS)	..	
Behavior Based Safety	..	
Benzene, Asbestos, Lead, and H ₂ S Awareness	..	
Bloodborne Pathogens	..	
Body Positioning Training	..	
Commercial Diving	..	
Confined Space Entry	..	
Cranes and Material Handling	..	
Defensive Driving/Driving Safety	..	
Electrical Lock-Out/Tag-Out	..	
Electrical Safety	..	
Emergency Evacuation (Drills, Muster Points)	..	
Emergency Marine Evacuation	..	
Emergency Response Plan	..	
Excavation and Trenching	..	
Explosives and Ordinance	..	
Fall Protection	..	
Fire Safety	..	
Fire Watch	..	
First Aid (CPR, EMS)	..	
Flammable and Toxic Material Handling	..	
Floor and Wall Opening	..	
Hazard Communication (MSDS), Labeling, etc.	..	
Hazard Identification and Awareness	..	
Hazardous Energy Lock-Out	..	
Hazmat Training	..	
HAZWOPER Training	..	
Hearing Conservation Program	..	
Heat and Cold Stress Prevention	..	
Helicopter Safety	..	

Description	ü Applicable	Narrative (Describe applicable training and provide documentation onsite)
Hot Taps	..	
Hot Work	..	
Incident Investigation and Reporting	..	
Industrial Hygiene Exposure Monitoring	..	
Job Safety Analysis	..	
Land Transportation Safety	..	
Lifeboat Safety	..	
Line Breaking/Opening Process	..	
Marine Drilling Safety	..	
Near Miss Reporting	..	
Offshore Diving	..	
Personal Protective Equipment	..	
Power Actuated Tools	..	
Radiation Control	..	
Respiratory Control	..	
Respiratory Protection Program	..	
Roofing Work Procedure	..	
Safety Culture/Commitment Training (e.g. JMJ)	..	
Safety Equipment Usage	..	
Safety Observation/Audit	..	
Scaffolding Safety	..	
Signs and Barricades	..	
Start-up Safety Workshop	..	
Water Survival	..	
Welding/Cutting	..	
Other	..	
Other	..	
Other	..	

8.0 Hazard Communication

Chemicals Brought on Site

(By generic use name. List here or append a separate Chemical Inventory List.)

- 1.
- 2.
- 3.
- 4.
- 5.

Special PPE or Handling Requirements

(List the PPE requirements for each chemical listed above)

- 1.
- 2.
- 3.
- 4.
- 5.

MSDS's are to be supplied for each chemical brought on site. MSDS's for these chemicals will be reviewed during the pre-job hazard review. There must be a MSDS to correspond with each item on the Chemical Inventory List. These are to be reviewed with all employees prior to commencing work and made readily available for easy reference. **Contractor to identify where all MSDS's associated with the project can be found at the job site.**

9.0 Personal Protective Equipment (PPE)

In accordance with OSHA 29CFR 1910.132-140, a completed CPL 731 form must be attached.



CPL 731

Minimum PPE Required Throughout the Job at All Times:

1. FRC
2. Hard Hats
3. Safety Glasses
4. Steel-Toed Boots
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Additional PPE Considerations:

10.0 Safe Work Permits

Describe contractor's plan detailing how permits will be issued and received (e.g. hot work, confined space, LOTO, excavation/trenching, etc.)

11.0 Environmental

Wastes Generated:

Waste Management Procedure:

Permit Compliance:

Spill Prevention and Containment:

Sensitive Area Protection:

12.0 Managing Subcontractors

13.0 Audits, Inspections, and Planned Observations

(Facility Audits, Onsite Inspections, Planned Task Observations [BBS])

14.0 Motor Vehicle Safety

15.0 Security Measures

16.0 Stop Work Activity

Every employee and contractor for Chevron **is responsible and authorized** to stop any work that does not comply with Chevron's tenets of operations. There will be no repercussions for exercising Stop Work Authority; it is a right and a responsibility.

17.0 Short-Service Employee (SSE) Identification Card and Mentoring

18.0 Communication

19.0 Incident, Injury, and Illness Management**First Aid/Minor Treatment Facility** (Clinic or other treatment center)**Phone****Contact** (Doctor or professional medical provider's name)**Phone****Emergency Medical Treatment Facility** (Local Hospital/Regional Trauma Center)**Phone****Emergency Transportation Provider** (Attach driving route to this plan)**Phone****Medical Management Plan Provider****Contact****Phone****Local Law Enforcement****Phone****Local Fire Department****Phone****Alternate Medical Management Plan Provider****Phone**

AXIOM Medical Consulting

877-502-9466

Incident Response:
HAZWOPER Emergency Plan: (Refer to instructions for requirements. This section should be discussed in detail. Append additional documents as appropriate.)
Incident Reporting and Investigation: (Describe requirements and process)

- Insert driving directions/maps/satellite photos as necessary to identify routes of travel to and from work site(s).
- Provide briefing with local emergency responders so that they are aware of driving directions to work site (e.g. local municipal fire department/volunteer fire department /sheriff's department/state police/city police).

Solar to Steam Demonstration
Project Safety Management Plan

Appendix I. Field Inspection Checklist

Global Upstream – CHESM Field Inspection Checklist

This checklist provides a format for the recording of observations at work sites visited during the inspection. Use this information for completing the inspection and providing the score required for the contractor's health, environment and safety (HES) qualification rating. The summary of the inspection findings and detailed information about the areas needing improvement (not the scoring) shall be communicated to the contractor's site representative. After completing this form, turn it in to your local HES representative and provide a copy to the work site supervisor/leader.

Company representatives observe the work site and work practices of the contractor. The contractor is an independent contractor responsible for the safe and timely completion of the work in accordance with applicable industry standards and the contract and company specifications. If the work site or practices of a contractor are unsafe, stop the work and notify the contractor's representative immediately. It is then the contractor's responsibility to evaluate the situation, take any necessary corrective or remedial action and restart the work when it is safe to do so.

The company should not direct the work or provide any work instructions or corrective measures directly to the contractor personnel, except for situations where imminent danger exists. Other than stopping any unsafe work practices, limit inspections to obtaining information for the company's audit and evaluation of the contractor's HES practices.

Interviewing contractor site personnel during the tour is advised to avoid making two trips.

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1. General Information

Inspection Participants

Location

Date

2. Contractor Information

Contractor Company Name

Project Name or Number

Chevron Department Sponsor

Number of Employees Supporting
Chevron Operations

Contractor Key Personnel

Company Director/Manager:

Phone:

Fax:

email:

Site Supervisor:

Phone:

Fax:

email:

HES Representative:

Phone:

Fax:

email:

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3. Work Site Condition and Work Practice Assessment

<u>Category</u>	<u>Acceptable or N/A</u>	<u>Improvement Needed</u>	<u>Comments</u>
General Work Site			
1. Walkways clean and clear?			
2. Proper lighting?			
3. Work area clear of tripping hazards/obstructions?			
4. Appropriate trash cans and disposal locations?			
5. Proper containment of fluids? For example, no plastic buckets in use for containing hydrocarbon based liquid			
6. Electronic communication devices in use within hot work guidelines?			
7. Control of entry/exit on the work site?			
8. Designated smoking areas?			
Hazard Identification			
9. JSA filled out before start of the work?			
10. Did the whole crew participate in filling out the JSA and sign off?			
11. New JSA filled out when a change occurred (weather, people, work tasks)?			

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GU – CHESM Field Inspection Checklist

3. Work Site Condition and Work Practice Assessment

<u>Category</u>	<u>Acceptable or N/A</u>	<u>Improvement Needed</u>	<u>Comments</u>
12. Task steps written out (not pre-filled in) to perform the job? Include site specific considerations? Procedure use?			
13. Hazards identified and addressed?			
14. Worker following the written steps or procedure?			
15. Were other contractors included in the JSA or shared the JSA if working in the same area?			
16. Are workers aware of the “stop work authority”?			

Behavior-Based Safety

- | | | | |
|--|--|--|--|
| 17. Critical behaviors identified? | | | |
| 18. Observations conducted? | | | |
| 19. Feedback given after observation? | | | |
| 20. Observation data communicated? | | | |
| 21. Observation data collected/analyzed/used to correct? | | | |

Short-Service Employee

- | | | | |
|------------------------------------|--|--|--|
| 22. SSEs are visibly identified? | | | |
| 23. Mentor assigned and available? | | | |

3. Work Site Condition and Work Practice Assessment

<u>Category</u>	<u>Acceptable or N/A</u>	<u>Improvement Needed</u>	<u>Comments</u>
24. Does the mentor know that he/she is assigned to the SSE and is responsible for the safety of the SSE?			
25. Crew in compliance? (0 SSE on 1 person crew, 1 SSE on 2-4 person crew, and no more than 20% on 5+ person crew or an approved variance is in place)			
Fall Protection			
26. Fall protection equipment inspected and in good condition?			
27. Anchorage location specified?			
28. Fall protection equipment properly worn?			
29. Tied off properly to designated anchor?			
30. Tie-off distance vs. lanyard length?			
31. Appropriate rescue plan in JSA?			
32. Proper rescue equipment available?			
33. Is there at least one person not in a harness on location while the fall protection equipment is in use?			
Electrical System			
34. Lock-out/tag-out systems?			

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GU – CHESM Field Inspection Checklist

3. Work Site Condition and Work Practice Assessment

<u>Category</u>	<u>Acceptable or N/A</u>	<u>Improvement Needed</u>	<u>Comments</u>
35. Damaged cords?			
36. Explosion-proof fixtures?			
37. Overhead power line clearance?			
38. Closed power panels?			
Personal Protective Equipment			
39. Head?			
40. Hand?			
41. Eye?			
42. Foot?			
43. Body (if required)?			
44. Respiratory (if required)?			
Manual and Power Hand Tools			
45. Defective tools?			
46. Grounded or double insulated?			
47. Guards in place?			
48. Appropriate tool used?			

<u>Category</u>	<u>Acceptable or N/A</u>	<u>Improvement Needed</u>	<u>Comments</u>
Vehicles			
49. Authorized to operate?			
50. Speed limits understood and adhered to?			
51. Do vehicle operators conduct a walk around hazard assessment before moving the vehicle?			
52. Are vehicles being backed in or parked for first move forward?			
Mobile Equipment			
53. Crane certification?			
54. Licensed/certified operators?			
55. Rollover protective structures?			
56. Movement warning devices (backup alarms)?			
57. Tag lines used?			
58. Load limits visibly identifiable?			
59. Log books available and current?			
Scaffold/Work Platform			
60. Quality of assembly?			
61. Secured against movement?			
62. Safe access?			

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<u>Category</u>	<u>Acceptable or N/A</u>	<u>Improvement Needed</u>	<u>Comments</u>
63. Fall protection/provisions?			
64. Are guard rails, mid-rails, and toe boards in place?			
65. Scaffolds appropriately tagged?			
Welding and Cutting			
66. Gas bottles upright/secured?			
67. Electric welders grounded?			
68. Cables/hoses/fittings serviceable?			
69. Standby fire watch/fire extinguisher?			
70. Are flashback preventers in place?			
Sanitation			
71. Drinking water?			
72. Toilet facilities?			
73. Field accommodations?			
74. Hygiene accommodations?			
Material Storage			
75. Materials are securely stored/stacked?			
76. Clear access to materials?			
77. Load rating for shelves?			

<u>Category</u>	<u>Acceptable or N/A</u>	<u>Improvement Needed</u>	<u>Comments</u>
78. Stability of shelving?			
Permit Systems			
79. Lock-out/tag-out procedures?			
80. Hot work permits?			
81. Confined space entry?			
82. Rescue procedures?			
83. Rescue equipment?			
84. Excavation permit process?			
Emergency Systems			
85. Emergency response plan?			
86. Rescue equipment?			
87. First aid materials?			
88. Eye wash stations?			
89. Fire protection?			
90. Evacuation procedure?			
91. Are workers familiar with alarms and emergency notification procedure?			

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GU – CHESM Field Inspection Checklist

<u>Category</u>	<u>Acceptable or N/A</u>	<u>Improvement Needed</u>	<u>Comments</u>
Excavations/Trenches/Pits			
92. Shoring/Wall slope after five feet before entry?			
93. Undermining?			
94. Water problems?			
95. Close proximity to power lines?			
96. Underground utility locations?			
97. Adequate means of access and egress?			
98. Appropriate means to monitor breathing space?			
Hazardous Openings			
99. Guard-rail/barriers or coverings on or around?			
100. Floor/Roof/Wall openings?			
101. Tanks/Trenches/Excavations/Pits/Ditches?			
Ladders/Safe Access			
102. Ladders correctly placed/secured?			
103. Ladder condition/construction?			
104. Adequate access ramps and walkways? (minimum 30 inches wide)			
105. Handrails on walkways/ramps?			

<u>Category</u>	<u>Acceptable or N/A</u>	<u>Improvement Needed</u>	<u>Comments</u>
Environment			
106. Adequate lighting?			
107. Adequate protection to noise level exposure			
108. Toxic vapors/fumes?			
109. Adequate protection to temperature extremes?			
HazCom			
110. Written HazCom program?			
111. MSDS?			
112. Labeling system?			
Environmental Protection			
113. Permit compliance?			
114. Pollution prevention?			
115. Waste management?			
Total Score = Number of Acceptable and N/A divided by 115 x 100			

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GU – CHESM Field Inspection Checklist

Action Items			
<u>Needs Improvement/Not Acceptable</u>	<u>Corrective Action Required for Future Re-Selection</u>	<u>Target Date</u>	<u>Completion</u>
1.			
2.			
3.			
4.			
5.			
6.			
7.			

Contract Owner: Date reviewed with Contract Owner:

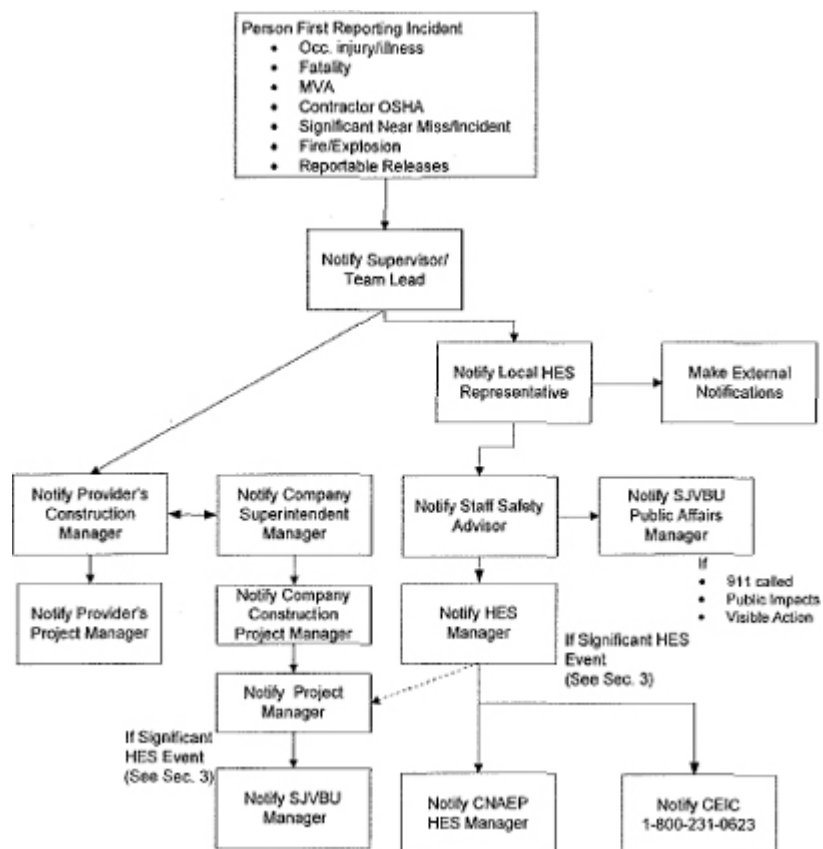
Corrective actions to be completed by:

Contract firm informed of Yes No Name:
results?

Contract firm to remain on re-selection bid Yes No
list?

Solar to Steam Demonstration
Project Safety Management Plan

Appendix J. Incident Investigation Flow Chart



**SIGNIFICANT HES EVENTS THAT REQUIRE REPORTING TO OPCO MANAGEMENT
and CHEVRON EMERGENCY INFORMATION CENTER (CEIC)**

SECTION 3

.. Media attention beyond local coverage	.. Chemical spill > 8000 Kg
.. Fatality (or likelihood thereof)	.. Natural gas or LPG release > 10MMSCF
.. Multiple hospitalizations	.. Natural disaster, civil/political unrest
.. Incident Cost > \$500,000	.. Employee/Public Evacuation or Shelter-in-Place
.. Oil spills > 50 bbl to water or > 500 bbl to land	

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EXHIBIT F
ACCEPTANCE AND PERFORMANCE TESTS

A. Commissioning Activities. The commissioning activities include the testing (at first each item of equipment, and later system by system) and commissioning process prior to startup of the entire plant as an integrated operating facility. The commissioning activities and protocols are described in Exhibit H. At the completion of the commissioning activities, the Demo Plant will have achieved Mechanical Completion and will be ready for startup.

B. Startup Test. The Startup Test is a preliminary test of operation of the entire Demo Plant after Mechanical Completion and during which service steam production is measured. The Startup Test will demonstrate significant operational functionality of the Demo Plant although the service steam delivery will be below final design. Pursuant to Exhibit A-5, the Startup test is to be satisfactorily completed not later than March 31, 2011.

The Startup Test will be deemed passed on the first day that aggregate enthalpy input to service steam from the Demo Plant, as measured and adjusted as set forth in Paragraphs F and G, during [*] hourly periods (an hourly period shall mean a sixty minute period within a daily hour, such as 11:00-12:00, but not 11:22 to 12:22) in one day (which [*] hours need not be contiguous) equals [*] MMBtu (which is the energy equivalent of [*] pounds of steam at an average quality of [*] and an average pressure of [*] psia (equivalent to [*] of maximum continuous design rate for a [*] hour period)).

C. Acceptance Test. The Acceptance Test is an operational test of the Demo Plant performance over a test period of [*] successive days during which there is an average of [*] hourly periods (an hourly period shall mean a sixty minute period within a daily hour, such as 11:00-12:00 but not 11:22 to 12:22) during each day with a minimum Direct Normal Insolation ("DNI") value of [*] Wh/sqm. If a day does not achieve said minimum DNI value for the requisite [*] hours, such day shall be ignored and the Acceptance Test continued on the next day with such minimum insolation. Thus the Acceptance Test may continue over a number of calendar days in excess of [*], but all days with the minimum insolation over the requisite hours during the Acceptance Test period shall be included. For the avoidance of doubt, the comparison of actual performance to predicted performance will be made during all operating hours of each day included in the Acceptance Test.

Actual performance will be measured and compared with the performance predicted by the Performance Model (see description of Performance Model in Paragraph H below) based upon actual operating conditions and parameters as set forth in the Performance Model and corrected for Forced Outage periods (see

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said description below in Paragraph H) as measured and adjusted as set forth in Paragraphs F and G. The Acceptance Test will be passed when the Project delivers [*] of the enthalpy at the Design Criteria that the Demo Plant should deliver to the Company's steam distribution system as predicted by the Performance Model when using actual hourly insolation values and other specified parameters as inputs to the Performance Model.

Provider will be able to start and restart the Acceptance Test at its own discretion as many times as needed to pass the Acceptance Test within six (6) months from the successful completion of the Startup Test. At any point prior to completion of said six (6) month period, Provider can request a six (6) month extension of the time allotted to complete the Acceptance Test by providing written notice of such request to Company. Such notice shall include Provider's detailed explanation for requiring the extension and such extension shall be effective upon Company's receipt thereof. If the Acceptance Test has not been passed prior to the expiration of such 6-month extension, Provider may request an additional extension of time. Company, in its sole discretion, will approve or deny Provider's request for such additional extension. Furthermore, in accordance with Exhibit H, Provider shall notify Company prior to starting its first attempt and any subsequent attempt to perform the Acceptance Test.

Determination of satisfactory completion of the Acceptance Test shall be made in the first instance by the Company in consultation with Provider, which shall include an opportunity for Provider to comment upon Company's methodology and data used for analysis prior to such determination. If Company determines that the Acceptance Test was not met, Company shall provide to Provider all data and calculations and assumptions made by Company in making such determination. If Provider disputes Company's determination, such dispute shall be resolved by an Independent Engineer as described in Paragraph J below.

D. Annual Production Test. The Annual Production Test is a test of the Demo Plant in operation over a twelve-month period. During the Annual Production Test, Provider will attempt to meet or exceed the Annual Production Guarantee (as defined below).

Actual performance will be measured and compared with the performance predicted by the Performance Model (see description of Performance Model in Paragraph H below) based upon actual operating conditions and parameters as set forth in the Performance Model and corrected for Forced Outage periods (see said description below in Paragraph H), as measured and adjusted as set forth in Paragraphs F and G. The "Annual Production Guarantee" is the enthalpy at the Design Criteria that the Demo Plant should deliver to the Company's steam distribution system as predicted by the Performance Model when using actual hourly insolation values and other specified parameters as inputs to the Performance Model.

The Annual Production Test will be commenced upon successful completion of

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the Acceptance Test and upon notice by Provider as set forth in Exhibit H and, at its election and notice, any such test commenced may be terminated and a new test commenced. Provider has eighteen months (18) months from successful completion of the Acceptance Test, but not later than thirty-four (34) months from Mechanical Completion, to complete the Annual Production Test.

The Annual Production Guarantee shall be satisfied if either (1) the actual results (as measured and adjusted as set forth in Paragraphs F and G) are not less than 100% of the Performance Model predicted results based upon actual operating conditions and parameters as set forth in the Performance Model and corrected for Forced Outage periods or (2) notwithstanding any other factor (including weather and Forced Outage periods) the aggregate enthalpy input to service steam from the Demo Plant during the Annual Production Test equals or exceeds the Design Output (as defined in Paragraph G below) as measured and adjusted as set forth in Paragraphs F and G.

E. Liquidated Damages for Failure to Satisfy Annual Production Guarantee

If the Annual Production Guarantee is not satisfied, liquidated damages ("Liquidated Damages") shall be payable, subject to the limitations in Section 15 of the Agreement, equal to the positive amount, if any, determined by the following formula:

[*]

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[*]

Upon completion of the Annual Production Test, Company will make a final payment to Provider as set forth in Exhibit B less the aggregated Liquidated Damages, subject to Section 15 of the Agreement. If the Liquidated Damages exceed the final payment, Provider will pay to Company the Liquidated Damages less the final payment, subject to Section 15 of the Agreement.

The willingness of Provider to provide an Annual Production Guarantee is expressly conditioned upon Provider or its Affiliate providing and having complete responsibility for the operation and maintenance for the Demo Plant until completion of the Annual Production Test, subject to Section 13 of the Agreement.

Determination of satisfactory completion of the Annual Production Guarantee shall be made in the first instance by the Company in consultation with Provider, which shall include an opportunity for Provider to comment upon Company's methodology and data used for analysis prior to such determination. If Company determines that the Annual Production Guarantee was not met, Company shall provide to Provider all data and calculations and assumptions made by Company in making such determination. If Provider disputes Company's determination, such dispute shall be resolved by an Independent Engineer as described in Paragraph J below.

F. Operating Conditions Measurement Protocols

Meteorological and operating data to be used for running the Performance Model and determination of the actual and predicted operating results shall be taken from the instruments at the Demo Plant supplied as part of the Work. Said

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instruments shall be calibrated as part of the commissioning process in accordance with the standards set forth in Exhibit A and shall be deemed accurate for purposes of all Tests (as defined below); provided, however, if an instrument demonstrates manifest and material error, the instrument shall be recalibrated in accordance with Prudent Industry Practices at the expense of the party that is then responsible for operations and maintenance (Provider until satisfactory completion of the Startup Test and Company thereafter). Either Party may choose to have an independent party experienced and certified in such activities recalibrate or correct said instruments in accordance with Prudent Industry Practices at its expense, and thereafter the readings on such instruments shall be used for subsequent data determinations.

Specific measurement points for these purposes are as follows (any instrument numbers refer to such instruments on the current P & I Diagrams included as part of Exhibit A-3):

Direct Normal Insolation	Meteorological Station
Wind Speed	Meteorological Station
Ambient Temperature	Meteorological Station
Service Steam Mass Flow Rate (1)	FT-601B
Service Steam Temperature	TT-601B
Service Steam Pressure	PT-601B
Service Water Mass Flow Rate (1)	FT-601C
Service Water Temperature	TT-601C
Service Water Pressure	PT-601C
Feedwater Inlet Temperature (2)	TIT P-602

- (1) In this Exhibit F, references to “service water” and “service steam” are references to the steam and water delivered from the Project to the TEOR (as defined below) system of Chevron, either after they are combined to produce the design 60% quality steam or prior to such combination as the context requires.
- (2) In this Exhibit F, references to “feedwater” or “feedwater inlet” are references to the return water from the TEOR operations that is processed in the Heat Exchanger System to produce the service water/steam combination at 60% quality steam for delivery to the TEOR.

The data collected from the above instruments shall be recorded in real time on a continuous basis and preserved for determination of the predicted and actual results during all tests. The feedwater inlet mass flow rate is assumed to equal the aggregate mass flow rate of the service steam and service water at all times. The above list sets forth the entire data set and the sole measurement points thereof that shall be used for all such determinations.

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G. Adjustments to Design Criteria.

The formulations for the thermodynamic properties of water and steam shall be based upon the latest version of the Formulation for Industrial Use by the International Association for the Properties of Water and Steam, commonly known as IAPWS-IF97 or IAPWS-97. All numbers set forth below shall be adjusted as necessary to reflect any changes to said steam and water property formulation. The term “Test” or “Tests” herein refers individually and collectively to the Startup Test, the Acceptance Test, and the Annual Production Test as the context requires.

The unit of measure for the energy basis evaluation shall be the British Thermal Unit (Btu). The Exhibit A-1 criteria for “Service Steam Output” serve to define an amount of energy to be delivered over the course of a one-year period. By specifying (1) the feedwater inlet temperature, (2) the service steam pressure, service steam temperature, and service steam quality (commonly known as % vapor fraction), and (3) the annual mass flow rate, the total amount of energy to be added to the feedwater can be computed.

[*]

Company’s objective in Thermally Enhanced Oil Recovery (“TEOR”) operation is to deliver latent heat into the oil reservoir, thus the Design Criteria specifies [*] quality steam as the design and operating objective.

Provider’s objective is to provide a design and Demo Plant that will deliver the enthalpy from insolation as predicted by the Performance Model at a steam quality of [*].

In order to determine if the predicted enthalpy delivery at design conditions has been met under operating conditions other than at design conditions, an adjustment to actual enthalpy delivery to design conditions may be required. A number of examples serve to illustrate the determination of such adjustments:

[*]

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[*]

During each hourly measurement period during each Test, the enthalpy delivered to the service steam, on a mass flow basis, shall be calculated and adjusted as necessary to design conditions consistent with the examples set forth above.

H. Performance Model. The Performance Model is an Excel spreadsheet model (refer to Exhibit F-2) prepared by the Provider and verified by the Company that inputs actual meteorological conditions and outputs predicted Demo Plant performance in terms of enthalpy delivered into the service steam. Exhibit F-1 attached hereto is a user manual that further describes the Performance Model.

The Performance Model delivered in connection with the execution of the Agreement shows Design Output at design conditions, with Typical Meteorological Year insolation data and other design parameters. When used to predict performance, actual data will be entered as described in Exhibit F-1, including Forced Outage periods as described below.

Essential to the proper analysis of the Demo Plant performance is a comparison of actual results with predicted results. However, with direct normal solar insolation as the ultimate energy source, the predicted results are a function of actual direct normal insolation, other climate and atmospheric conditions, and the time of year and time of day.

Furthermore, any predicted annual performance shall account for periods when the Project could not operate due to the following certain and limited events (collectively defined as and referred to as "Forced Outage" hours and "Forced Hour" events, or in Exhibit F-1, as "Excuse Hours"): (1) Force Majeure; (2) inability of Company to receive service steam from the Demo Plant at Design Criteria conditions; (3) inability of Company (feedwater) or the City of Coalinga (municipal water) to provide water needed to operate the Demo Plant; (4) wind conditions resulting in shutting down of the solar field; (5) periods when the feedwater temperature is below [*] degrees Fahrenheit or in excess of [*] degrees Fahrenheit; (6) regular and routine maintenance for the Demo Plant, but not in excess of [*] days per year; (7) and forced outages of the Demo Plant (i.e., unplanned, unscheduled maintenance activity resulting in corrective repair or cleaning of equipment to return the Demo Plant to service)). Any daily

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hour in which the Demo Plant does not produce service steam due to a Forced Outage for 20 minutes or more shall be entered as a Forced Outage/Excuse hour for the entire hour as described in Exhibit F-1. A Forced Outage of less than 20 minutes in a daily hour shall be ignored.

The Performance Model is a predicted operating model based on the best technical judgment of Provider, but could be improved based on actual operating data. However, the period of actual operations available to capture that data and analyze the results to produce different engineering estimates is not adequate for purposes of the Tests. Thus Provider and Company agree to use the Performance Model as is (subject to the specific updates referred to below), but either Party may suggest updates to the Model over time for purposes of the Tests, and the other Party agrees to consider such adjustments in good faith, but is under no obligation to agree to any changes in the Performance Model. In any event, the Performance Model used for the Acceptance Test and Annual Production Test, at the design insolation and operating conditions, must and shall predict the design enthalpy delivery to Chevron at the Design Criteria operating conditions. More specifically, the final Performance Model, pursuant to Provider's response to Company's original request for proposal, shall predict an annual enthalpy output equivalent to a service steam output of at least [*]

Because the final solar field layout has not been completed, the Parties agree that the "Spillage" and "Heliostat Efficiency" in the Performance Model may be changed by Provider to reflect the final design so long as the criteria set forth in the immediately preceding paragraph is met. Such adjustments are expected to result in minor refinements that could result in small changes in the predicted results during certain hours of the year, with such results offsetting one another and resulting in the same predicted output. Provider shall deliver any such updated Performance Model to Company for its review to verify that the foregoing criteria are met not less than ninety (90) days in advance of the commencement of the Acceptance Test.

I. Additional Agreements Concerning the Tests

The Parties acknowledge that an Affiliate of Provider is expected to provide Operation and Maintenance services for the Demo Plant during the period of the Acceptance Test and Annual Production Test. As set forth in Exhibit H, Provider is to provide supervision for such Tests.

Company agrees to cooperate during the completion of such Tests and to not interfere in the running of such Tests so long as such operation and maintenance

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is performed consistent with the standards set forth in Exhibit A-4. In particular, it is important to Provider's obligations (and consistent with Company's interests) that the control system be operated to produce [*] quality steam, that the Demo Plant operate during all hours in which insolation is adequate to do so, that any maintenance be done during periods which minimize lost output, and that the Demo Plant be operated and maintained so as to maximize aggregate thermal output consistent with the standards set forth in Exhibit A-4. These shared goals shall be implemented by the Operation and Maintenance operator during the period of the Tests.

The Parties further acknowledge that the proper analysis of the Tests requires the capturing and preservation of necessary data during real time, including a log of Forced Outage hours and other events that may affect Performance Model input. The Parties agree to cooperate so that such data is collected and available to both Parties on a daily basis and, to the extent possible, to agree upon an automated system of analysis of operating data using the data logging software and hardware available at the Demo Plant.

Company agrees that if Provider needs to add Heliostats to the Project to meet the requirements of any Test, it may add such Heliostats within the boundaries of the Site, subject to all of the provisions of the Agreement concerning construction activities at the Site.

J. Certification by Independent Engineer.

(a) In the event that Provider disputes Company's determination regarding successful completion of the Acceptance Test and/or the Annual Production Test, Company and Provider shall mutually select an Independent Engineer to provide a certification with respect to Provider's compliance with the terms of the Acceptance Test and/or Annual Production Test, as applicable (collectively, the "Tests" and severally a "Test").

(b) The Independent Engineer shall review operational and weather data, including DNI levels. Such data shall be input into the Performance Model, which will yield the predicted enthalpy production at such operating conditions. A description of the Performance Model and its use and inputs is included in Exhibit F-1.

(1) Provider and Company shall provide access to any and all information and data concerning the Demo Plant reasonably deemed relevant by the Independent Engineer. The Independent Engineer shall discuss its preliminary conclusions with Provider and Company and, to the extent feasible, resolve any disagreements among itself and Provider and Company concerning interpretation of operating data or running of the Performance Model so that any data gathering difficulties or Performance Model disparities may be corrected immediately. The Independent

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Engineer shall prepare a preliminary written report and submit it to both parties for review and comment as promptly as possible after the end of each Test. The Independent Engineer shall also meet with the parties (jointly at the request of either party) to discuss its preliminary conclusions within the fifteen day period following its preliminary report.

(2) The Independent Engineer shall complete its review and submit its final report to Provider and Company not more than thirty days after delivery of its preliminary report. The final report shall include a copy of any comments submitted by Provider and Company and the Independent Engineer's response thereto, which shall include any necessary technical analysis required to support any technical conclusions. Such report shall state the extent to which the Test has or has not been met. Along with such report, the Independent Engineer shall provide a certification to Provider and Company, and to any other person identified by Provider and Company, setting forth the conclusions in said report.

(c) The certification by the Independent Engineer shall conclusively determine as between Provider and Company and any of their successors or assigns, the extent to which the applicable Test has or has not been met, and neither Provider nor Company shall contest the conclusion stated in said certification in any other proceeding.

(d) Provider and Company through their duly authorized agents or representatives shall be entitled, at their expense, to audit all information and calculations concerning the Tests. Such information will be monitored or caused to be monitored by Provider and Company on a daily basis, and shall be available to Provider, Company, and the Independent Engineer on a daily basis at the Project Site.

(e) The fees and expenses of the Independent Engineer shall be paid equally by Provider and Company.

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EXHIBIT F-1
PERFORMANCE MODEL USER MANUAL

Attached.

USER MANUAL - PERFORMANCE
REVISIONS

<u>REV</u>	<u>DESCRIPTION</u>	<u>BY</u>	<u>DATE</u>	<u>APP</u>
1	User Manual – Chevron Performance	SW	08Dec08	

Written by: Susan Walzer

Date: Nov 23, 2008

Checked by:

Eng Dept App:

Proj. Mgr:

Doc Control:

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Title: Model User Manual



 LUZ II A BrightSource Energy Company	Kiryat Mada 11 - Amot Bldg #6 P.O. Box 45220 Har Hotzvim Jerusalem 91450 Israel Ph: +972 (0)77-202-5000 Fax: +972 (0)2 571-1059		Project	08 Chevron, Exhibit F-1 to MSA					
			File Name	08-081208 Performance Manual					
			Sheet	1	of	8	Rev	2	

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1. Instructions

This document describes how to use the Workbook entitled 08 081201 Performance Rev2, to provide an annual performance projection for the Chevron Solar Power Plant, for a given year. Meteorological data (solar and wind) will be a required input every year. Other parameters such as parasitic will change only as necessary. Below the instructions, a description of each spreadsheet is provided.

The first five spreadsheets have red tabs. The red tabs indicate that these spreadsheets may have input information to be updated by the user with current data, to provide the required projection information for a given year.

1. The first red tabbed (input) spreadsheet labeled Summary, provides general information and a table of the projected monthly thermal output. Data is not changed in this spreadsheet on a regular basis, but as mutually agreed by Chevron and BrightSource.
2. The second red tabbed spreadsheet provides input concerning hours excluded from BrightSource liability, also known as "Excuse Hours". This spreadsheet has a table in a 13 x 365 matrix to represent each possible working hour of the day (from 6:00 to 18:00). The default value is 100%. For each hour where the BrightSource liability is reduced or negated a value from 0% to 100%, should replace the 100% for that hour.
3. The third red tabbed spreadsheet provides average hourly direct normal radiation [dnr] in units of wh/sqm. The default values are those that have been generated to simulate the annual average of tmy2 data from Daggett and Fresno. To calculate the expected production for a given year, a table of the measured dnr from the Chevron plant should be inserted. The table needs to be in the format of 365 (days) x 24 (hours)
4. The fourth red tabbed spreadsheet provides average hourly wind data in units of meters/second. As with the dnr, to calculate the expected production for a given year, a table of the measured wind (m/sec) from the Chevron plant should be inserted. The table needs to be in the format of 365 (days) x 24 (hours)
5. The fifth red tabbed spreadsheet provides average hourly ambient temperature (°C). As with the dnr and wind speed, a table of the measured wind (m/sec) from the Chevron plant should be inserted to calculate the expected production for a given year. The table needs to be in the format of 365 (days) x 24 (hours).

In addition to the five spreadsheets with the input factors there are an additional 10 spreadsheets that are used to calculate the projected production from the Chevron Plant. The calculations are based on hourly calculations over the year. All the spreadsheets are described briefly on the following pages.

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2. Summary

This spreadsheet is not in 24 by 365 matrix format. Basic input parameters are shown and there are tables outlining annual summary by months of the output in MWth.

Below is a list of input parameters, as they appear in the model, for the Chevron Project.

Name of Site, Chevron Coalinga

Location of the field, noted for reference only. It has no bearing on calculations

[*]

[*]

[*]

[*]

[*]

[*]

HelioStat Factor (ex. Availability, Accuracy)

This number is an overall safety factor for the heliostats.

[*]

Area of Heliostat

Square meters (sqm) of reflecting surface per heliostat

[*]

Number of Heliostats in the Field

The number of heliostat in the solar field

[*]

PB minimum Load (% out of 100)

The minimum load under which the plant can operate

[*]

PB Nominal Capacity MWt (Net)


[*]

Plant Start-Up

Thermal energy (MWth) required to start plant operations

[*]

[*]

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Output


Below is a sample output (subject to change) as shown in the summary spreadsheet. The values will be recalculated every time new meteorological data is provided (dnr, wind, temperature)

Insolation Modified Lost**Hills****Based on Daggett and Fresno Annual Average**

Chevron	[*]	Monthly MWht	Includes Outage of <u>X</u> Days:
---------	-----	-----------------	--

Below is the table of the parasitic energy, used to calculate the hourly energy provided by Chevron to the power plant depending on load. It is taken from the Baran calculations (Ref: '08-GE-M-L-304 Process Equipment List RevN'.)

[*]

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3. Excuse Hr

This spreadsheet has a table of daylight hours 6:00 to 18:00 for 365 days a year, showing the BrightSource responsibility, on an hourly basis, for production. Initially the table indicates that BrightSource is required to produce 100% of the warrantee output for each hour. When calculating the projection for a given year numbers may be replaced with values from 0% to 100%.

4. Insolation

This spreadsheet has a table in a 24 x 365 providing insolation (dnr), on an average hourly basis in watts/sqm. Initially this spreadsheet contains the typical dnr expected. This spreadsheet has a red tab marking it as a sheet where data can be input. To check generated output against expectations, measured data is input to this spreadsheet.

5. Wind

This spreadsheet has a table in a 24 x 365 matrix providing average hourly wind speeds in meters / second. This spreadsheet has a red tab indicating an input sheet. Measured data can be input, to make projections for a given month / year.

6. Temperature

This spreadsheet has a table in a 24 x 365 matrix providing average hourly ambient temperature degrees Celsius. This spreadsheet has a red tab indicating an input sheet. Measured data can be input, to make projections for a given month / year. This is the last of four red tabbed spreadsheets, where data can be expected to change on a regular basis.

7. Consumer Input


The spreadsheet has a table in a 24 x 365 matrix where the consumer input for each hour is calculated based on the operating status of the plant for that hour. The correct amount of consumer input is chosen from the Summary spreadsheet, depending on the load (100%, 75%, 50, 25, Start-Up, Offline)

8. Summary-Hourly

This spreadsheet generates hourly parameters of the plant. The information is provided in a vertical fashion, where each of the 8,760 hours of the year has a line with calculated information, about that hour.

9. MWtNet

This spreadsheet has a table in a 24 x 365 matrix that provides the hourly output from the solar plant to the consumer (Chevron). The basic formula for calculating the thermal input multiplies the load (as described in the next paragraph) by the nominal capacity of the plant (29MW) and the consumer input. If the temperature is above [*], then the plant

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load is limited [*]. This is an extreme case, that hasn't been noted in the temperatures measured in the area.

10. Load

This spreadsheet has a table in a 24 x 365 matrix where load of the plant is calculated on an hourly basis from 0-1, where 1 would be a full load (29 MWt, net). The hourly load is calculated as follows:

$\text{Load} = \text{MIN} ((\text{PotThermal} - \text{StartUp} - \text{Extra Thermal}) / \text{Capacity}, 1)$

PotThermal = the amount of potential thermal energy that the field could produce (MW)

StartUp = the amount of energy required for start-up (MW)

ExtraTherm = Amount of energy that could be produced by the solar field, above the total amount of energy that can be used by the plant (MW)

Capacity = Nominal capacity of the plant (MW)

11. [*]


[*]

12. [*]

[*]

13. [*]

[*]

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Potential Thermal = (IF(OR(AND (Insolation < 400wh/sqm, Insolation for previous hr<400wh/sqm), Wind>12m/sec),0,MAX (SolarEfficiency * HelioFactor * Insolation * field * Contingencies * Spillage – heat losses ,0))) * ExcuseHr (from 0-100%)

14. [*]


[*]

15. [*]

[*]

16. [*]

[*]

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 A BrightSource Energy Company	Kiryat Mada 11 - Amot Bldg #6 P.O. Box 45220 Har Hotzvim Jerusalem 91450 Israel Ph: +972 (0)77-202-5000 Fax: +972 (0)2 571-1059		Project	08 Chevron, Exhibit F-1 to MSA					
			File Name	08-081208 Performance Manual					
			Sheet	8	of	8	Rev	2	

* Confidential Treatment Request

Confidential

Execution Copy

**EXHIBIT F-2
PERFORMANCE MODEL**

The agreed upon Performance Model is in an Excel spreadsheet file format. Attached hereto is the first page of Sheet 1 "Summary." The agreed upon form of the Performance Model was distributed by Counsel to Provider to the Company via email on December 8, 2008 and reviewed by the Company and its outside consultant. On a telephone conference on December 10 with representatives of the Company and Provider, the form of Model distributed on December 8 was approved as the Model referred to in Exhibit F. No further distribution or attachment to this Agreement of the Performance Model will or has been made. This description is for the purposes of identification of the final version of the Performance Model that is applicable to the Agreement.

Confidential

Execution Copy

[*]

* Confidential Treatment Requested

Confidential

Execution Copy

EXHIBIT G
IP ESCROW AGREEMENT

Attached.

EFFECTIVE DATE: DECEMBER 17, 2008

DEPOSIT ACCOUNT NUMBER: _____

THREE-PARTY ESCROW SERVICE AGREEMENT**1. Introduction.**

This Three Party Escrow Service Agreement (the “**Agreement**”) is entered into by and between BrightSource Industries (Israel) Ltd. (the “**Depositor**”), and by Chevron Technology Ventures, a division of Chevron U.S.A. Inc. (the “**Beneficiary**”), and by Iron Mountain Intellectual Property Management, Inc. (“**Iron Mountain**”). Depositor, Beneficiary, and Iron Mountain may be referred to individually as a “Party” or collectively as the “Parties” throughout this Agreement.

(a) The use of the term services in this Agreement shall refer to Iron Mountain services that facilitate the creation, management, and enforcement of software or other technology escrow accounts as described in Exhibit A attached hereto (“**Services**”). A Party shall request Services under this Agreement by submitting a work request for certain Iron Mountain Services (“**Work Request**”) via written instruction or the online portal maintained at the website located at www.ironmountainconnect.com, or other websites owned or controlled by Iron Mountain that are linked to that website (collectively the “**Iron Mountain Website**”).

(b) Beneficiary and Depositor; BrightSource Energy, Inc. (“**BSE**”), Depositor’s parent; and BrightSource Construction Management, Inc. (“**Provider**”), Depositor’s affiliate and BSE’s subsidiary; have entered into a Master Services Agreement (the “**MSA**”) pursuant to which Depositor has conveyed certain intellectual property rights to Beneficiary and its Affiliates and agreed to enter into this Escrow Agreement. All capitalized terms used in this Agreement but not otherwise defined herein shall have the meanings ascribed to them in the MSA.

2. License Grant; Depositor Responsibilities and Representations.

- (a) Depositor has granted to Beneficiary and its Affiliates an irrevocable, perpetual, transferable, assignable, non-exclusive, royalty free license, with right to modify and have modified, copy, and use, the Background IP owned by Depositor and Provider IP solely in connection with and only to the extent necessary for the operation, maintenance, repair, improvement, replacement (which shall included, without limitation, repair and replacement of equipment, materials, components and parts), restoration, expansion (expansion only in connection with Beneficiary’s exercise of its rights under Section 8(a)(iii) of the MSA) of the Project (such portion, the “**Project IP**”, and said license, the “**License**”), and the right to use the Project IP for training Beneficiary’s employees and subcontractors in connection therewith. Depositor and Beneficiary acknowledge that Iron Mountain has no knowledge of the terms and conditions contained in the License or the MSA, and that Iron Mountain’s only obligations shall be as set forth herein or in any other writing signed by Iron Mountain, Depositor and Beneficiary.
- (b) Depositor shall deposit in escrow with Iron Mountain source code necessary to utilize the Project IP for the purposes of the License. Depositor shall make an initial deposit that is complete and functional of all proprietary technology and other materials covered under this Agreement (“**Deposit Material**”) to Iron Mountain within thirty (30) days of the Effective Date. Depositor shall also update Deposit Material semi-annually, if needed, during the Term of this Agreement provided a minimum of one (1) complete and functional copy of Deposit Material is deposited with Iron Mountain at all times. At the time of each deposit or update, Depositor will provide an accurate and complete description of all Deposit Material sent to Iron Mountain using the form attached hereto as Exhibit B.
- (c) Depositor represents that it lawfully possesses all Deposit Material provided to Iron Mountain under this Agreement free of any liens or encumbrances as of the date of their deposit. Any Deposit Material liens or encumbrances made after their deposit will not prohibit, limit, or alter the rights and obligations of Iron Mountain under this Agreement. Depositor warrants that with respect to the Deposit Material, Iron Mountain’s proper administration of this Agreement will not violate the rights of any third parties.
- (d) Depositor represents that all Deposit Material is readable and useable in its then current form; if any portion of such Deposit Material is encrypted, the necessary decryption tools and keys to read such material are deposited contemporaneously.
- (e) Depositor agrees, upon request by Iron Mountain, in support of Beneficiary’s request for verification Services, to promptly complete and return the Escrow Deposit Questionnaire attached hereto as Exhibit Q. Depositor consents to Iron Mountain’s performance of any level(s) of verification Services described in Exhibit A attached hereto and Depositor further consents to Iron Mountain’s use of a subcontractor to perform verification Services. Any such subcontractor shall be bound by the same confidentiality obligations as Iron Mountain and shall not be a direct competitor to either Depositor or Beneficiary. Iron Mountain shall be responsible for the delivery of Services of any such subcontractor as if Iron Mountain had performed the Services. Depositor represents that all Deposit Material is

provided with all rights necessary for Iron Mountain to verify such proprietary technology and materials upon receipt of a Work Request for such Services or agrees to use commercially reasonable efforts to provide Iron Mountain with any necessary use rights or permissions to use materials necessary to perform verification of the Deposit Material. Depositor agrees to reasonably cooperate with Iron Mountain by providing reasonable access to its technical personnel for verification Services whenever reasonably necessary.

3. Beneficiary Responsibilities and Representations.

- (a) Beneficiary acknowledges that, as between Iron Mountain and Beneficiary, Beneficiary assumes all responsibility for the completeness and functionality of all Deposit Material.

- (b) Beneficiary may submit a verification Work Request to Iron Mountain for one or more of the Services defined in Exhibit A attached hereto and further consents to Iron Mountain's use of a subcontractor if needed to provide such Services. Beneficiary warrants that Iron Mountain's use of any materials supplied by Beneficiary to perform the verification Services described in Exhibit A is lawful and does not violate the rights of any third parties.

4. Iron Mountain Responsibilities and Representations.

- (a) Iron Mountain agrees to use commercially reasonable efforts to provide the Services requested by Authorized Person(s) (as identified in the "Authorized Person(s)/Notices Table" below) representing the Depositor or Beneficiary in a Work Request. Iron Mountain may reject a Work Request (in whole or in part) that does not contain all required information at any time upon notification to the Party originating the Work Request. Upon receiving all required information, Iron Mountain shall then promptly complete any such rejected Work Request.
- (b) Iron Mountain will conduct a visual inspection upon receipt of any Deposit Material and associated Exhibit B. If Iron Mountain determines that the Deposit Material does not match the description provided by Depositor represented in Exhibit B attached hereto, Iron Mountain will notify Depositor of such discrepancies and notate such discrepancy on the Exhibit B.
- (c) Iron Mountain will provide notice to the Beneficiary of all Deposit Material that is accepted and deposited into the escrow account under this Agreement.
- (d) Iron Mountain will work with a Party who submits any verification Work Request for Deposit Material covered under this Agreement to either fulfill any standard verification Services Work Request or develop a custom Statement of Work ("SOW"). Iron Mountain and the requesting Party will mutually agree in writing to an SOW on the following terms and conditions that include but are not limited to: description of Deposit Material to be tested; description of Verification testing; requesting Party responsibilities; Iron Mountain responsibilities; Service Fees; invoice payment instructions; designation of the paying Party; designation of authorized SOW representatives for both the requesting Party and Iron Mountain with name and contact information; and description of any final deliverables prior to the start of any fulfillment activity. After the start of fulfillment activity, each SOW may only be amended or modified in writing with the mutual agreement of both Parties, in accordance with the change control procedures set forth therein.
- (e) Iron Mountain will hold and protect Deposit Material in physical or electronic vaults that are either owned or under the control of Iron Mountain, unless otherwise agreed to by the Parties.
- (f) Upon receipt of written instructions by both Depositor and Beneficiary, Iron Mountain will permit the replacement or removal of previously submitted Deposit Material. The Party making such request shall be responsible for getting the other Party to approve the joint instructions.

5. Payment.

The Party responsible for payment designated in Exhibit A ("**Paying Party**") shall pay to Iron Mountain all fees as set forth in the Work Request ("**Service Fees**"). Except as set forth below, all Service Fees are due within thirty (30) calendar days from the date of invoice in U.S. currency and are non-refundable. Iron Mountain may update Service Fees with a ninety (90) calendar day written notice to the Paying Party during the term of this Agreement. The Paying Party is liable for any taxes related specifically to Services purchased under this Agreement or shall present to Iron Mountain an exemption certificate acceptable to the taxing authorities. Applicable taxes shall be billed as a separate item on the invoice. Depositor and Beneficiary agree that if this Agreement terminates during the term for any reason, other than for the fault of Iron Mountain, all prepaid fees shall be non-refundable. Any Service Fees not collected by Iron Mountain when due shall bear interest until paid at a rate of one percent (1%) per month (12% per annum) or the maximum rate permitted by law, whichever is less. Notwithstanding, the non-performance of any obligations of Depositor to deliver Deposit Material under the License Agreement or this Agreement, Iron Mountain is entitled to be paid all Service Fees that accrue during the Term of this Agreement.

6. Term and Termination.

- (a) The "**Term**" of this Agreement is for a period of one (1) year from the Effective Date ("**Initial Term**") and will automatically renew for additional one (1) year terms ("**Renewal Term**") and continue in full force and effect unless earlier terminated as follows : (i) Depositor and Beneficiary provide Iron Mountain with sixty (60) days' prior written joint notice of their intent to terminate this Agreement; (ii) Beneficiary provides Iron Mountain and Depositor with sixty (60) days' prior written notice of its intent to terminate this Agreement; (iii) the Agreement terminates as provided in Exhibit C, Section 5 of this Agreement or under another provision of this Agreement; or (iv) any time after the first anniversary of the Effective Date, Iron Mountain provides a sixty (60) days' prior written

notice to the Depositor and Beneficiary of Iron Mountain's intent to terminate this Agreement. If the Effective Date is not specified above, then the last date noted on the signature blocks of this Agreement shall be the Effective Date.

- (b) Unless the express terms of this Agreement provide otherwise, upon termination of this Agreement, Iron Mountain shall return the Deposit Material to the Depositor. If reasonable attempts to return the Deposit Material to Depositor are unsuccessful, Iron Mountain shall destroy the Deposit Material.
- (c) In the event of the nonpayment of undisputed Service Fees owed to Iron Mountain, Iron Mountain shall provide all Parties to this Agreement with written notice of Iron Mountain's intent to terminate this Agreement. Any Party to this Agreement shall have the right to make the payment to Iron Mountain to cure the default. If the past due payment is not received in full by Iron Mountain within thirty (30) calendar days of the date of such written notice, then Iron Mountain shall have the right to terminate this

Agreement at any time thereafter by sending written notice to all Parties, and Iron Mountain shall return all Deposit Materials to Depositor, at Depositor's cost, in accordance with Section 6(b) of this Agreement. Iron Mountain shall have no obligation to perform the Services under this Agreement (except those obligations that survive termination of this Agreement) so long as any undisputed Service Fees due Iron Mountain under this Agreement remain unpaid.

7. General Indemnity.

Subject to Section 10 and 11, each Party shall defend, indemnify and hold harmless the others, their corporate affiliates and their respective officers, directors, employees, and agents and their respective successors and assigns from and against any and all claims, losses, liabilities, damages, and expenses (including, without limitation, reasonable attorneys' fees), arising under this Agreement from the negligent or intentional acts or omissions of the indemnifying Party or its subcontractors, or the officers, directors, employees, agents, successors and assigns of any of them.

8. Warranties.

- (a) IRON MOUNTAIN WARRANTS ANY AND ALL SERVICES PROVIDED HEREUNDER SHALL BE PERFORMED IN A WORKMANLIKE MANNER. EXCEPT AS SPECIFIED IN THIS SECTION, ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS, AND WARRANTIES INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, SATISFACTORY QUALITY, AGAINST INFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE, ARE HEREBY EXCLUDED TO THE EXTENT ALLOWED BY APPLICABLE LAW. AN AGGRIEVED PARTY MUST NOTIFY IRON MOUNTAIN PROMPTLY OF ANY CLAIMED BREACH OF ANY WARRANTIES AND SUCH PARTY'S SOLE AND EXCLUSIVE REMEDY FOR BREACH OF WARRANTY SHALL BE RETURN OF THE PORTION OF THE FEES PAID TO IRON MOUNTAIN BY PAYING PARTY FOR SUCH NON-CONFORMING SERVICES. THIS DISCLAIMER AND EXCLUSION SHALL APPLY EVEN IF THE EXPRESS WARRANTY AND LIMITED REMEDY SET FORTH ABOVE FAILS OF ITS ESSENTIAL PURPOSE. THE WARRANTY PROVIDED IS SUBJECT TO THE LIMITATION OF LIABILITY SET FORTH IN THIS AGREEMENT.
- (b) Depositor warrants that all Depositor information provided hereunder is accurate and reliable and undertakes to promptly correct and update such Depositor information during the Term of this Agreement.
- (c) Beneficiary warrants that all Beneficiary information provided hereunder is accurate and reliable and undertakes to promptly correct and update such Beneficiary information during the Term of this Agreement.
- (d) Ownership Warranty. Depositor warrants that it is the owner or legal custodian of the Deposit Material and has full authority to store the Deposit Material and direct their disposition in accordance with the terms of this Agreement. Depositor shall reimburse Iron Mountain for any expenses reasonably incurred by Iron Mountain (including reasonable legal fees) by reason of Iron Mountain's compliance with the instructions of Depositor in the event of a dispute concerning the ownership, custody or disposition of Deposit Material stored by Depositor with Iron Mountain.

9. Confidential Information.

Iron Mountain shall use the same degree of care to protect the confidentiality of the Deposit Material as it uses to protect its own confidential information, but in no case less than reasonable care. Except as provided in this Agreement Iron Mountain shall not use or disclose the Deposit Material. Iron Mountain shall not disclose the terms of this Agreement to any third Party. If Iron Mountain receives a subpoena or any other order from a court or other judicial tribunal pertaining to the disclosure or release of the Deposit Material, Iron Mountain will notify the Parties to this Agreement unless prohibited by law. After notifying the Parties, Iron Mountain may comply in good faith with such order. It shall be the responsibility of Depositor or Beneficiary to challenge any such order; provided, however, that Iron Mountain does not waive its rights to present its position with respect to any such order. Iron Mountain will cooperate with the Depositor or Beneficiary, as applicable, to support efforts to quash or limit any subpoena, at such party's expense. Any party requesting additional assistance shall pay Iron Mountain's standard charges or as quoted upon submission of a detailed request.

10. Limitation of Liability.

NOTWITHSTANDING ANYTHING ELSE IN THIS AGREEMENT, ALL LIABILITY, IF ANY, WHETHER ARISING IN CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, OF ANY PARTY TO THIS AGREEMENT SHALL BE LIMITED TO THE AMOUNT EQUAL TO ONE YEAR OF FEES PAID OR OWED TO IRON MOUNTAIN UNDER THIS AGREEMENT. IF CLAIM OR LOSS IS MADE IN RELATION TO A SPECIFIC

DEPOSIT OR DEPOSITS, SUCH LIABILITY SHALL BE LIMITED TO THE FEES RELATED SPECIFICALLY TO SUCH DEPOSITS. THIS LIMIT SHALL NOT APPLY TO ANY PARTY FOR: (I) ANY CLAIMS OF INFRINGEMENT OF ANY PATENT, COPYRIGHT, OR TRADEMARK; (II) LIABILITY FOR DEATH OR BODILY INJURY; (III) PROVEN THEFT; OR (IV) PROVEN GROSS NEGLIGENCE OR WILLFUL MISCONDUCT.

11. Consequential Damages Waiver.

IN NO EVENT SHALL ANY PARTY TO THIS AGREEMENT BE LIABLE TO ANOTHER PARTY FOR ANY INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, LOST PROFITS OR LOST DATA OR INFORMATION, ANY COSTS OR EXPENSES FOR THE PROCUREMENT OF SUBSTITUTE SERVICES, OR ANY OTHER INDIRECT DAMAGES, WHETHER

ARISING IN CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE EVEN IF THE POSSIBILITY THEREOF MAY BE KNOWN IN ADVANCE TO ONE OR MORE PARTIES.

12. **General.**

- (a) Incorporation of Work Requests. All valid Depositor and Beneficiary Work Requests are incorporated into this Agreement.
- (b) Purchase Orders. In the event that the Paying Party issues a purchase order or other instrument used to pay Service Fees to Iron Mountain, any terms and conditions set forth in the purchase order which constitute terms and conditions which are in addition to those set forth in this Agreement or which establish conflicting terms and conditions to those set forth in this Agreement are expressly rejected by Iron Mountain.
- (c) Right to Make Copies. Iron Mountain shall have the right to make copies of all Deposit Material as reasonably necessary to perform the Services. Iron Mountain shall copy all copyright, nondisclosure, and other proprietary notices and titles contained on Deposit Material onto any copies made by Iron Mountain. Any copying expenses incurred by Iron Mountain as a result of a Work Request to copy will be borne by the Party requesting the copies. Iron Mountain may request Depositor's reasonable cooperation in promptly copying Deposit Material in order for Iron Mountain to perform this Agreement.
- (d) Choice of Law. The validity, interpretation, and performance of this Agreement shall be controlled by and construed under the laws of the State of California, USA, as if performed wholly within the state and without giving effect to the principles of conflicts of laws.
- (e) Authorized Person(s). Depositor and Beneficiary must each authorize and designate one person whose actions will legally bind such party ("Authorized Person" who shall be identified in the Authorized Persons (s) Notices Table of this Agreement) and who may manage the Iron Mountain escrow account through the Iron Mountain website or written instruction. The Authorized Person for each the Depositor and Beneficiary will maintain the accuracy of their name and contact information provided to Iron Mountain during the term of this Agreement.
- (f) Right to Rely on Instructions. Iron Mountain may act in reliance upon any instruction, instrument, or signature reasonably believed by Iron Mountain to be genuine and from an Authorized Person(s), officer, or other employee of a Party. Iron Mountain may assume that such representative of a Party to this Agreement who gives any written notice, request, or instruction has the authority to do so. Iron Mountain will not be required to inquire into the truth or evaluate the merit of any statement or representation contained in any notice or document reasonably believed to be from such representative. With respect to Release and Destruction of Deposit Materials, Iron Mountain shall rely on an Authorized Person(s).
- (g) Force Majeure. No Party shall be liable for any delay or failure in performance due to events outside the defaulting Party's reasonable control, including without limitation acts of God, earthquake, labor disputes, shortages of supplies, riots, war, acts of terrorism, fire, epidemics, or delays of common carriers or other circumstances beyond its reasonable control. The obligations and rights of the excused Party shall be extended on a day-to-day basis for the time period equal to the period of the excusable delay.
- (h) Notices. All notices regarding Exhibit C (release) shall be sent by commercial express mail or other commercially appropriate means that provide prompt delivery and require proof of delivery. All other correspondence, including invoices, payments, and other documents and communications, may be sent electronically or via regular mail. The Parties shall have the right to rely on the last known address of the other Parties. Any correctly addressed notice to last known address of the other Parties that is relied on herein and that is refused, unclaimed, or undeliverable because of an act or omission of the Party to be notified as provided herein shall be deemed effective as of the first date that said notice was refused, unclaimed, or deemed undeliverable by electronic mail, the postal authorities by mail, through messenger or commercial express delivery services.
- (i) No Waiver. No waiver of rights under this Agreement by any Party shall constitute a subsequent waiver of this or any other right under this Agreement.
- (j) Assignment. No assignment of this Agreement by Depositor or Beneficiary or any rights or obligations of Depositor or Beneficiary under this Agreement is permitted without the written consent of Iron Mountain, which shall not be unreasonably withheld or delayed. Iron Mountain shall have no obligation in performing this Agreement to recognize any successor or assign of Depositor or Beneficiary unless Iron Mountain receives clear, authoritative and conclusive written evidence of the change of parties.
- (k) Severability. In the event any of the terms of this Agreement become or are declared to be illegal or otherwise unenforceable by any court of competent jurisdiction, such term(s) shall be null and void and shall be deemed deleted from this Agreement. All remaining terms of this Agreement shall remain in full force and effect. If this

paragraph becomes applicable and, as a result, the value of this Agreement is materially impaired for any Party, as determined by such Party in its sole discretion, then the affected Party may terminate this Agreement by written notice to the others.

- (l) Independent Contractor Relationship. Depositor and Beneficiary understand, acknowledge, and agree that Iron Mountain's relationship with Depositor and Beneficiary will be that of an independent contractor and that nothing in this Agreement is intended to or should be construed to create a partnership, joint venture, or employment relationship.
- (m) Attorneys' Fees. In any suit or proceeding between the Parties relating to this Agreement, the prevailing Party will have the right to recover from the other(s) its costs and reasonable fees and expenses of attorneys, accountants, and other professionals incurred in connection with the suit or proceeding, including costs, fees and expenses upon appeal, separately from and in addition to any other

amount included in such judgment. This provision is intended to be severable from the other provisions of this Agreement, and shall survive and not be merged into any such judgment.

- (n) No Agency. No Party has the right or authority to, and shall not, assume or create any obligation of any nature whatsoever on behalf of the other Parties or bind the other Parties in any respect whatsoever.
- (o) Disputes. Any dispute, difference or question relating to or arising among any of the Parties concerning the construction, meaning, effect or implementation of this Agreement or the rights or obligations of any Party hereof will be submitted to, and settled by arbitration by a single arbitrator chosen by the corresponding Regional Office of the American Arbitration Association in accordance with the Commercial Rules of the American Arbitration Association. The Parties shall submit briefs of no more than 10 pages and the arbitration hearing shall be limited to two (2) days maximum. The arbitrator shall apply California law. Unless otherwise agreed by the Parties, arbitration will take place in San Francisco, California, U.S.A. Any court having jurisdiction over the matter may enter judgment on the award of the arbitrator. Service of a petition to confirm the arbitration award may be made by regular mail or by commercial express mail, to the attorney for the Party or, if unrepresented, to the Party at the last known business address. If however, Depositor or Beneficiary refuse to submit to arbitration, the matter shall not be submitted to arbitration and Iron Mountain may submit the matter to any court of competent jurisdiction for an interpleader or similar action. Unless adjudged otherwise, any costs of arbitration incurred by Iron Mountain, including reasonable attorney's fees and costs, shall be divided equally and paid by Depositor and Beneficiary.
- (p) Regulations. All Parties are responsible for and warrant, to the extent of their individual actions or omissions, compliance with all applicable laws, rules and regulations, including but not limited to: customs laws; import; export and re-export laws; and government regulations of any country from or to which the Deposit Material may be delivered in accordance with the provisions of this Agreement.
- (q) No Third Party Rights. This Agreement is made solely for the benefit of the Parties to this Agreement and their respective permitted successors and assigns, and no other person or entity shall have or acquire any right by virtue of this Agreement unless otherwise agreed to by all the parties hereto.
- (r) Entire Agreement. The Parties agree that this Agreement, which includes all the Exhibits attached hereto and all valid Work Requests submitted by the Parties, is the complete agreement between the Parties hereto concerning the subject matter of this Agreement and replaces any prior or contemporaneous oral or written communications between the Parties. There are no conditions, understandings, agreements, representations, or warranties, expressed or implied, which are not specified herein. Each of the Parties herein represents and warrants that the execution, delivery, and performance of this Agreement has been duly authorized and signed by a person who meets statutory or other binding approval to sign on behalf of its business organization as named in this Agreement. This Agreement may only be modified by mutual written agreement of the Parties.
- (s) Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.
- (t) Survival. Sections 6 (Term and Termination), 7 (General Indemnity), 8 (Warranties), 9 (Confidential Information), 10 (Limitation of Liability) 11 (Consequential Damages Waiver), and 12 (General) of this Agreement shall survive termination of this Agreement or any Exhibit attached hereto.

NOTE: SIGNATURE BLOCKS FOLLOW ON THE NEXT PAGE

Note: If contracting electronically via the online portal, clicking the “I Accept” button displayed as part of the ordering process, evidences agreement to the preceding terms and conditions (the “**Agreement**”). If you are entering into this Agreement via the online portal on behalf of a company or other legal entity, you represent that you have the authority to bind such entity to these terms and conditions, in which case the terms “you” or “your” shall refer to such entity. If you do not have such authority, or if you do not agree with these terms and conditions, you must select the “I Decline” button.

DEPOSITOR**BENEFICIARY**

**COMPANY NAME: BRIGHTSOURCE INDUSTRIES
(ISRAEL) LTD.**

**COMPANY NAME: CHEVRON TECHNOLOGY VENTURES,
a division of Chevron U.S.A. Inc.**

SIGNATURE: _____

SIGNATURE: _____

PRINT NAME: _____

PRINT NAME: **Jerry Lomax**

TITLE: _____

TITLE: **Vice President, Emerging Energy**

DATE: _____

DATE: _____

EMAIL ADDRESS _____

EMAIL ADDRESS: **jerrylomax@chevron.com**

IRON MOUNTAIN INTELLECTUAL PROPERTY MANAGEMENT, INC.

SIGNATURE: _____

PRINT NAME: _____

TITLE: _____

DATE: _____

EMAIL ADDRESS: **ipmclientservices@ironmountain.com**

NOTE: AUTHORIZED PERSON(S)/NOTICES TABLE, BILLING CONTACT INFORMATION TABLE AND EXHIBITS FOLLOW

DEPOSITOR — AUTHORIZED PERSON(S)/NOTICES TABLE

Provide the name(s) and contact information of the Authorized Person(s) under this Agreement. All notices will be sent to the person(s) at the address(es) set forth below. This is required information.

COMPANY:	BrightSource Industries (Israel) Ltd.
ADMINISTRATIVE CONTACT PRINT NAME:	Daniel Judge
TITLE:	General Counsel
EMAIL ADDRESS	<u>djudge@brightsourceenergy.com</u>
ADDRESS 1	1999 Harrison Street, Suite 2150
ADDRESS 2	
CITY/STATE /PROVINCE	Oakland, CA
POSTAL/ZIP CODE	94612
PHONE NUMBER	(510) 250 8154
FAX NUMBER	(510) 550 8165

BENEFICIARY — AUTHORIZED PERSON(S)/NOTICES TABLE

Provide the name(s) and contact information of the Authorized Person(s) under this Agreement. All notices will be sent to the person(s) at the address(es) set forth below. This is required information.

COMPANY:	CHEVRON TECHNOLOGY VENTURES, a division of Chevron U.S.A. Inc.
ADMINISTRATIVE CONTACT PRINT NAME:	Kendra Clemons
TITLE:	Contracts Manager
EMAIL ADDRESS	<u>kclemons@chevron.com</u>
ADDRESS 1	3901 Briarpark Drive
ADDRESS 2	BP/360
CITY/STATE /PROVINCE	Houston, TX
POSTAL/ZIP CODE	77042
PHONE NUMBER	(713) 954 6239
FAX NUMBER	(713) 954 6388

IRON MOUNTAIN INTELLECTUAL PROPERTY MANAGEMENT, INC.

All notices should be sent to ipmclientservices@ironmountain.com OR
 Iron Mountain Intellectual Property Management, Inc., Attn: Client Services
 2100 Norcross Parkway, Suite 150
 Norcross, Georgia, 30071, USA.
 Telephone: 800-875-5669
 Facsimile: 770-239-9201

BILLING CONTACT INFORMATION TABLE

Please provide the name and contact information of the Billing Contact under this Agreement. All Invoices will be sent to this individual at the address set forth below.

DEPOSITOR

PRINT NAME:	<u>Daniel Judge</u>
TITLE:	<u>General Counsel</u>
EMAIL ADDRESS	<u>djudge@brightsourceenergy.com</u>
STREET ADDRESS	<u>1999 Harrison Street, Suite 2150</u>
PROVINCE/CITY	
/STATE	<u>Oakland, CA</u>
POSTAL/ZIP CODE	<u>94612</u>
PHONE NUMBER	<u>(510) 250 8154</u>
FAX NUMBER	<u>(510) 550 8165</u>
PURCHASE ORDER #	<u></u>

BENEFICIARY

PRINT NAME:	<u>Genoveva Trevino</u>
TITLE:	<u>Procurement Specialist</u>
EMAIL ADDRESS	<u>GenovevaTrevino@chevron.com</u>
STREET ADDRESS	<u>3901 Briarpark Drive</u>
PROVINCE/CITY	
/STATE	<u>Houston, TX</u>
POSTAL/ZIP CODE	<u>77098</u>
PHONE NUMBER	<u>713-954-6847</u>
FAX NUMBER	<u>713-954-6388</u>
PURCHASE ORDER #	<u>TBD</u>

With Copies to:

PRINT NAME:	<u>Renee Allen</u>
TITLE:	<u>Business Development Coordinator</u>
EMAIL ADDRESS	<u>renee.allen@chevron.com</u>
STREET ADDRESS	<u>3901 Briarpark Drive</u>
PROVINCE/CITY	
/STATE	<u>Houston, TX</u>
POSTAL/ZIP CODE	<u>77098</u>
PHONE NUMBER	<u>713-954-6805</u>
FAX NUMBER	<u>713-954-6388</u>
PURCHASE ORDER #	<u>TBD</u>

MUST BE COMPLETED EXHIBIT A—Escrow Service Work Request—Deposit Account Number:

SERVICE Check box(es) to order service	SERVICE DESCRIPTION – THREE PARTY ESCROW AGREEMENT All services are listed below. Services in shaded tables are required for every new escrow account set up. Some services may not be available under the Agreement.	ONE-TIME FEES	ANNUAL FEES	PAYING PARTY Check box to identify the
				Paying Party for each service below.
<input checked="" type="checkbox"/> Setup Fee	Iron Mountain will setup a new escrow deposit account using a standard escrow agreement. Custom contracts are subject to the Custom Contract Fee noted below.	\$1250		<input type="checkbox"/> Depositor - OR - <input checked="" type="checkbox"/> Beneficiary
<input checked="" type="checkbox"/> Deposit Account Fee-including Escrow Management Center Access	Iron Mountain will set up one deposit account to manage and administrate access to Deposit Material that will be securely stored in controlled media vaults. Furthermore, Iron Mountain will provide account services that include unlimited deposits, electronic vaulting, access to Iron Mountain Connect™ Escrow Management Center for secure online account management, submission of electronic Work Requests, and communication of status. A Client Manager will be assigned to each deposit account and provide training upon request to facilitate secure Internet access to the account and ensure fulfillment of Work Requests. An oversize fee may apply.		\$1,000	<input type="checkbox"/> Depositor - OR - <input checked="" type="checkbox"/> Beneficiary
<input checked="" type="checkbox"/> Beneficiary Fee including Escrow Management Center Access	Iron Mountain will fulfill a Work Request to add a Beneficiary to an escrow deposit account and manage access rights associated with the account. Beneficiary will have access to Iron Mountain Connect™ Escrow Management Center for secure online account management, submission of electronic Work Requests, and communication of status. A Client Manager will be assigned to each deposit account and provide training upon request to facilitate secure Internet access to the account and ensure fulfillment of Work Requests.		\$700	<input type="checkbox"/> Depositor - OR - <input checked="" type="checkbox"/> Beneficiary
<input checked="" type="checkbox"/> Add Deposit Tracking Notification	At least semi-annually, Iron Mountain will send an update reminder to Depositor. Thereafter, Beneficiary will be notified of last deposit. .	N/A	\$375	<input type="checkbox"/> Depositor - OR - <input checked="" type="checkbox"/> Beneficiary
<input type="checkbox"/> Add File List Test	Iron Mountain will fulfill a Work Request to perform a File List Test, which includes analyzing deposit media readability, file listing, creation of file classification table, virus scan, and assurance of completed deposit questionnaire. A final report will be sent to the Paying Party regarding the Deposit Material to ensure consistency between Depositor's representations (i.e., Exhibit B and Supplementary Questionnaire) and stored Deposit Material. Deposit must be provided on CD, DVD-R, or deposited FTP.	\$2,500	N/A	<input type="checkbox"/> Depositor - OR - <input type="checkbox"/> Beneficiary
<input type="checkbox"/> Add Level 1 - Inventory and Analysis Test	Iron Mountain will perform an Inventory Test on the initial deposit, which includes Analyzing deposit media readability, virus scanning, developing file classification tables, identifying the presence/absence of build instructions, and identifying materials required to recreate the Depositor's software development environment. Output includes a report which will include build instructions, file classification tables and listings. In addition, the report will list required software development materials, including, without limitation, required source code languages and compilers, third-party software, libraries, operating systems, and hardware, as well as Iron Mountain's analysis of the deposit.	\$5,000 or based on SOW if custom work required	N/A	<input type="checkbox"/> Depositor - OR - <input type="checkbox"/> Beneficiary

“ Add Level 2 - Compile Test	Iron Mountain will fulfill a Work Request to perform a Deposit Compile Test, which includes the Inventory Test as described above plus recreating the Depositor’s software development environment, compiling source files and modules, linking libraries and recreating executable code, pass/fail determination, creation of comprehensive build instructions with a final report sent to the Paying Party regarding the Deposit Material. The Paying Party and Iron Mountain will agree on a custom Statement of Work (“SOW”) prior to the start of fulfillment.	Based on SOW	N/A	“ Depositor - OR - Beneficiary
“ Add Level 3 - Binary Comparison	Iron Mountain will fulfill a Work Request to perform one Deposit Compile Test Binary Comparison which includes a comparison of the files built from the Deposit Compile Test to the actual licensed technology on the Beneficiary’s site to ensure a full match in file size, with a final report sent to the Requesting Party regarding the Deposit Material. The Paying Party and Iron Mountain will agree on a custom Statement of Work (“SOW”) prior to the start of fulfillment.	Based on SOW	N/A	“ Depositor - OR - Beneficiary
“ Add Level 4 - Full Usability	Iron Mountain will fulfill a Work Request to perform one Deposit Compile Test Full Usability which includes a confirmation that the built applications work properly when installed. A final report will be sent to the Paying Party regarding the Deposit Material. The Paying Party and Iron Mountain will agree on a custom Statement of Work (“SOW”) prior to the start of fulfillment.	Based on SOW	N/A	“ Depositor - OR - Beneficiary
“ Add Dual/Remote Vaulting	Iron Mountain will fulfill a Work Request to store deposit materials in one additional location as defined within the Service Agreement. Duplicate storage request may be in the form of either physical media or electronic storage.	N/A	\$500	“ Depositor - OR - Beneficiary
“ Release Deposit Material	Iron Mountain will process a Work Request to release Deposit Material by following the specific procedures defined in Exhibit C “Release of Deposit Materials” the Escrow Service Agreement.	\$500	N/A	“ Depositor - OR - Beneficiary
“ Add Custom Services	Iron Mountain will provide its Escrow Expert consulting based on a custom SOW mutually agreed to by all Parties.	\$175/hour	N/A	“ Depositor - OR - Beneficiary
“ Custom Contract Fee	Custom contracts are subject to the Custom Contract Fee, which covers the review and processing of custom or modified contracts.	\$500	N/A	“ Depositor - OR - Beneficiary

Note: Parties may submit Work Requests via written instruction or electronically through the online portal.

EXHIBIT B
DEPOSIT MATERIAL DESCRIPTION

COMPANY NAME: _____ **DEPOSIT ACCOUNT NUMBER:** _____

DEPOSIT NAME _____ **AND DEPOSIT VERSION** _____

(Deposit Name will appear in account history reports)

DEPOSIT MEDIA (PLEASE LABEL ALL MEDIA WITH THE DEPOSIT NAME PROVIDED ABOVE)

MEDIA TYPE	QUANTITY	MEDIA TYPE	QUANTITY
.. CD-ROM / DVD		.. 3.5" Floppy Disk	
.. DLT Tape		.. Documentation	
.. DAT Tape		.. Hard Drive / CPU	
		.. Circuit Board	
		TOTAL SIZE OF TRANSMISSION (SPECIFY IN BYTES)	# OF FILES
			# OF FOLDERS
.. Internet File Transfer			
.. Other (please describe below):			

DEPOSIT ENCRYPTION (Please check either "Yes" or "No" below and complete as appropriate)

Is the media or are any of the files encrypted? .. Yes or .. No

If yes, please include any passwords and decryption tools description below. Please also deposit all necessary encryption software with this deposit.

Encryption tool name _____ Version _____

Hardware required _____

Software required _____

Other required information _____

DEPOSIT CERTIFICATION (Please check the box below to Certify and Provide your Contact Information)

.. I certify for Depositor that the above described Deposit Material has been transmitted electronically or sent via commercial express mail carrier to Iron Mountain at the address below.

.. Iron Mountain has inspected and accepted the above described Deposit Material either electronically or physically. Iron Mountain will notify Depositor of any discrepancies.

NAME: _____

PRINT NAME: _____

DATE: _____

EMAIL ADDRESS: _____

TELEPHONE NUMBER: _____

FAX NUMBER: _____

NAME: _____

PRINT NAME: _____

DATE: _____

Note: If Depositor is physically sending Deposit Material to Iron Mountain, please label all media and mail all Deposit Material with the appropriate Exhibit B via commercial express carrier to the following address:

Iron Mountain Intellectual Property Management, Inc.
Attn: Vault Administration
2100 Norcross Parkway, Suite 150
Norcross, GA 30071

Telephone: 800-875-5669
Facsimile: 770-239-9201

FOR IRON MOUNTAIN USE ONLY: (NOTED DISCREPANCIES ON VISUAL INSPECTION)

EXHIBIT C

RELEASE OF DEPOSIT MATERIALS

Deposit Account Number: _____

Iron Mountain will use the following procedures to process any Beneficiary Work Request to release Deposit Material. All notices under this Exhibit C shall be sent pursuant to the terms of Section 12(h) Notices.

1. **Release Conditions.** The Depositor and Beneficiary agree that a Work Request for the release of the Deposit Material shall be based solely on one or more of the following conditions (defined as “**Release Conditions**”):
 - (i) in the event of the institution by or against Provider of insolvency, receivership, or bankruptcy proceedings (which proceedings shall not be dismissed within sixty (60) days) or upon any assignment for the benefit of Provider’s creditors; or
 - (ii) upon Provider’s dissolution, ceasing to do business or upon termination of the MSA by Beneficiary for cause in accordance with Section 23(b) thereof (but only if Beneficiary intends to and does in fact complete the Project (as defined in the MSA) as provided under Section 23(i)(ii)(A) thereof); or
 - (iii) Provider’s failure to pass the Acceptance Test (as defined in the MSA) in accordance with Section 23(g) of the MSA.
2. **Release Work Request.** A Beneficiary may submit a Work Request to Iron Mountain to release the Deposit Material covered under this Agreement. Iron Mountain will send a written notice of this Beneficiary Work Request within five (5) business days to the Depositor’s Authorized Person(s).
3. **Contrary Instructions.** From the date Iron Mountain mails written notice of the Beneficiary Work Request to release Deposit Material covered under this Agreement, Depositor authorized representative(s) shall have ten (10) business days to deliver to Iron Mountain contrary instructions. Contrary instructions shall mean the written representation by Depositor that a Release Condition has not occurred or has been cured (“**Contrary Instructions**”). Contrary Instructions shall be on company letterhead and signed by an authorized Depositor representative. Upon receipt of Contrary Instructions, Iron Mountain shall promptly send a copy to Beneficiary’s Authorized Person(s). Additionally, Iron Mountain shall notify both Depositor and Beneficiary Authorized Person(s) that there is a dispute to be resolved pursuant to the Disputes provisions of this Agreement. Iron Mountain will continue to store Deposit Material without release pending (i) joint instructions from Depositor and Beneficiary with instructions to release the Deposit Material; or (ii) dispute resolution pursuant to the Disputes provisions of this Agreement; or (iii) receipt of an order from a court of competent jurisdiction.
4. **Release of Deposit Material.** If Iron Mountain does not receive Contrary Instructions from an authorized Depositor representative, Iron Mountain is authorized to release Deposit Material to the Beneficiary or, if more than one Beneficiary is registered to the deposit, to release a copy of Deposit Material to the Beneficiary. Iron Mountain is entitled to receive any undisputed, unpaid Service Fees due Iron Mountain from the Parties before fulfilling the Work Request to release Deposit Material covered under this Agreement. Any Party may cure a default of payment of Service Fees.
5. **Termination of Agreement Upon Release.** This Agreement will terminate upon the release of Deposit Material held by Iron Mountain.
6. **Right to Use Following Release.** Beneficiary has the right under this Agreement to use the Deposit Material for the sole purpose of continuing the benefits afforded to Beneficiary by the MSA. Notwithstanding, the Beneficiary shall not have access to the Deposit Material unless there is a release of the Deposit Material in accordance with this Agreement. Beneficiary shall be obligated to maintain the confidentiality of the released Deposit Material in accordance with the MSA.

EXHIBIT Q
ESCROW DEPOSIT QUESTIONNAIRE

Introduction

From time to time, technology escrow beneficiaries may exercise their right to perform verification services. This is a service that Iron Mountain provides for the purpose of validating relevance, completeness, currency, accuracy and functionality of deposit materials.

Purpose of Questionnaire

In order for Iron Mountain to determine the deposit material requirements and to quote fees associated with verification services, a completed deposit questionnaire is requested. It is the responsibility of the escrow depositor to complete the questionnaire.

Instructions

Please complete the questionnaire in its entirety by answering every question with accurate data. Upon completion, please return the completed questionnaire to the beneficiary asking for its completion, or e-mail it to Iron Mountain to the attention of verification@ironmountain.com

Escrow Deposit Questionnaire

General Description

1. What is the general function of the software to be placed into escrow?
2. On what media will the source code be delivered?
3. What is the size of the deposit in megabytes?

Requirements for the Execution of the Software Protected by the Deposit

1. What are the system hardware requirements to successfully execute the software? (memory, disk space, etc.)
2. How many machines are required to completely set up the software?
3. What are the software and system software requirements, to execute the software and verify correct operation?

Requirements for the Assembly of the Deposit

1. Describe the nature of the source code in the deposit. (Does the deposit include interpreted code, compiled source, or a mixture? How do the different parts of the deposit relate to each other?)
2. How many build processes are there?
3. How many unique build environments are required to assemble the material in the escrow deposit into the deliverables?
4. What hardware is required for each build environment to compile the software? (including memory, disk space, etc.)
5. What operating systems (including versions) are used during compilation? Is the software executed on any other operating systems/version?
6. How many separate deliverable components (executables, share libraries, etc.) are built?
7. What compilers/linkers/other tools (brand and version) are necessary to build the application?
8. What, if any, third-party libraries are used to build the software?
9. How long does a complete build of the software take? How much of that time requires some form of human interaction and how much is automated?
10. Do you have a formal build document describing the necessary steps for system configuration and compilation?
11. Do you have an internal QA process? If so, please give a brief description of the testing process.
12. Please list the appropriate technical person(s) Iron Mountain may contact regarding this set of escrow deposit materials.

Please provide your technical verification contact information below:

COMPANY: _____
SIGNATURE: _____
PRINT NAME: _____
ADDRESS 1: _____
ADDRESS 2: _____
CITY, STATE, ZIP _____
TELEPHONE: _____
EMAIL ADDRESS: _____

For additional information about Iron Mountain Technical Verification Services, please contact
Manager of Verification Services at **978-667-3601 ext. 100** or by e-mail at **[mailto: verification@ironmountain.com](mailto:verification@ironmountain.com)**

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EXHIBIT H PROCEDURES MANUAL

ARTICLE 1. DEFINITIONS

For purposes of this Procedures Manual and all Change Orders to be issued under the Agreement, the defined terms shall have the meanings set forth in Exhibit J, “Definitions”, attached to the Agreement.

ARTICLE 2. Intentionally Deleted.

ARTICLE 3. PROVIDER’S OBLIGATIONS

3.1 Intentionally Deleted.

3.2 Personnel & Subcontractors

- 3.2.1 Prior to commencement of construction, Provider shall provide Company a Project Organizational Flowchart depicting the individuals responsible for all the primary functional areas outlined in Provider’s Project Execution Plan (Document 08-GE-G-P-002) in Exhibit A to the Agreement and shall provide Company with the written resume of such individuals. Thereafter, Provider shall not change such designations without providing Company with a written notice of such change and the written resume of such person’s replacement. Provider’s project manager or superintendent (or equivalent) shall devote full time attention to the Project and shall maintain an office at the Site, as appropriate.
- 3.2.2 Provider shall receive materials and equipment purchased for the Project and provide storage and protection for such materials and equipment upon delivery. Provider shall ascertain whether or not the materials and equipment comply with the Contract Documents as soon as practicable and either remove any nonconforming materials and equipment from the Site or rework them to bring them into conformance. All materials and equipment delivered to the Site, whether furnished by Company or Provider, shall be stored and handled in such a manner to prevent damage thereto. In the event the Work includes installation of materials or equipment furnished by others, it shall be the responsibility of the Provider to examine the items so provided and thereupon handle, store, and install the items, unless otherwise provided in the Contract Documents, with such skill and care as to ensure a satisfactory and proper installation in accordance with the Agreement.

3.3 Communications

- 3.3.1 Agreement – All communications on the Agreement should be through Provider and Company designated representatives.
- 3.3.2 Design Phase – All communications during the Design Phase through Provider’s submission of the Issued for Construction (IFC) design package as outlined in Exhibit A-2 Engineering Scope of Work to the Agreement should be through Provider Project Manager (Arieh Amit) and Company Project Manager (Sergio Hoyos). Provider shall give Company approximately thirty (30) days advance notice of its submission of the 90% engineering package.
- 3.3.3 Construction Phase – All communications during construction phase starting after Provider’s submission of the Issued for Construction (IFC) design package

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as outlined in Exhibit A-2 Engineering Scope of Work to the Agreement through final completion of the Work should be through Provider Project Manager/Provider Construction Manager and Company Construction Superintendent (Manny Mendez) with copy to Company Construction Manager (Michael Walneuski) and Company Project Manager (Sergio Hoyos).

3.3.4 Emergency Notifications – In the event of an emergency all communications and notifications should be made in accordance with Exhibit E-1 Project Safety Management Plan to the Agreement.

3.3.5 Designated Representatives – All references to specific individuals in this subsection include any of his/her replacements.

3.4 Haz-Op Review. Prior to submission of the 90% engineering package, Provider and Company shall participate in a “Hazard and Operability Study” based on latest versions of the process flow diagrams and piping and instrumentation diagrams. The study will take no more than three (3) business days to complete. Recommendations resulting from the study will be incorporated into the 90% engineering package as agreed upon by Parties. Prior to the study, the Parties will agree on additional costs, if any, that will be paid by Company for Provider’s participation.

3.5 Interconnection Design by Company Engineer: Plans and specifications for interconnection of the Project may be prepared by a Company engineer, or Company engineering contractor. Provider shall:

3.5.1 Review Plans and Specifications: Carefully study and compare the Company engineer’s plans and specifications and report to Company any error, ambiguity, or omission discovered by Provider related to interconnection to the Project.

3.5.2 Construction Consulting Services: Provide time requirements for installation and construction; attend and provide input at meetings with Company engineer during the development of the design.

3.5.3 Notification of Changes. Provider shall promptly provide written notification to Company of any changes to the Project design that would affect the interconnection to the Project.

For the avoidance of doubt, in connection with its activities under this Section 3.5, Provider assumes no responsibility or liability, including tort liability, with respect to plans and specifications for interconnection of the Project prepared by a Company engineer or Company engineering contractor.

3.6 Procurement: In connection with the procurement of the Work, Provider shall, without limitation:

3.6.1 Intentionally deleted.

3.6.2 Intentionally deleted.

3.6.3 PO Tracking: Provide the Company with the PO tracking log listing the current status of all equipment orders including equipment description, PO date, advance notice of expected receipt of shop drawings, ship date and scheduled and actual delivery date(s). PO Tracking log to be submitted to Company on a weekly basis. Listing of above events by Provider in the PO tracking log submitted at least 7 days but no more than 14 days before the scheduled date of the event will be considered sufficient notice.

- 3.6.4 FAT Witness, Verifications and Inspections: Provide the Company with the Inspection and Factory Acceptance Test (FAT) schedule and tracking log for all Major Equipment that lists all inspection and test points. Provide Company with at least 21 days notice prior to actual date for witness and verification of vendor activities and FAT. Inspection and FAT schedule and tracking log to be submitted to Company when an equipment PO is issued or updated on a weekly basis. Listing of such events by Provider in the PO tracking log submitted at least 21 days but no more than 28 days before the scheduled date of the event will be considered sufficient notice.
- 3.6.5 Materials & Equipment Handling & Receipt Inspection: Provide 7 day advance notification of delivery and written notification to Company of Major Equipment arrival. Provide notification to Company of all non-major material deliveries. Company reserves the right to inspect all shipments delivered to Site. Company shall be notified of all Non-Conforming Report Form records and the actions taken to resolve any deviation from the contract terms. Listing of above events by Provider in the PO tracking log submitted at least 7 days but no more than 14 days before the scheduled date of the event will be considered sufficient notice.
- 3.6.6 Intentionally deleted.
- 3.6.7 In the case of supply & install packages, provide Company with Provider's list of material suppliers including the schedule for all inspection and test points. Company shall identify which if any inspections it intends to witness or verify. Provide Company with at least 21 days notice prior to actual date for witness and verification of designated inspections or tests. Provide Company with any Provider approved substitutions of products or materials furnished by Provider. Provider may combine this list with the PO tracking log referenced above.
- 3.6.8 Provide Company with advance notification of proposed transfer of procurement process of Major Equipment to Subcontractors.
- 3.7 Construction:** In connection with the construction of the Work, Provider shall:
- 3.7.1 Submittals: Prior to beginning on-site construction of each portion of the Work, provide Company an issued for construction engineering package as outlined in Exhibit A-2 Engineering Scope of Work to the Agreement for such portion of the Work.
- 3.7.2 Trenching: Before excavation of any trench five (5) feet or more in depth, submit to Company a detailed Trenching Plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation. If such plan varies from the Shoring Systems Standards established by the Construction Safety Orders of the Division of Industrial Safety, the plan shall be prepared by a registered civil or structural engineer, employed by Provider at Provider's own expense. Nothing in this Section shall be deemed to allow the use of a system less effective than that required by such Construction Safety Orders. No excavation of such trench or trenches shall be commenced until such plan has been reviewed by Company or its Consultant assigned to conduct such review. Nothing in this Section shall be construed to impose any liability, including, without limitation, any tort liability, upon neither Company nor any of its officers, agents, representatives, or employees.
- 3.7.3 Intentionally deleted.

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- 3.7.4 Intentionally deleted.
- 3.7.5 Intentionally deleted.
- 3.7.6 Intentionally deleted.
- 3.7.7 Intentionally deleted.
- 3.7.8 Meetings: Attend and participate in meetings with Company to be held periodically at the Site as referenced in the Provider's Project Execution Plan (Document 08-GE-G-P-002) in Exhibit A to the Agreement.
- 3.7.8.1 Bi-Weekly (every 2 weeks) Project Management Coordination meeting between Company and Provider, to update Company on the progress of the project and any coordination issues. The scope of the meeting shall be as outlined in Provider's Project Execution Plan (08-GE-G-P-002) in Exhibit A-3 to the Agreement.
- 3.7.8.2 Weekly Project Coordination meeting of Chevron site manager with BSCM Construction Manager to coordinate two week look-ahead schedule with Company. The scope of the meeting shall be as outlined in Provider's Project Execution Plan (08-GE-G-P-002) in Exhibit A-3 to the Agreement.
- 3.7.8.3 Bi-Weekly Project Safety Meeting and Daily Pre-Job Safety Meeting (also called Tailgate Safety Meetings) shall be held as outlined in Exhibit E-2 Project Safety Management Plan, Section G to the Agreement. Provider shall control meeting content and length.
- 3.7.9 Schedule: Provider shall determine the adequacy of the personnel working on the Project and also determine whether the equipment and the availability of materials and supplies are sufficient to meet the Project Schedule. Provider shall implement appropriate action when the obligations of Provider and Subcontractors are not being met.
- 3.7.10 Site Clean-Up: Keep the Project and Site free from accumulation of waste materials or rubbish caused by its operations. As the Work is performed, Provider shall remove all of its waste materials and rubbish from the Site in accordance with Applicable Laws. Upon the completion of the Work, Provider shall remove all of its tools, construction equipment, and machinery and surplus materials.
- 3.7.11 Project lines and levels: Be responsible for the accuracy of the Project lines and levels. Provider shall compare the levels shown on the drawings with existing levels and shall call to Company's attention any discrepancies before proceeding with the Work. In accordance with industry standards of subcontractors performing similar work on the types of projects that will be performed by the Provider, the Work shall be erected square, plumb, level, true in line and grade, in the exact plane and to the correct elevation and/or slope as indicated in the Contract Documents.
- 3.7.12 Tests: Conduct tests, inspections, and approvals as required by the Agreement. If the Contract Documents or Applicable Laws require any portion of the Work to be inspected, tested, or approved, Provider shall give Company at least 48 hours notice of its readiness for such inspecting, testing or approval or as otherwise provided in the Agreement. The Provider shall give proper written notice to all

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required parties of such tests, approvals, and inspections. Unless otherwise specifically provided in the Contract Documents, Provider shall bear all costs of such inspections, tests, or approvals. Provider shall also secure all required certificates of inspection, testing, or approval. If Company determines that any Work requires special inspection, testing, or approval not already required by the Contract Documents or Applicable Laws, Company may instruct Provider to order such special inspection, testing, or approval. If such special inspection or testing reveals a failure of the Work to comply with the requirements of the Contract Documents (including any Applicable Laws), Provider shall bear all costs thereof; otherwise, Company shall bear such costs, and an appropriate Change Order will be issued. Provider shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents, notwithstanding any inspections, tests, or approvals provided by Company.

3.7.13 Intentionally deleted.

3.7.14 Documents And Samples At The Site Location: Provider shall maintain at the Site Location in good order the following documents for Company's inspection and copying:

1. Drawings, Specifications, approved Shop Drawings and Submittals, Product Data and Samples, test and inspection reports and other QA/QC documentation, and other Modifications.
2. A current marked set of Plans and Specifications showing record, or "as-built", conditions, configurations and locations to facilitate the preparation of record, or "as-built", drawings.
3. Subcontracts, purchase orders and any other documents containing cost data pertaining to the Work shall be made available for Company's inspection and copying at Provider's discretion.

3.7.15 Reports And Project Site Location Documents: Provider shall record the progress and activity of the Project on a monthly basis, maintain such records for a period of three (3) years after final payment as set forth in Exhibit B Schedule of Milestone Payments to the Agreement, and upon request of Company, submit copies thereof to Company. Provider shall submit written progress reports on a monthly basis, to Company's designated representative, including information on the status of the Work, any problems that threaten the timely completion of the Work, and the percentage of completion of the Work based on the Schedule of Values in Exhibit B-1. Reports should be prepared for review during the monthly meetings. The details required in the progress reports are set forth below:

Monthly Progress Report - Report as to the progress made on the Work during the preceding month and an overview of the upcoming month procurement, QA/QC and construction activities. Report should include an update and status on the following items: Progress Summary with completed milestones; Schedule with 4 week look ahead; Change Order log; Safety highlights and metrics; Procurement Log; QA/QC Plan; Risk Management; Project issues and concerns; and Lessons learned (optimized construction methods and failures).

3.7.16 Daily Job Log: Provider shall maintain for Company review a completed Daily Job Log for each day that on-site work occurs. Company's standard Daily Job Log format, or similar form as approved by Company, shall be used. The Provider shall require each lower-tiered subcontractor to sign the Daily Job Log

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each day. Copies of the Job Safety Analysis shall be attached to the Daily Job Log and submitted to Company's designated representative.

3.7.17 Safety: Provider shall implement the Exhibit E-2 Project Safety Management Plan (PSMP) to the Agreement.

Provider shall assign a full time Project Safety Manager (PSM) to be located at the Project Site during the construction phase of the project. Provider Project Safety Manager shall be responsible for all Health, Environmental and Safety issues for the Provider and lower tiered subcontractors. PSM shall assure that all aspects of the PSMP are implemented by Provider and subcontractors. PSM shall coordinate with Company Construction Superintendent and Company HES supervisor and report all safety incidents and reports as required in the PSMP. Provider may use designated subcontractor personnel to satisfy this requirement through the various stages of the project.

Provider shall provide Company with documentation that Provider and Subcontractor employees have completed the required Employee Orientation and Site Orientation per Exhibit E-1 Project Safety Management Plan, Section G to the Agreement before starting work at the Site.

Provider personnel and guests shall have reasonable access to the Site as authorized by Provider designated representatives. Provider shall conduct Site orientation for all guests of Provider prior to allowing its visitors to enter the Project Site.

3.7.18 Site Access and Control: Provider shall be responsible to provide all Site security 24 hours a day during construction phase of the project. This includes provision of security guards and equipment as deemed necessary by Provider to protect the Site from losses. Provider shall provide Company with its written security management plan prior to start of construction.

3.7.18.1 Provider's security guard (if any) shall notify Provider and Company Construction Superintendent of an emergency. Security shall follow Emergency Procedures outlined in Exhibit E-2 Project Safety Management Plan, Section L. Company's roving night watchman will include the Site in his regular rounds.

3.7.18.2 Provider shall implement work practices and procedures that restrict access to the tower and elevator to essential personnel during construction.

3.7.18.3 Company personnel and guests shall have reasonable access to the Site as authorized by Company designated representatives. Company shall conduct Site orientation for all guests of Company prior to allowing its visitors to enter the Project Site.

3.7.19 Company shall be provided with an updated QA/QC Plan (Appendix I of the Provider's Project Execution Plan) of inspection and tests that will be carried out in accordance with defined practice at prescribed stages. Provider shall coordinate with Company to identify the required inspection, test, hold, verification and witness points and the documented evidence required for all processes at the various stages of manufacturing, receiving and installation. Provider shall coordinate with Company to participate in the inspection, testing and witnessing of materials, equipment and systems for all phases of the project. Provider shall give Company 21 day advance notice for all inspections, tests or witness verifications and keep Company updated on any changes to this schedule. Listing of such events by Provider in the PO tracking log submitted at least 21 days but no more than 28 days before the scheduled date of the event will be considered sufficient notice.

Provider shall establish, document and implement a system to ensure that the identification, documentation, evaluation and disposition of non-conforming materials, equipment, product, services or works are controlled. Provider shall include in the PO tracking log when non-conforming items, including work operations, are suspended or rejected, and confirm disposition and corrective action. Company shall have the right to request copies of documentation of the same.

Provider shall maintain and allow Company access (for Company review and copying) to documents that provide evidence of compliance (or non-compliance) with specified requirements such as welder certification, factory acceptance test results, material certification, equipment and systems test reports, and final inspections.

Provider shall ensure that all material and equipment for incorporation into the permanent works has undergone the manufacturer's standard quality control tests, as well as those prescribed within the specifications. Company shall have the right to request and review copies of all Provider and supplier quality documentation.

Company shall have the right to request and review copies of all Provider and supplier pre-qualification process documentation (including verification of safety training and professional licenses) to validate their ability to meet commercial, safety and quality criteria.

3.8 Use of Site

- 3.8.1 Provider shall confine its operations at the Site to areas permitted by Applicable Laws and the Contract Documents. Provider shall not unreasonably encumber the Site with any materials or equipment, and it shall maintain the Site in a neat, orderly manner. Provider shall confine its ingress and egress to the Site to areas approved in advance by Company and shall not use any other ingress or egress to or from the Site. No signs shall be placed on the Site by Provider or any Subcontractor or lower-tiered subcontractor without the prior approval of Company.
- 3.8.2 Provider shall take measures to control the blowing or spreading of dust, smoke, dirt, mud, and refuse from the Work to avoid nuisance and inconvenience to others whether on or off the Site. These measures shall be in compliance with, without being limited to, all Applicable Laws, and shall be subject to Company's reasonable approval. Provider shall follow the Dust Control Plan measures set forth in the San Joaquin Valley Unified Air Pollution Control District Rule 8021, a copy of which has been provided to Provider.
- 3.8.3 Provider shall perform its Work (and have its Subcontractors and other parties so perform their work) so as to not unduly interfere with or disrupt the business operations of Chevron. Company will coordinate to minimize the possibility of Company caused delays to the construction. Company acknowledges and agrees that Provider needs reasonable access to the Site and a reasonable amount of time per working day to perform the Work in an efficient manner, and Company will coordinate regarding same.
- 3.8.4 Provider acknowledges that Company intends to minimize damage and disturbance to the environment at the Site. Provider shall use its best efforts to limit its Work to the areas designated by Company and to protect and prevent damage or disturbance to any trees or other vegetation outside of the clearing limits shown on the Contract Documents.

3.9 Intentionally deleted.

*Confidential**Execution Copy***ARTICLE 4. COMPLETION PROCESS****4.1 Completion Process and Close-Out Submittals**

Provider shall document Project's readiness to commence the Startup Test, Acceptance Test, and Annual Production Test, and prepare procedures for testing and calculation of results. During the Startup Test period O&M Training shall begin as provided in the Provider's Operation, Maintenance and Training Plan (08-080220) in Exhibit A-3 to the Agreement. Provider shall prepare a closeout package that will describe the closeout process in accordance with Appendix D to Provider's Project Execution Plan (Document 08-GE-G-P-002), Exhibit A-3 of the Agreement.

4.2 Startup Test

The Startup Test shall follow completion of pre-startup testing (at first each item of equipment, and later system by system), prior to startup of the entire plant as an integrated operating facility. The commissioning procedures for the equipment and systems will be documented and mutually agreed upon during the construction phase of the Project. The commissioning of equipment and systems shall fully comply with manufacturer's specifications and instructions and may be witnessed by Company. Provider shall give Company and the operator under the O&M Agreement ninety (90) days advance notice (or as much as reasonably practicable, if ninety (90) days is not possible) of the expected completion of the Startup Test.

4.2.1 Prior to commencing the Startup Test Provider shall assemble and submit to Company a punch list that identifies all incomplete and nonconforming work, with the work scope description, Provider or Subcontractor name, location, and comments, and a report on any equipment and system pre-startup tests that were performed, and a summary of the results of the commissioning process. The punch list items will be completed within sixty (60) days of successful completion of the Startup Test. Any items subsequently added to the punch list will be completed within sixty (60) days of their addition to the punch list.

4.2.2 Company will inspect the Work to verify the status of completion within a reasonable time after its receipt of Provider's certification that the Work is ready to commence the Startup Test.

4.2.3 If Company determines that any of the Work is incomplete or defective under the Agreement to an extent that prevents safely conducting the Startup Test, Company will promptly notify Provider in writing of such incomplete or defective Work, itemizing and describing such remaining items with reasonable particularity. Provider shall remedy any such deficiencies, after which Provider shall send another written certification to Company that the Work is ready to commence the Startup Test. Company will thereafter promptly re-inspect the Work.

4.2.4 When Company determines that Work has been completed as required to safely conduct the Startup Test, Company will give written notice to Provider to commence the Startup Test.

4.2.5 The Startup Test shall be conducted by Provider and witnessed by Company, and shall meet the criteria of Exhibit F to the Agreement: Acceptance and Performance Tests.

4.2.6 Upon completion of the Startup Test, Provider shall assemble and submit to Company:

1. Documentation of results showing the Demo Plant performance meets the acceptance criteria in Exhibit F: Acceptance and Performance Tests of the Agreement.

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2. “Open book” accounting documentation required pursuant to Section 3(d) of the Agreement.
 3. Operating Manual(s) for the Major Equipment (if any) and the Demo Plant, and any other documentation required to operate and maintain the Demo Plant.
 4. Spare parts inventory (appropriate levels to be determined by the Parties).
- 4.2.7 Transfer to the Company of care, custody, control of, and title to the Demo Plant shall occur upon successful completion of the Startup Test and submission of the required documentation.

4.3 Acceptance Test

- 4.3.1 Final acceptance shall be dependent upon completion of the Work and of the Acceptance Test as described in Exhibit F: Acceptance and Performance Tests to the Agreement, and submittal of the Closeout Documentation outlined below. An Acceptance Test procedure shall be prepared by Provider as described above and in accordance with the requirements of Exhibit F to the Agreement: Acceptance and Performance Tests. The Acceptance Test will be monitored and supervised by Provider and witnessed by Company. A determination of whether the Acceptance Test passes or fails will be made following review of the Acceptance Test documentation in accordance with the requirements of Exhibit F.
- 4.3.2 For completion of the Work, Provider shall submit to Company the following materials and documentation (“Closeout Documentation”):
1. All permit sign-offs or other approvals of any governmental agency with authority over the Project including copies of all final inspections; for clarity’s sake, such sign-offs or approvals shall only be submitted with respect to those agencies identified in the course of the Project by Company and Provider as requiring licensing and/or permitting actions.
 2. One record set of all the following project documentation: (a) specifications, (b) drawings, (c) modifications, (d) Company field orders or written instructions, sketches, etc., (e) approved shop drawings, product data, and samples, (f) all quality record documents, test data and testing laboratory reports, (g) record, or “As Built”, equipment lists legibly marked to indicate the manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed, (h) two sets of prints of record, or “As Built”, drawings, legibly marked concurrently with the construction process, and (i) one electronic AutoCAD copy of the record, or “As Built”, drawings, and one copy in PDF format.
 3. Three duplicate sets, each separately bound and indexed in vinyl covered three ring binders, of operating instructions and maintenance recommendations for all equipment and systems installed as a part of the Work, including, without limitation, a printed parts list for all items which might be subject to replacement. The instructions shall set forth all of the information necessary for Company to maintain and operate and make full and efficient use of all equipment and systems comprising the Work. For clarity’s sake, standard vendor operation and maintenance documentation shall be considered to satisfy this requirement for individual items of “off-the-shelf” equipment. Provider shall be responsible to provide original operating and maintenance instructions for systems only.

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4. Subcontractor/Supplier directory should include name, equipment tag number, address, telephone number and contacts of the firm or organization that is authorized by the manufacturer of the installed equipment to service the equipment as the need may arise. The directory shall include a list of equipment provided and respective warranty dates.
 5. All spare parts, maintenance materials, tools, and any other materials or equipment for which Provider had been paid but which was not actually incorporated into Work.
 6. Revisions to the record set of project documentation shall be based on changes to the Project as result of work activities during the Acceptance Test, such as changes to control systems, software programs, hardware, equipment, systems, procedures or other.
 7. Acceptance Test documentation including a report on tests that were performed and the results of the Demo Plant performance relative to the acceptance criteria in accordance with the requirements of Exhibit F Acceptance and Performance Tests to the Agreement.
 8. As provided for in Article 10 below, Provider will submit a Make Right Expense Report detailing all expenses incurred in its effort to satisfy the Acceptance Test.
 9. Final affidavit and unconditional lien waivers and releases from Provider and all Subcontractors (if applicable). Provider shall submit copies of the "Subcontract Financial Closeout Letter" and "Contract Financial Closeout Letter" (per Appendix D – Closeout Procedures to Provider's Project Execution Plan (08-GE-G-P-002) in Exhibit A-3 to the Agreement) for each Subcontractor if requested by Company.
 10. The originals of all warranties, guaranties, bonds, or certificates of compliance required by the Contract Documents relative to the Work.
 11. Updated cost data for the Project required pursuant to Section 3(d) of the Agreement.
 12. Documentation that O&M Training has been conducted and a list of all Company personnel that attended said training.
- 4.3.4 If Company determines that any of the Work is incomplete or defective under the Agreement, Company will promptly notify Provider in writing of such incomplete or defective Work, itemizing and describing such remaining items with reasonable particularity. Provider shall immediately complete all items and remedy any deficiencies, after which Provider shall send another written certification to Company that the Work is fully complete. Company will thereafter promptly re-inspect the Work.
- 4.3.5 When Company reasonably determines that this phase of the Work has been completed, Company will give written notice to Provider of completion of the Work. Successful completion of the Acceptance Test will constitute final acceptance of the Work.

4.4 Annual Production Test and Guarantee

- 4.4.1 An Annual Production Test procedure shall be prepared as described in Section 4.1 above and the test will be monitored and supervised by Provider, witnessed by Company, and documented by Provider.
- 4.4.2 As necessary for Company's acceptance of the successful completion of the Annual Production Test, Provider shall submit to Company updated

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documentation (as appropriate) of material changes to the Project in the course of the Annual Production Test (such as changes to control systems, software programs, hardware, equipment or procedures), and a Make Right Expense Report detailing all expenses incurred in its effort to satisfy the Annual Production Test.

- 4.4.3 Based on a determination of the results of the Annual Production Test in accordance with the requirements of Exhibit F Acceptance and Performance Tests to the Agreement, Company will issue written notice to Provider stating the amount of any Liquidated Damages payable by Provider. Provider shall conduct any necessary close-out activities.

ARTICLE 5. CONTRACT TIME AND SCHEDULE

5.1 Intentionally deleted.

5.2 Delays and Extensions Of Time

5.2.1 Time is a material consideration in the performance of the Work.

5.2.2 In the event that Provider requests an extension of the Contract Time, Provider shall furnish justification and supporting documentation, as described in Section 5.2.3 below, to determine whether Provider is entitled to an extension of time under the Agreement. If Provider is entitled to any extension of time, the determination as to the total number of days' extension shall be based upon the justified number of days of delay claimed by Provider and the current Project Schedule. Provider acknowledges and agrees that actual delays in activities which, according to the most current Project Schedule, do not affect activities critical to completion of the Work within the Contract Time will not be a valid basis for a change to the Contract Time. If Provider is entitled to an extension of the Contract Time, an appropriate Change Order will be issued.

5.2.3 Any claim for an extension of time shall be made in writing to Company within ten (10) days of Provider's reasonable discovery of actual delay to the Work. In making a claim for an extension of time, Provider shall provide the following specific information and Company may request additional documentation if necessary to evaluate Provider's claim for additional time:

1. Nature of the delay;
2. Date (or anticipated date) of commencement of delay;
3. Activities on the Project Schedule affected by the delay, and/or new activities created by the delay, and their relationship with existing activities;
4. Reason for delay; identification of person(s), or organization(s), event(s), or circumstances responsible for the delay as evidenced by daily report entries;
5. Anticipated extent of delay;
6. Amount of additional extension of time requested by Provider; and
7. Any recommended action to avoid or minimize additional delays.

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- 5.2.4 Subject to Provider's right to extensions due to Excusable Delay under the Agreement, an extension of Contract Time shall not be granted if, in the exercise of reasonable prudence, Provider, or anyone for whom Provider is responsible, could have avoided the delay in the progress of the Work.

5.3 Project Schedule

- 5.3.1 The Project Schedule describes Provider's intended method of accomplishing the Work. Such Project Schedule shall be in a form acceptable to Company and shall demonstrate an expeditious, practicable, and reasonable plan for accomplishing Mechanical Completion within the Contract Time.
- 5.3.2 The Project Schedule shall identify and take into account accomplishment of such interim milestones, including those identified on Exhibit A-5 and Exhibit B, or requirements of Company for completion of portions of the Work at times earlier than the full Contract Time, and Provider may use such "float" time elsewhere in the Project Schedule if it does not impact the Project critical path.
- 5.3.3 In accordance with the Agreement, the Project Schedule may be revised to reflect any adjustments extending the Contract Time, including revision to the durations, sequences, and interrelationships of activities affected by the occurrences permitting such adjustment; provided, however, that any revisions affecting the milestones identified on the Milestone Schedule, Exhibit A-5 will require Company's prior written approval. Company shall be entitled to rely on the Project Schedule (and as revised from time to time) in planning and scheduling performance of its obligations under the Contract Documents or of interrelated work by its own forces or separate contractors.
- 5.3.4 Provider shall coordinate its Work with Company and all other contractors, lower-tiered subcontractors, and suppliers so as not to unreasonably delay or disrupt their performance or impact the Project critical path. Oral extensions of the Contract Time shall not be binding on Company.

5.4 Intentionally deleted.

ARTICLE 6: CHANGES IN THE SCOPE OF WORK AND CLAIMS

- 6.1 Requests for Additional Work.** Provider shall perform the Work as specified in Agreement and any Change Orders. Provider is under no obligation to perform additional work which exceeds the Scope of Work described in the Agreement and written Change Orders. During the performance of Work Company may request Provider to perform additional work, and any such new work shall be authorized by a written Change Order signed by both Company and Provider. If, during the performance of the Work, Provider is requested in writing to perform work under the Agreement that Provider believes is outside the original Scope of Work or a subsequently issued Change Order, Provider shall provide written notice of same to Company within ten (10) working days of Provider's receipt of written notice of such request. If the Work is determined by the Parties to be outside the original Scope of Work, a Change Order for the additional work shall be issued. If there is a disagreement as to whether said work is within the original Scope of Work, or an approved Change Order scope of work, Provider shall perform such work (subject to Provider's right not to implement a Change Order pursuant to Section 1(i)(iv) of the Agreement), but shall do so under protest for additional compensation and/or time; and such protests shall be submitted to Company as a claim for additional compensation and/or time. Provider and Company will utilize Appendix C – Change Order Procedures to Provider's Project Execution Plan (08-GE-G-P-002) in

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Exhibit A-3 to the Agreement to document and approve Change Orders to the extent not inconsistent with Section 1(i) of the Agreement or this Article 6.

6.2 Material Changes in the Scope of Work.

6.2.1 If there is any change to the Scope of Work resulting in additional compensation, the additional compensation shall be determined by mutual agreement in one or more of the following ways:

1. By mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
2. By unit prices stated in the Contract Documents (if any) or subsequently agreed upon; or
3. The cost to Company of an increase in the Work, not covered by unit prices or agreed to pursuant to subparagraph 1 above, shall be Provider's documented direct costs plus [*] for overhead and profit). Credit to Company for reductions to the Work shall be Provider's documented direct cost saving, less [*] (for example, if Provider's documented direct cost saving is [*], the contract price will be reduced by [*]).

6.2.3 Notwithstanding any dispute regarding any additional compensation or requested adjustment in the Contract Time with respect to a change in the Work, Provider shall promptly proceed with the Work required in the Agreement and Company shall continue to make payments to Provider in accordance with the Contract Documents.

6.3 Claims

6.3.1 Other than changes initiated by Company, or as otherwise provided pursuant to the Agreement, Provider shall not be entitled to any additional compensation or adjustment of Contract Time except in strict compliance with the procedures hereinafter set forth. The failure of Provider to assert any claim within the time limits prescribed herein or in the form or manner required hereby shall be deemed a material prejudice to the interests of Company; provided that such failure shall not bar assertion of such claim, subject to payment of any damages Company suffers due to such failure.

6.3.2 In the event that Provider contends that any other event or occurrence causes a change in the Work entitling Provider to additional compensation or an adjustment of the Contract Time or both, Provider shall:

1. Provide a written notice of claim to Company within ten (10) days after the later of the occurrence of the event or Provider first recognized the condition giving rise to such claim. Such notice of claim must clearly identify the event or condition that is relied upon and contain a clear statement of why it constitutes a basis for adjustment.
2. The notice of claim shall include a clear, concise recital of the basis upon which the claim is asserted, including a designation of the provision(s) in the Contract Documents on which the claim is based and the amount of time and compensation claimed. All costs, expenses or damages, and extensions of time claimed as a result of the alleged change shall be described in reasonable detail and shall be supported with reasonable documentation.
3. To the extent that any adjustment to the Contract Time is sought, Provider shall also fully comply with the requirements of Article 5 hereof.

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4. All claims for any changes, omissions, or extra work or costs shall be submitted in writing by the Provider prior to performance of the work, except in an emergency which threatens or endangers life or property. No such claim shall be valid unless so made and approved in writing by Company prior to performance of the work. All documentation regarding such claims from the Provider must be submitted to Company within thirty (30) days of performance of the Work.
- 6.3.3 Company shall promptly review any claim that was timely submitted by Provider. In conducting this review, Company shall have the right to require Provider to submit such additional documents, data and other information in Provider's possession as Company may reasonably require. Provider shall submit any such additional information within fifteen (15) business days. If, upon completion of such review, Company determines that a Change is justified, Company shall issue a Change Order providing for additional compensation or amending the Contract Time or both as appropriate. If Provider disputes the determination made by Company, as a condition precedent of any further action to resolve such dispute but subject to Article 21 of the Agreement, Provider must notify Company in writing within five (5) working days following receipt of the decision of such dispute and permit Company fifteen (15) additional working days to reconsider and, if it deems it appropriate, modify its decision.

ARTICLE 7. UNCOVERING OF WORK

- 7.1 Company shall inspect the Work at times chosen to avoid delay to Provider's Work. If any portion of the Work is covered contrary to the requirements of the Contract Documents or to the express request of Company during construction, Provider shall, if required in writing by Company, uncover such work for Company's observation. Any defective Work shall be removed and replaced at Provider's expense.
- 7.2 If any portion of the Work has been covered which Company has not specifically requested to observe prior to being covered or which the Contract Documents did not state should be observed by Company prior to covering, Company may request to see such Work and it shall be uncovered by Provider. If such Work is found to be in accordance with the Contract Documents, the cost and additional time of uncovering and replacement shall, by appropriate Change Order, be paid by Company. If such Work is found to be not in accordance with the Contract Documents, Provider shall pay such costs unless the condition was caused by Company, in which event Company shall be responsible for the payment to Provider of such costs.

ARTICLE 8. Intentionally deleted.

ARTICLE 9. Intentionally deleted.

ARTICLE 10. MAKE RIGHT AND WARRANTY EXPENSES AND REPORTING

- 10.1 Provider will submit a written make right expense report ("Make Right Expense Report") to Company in Provider's Acceptance Test and Annual Production Test documentation. Such reports shall be itemized and prepared in such detail as Company may reasonably request, and shall include all of Provider's make right and warranty expenses incurred in its efforts to (1) make right its failure to pass the Acceptance Test and/or the Annual Production Test, and (2) remedy any failure referred to in Section 1(b)(ii), 1(b)(v), 1(b)(vi) and 1(b)(viii) of the Agreement. Such reports shall be clearly presented and include detailed invoices, purchase orders, receipts, compilations of labor and engineering hours, and other documents or proof as Company may reasonably request to verify all such expenses.

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10.2 Such expenses shall include only expenses actually incurred that are directly related to (1) Provider's additions, modifications, or enhancements to the Work required to successfully complete the Acceptance Test or Annual Production Test or (2) Provider's expenses incurred to remedy any failure referred to in Sections 1(b)(ii), 1(b)(v), 1(b)(vi) and 1(b)(viii) of the Agreement. This shall include fully burdened costs, including overhead, for equipment, components, materials, parts, management, engineering, engineering analysis, and labor, whether provided directly by Provider or through Subcontractors required for the additions, modifications or enhancements to the Work including warranty remedy expenses, including the installation thereof and any removal or uncovering and reinstallation of or integration into already constructed portions of the Project. Specifically excluded are costs reasonably expected to be incurred for the successful completion of the Acceptance Test or Annual Production Test if no such additions, modifications, or enhancements were required, including internal Provider labor costs and overhead, ongoing O&M costs, and reasonably expected enhancements to Provider's proprietary software that would be reasonably expected to be incurred in the normal course of passing the Acceptance Test and Annual Production Test. If any Heliostats or components thereof are added to the Project for which a cost is included on Exhibit B-1, such cost shall be deemed the cost of the item for the purposes of such expenses.

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**EXHIBIT I
FORM OF LIEN RELEASES**

(Attached 3 Sheets – Conditional and Unconditional Lien Release Forms)

A. Provider's Waiver and Release Forms. The following Waiver and Release forms shall be completed by Provider and submitted to Company prior to Company making the final payment to Provider (additional waivers and releases may be required from Provider as governed by local law):

1. **Conditional Waiver and Release Upon Final Payment:** This form should be completed by Provider and submitted to Company with its final Invoice.
2. **Unconditional Waiver and Release Upon Final Payment:** This form should be completed by Provider upon its receipt of final payment and provided to Company within ten days thereafter.

B. Provider's Subcontractor, Supplier, and Vendor Waiver and Release Forms. The following Waiver and Release form may be required to be completed and submitted to Company prior to Company making the final payment to Provider.

1. **Unconditional Waiver and Release Upon Final Payment:** This form should be completed by every subcontractor, vendor and material supplier to Provider or a subcontractor furnishing labor or material for the Work and submitted by Provider with the final Invoice to Company.

*Confidential**Execution Copy***Provider's Waiver and Release Forms****CONDITIONAL WAIVER AND RELEASE
UPON FINAL PAYMENT**

Project Name: _____

Company Contract Number: _____

Upon receipt by the undersigned of a check from Chevron Technology Ventures, a division of Chevron U.S.A. Inc. ("Company") in the sum of \$ _____ (amount of check) payable to BrightSource Construction Management, Inc. and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any mechanic's lien, stop notice, or bond right the undersigned has on the job of (_____) located at (_____). This release covers the final payment to the undersigned for all labor, services, equipment, or material furnished to on the job, except for disputed claims for additional work in the amount of \$(Amount of disputed claims). Except as otherwise disclosed herein, all Providers and/or suppliers to the undersigned have been paid in full for the labor, services, equipment, or material included in this voucher or will be paid from the proceeds of any funds disbursed to the undersigned in accordance with this voucher; such funds will be received in trust for that purpose. Before any recipient of this document relies on it, said party should verify evidence of payment to the undersigned.

Dated: _____

BrightSource Construction
Management, Inc.By: _____
(Signature)Name: _____
(Printed or Typed Name)

Title: _____

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Provider's Waiver and Release Forms

**UNCONDITIONAL WAIVER AND RELEASE
UPON FINAL PAYMENT**

Project Name: _____

Company Contract Number: _____

The undersigned has been paid in full for all labor, services, equipment, or material furnished to (_____) on the job of (_____) located at (_____) and does hereby waive and release any right to a mechanic's lien, stop notice, or any right against a labor and material bond on the job, except for disputed claims for extra work in the amount of \$ (Amount of disputed claims).

Except as otherwise disclosed herein, all subcontractors, vendors, and suppliers to the undersigned have been paid in full for the labor, services, equipment, or material included in this invoice or will be paid from the proceeds of any funds disbursed to the undersigned in accordance with this invoice; such funds will be received in trust for that purpose.

NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.

Dated: _____

BrightSource Construction
Management, Inc.

By: _____
(Signature)

Name: _____
(Printed or Typed Name)

Title: _____

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Provider's Provider Waiver and Release Forms

**UNCONDITIONAL WAIVER AND RELEASE
UPON FINAL PAYMENT**

Project Name: _____

Company Contract Number: _____

The undersigned has been paid in full for all labor, services, equipment, or material furnished to (_____) on the job of (_____) located at (_____) and does hereby waive and release any right to a mechanic's lien, stop notice, or any right against a labor and material bond on the job, except for disputed claims for extra work in the amount of \$ (Amount of disputed claims).

Except as otherwise disclosed herein, all subcontractors, vendors, and suppliers to the undersigned have been paid in full for the labor, services, equipment, or material included in this invoice or will be paid from the proceeds of any funds disbursed to the undersigned in accordance with this invoice; such funds will be received in trust for that purpose.

NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.

Dated: _____

[Entity Name]

By: _____
(Signature)

Name: _____
(Printed or Typed Name)

Title: _____

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DEFINITIONS**

“Acceptance Test” means an operational test, as set forth in Exhibit F, of the Demo Plant performance over a test period of fourteen successive days.

“Agreement” means this Master Services Agreement, including all Exhibits and Schedules attached hereto.

“Affiliate” means any entity (including without limitation, any corporation, partnership, limited liability company, joint venture or other entity) that controls, is controlled by, or is under common control with another entity. An entity is deemed to control another if it owns directly or indirectly ten percent (10%) or more of (i) the shares entitled to vote at a general election of directors of such other entity or (ii) the voting interest in such other entity if such entity does not have either shares or directors.

“Applicable Laws” means all laws (including Environmental Laws), treaties, ordinances, judgments, decrees, injunctions, writs, orders, rules, regulations, Permits and the binding interpretations of any Governmental Authority having jurisdiction over the Parties, the Project, the Site, interconnection of the Project to Company’s facilities, the Work, and this Agreement.

“Applicable Standards” means those fabrication, construction, solar, electrical and other standards and codes applicable to the Project as set forth in the Requirements.

“Annual Production Guarantee” has the meaning set forth in Exhibit F.

“Annual Production Test” has the meaning set forth in Exhibit F.

“Areas of Exclusivity” means the geographical areas set forth in the maps in Exhibit D to this Agreement.

“Background IP” has the meaning set forth in Section 8(a).

“Balance of Plant” means the portion of the Work that comprises the balance of the Project excluding the Solar Field Equipment.

“BrightSource” means BSE together with its subsidiaries, including Provider.

“BSE” means BrightSource Energy, Inc.

“BSII” means BrightSource Industries (Israel) Ltd.

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“Change Order” means changes and/or modifications to the Work and/or Milestone Schedule as authorized in writing by both Company and Provider. The Change Order shall state the change and/or modification to the Work and/or the Milestone Schedule and any related additional compensation to be paid or extension of time.

“Chevron” has the meaning set forth in Section 14(a).

“Chevron Engineering Standards” are the set of engineering guidelines, specifications, and drawings of the Company and/or its Affiliates which focus on various technical subjects, as specifically identified in Exhibit A as being applicable to the performance of the Work.

“Claim Notice” has the meaning set forth in Section 4(f)(1).

“Commercial-Scale Facility” means any Solar-To-Steam Facility for Enhanced Oil Recovery larger than the Demo Plant (approximately [*] pounds of steam per year at the Design Criteria set forth in Exhibit A-1).

“Commissioning Activities” means the testing (at first each item of equipment, and later system by system) and commissioning process prior to startup of the entire plant as an integrated operating facility.

“Company” means Chevron Technology Ventures, an unincorporated division of Chevron U.S.A. Inc., a Pennsylvania corporation.

“Company Construction Manager” means Mr. Mike Walneuski, an employee of an Affiliate of the Company or his replacement.

“Company Construction Superintendent” means Mr. Manny Mendez, an employee of an Affiliate of the Company or his replacement.

“Company Indemnitee(s)” means the Company and any Affiliate, and the members, partners, managers, directors, officers, agents, consultants, contractors, representatives and employees of any of them.

“Company Project Manager” means Mr. Sergio Hoyos, an employee of Company or his replacement

“Company Release Event” has the meaning given in Section 23 (b).

“Confidential Information” has the meaning set forth in Section 7(a).

“Contract Documents” means this Agreement, all Exhibits, and any Change Orders and amendments thereto, and the final detailed drawings, plans and

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specifications that describe the technical requirements required for the completion of the Work pursuant to this Agreement.

“Contract Price” means the amount the Company shall pay Provider as full compensation for the performance of the Work and its obligations under this Agreement. Unless modified by Change Order, the Contract Price is the maximum amount of compensation payable by Company to Provider for the Work.

“Contract Time” means the period of time after the Effective Date allotted in the Milestone Schedule to achieve Mechanical Completion of the Work, as may be adjusted by Change Order.

“CTV” means Company or Chevron Technology Ventures, an unincorporated division of Chevron U.S.A. Inc., a Pennsylvania corporation.

“Deliverables” means all data, designs, documentation, plans, specifications, drawings, diagrams, parts lists, safety documents, safety reports, training documents, training records, manuals, instructions, operating procedures, operating plans, operating data, test data, test reports, cost data, and cost reports to be physically delivered to Company by Provider as required in the Agreement.

“Demo Plant” or “Project” means the Solar-to-Steam Demonstration Plant at the Company’s oil production facility in Coalinga, California.

“Design Criteria” means the design specifications set forth in Exhibit A-1 to this Agreement.

“Dispute” means any dispute, claim or controversy arising out of or in connection with this Agreement.

“Documentation” means all data, designs, documentation, plans, and specifications created by either Party specifically for the Demo Plant.

“Effective Date” means the date on which the parties entered into the Agreement.

“Election Period” has the meaning set forth in Section 4(f)(1).

“Enhanced Oil Recovery” means any method or process employed to improve the extraction or recovery of crude oil or natural gas.

“Environmental Laws” means all Applicable Laws relating to (i) facility siting, land use and environmental matters; (ii) the control of any pollutant, or protection of the air, water, or land; (iii) solid, gaseous or liquid waste generation, handling, treatment, storage, disposal or transportation; (iv) exposure to hazardous, toxic

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or other harmful substances; and (v) the protection and enhancement of the environment.

“Exclusivity Period” has the meaning set forth in Section 17(b).

“Excusable Delay” has the meaning set forth in Section 1(i)(iii).

“Excuse Hours” has the meaning set forth in Exhibit F, Paragraph H.

“Exhibits” means an exhibit to this Agreement as set forth in Section 28 and the List of Exhibits in this Agreement, including any exhibits or documents referenced therein.

“First Commercial-Scale Facility” means the first Commercial-Scale Facility developed and constructed by Provider for the Company.

“Force Majeure” has the meaning set forth in Section 25.

“Governmental Authority” means any court, tribunal, arbitrator, authority, agency, commission, counsel, official or other instrumentality of the United States, any foreign country or any domestic or foreign state, county, city, school district or other political subdivision or similar governing entity.

“Hazardous Substances” means any hazardous, toxic, or dangerous wastes, substances, chemicals, constituents, contaminants, pollutants, and materials and any other carcinogenic, liquids, corrosive, ignitable, radioactive, reactive, toxic, or otherwise hazardous substances or mixtures (whether solids, liquids, or gases) now or at any time subject to regulation, control, remediation, or otherwise addressed under Applicable Laws; (i) any “hazardous substance” as defined by any Environmental Law, and regulations promulgated thereunder; (ii) any “hazardous, toxic or dangerous waste, substance or material” specifically defined as such in any Environmental Law and regulations promulgated thereunder; and (iii) any hazardous, toxic or dangerous waste, substance, or material as defined in any so-called “superfund” or “superlien” law.

“Heat Exchanger System” means the system of interconnected components listed below (with equipment numbers as defined in Exhibit A-3) as constructed by Provider for the Demo Plant for the purpose of using solar process steam as a heat source to produce service steam:

[*]

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[*]

“Heliostats” means the items of equipment identified as Solar Field Equipment on Schedule B-1.

“Independent Engineer” means an engineer mutually selected by the Parties to provide a certification with respect to Provider’s compliance with the terms of the Acceptance Test and/or Annual Production Test, as applicable, as referred to in Paragraph F, Exhibit J.

“Indemnified Party” means a Party claiming indemnification under this Agreement.

“Indemnifying Party” means the Party from whom indemnification is sought under this Agreement.

“Indemnity Notice” has the meaning set forth in Section 4(f)(6).

“IP” has the meaning set forth in Section 8(a)(i).

“Invoice” means the written invoice submitted by Provider requesting and verifying its entitlement to payment.

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“Issue Date” means the date an issue is presented to a Party.

“JAMS” means the Office of Judicial Arbitration and Mediation Services, Inc.

“Joint IP” has the meaning set forth in Section 8(a)(ii).

“License” has the meaning set forth in Section 11.

“Liquidated Damages” has the meaning set forth in Exhibit F, Paragraph D.

“LOA” means that certain Letter of Authorization, dated December 11, 2007 between the Company and Provider.

“Major Equipment” means the following equipment:

[*]

“Make Right Expenses” as the meaning set forth in Section 10.2 of Exhibit H, Procedures Manual.

“Mechanical Completion” means the successful completion of all commissioning activities including the entire pre-startup, testing (at first each item of equipment, and later system by system), and commissioning process prior to startup of the entire Demo Plant as an integrated operating facility.

“Milestone Payment” means each of the eight payment tranches set forth on Exhibit B-1.

“Milestone Schedule” means the schedule of milestone dates set forth on Exhibit A-5 which Provider shall endeavor to meet in accordance with the terms of Section 1(n)(i).

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“Notice of Completion” means a notice filed by Company with the county recorder stating that construction of the Project has been completed.

“Notice to Proceed” has the meaning set forth in Section 1(n)(i).

“O&M Agreement” means the Operating and Maintenance Agreement between Company and Provider, set forth in Exhibit A-4 to this Agreement.

“Party” means Company or Provider individually.

“Parties” means Company and Provider collectively or jointly.

“Performance Model” has the meaning set forth in Exhibit F, Paragraph H.

“Permits” means all licenses, permits, certificates of authority, notifications, authorizations, approvals, registrations, franchises and similar consents granted or issued by any Governmental Authority and applicable to the Project or the Work.

“Prime Rate” means, at any given point in time, the Prime Rate of interest per annum for domestic banks as published in The Wall Street Journal in the “Money Rates” section, or if such rate ceases to be published in The Wall Street Journal or The Wall Street Journal ceases publication, such other rate as agreed by the Parties.

“Products” means all materials, fabrications, assemblies, equipment, supplies, spare parts and components incorporated or to be incorporated into the Project or furnished pursuant to this Agreement.

“Project” or “Demo Plant” means the Solar-to-Steam Demonstration Plant at the Company’s oil production facility in Coalinga, California. Provider will provide to Company certain technical, developmental, engineering, procurement, construction and consulting services for the design and construction of said Solar-to-Steam Demonstration Plant.

“Project IP” has the meaning set forth in Section 11.

“Project Organizational Flowchart” means the flowchart depicting the personnel of Provider or Provider’s individuals responsible for all the primary functional areas outlined in Provider’s Project Execution Plan (Document 08-GE-G-P-002) in Exhibit A-3 to the Agreement.

“Project Schedule” means Provider’s timeline for completion of the Work, developed using the critical path method and including the dates Project tasks will be started and completed.

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“Provider” means BrightSource Construction Management, Inc., a California corporation.

“Provider Indemnitee(s)” means Provider and any Affiliate, and the members, partners, managers, directors, officers, agents, consultants, contractors, representatives and employees of any of them.

“Provider IP” has the meaning set forth in Section 8(a)(ii).

“Provider Proprietary Properties” means software, technology, and other materials, products, and information used by Provider in connection with the Work.

“Provider Project Manager” means Mr. Arie Amit, an employee of Provider, or his replacement.

“Provider Release Event” has the meaning given in Section 23 (i).

“Prudent Industry Practices” means those practices, methods, standards and acts (including those engaged in or approved by a significant portion of the solar power industry with respect to the Solar Field Equipment and/or industrial process industry with respect to the Balance of Plant for similar facilities or processes in the United States) that at a particular time in the exercise of diligence and good judgment would have been expected to accomplish the desired result in a manner consistent with proven engineering standards and procedures, safety, environmental protection, economy, and expediency as applied to the Project.

“Requirements” means the product plans and specifications set forth in Exhibit A (including the Chevron Engineering Standards set forth therein), Applicable Laws, Permits, Prudent Industry Practices, Design Criteria, and the Site Map, each as may be amended from time to time by Change Order.

“Royalty” has the meaning set forth in Section 14(b).

“Scope of Work” has the meaning set forth in Section 1(a).

“Section” means a section of this Agreement.

“Services” means the design, technical, developmental, engineering, procurement, installation, construction, consulting and other services required for the Project. Without limiting the foregoing, the Services include all labor necessary to perform such Services, including the services set forth in Exhibit A to this Agreement.

“Site” means the land owned by Chevron U.S.A. Inc. on which Provider will construct the Project as set forth in the Site Map.

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“Site Map” means the Area Development Site Plan (Revision D of Document 08-GE-C-D-302) as set forth in Exhibit A-3 to this Agreement.

“Solar Field Equipment” means the portion of Work that comprises the solar field heliostats, including all mirrors and mirror pads, support structures, drives (azimuth and elevation), heliostat controllers and enclosures, drive interface units, harnesses, wiring connectors, above-ground wiring connecting heliostats to adjacent heliostats, pylons, installation, and the solar field control system (hardware and software). For the avoidance of doubt, the Solar Field Equipment is comprised of the items of equipment identified as Solar Field Equipment on Schedule B-1 plus the solar field control system (hardware and software).

“Solar-To-Steam Facility” means any plant or device that converts solar energy into thermal energy, including but not limited to steam or preheated water but excluding electricity and steam to produce electricity.

“Startup Test” means a preliminary test of operation, as set forth Exhibit F.

“Subcontractors” means any subcontractors of Provider.

“Suspension Notice” means a written notice served by the Company to the Provider, at any time and for any reason, to suspend the Work to be performed by Provider, in whole or in part.

“Tax or Taxes” has the meaning set forth in Section 10(b).

“Third Party Claim” means any third-Party claim or claims for which indemnification is sought.

“Warranty(ies)” means the warranties in Sections 1(b)(iii)(A) – (F).

“Work” means the Services, all Deliverables, and all Products as set forth in Exhibit A.