

GRANTS/CONTINGENT AWARD REQUEST



To: Grants and Loans Office

Date: 3/13/2012

Project Manager: Heather Bird

Phone Number: 916-327-1473

Office: Energy Efficiency Research Office

Division: Energy Research and Development

MS- 51

Project Title: Demonstration of i50 Decentralized Wastewater Treatment/Water Recycling

Type of Request: (check one)

[X] New Agreement: (include items A-F from below) Agreement Number: PIR-11-011
Program: PIER E / Industrial/ Ag/ Water
Solicitation Name and/or Number: PON-11-501-05 (2011 Emerging Technology Demonstration Grant Program (ETDG II))
Legal Name of Recipient: Great Circle Industries, Inc.
Recipient's Full Mailing Address: 1631 VISALIA AVE BERKELEY, CA 94707-1527
Recipient's Project Officer: David Peterson Phone Number: (310) 826-09270
Agreement Start Date: 6/30/2012 Agreement End Date: 3/30/2015

[] Amendment: (Check all that apply) Agreement Number:
[] Term Extension - New End Date:
[] Work Statement Revision (include Item A from below)
[] Budget Revision (include Item B from below)
[] Change of Scope (include Items A - F as applicable from below)
[] Other:

ITEMS TO ATTACH WITH REQUEST:

- A. Work Statement B. Budget C. Recipient Resolution, if applicable. (Resolution may be requested in Special Conditions if not currently available.) D. Special Conditions, if applicable. E. CEQA Compliance Form F. Other Documents as applicable
• Copy of Score Sheets
• Copy of Pre-Award Correspondence
• Copy of All Other Relevant Documents

California Environmental Quality Act (CEQA)

[] CEC finds, based on recipient's documentation in compliance with CEQA:
[] Project exempt: NOE filed:
[] Environmental Document prepared: NOD filed:
[] Other:
[X] CEC has made CEQA finding described in CEC-280, attached

Funding Information:

*Source #1: PIER-E Amount: \$ 750,000.00 Statute: 10- FY: 11-12 Budget List #: 501.0271
*Source #2: Amount: \$ Statute: FY: Budget List #:
*Source #3: Amount: \$ Statute: FY: Budget List #:

If federally funded, specify federal agreement number:

* Source Examples include ERPA, PIER-E, PIER-NG, FED, GRDA, ARFVT, OTHER.

Business Meeting Approval: (refer to Business Meeting Schedule)

Proposed Business Meeting Date: 5/9/2012 [] Consent [X] Discussion
Business Meeting Participant: Heather Bird Time Needed: 5 minutes

Agenda Notice Statement: (state purpose in layperson terms)

Possible approval of a [X] Grant / [] Contingent Award to...
Possible approval of Agreement PIR-11-011 for a grant of \$750,000.00 to Great Circle Industries, Inc. to test and demonstrate, and obtain State of California Title 22 regulatory approval, for unique modular processes and equipment for wastewater treatment and reuse, that conserve energy and water, reuse water, and where beneficial, plant nutrients. (PIER electricity funding.) Contact: Heather Bird. (5 minutes)

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TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2		Build/Ship i50 Test Unit (Match Contribution)
3	X	Obtain Title 22 Regulatory Approval
4	X	Plan Beta Field Site Installation
5	N/A	Technology Transfer Activities
6	N/A	Production Readiness Plan

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1-5	David Peterson, Great Circle Industries, Inc. (GCI) Steven Mullerheim (GCI)		
6	David Peterson (GCI)		

GLOSSARY

Specific terms and acronyms used throughout this scope of work are defined as follows:

Term/ Acronym	Definition
CPR	Critical Project Review
CDPH	California Department of Public Health
CEQA	California Environmental Quality Act
DSRSD	Dublin San Ramon Services District
Energy Commission	California Energy Commission
GCI	Great Circle Industries, Inc.
i50	Proprietary GCI wastewater treatment product being demonstrated
M&V	Measurement and Verification
PAC	Project Advisory Committee
PIER	Public Interest Energy Research
RD&D	Research, Development and Demonstration

Problem Statement:

The problems addressed in this Agreement are institutional, market-based, and technological in character. The institutional problems relate to existing wastewater treatment regulations of California, and to a lesser extent of other states, which require

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use of particular processes, process sequences, and equipment designs. Existing regulations are based on conventional treatments, and also assume that large central treatment plants are the sources of recycled water. The California regulations (principally "Title 22"), developed over 30 years ago, give no consideration to such environmental factors as energy consumption, carbon footprint, and disinfection byproducts. The regulations, furthermore, exclude other designs which can be much more energy efficient, cost-effective, environmentally beneficial, and conservative of water and other valuable resources.

Alternative wastewater treatment and recycling technologies, such as those developed by Great Circle Industries, Inc. (GCI) must be formally tested to demonstrate equivalent or superior performance to those technologies mandated by the regulations. Implementation of these testing and demonstration requirements is very expensive, and even if technologically successful, may not be accepted by regulatory authorities. Thus, the market-related barriers: investors and municipalities responsible for wastewater treatment and reuse will not support a new paradigm and technology until it has received regulatory approval, and also, a precedent of both acceptance and operation in an actual installation.

Goals of the Agreement:

The main goal of this Agreement is to formally test and demonstrate, and obtain State of California Title 22 regulatory approval, for unique modular processes and equipment developed by GCI, and industrial partners, for wastewater treatment and reuse, that conserve energy and water, reuse water, and where beneficial, plant nutrients.

Objectives of the Agreement:

The objectives of this Agreement are:

- To collect that body of data needed to gain Title 22 regulatory approval from the California Department of Public Health for water reuse of the GCI effluent water product, with and without post treatment;
- To measure and analyze energy and power consumption vs. effluent flow, with calculation of unit energy consumption for these treatments;
- To demonstrate irrigation performance with sample plantings of crops with differing nutrient requirements; and
- To find a prospective beta site, that will use the GCI technology, in or near the service area of the Dublin San Ramon Services District (DSRSD), and to take such preparatory steps as are needed for such an installation.

Product Guidelines:

For complete product guidelines, refer to Section 5 in the Terms and Conditions.

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TASK 1 ADMINISTRATION

Task 1.1 Attend Kick-off Meeting

The goal of this task is to establish the lines of communication and procedures for implementing this Agreement.

The Recipient shall:

- Attend a “Kick-Off” meeting with the Commission Project Manager, the Grants Officer, and a representative of the Accounting Office. The Recipient shall bring its Project Manager, Agreement Administrator, Accounting Officer, and others designated by the Commission Project Manager to this meeting. The administrative and technical aspects of this Agreement will be discussed at the meeting. Prior to the kick-off meeting, the Commission Project Manager will provide an agenda to all potential meeting participants.

The administrative portion of the meeting shall include, but not be limited to, the following:

- Discussion of the terms and conditions of the Agreement
- Discussion of Critical Project Review (Task 1.2)
- Match fund documentation (Task 1.6)
- Permit documentation (Task 1.7)

The technical portion of the meeting shall include, but not be limited to, the following:

- The Commission Project Manager’s expectations for accomplishing tasks described in the Scope of Work
- An updated Schedule of Products
- Discussion of Progress Reports (Task 1.4)
- Discussion of Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
- Discussion of the Final Report (Task 1.5)

The Commission Project Manager shall:

- Designate the date and location of this meeting.

Recipient Products:

- Updated Schedule of Products (no draft)
- Updated List of Match Funds (no draft)
- Updated List of Permits (no draft)

Commission Project Manager Product:

- Kick-Off Meeting Agenda (no draft)

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Task 1.2 Critical Project Review (CPR) Meetings

The goal of this task is to determine if the project should continue to receive Energy Commission funding to complete this Agreement and to identify any needed modifications to the tasks, products, schedule or budget.

CPRs provide the opportunity for frank discussions between the Energy Commission and the Recipient. CPRs generally take place at key, predetermined points in the Agreement, as determined by the Commission Project Manager and as shown in the Technical Task List above. However, the Commission Project Manager may schedule additional CPRs as necessary, and any additional costs will be borne by the Recipient.

Participants include the Commission Project Manager and the Recipient and may include the Commission Grants Officer, the Public Interest Energy Research (PIER) Program Team Lead, other Energy Commission staff and Management as well as other individuals selected by the Commission Project Manager to provide support to the Energy Commission.

The Commission Project Manager shall:

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the Energy Commission, but they may take place at another location.
- Send the Recipient the agenda and a list of expected participants in advance of each CPR. If applicable, the agenda shall include a discussion on both match funding and permits.
- Conduct and make a record of each CPR meeting. One of the outcomes of this meeting will be a schedule for providing the written determination described below.
- Determine whether to continue the project, and if continuing, whether or not modifications are needed to the tasks, schedule, products, and/or budget for the remainder of the Agreement. Modifications to the Agreement may require a formal amendment (please see the Terms and Conditions).
- Provide the Recipient with a written determination in accordance with the schedule. The written response may include a requirement for the Recipient to revise one or more product(s) that were included in the CPR.

The Recipient shall:

- Prepare a CPR Report for each CPR that discusses the progress of the Agreement toward achieving its goals and objectives. This report shall include recommendations and conclusions regarding continued work of the projects. This report shall be submitted along with any other products identified in this scope of work. The Recipient shall submit these documents to the Commission Project Manager and any other designated

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- reviewers at least 15 working days in advance of each CPR meeting.
- Present the required information at each CPR meeting and participate in a discussion about the Agreement.

Commission Project Manager Products:

- Agenda and a list of expected participants (no draft)
- Schedule for written determination (no draft)
- Written determination (no draft)

Recipient Product:

- CPR Report(s) (no draft)

Task 1.3 Final Meeting

The goal of this task is to closeout this Agreement.

The Recipient shall:

- Meet with Energy Commission staff to present the findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement.

This meeting will be attended by, at a minimum, the Recipient, the Commission Grants Office Officer, and the Commission Project Manager. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be two separate meetings at the discretion of the Commission Project Manager.

The technical portion of the meeting shall present an assessment of the degree to which project and task goals and objectives were achieved, findings, conclusions, recommended next steps (if any) for the Agreement, and recommendations for improvements. The Commission Project Manager will determine the appropriate meeting participants.

The administrative portion of the meeting shall be a discussion with the Commission Project Manager and the Grants Officer about the following Agreement closeout items:

- What to do with any equipment purchased with Energy Commission funds (Options)
- Energy Commission's request for specific "generated" data (not already provided in Agreement products)
- Need to document Recipient's disclosure of "subject inventions" developed under the Agreement
- "Surviving" Agreement provisions, such as repayment provisions and confidential Products
- Final invoicing and release of retention

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- Prepare a schedule for completing the closeout activities for this Agreement

Products:

- Written documentation of meeting agreements (no draft)
- Schedule for completing closeout activities (no draft)

Task 1.4 Monthly Progress Reports

The goal of this task is to periodically verify that satisfactory and continued progress is made towards achieving the research objectives of this Agreement on time and within budget.

The objectives of this task are to summarize activities performed during the reporting period, to identify activities planned for the next reporting period, to identify issues that may affect performance and expenditures, and to form the basis for determining whether invoices are consistent with work performed.

The Recipient shall:

- Prepare a Monthly Progress Report which summarizes all Agreement activities conducted by the Recipient for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Each progress report is due to the Commission Project Manager within 10 days of the end of the reporting period. The recommended specifications for each progress report are contained in Exhibit A, Attachment A-2.

Product:

- Monthly Progress Reports (no draft)

Task 1.5 Final Report

The goal of the Final Report is to assess the project's success in achieving its goals and objectives, advancing science and technology, and providing energy-related and other benefits to California.

The objectives of the Final Report are to clearly and completely describe the project's purpose, approach, activities performed, results, and advancements in science and technology; to present a public assessment of the success of the project as measured by the degree to which goals and objectives were achieved; to make insightful observations based on results obtained; to draw conclusions; and to make recommendations for further RD&D projects and improvements to the PIER project management processes.

The Final Report shall be a public document. If the Recipient has obtained confidential

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status from the Energy Commission and will be preparing a confidential version of the Final Report as well, the Recipient shall perform the following activities for both the public and confidential versions of the Final Report.

The Recipient shall:

- Prepare an Outline of the Final Report.
- Prepare a Final Report following the approved outline and the latest version of the PIER Final Report guidelines published on the Energy Commission's website at <http://www.energy.ca.gov/contracts/pier/contractors/index.html> at the time the Recipient begins performing this task, unless otherwise instructed in writing by the Commission Project Manager. Instead of the timeframe listed in the Product Guidelines located in Section 5 of the Terms and Conditions, the Commission Project Manager shall provide written comments on the Draft Final Report within fifteen (15) working days of receipt. The Final Report must be completed on or before the end of the Agreement Term.
- Submit one bound copy of the Final Report with the final invoice.

Products:

- Draft Outline of the Final Report
- Final Outline of the Final Report
- Draft Final Report
- Final Report

Task 1.6 Identify and Obtain Matching Funds

The goal of this task is to ensure that the match funds planned for this Agreement are obtained for and applied to this Agreement during the term of this Agreement.

The costs to obtain and document match fund commitments are not reimbursable through this Agreement. Although the PIER budget for this task will be zero dollars, the Recipient may utilize match funds for this task. Match funds shall be spent concurrently or in advance of PIER funds for each task during the term of this Agreement. Match funds must be identified in writing and the associated commitments obtained before the Recipient can incur any costs for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a letter documenting the match funding committed to this Agreement and submit it to the Commission Project Manager at least 2 working days prior to the kick-off meeting. If no match funds were part of the proposal that led to the Energy Commission awarding this Agreement and none have been identified at the time this Agreement starts, then state such in the letter. If match funds were a part of the proposal that led to the Energy Commission awarding this Agreement, then provide in the

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letter a list of the match funds that identifies the:

- Amount of each cash match fund, its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied
- Amount of each in-kind contribution, a description, documented market or book value, and its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient shall identify its owner and provide a contact name, address and telephone number, and the address where the property is located
- Provide a copy of the letter of commitment from an authorized representative of each source of cash match funding or in-kind contributions that these funds or contributions have been secured.
- Discuss match funds and the implications to the Agreement if they are reduced or not obtained as committed, at the kick-off meeting. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide the appropriate information to the Commission Project Manager if during the course of the Agreement additional match funds are received.
- Notify the Commission Project Manager within 10 days if during the course of the Agreement existing match funds are reduced. Reduction in match funds must be approved through a formal amendment to the Agreement and may trigger an additional CPR.

Products:

- A letter regarding match funds or stating that no match funds are provided (no draft)
- Copy(ies) of each match fund commitment letter(s) (if applicable) (no draft)
- Letter(s) for new match funds (if applicable) (no draft)
- Letter that match funds were reduced (if applicable) (no draft)

Task 1.7 Identify and Obtain Required Permits

The goal of this task is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track.

Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement. Although the PIER budget for this task will be zero dollars, the Recipient shall budget match funds for any expected expenditures associated with obtaining permits. Permits must be identified in writing and obtained before the Recipient can make any expenditures for which a permit is required.

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The Recipient shall:

- Prepare a letter documenting the permits required to conduct this Agreement and submit it to the Commission Project Manager at least 2 working days prior to the kick-off meeting. If there are no permits required at the start of this Agreement, then state such in the letter. If it is known at the beginning of the Agreement that permits will be required during the course of the Agreement, provide in the letter:
 - A list of the permits that identifies the:
 - Type of permit
 - Name, address and telephone number of the permitting jurisdictions or lead agencies
- The schedule the Recipient will follow in applying for and obtaining these permits.
- Discuss the list of permits and the schedule for obtaining them at the kick-off meeting and develop a timetable for submitting the updated list, schedule and the copies of the permits. The implications to the Agreement if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in the Progress Reports and will be a topic at CPR meetings.
- If during the course of the Agreement additional permits become necessary, provide the appropriate information on each permit and an updated schedule to the Commission Project Manager.
- As permits are obtained, send a copy of each approved permit to the Commission Project Manager.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the Commission Project Manager within 10 days. Either of these events may trigger an additional CPR.

Products:

- Letter documenting the permits or stating that no permits are required (no draft)
- A copy of each approved permit (if applicable) (no draft)
- Updated list of permits as they change during the term of the Agreement (if applicable) (no draft)
- Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable) (no draft)

Professional Advisory Committee (PAC)

Task 1.8 Establish the PAC

The goal of this task is to create an advisory committee for this Agreement.

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The PAC shall be composed of diverse professionals. The number can vary depending on potential interest and time availability. The Recipient's Project Manager and the Commission Project Manager shall act as co-chairs of the PAC. The exact composition of the PAC may change as the need warrants. PAC members serve at the discretion of the Commission Project Manager.

The PAC may be composed of, but is not limited to, qualified professionals spanning the following types of disciplines:

- Researchers knowledgeable about the project subject matter.
- Members of the trades who will apply the results of the project (for example, designers, engineers, architects, contractors, and trade representatives).
- Public Interest Market Transformation Implementers.
- Product Developers relevant to project subject matter.
- U.S. Department of Energy Research Manager.
- Public Interest Environmental Groups.
- Utility Representatives.
- Members of the relevant technical society committees.

The purpose of the PAC is to:

- Provide guidance in research direction. The guidance may include scope of research; research methodologies; timing; coordination with other research. The guidance may be based on:
 - Technical area expertise
 - Knowledge of market applications
 - Links between the agreement work and other past, present or future research (both public and private sectors) they are aware of in a particular area
- Review products. Provide specific suggestions and recommendations for needed adjustments, refinements, or enhancement of the products.
- Evaluate tangible benefits to California of this research and provide recommendations, as needed, to enhance tangible benefits.
- Provide recommendations regarding information dissemination, market pathways or commercialization strategies relevant to the research products.

The Recipient shall:

- Prepare a draft list of potential PAC members that includes name, company, physical and electronic address, and phone number and submit it to the Commission Project Manager at least 2 working days prior to the kick-off meeting. This list will be discussed at the kick-off meeting and a schedule for recruiting members and holding the first PAC meeting will be developed.

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- Recruit PAC members and ensure that each individual understands the member obligations described above, as well as the meeting schedule outlined in Task 1.9.
- Prepare the final list of PAC members.
- Submit letters of acceptance or other comparable documentation of commitment for each PAC member.

Products:

- Draft List of PAC Members
- Final List of PAC Members
- Letters of acceptance, or other comparable documentation of commitment for each PAC Member (no draft)

Task 1.9 Conduct PAC Meetings

The goal of this task is for the PAC to provide strategic guidance to this project by participating in regular meetings or teleconferences.

The Recipient shall:

- Discuss the PAC meeting schedule at the kick-off meeting. The number of face-to-face meetings and teleconferences and the location of PAC meetings shall be determined in consultation with the Commission Project Manager. This draft schedule shall be presented to the PAC members during recruiting and finalized at the first PAC meeting.
- Organize and lead PAC meetings in accordance with the schedule. Changes to the schedule must be pre-approved in writing by the Commission Project Manager.
- Prepare PAC meeting agenda(s) with back-up materials for agenda items.
- Prepare PAC meeting summaries, including recommended resolution of major PAC issues.

Products:

- Draft PAC Meeting Schedule
- Final PAC Meeting Schedule
- PAC Meeting Agenda(s) with Back-up Materials for Agenda Items (no draft)
- Written PAC meeting summaries, including recommended resolution of major PAC issues (no draft)

TECHNICAL TASKS

TASK 2 BUILD/SHIP i50 TEST UNIT (MATCH CONTRIBUTION)

The goal of this task is to build and ship a functional i50 test unit to the DSRSD test site, to serve as the base module for wastewater treatment testing and evaluation.

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The Recipient shall:

- Build the GCI i50 unit, using the services of industrial partners.
- Functionally test the unit at the factory prior to shipment and ship the unit to the DSRSD test site.
- Prepare an i50 Acceptance Test Report to include the results of a checklist based physical and functional inspection of the unit. The physical inspection will include paint, inventory of components and parts, and visual inspection. The functional inspection will confirm proper operation in all modes, including automatic and manual, over various operating parameters. The controls, displays, hydraulic integrity will also be checked.

Products:

- i50 Acceptance Test Report (no draft)

TASK 3 OBTAIN TITLE 22 REGULATORY APPROVAL

The goal of this task is to obtain regulatory approval from the California Department of Public Health (CDPH) for use of the GCI product and technology for water recycling in California, per the requirements of the Title 22 code, and to obtain any needed variances.

The Recipient shall:

- Prepare a Measurement and Verification (M&V) Test Plan based on a test plan that was developed for a similar purpose.
- Prepare updated product design drawings.
- Communicate with the CDPH to guide planned activities and data requirements and update M&V test plan as needed.
- Retain all needed consultants, including a third party vendor who will conduct a measurement and verification assessment of the technology. Assessment shall include energy consumption, water quality, system performance, reliability, economics, operating maintenance costs and effectiveness of using treated water as irrigation water.
- Verify DSRSD as the demo site, or obtain another suitable demo site subject to written approval by the Commission Project Manager of the new site.
- Prepare the test site at the DSRSD Wastewater Treatment Facility.
- Perform preliminary tests and collect data required by CDPH.
- Prepare and submit an M&V Interim Test Report to the CDPH for a preliminary response including, but not limited to, all collected data.
- Perform long-term tests and collect data required by CDPH.
- Prepare the 1st Critical Project Review Report.
- Participate in the 1st Critical Project Review.
- Obtain conditional approval from the CDPH and other agencies for installation of a beta site at a commercial location, including any needed

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- variances and permits.
- Prepare the Final M&V Test Report.

Products:

- Draft M&V Test Plan
- Final M&V Test Plan
- Updated product design drawings
- Interim M&V Test Report
- Approval permits and variances for beta site installation from CDPH
- 1st Critical Project Review Report (no draft)
- Final M&V Test Report, after regulatory review and concurrence

TASK 4 PLAN BETA FIELD SITE INSTALLATION

The goal of this task is to evaluate potential field sites in or near the DSRSD service area, develop preliminary proposals for promising sites, and negotiate an attractive implementation plan and price with major stakeholders for the most promising site.

The Recipient shall:

- Plan for installation at a beta site by surveying the DSRSD service area and the adjoining service areas for potential beta field site installation.
- Install i50 unit at beta field site.
- Deliver beta site proposals and presentations to potential customers, including water and wastewater districts and their largest water users, using the DSRSD test field site installation for demonstrations.
- Implement tests and procedures in accordance with the approved Test Plan.
- Use qualified, licensed sanitary engineering consultants to implement the Test Plan.
- Prepare a Draft Beta Site Development Plan and Status Report, after regulatory decisions.
- Present results to staff of the CDPH for review, comment, and ultimate regulatory actions.
- Negotiate through qualified consultants the bases for variances of Title 22 provisions that are inapplicable, unnecessarily restrictive and/or economically prohibitive for the scale and methods of treatment employed by the GCI technology.
- Prepare a Final Beta Site Development Plan and Status Report including, but not limited to, list of potential beta sites.
- Prepare the 2nd Critical Project Review Report.
- Participate in the 2nd Critical Project Review.
- Dismantle the test site.

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Products:

- Draft Beta Site Development Plan and Status Report
- Final Beta Site Development Plan and Status Report
- 2nd Critical Project Review Report (no draft)

TASK 5 TECHNOLOGY TRANSFER ACTIVITIES

The goal of this task is to develop a plan to make the knowledge gained, experimental results and lessons learned available to key decision-makers.

The Recipient shall:

- Prepare a Draft Technology Transfer Plan that explains how the knowledge gained in this project will be made available to the public. Technology transfer activities shall be reported in the Monthly Progress Reports.
- Prepare a Final Technology Transfer Plan. The level of detail expected is least for research-related projects and highest for demonstration projects. Key elements from this report shall be included in the Final Report for this project.
- Conduct Technology Transfer Activities in accordance with the Technology Transfer Plan, including dissemination of test results to technical journals.
- Provide demonstrations and test result documents to prospective stakeholders. This task will be completed before dismantling the test site and will target a broader audience, including representatives of golf courses, engineering firms, developers, water districts and wastewater districts from across California and the U.S.
- Update website to include the results of the project.
- Make presentations to the WateReuse Association.
- Hold press conference(s) at the test site to publicize the results of the project. This task will be completed before dismantling of the test site.

Products:

- Draft Technology Transfer Plan
- Final Technology Transfer Plan

TASK 6 PRODUCTION READINESS PLAN

The goal of the plan is to determine the steps that will lead to the manufacturing of the technologies developed in this project or to the commercialization of the project's results.

The Recipient shall:

- Prepare a Draft Production Readiness Plan by locating potential California manufacturers and assemblers. The plan will include identification of

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critical production processes, equipment, facilities, personnel resources, and support systems that will be needed to produce a commercially viable product, including internal manufacturing facilities, as well as supplier technologies, capacity constraints imposed by the design under consideration, identification of design critical elements and the use of hazardous or non-recyclable materials. The degree of detail in the Production Readiness Plan discussion should be proportional to the complexity of producing or commercializing the proposed product and its state of development. The plan shall include, as appropriate, but not be limited to:

- Identification of critical production processes, equipment, facilities, personnel resources, and support systems that will be needed to produce a commercially viable product.
- Internal manufacturing facilities, as well as supplier technologies, capacity constraints imposed by the design under consideration, identification of design critical elements and the use of hazardous or non-recyclable materials. The product manufacturing effort may include “proof of production processes”.
- A projected “should cost” for the product when in production.
- The expected investment threshold to launch the commercial product.
- An implementation plan to ramp up to full production.
- Solicit proposals and quotes from prospective manufacturers and prepare the projected “should cost” for the product when in production, the expected investment threshold to launch the commercial product, and an implementation plan to ramp up to full production.
- Negotiate initial manufacturing agreements and complete the Final Production Readiness Plan.

Products:

- Draft Production Readiness Plan
- Final Production Readiness Plan