

ATTACHMENT 2

SCOPE OF WORK FOR TASK THREE

(7 June 2018)

Task Three: Food Crop Sampling and Analysis

Groups and Individuals identified in this task are as follows:

Permit Holders. The groups that use or supply oilfield produced water for irrigation of crops for human consumption under Waste Discharge Requirements adopted by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) or have submitted Reports of Waste Discharge to use oilfield produced water to irrigate crops for human consumption.

Administrator. The representative of the Permit Holders.

Manager. The representative of the Central Valley Water Board.

Consultant. The party selected to do the work by the Administrator and approved by the Manager.

Sampler. A third party selected to do the sampling as selected by the Administrator and approved by the Manager.

Scientific Advisor. The scientific advisor to the Central Valley Water Board and under contract to the Central Valley Water Board.

Food Safety Panel. Panel of food safety experts convened by the Central Valley Water Board.

Parties. The Permit Holders and the Central Valley Water Board.

Description and Objectives

Oil field produced water (produced water) is known to contain trace constituents from oil production processes, as documented by analytical results found in reports submitted to the Central Valley Water Board. These constituents are typically detected below primary maximum contamination levels (MCLs) for drinking water. Certain produced water from the general region of the Kern River Field and Kern Front Field is treated and then blended with agricultural water supplies and used to irrigate certain crops.

Beginning in September of 2015, samples of crops irrigated with this produced water have been analyzed for oilfield waste constituents, as compared to the same crops grown in nearby areas that have not been irrigated with produced water. This has been done to provide data to assess the safety of consuming products grown with produced water for human consumption. This food safety testing program (Food Safety Study), initially undertaken and administered voluntarily by the Cawelo Water District, and later with Central Valley Water Board oversight, has evolved with input from the Food Safety Panel and collaboration with the Central Valley Water Board and its Scientific Advisor. To date, there have been 20 different sampling events generally occurring over the past three years, analyzing the quality of almonds, carrots, citrus, garlic, grapes, pistachios, and potatoes.

Regardless of the current oversight, the Central Valley Water Board is concerned about a potential perceived bias that could affect the objectivity of the current Food Safety Study. The Central Valley Water Board will control and operate the Food Safety Study and the Permit Holders will fund the study.

The objective of Task Three is to collect food crop samples of the same type as the 2017 Food Safety Study (if available) from both test and control fields¹, deliver the samples to an analytical laboratory, review laboratory results, and provide a written report regarding the results using the same procedures and methods as the latest round of sampling events and reports. The report will discuss, among other matters, if Chemicals of Interest identified in the attached Crop Sampling and Analysis Plans (SAP), are detected in the edible portions of food crops obtained from test fields are in concentrations significantly different from food crops that are obtained from the control fields (herein referred to as the objective of Task Three). The list of Chemicals of Interest may change as information becomes available about potential health risks and potential presence in produced water. In the event of the need to test for additional chemicals, the Manager and Administrator shall first meet and confer. Crop Sampling and Analysis Plans (SAPs) can only be modified with prior written consent as described in this Task Three. The food crop samples collected shall be analyzed for the Chemicals of Interest listed in the applicable SAP using standard industry test protocols for the particular chemical analyzed. It should be noted that the results of Task Three and associated laboratory reports will be provided to the Food Safety Panel by way of Central Valley Water Board staff.

The confidentiality of land ownership and crop testing locations are of the highest priority in the work to be performed under this Task Three, and all reasonable and best efforts shall be employed by Consultants, their employees, agents, subcontractors, and any others performing work under this Task Three to maintain such confidentiality.

Procedure

An independent third party sampler or sampling company (Sampler) with proficient experience in crop sampling will be chosen by the Permit Holders (through its Administrator), with approval by the Central Valley Water Board (through its Manager). The Sampler shall implement and be familiar with the techniques for project quality assurance and quality control. Central Valley Water Board staff will be notified two weeks prior to sampling events and will attend the event. Central Valley Water Board staff will coordinate sampling with the Permit Holders' Administrator, and the Sampler. The Sampler shall direct all technical issues through Central Valley Water Board staff and shall have direct communications with the Permit Holders only on administrative issues (i.e., contracting clarification, payment of invoices, etc.).

An independent consultant (Consultant), with appropriate qualifications, will be selected by the

¹ Test fields are fields irrigated with produced water (blended with other supplies, or not). Control fields are fields growing similar crops as the test fields in the same general geographic area, but which are not and have not been irrigated with produced water.

Permit Holders (through its Administrator), with approval by the Central Valley Water Board (through its Manager). Pursuant to this Task Three, but under the direction of the Central Valley Water Board Manager, the Consultant will coordinate and direct this Food Safety Study and provide completed reports as described in this Task Three.

An independent analytical laboratory (lab or laboratory) with proficient experience in analyzing edible crop samples for constituents of concern will be selected by the Permit Holders (through the Administrator), with approval of the Central Valley Water Board (through the Manager).

Generally, sample collection and analysis will be conducted in the same manner as the Food Safety Study was conducted in the year 2017. Modifications to the procedures or protocols will need to be approved prior to any implementation; such approval being obtained by the Consultant, the Manager, and the Permit Holders' Administrator. Additionally, a Central Valley Water Board representative and a Permit Holders' representative are required to be present at all crop sampling events, but they shall not participate in sample collection, shall not obtain additional independent samples, shall not take or obtain any other item or matter (including soil, water, or plant material), nor shall they record the location. Any questions by the Sampler will be directed to the Consultant and the Central Valley Water Board's Manager.

Before initiating sampling activities, Sampler personnel will become familiar with an appropriate site specific health and safety plan and emergency response plan developed or approved by the Consultant. It is the responsibility of the Consultant to ensure that personnel are familiar with the plan and follow it accordingly.

Sampling Locations and Coordination

All parties will abide by all local laws and regulations. Crop samples will be acquired from private farming operations and private land. No one associated with this Task Three, including but not limited to personnel, staff, or representatives, will enter private property or collect crop samples without proper authorization from the landowner or their authorized representative (and lessee, if there is a lessee of the property). This Scope of Work for Task Three does not authorize unlawful entry onto or into property or unlawful collection, removal or transportation of property and such action immediately terminates this Scope of Work and halts all associated activities. Permission must be obtained from appropriate landowners (and lessee, if there is a lessee of the property) to enter property and collect crop samples for the purposes of implementing this Scope of Work for Task Three.

Fields from which crop samples were obtained during the year 2017 will be utilized for this Scope of Work for Task Three. Consultant shall determine the area within the field to have samples collected, provided however that the actual sample locations are not in the vicinity of other external potential sources of contamination such as combustion engines, chemical storage facilities, or other likely sources of contamination. Any changes to sample field

locations must first be approved by the Consultant, the Manager, and the Permit Holder's Administrator, and use of such other locations will be dependent on obtaining proper permissions.

Sampling locations, permissions, and collection schedules shall be coordinated with the Manager who will work with the Administrator and such coordination must be done at least 2 weeks prior to each actual sampling event, except as otherwise agreed. The Administrator does not guarantee access to private property or to crop samples, nor does the Administrator have the authority to require such access. Crops are seasonal and are not available at all times. Coordination of sample collection needs to consider seasonal availability and maturation level of the crop.

Sampling Techniques

Crop Sampling and Analysis Plans (SAPs) were developed and implemented for the prior Food Safety Study in year 2017 and describe sampling methods and associated activities for collecting food crop samples. Crop sampling and chain of custody procedures used for this Task Three must follow the latest SAPs available for the type of crop being sampled. Any proposed alteration to the corresponding SAPs must be supported by good scientific reasoning, and must first be approved by the Consultant, the Manager, and the Administrator prior to implementation. The 2017 SAPs are attached as Exhibit A. Any written modifications to the SAP must be provided with track changes used to identify all changes.

Before sample collection, proper access permission from the landowner and lessee (if there is a lessee) is required to enter any property. No entry shall take place on any land without the landowner's (and lessee's, if there is a lessee of the property) informed consent, and no crops shall be taken without the landowner's (and lessee's, if there is a lessee of the property) informed consent. Landowners and lessees shall NOT be identified as part of any sampling event. Information regarding farmers, distributors, landowners, and/or lessees will not be shared with or disclosed to the general public, nor shall such information be disclosed to any third person.

The locality of each sample field shall be identified generally with an aerial photo. All records will be kept in a manner that does not identify property owners or lessees, nor shall it be kept or maintained in any manner that will allow identification of property ownership. Sampling locations, elevations, and sample type (Test or Control) will be recorded in a field logbook which shall remain confidential and shall not be shared with or disclosed to the general public, nor shall such information be disclosed to any third person. Photo-documentation of sampling events should be taken and provided as part of the sampling record. Electronic copies of lab notes, photographs, and other field documentation should be maintained as part of the report; provided however, no information shall be provided to the extent that it could be used to determine the specific location or property ownership of test crop locations, or the

lessees/tenants of such locations.

Quality Control

Field duplicate samples will be collected for quality control and as described in the SAP.

Sample Transfer

Emphasis must be placed on careful documentation of sample collection, sample packaging, and sample transfer. Samples will be hand-delivered to the laboratories within 24 hours of sample collection or shipped by 24-hour air courier (e.g., Federal Express) following all Department of Transportation (DOT) regulations. Sample custody shall be maintained by a chain of custody record. The chain of custody record will be completed by the individual collecting the sample. When transferring possession of the samples, the individual relinquishing and receiving the samples will sign, date, and note the time on the chain of custody record.

The relinquishing individual will record specific shipping data on the original and duplicate chain of custody forms. If samples are sent by mail, the package will be sent by registered mail with a return receipt requested. If samples are sent by common carrier, a bill of lading will be retained as part of the permanent documentation. The relinquishing individual will retain a copy of the chain of custody record.

Constituent Analysis

The analysis shall be completed by a laboratory certified by the State of California's Environmental Laboratory Accreditation Program (ELAP). The chosen laboratory must have experience in analyzing food products. Samples will be sealed at the sampling locations and all chain of custody procedures will be followed.

Samples shall be labeled in a manner that does not identify to the analytical laboratory which samples are Test and which samples are Control. Samples should be peeled or shelled by the analytical laboratory so that only the edible portion of the food crop is analyzed. The analytical laboratory shall use best management practices to avoid any cross-contamination.

Samples shall be analyzed for all of the chemicals as referenced in the applicable SAPs for which certified analyses are available. If there are Chemicals of Interest for which there are no certified analytical methods for food crops (or a specific crop) available, research laboratories can be retained for the desired analysis, as approved by the Manager and concurred with by the Administrator prior to implementation.

Laboratory analytical reports are to include all laboratory analyses including quality assurance/quality control (QA/QC) data. All analytical data are to be provided electronically in a format compatible with Excel or other software acceptable to the Manager. Laboratory data are

to be available within 21 days of receipt by the samples by the laboratory.

SAP Deviations

As conditions may vary, it may become necessary to implement minor deviations from the SAP. Field personnel will notify the Manager when deviations from the SAP are necessary. Verbal approvals from the Manager shall be obtained regarding the deviations after the Manager obtains concurrence from the Administrator. The Manager will inform the Administrator of the need to implement the deviation and fiscal impacts of the deviation are to be approved by the Administrator prior to implementation. Deviations from the SAP will be fully documented in the field logbook and in the reports. It is the responsibility of the Consultant and Sampler to keep a written record of SAP deviations and approvals.

Data Compilation and Electronic Data Delivery

All analytical results received from the lab will be provided to the Consultant and the Manager simultaneously. Once analytical results are received, the Manager will forward analytical results to the Administrator. Once analytical results have been received from the laboratory, the Consultant will compile the data in an electronic format (Excel spreadsheet or equivalent) and distribute the data to the Central Valley Board's Manager, together with electronic copies (e.g. PDF, JPG, etc.) of all field notes, analytical reports, photographs, and any other associated relevant materials, provided however, no information shall be provided to the extent that it could be used to determine the specific location and/or property ownership of test crop locations and/or the lessee/tenants of such locations. The Manager will forward this additional information to the Administrator following receipt.

Data Analysis and Sampling Reports

The Consultant will prepare reports describing sampling events, a discussion on results, and the relative safety of the test samples as compared to the control samples, including whether there is a significant difference between food crops grown with produced water and food crops grown without produced water. The reports will include a complete set of data using appropriate statistical analysis to determine if a significant difference occurs between the Test and Control samples. The Consultant shall document the reasons for using any statistical methods. Draft reports will be submitted to the Central Valley Water Board Manager for review and comment. Following receipt of such draft report(s), the Manager will provide a copy of the draft report to the Administrator for review and comment. The Administrator will send all comments to the Manager and the Manager will include comments, as appropriate, in comments from the Manager to the Consultant. Final reports shall be submitted to the Central Valley Water Board Manager and the Permit Holders' Administrator.

The final report must include:

- The sampling logbook (original or copies);
- A general description of sampling activities;

- Sample location maps and/or aerial photos showing general sample locations (that do not allow individual specific location or ownership determination);
- Photos from sampling events (that do not allow individual specific location or ownership determination);
- Laboratory reports including QA/QC data and chain of custody forms (original or copies);
- Tables showing analytical results and comparisons between test and control samples;
- A discussion of the statistical analysis and why a specific analysis was chosen;
- Results of any statistical analysis of the data;
- If a Chemical of Interest is detected in test samples in concentrations significantly higher than control samples, a determination of whether or not the Chemical of Interest has been detected in previous water monitoring reports submitted to the Central Valley Water Board, and whether such Chemical of Interest was detected in water monitoring reports and whether those detected concentrations exceed Maximum Contaminant Levels for drinking water;
- If a Chemical of Interest is detected in test samples in concentrations significantly higher than control samples, a determination of whether or not the Chemical of Interest is naturally occurring or has been utilized for construction, maintenance, or operations of municipal/industrial/drinking/agricultural water wells;
- If a Chemical of Interest is detected in test samples in concentrations significantly higher than control samples, a determination of whether or not the Chemical of Interest is identified in the County of Kern Agricultural and Measurement Standards Department's Agricultural Materials MSDS Reference materials as an applied chemical.
- An interpretation and discussion of the results, as they relate to the objective of Task Three; and
- If a Chemical of Interest is detected in test samples in concentrations significantly higher than control samples, a determination of the safety of the test samples, as compared to the control samples and other typical consumer food products.

Deliverables

After each sampling event, the Consultant shall submit the data and final reports (as described above) to the Central Valley Water Board, addressed to the Manager. The Consultant will provide the draft report no later than 90 days from the time the last sampling event laboratory report was provided to the Consultant. The Manager, in consultation with the Scientific Advisor and the Food Safety Panel, will review and comment on the draft report. Upon receipt of such draft report(s), the Manager will provide a copy of the draft report to the Administrator

for review and comment. The Manager and Administrator shall use their best efforts to make such review and provide comments within 60 days of receipt. Appropriate comments from the Administrator will be included in comments from the Manager and provided to the Consultant. The final report is to address comments from the Manager and provided to the Manager within 60 days from receipt of written comments. The Manager will share the reports with the Administrator. All comments regarding the technical contents of the report are to be directed to the Manager and the Manager will provide them to the Consultant as appropriate. The Administrator will not submit comments directly to the Consultant. Report findings may also be conveyed to the general public in a presentation given during a public meeting.

Task Dates and Termination

This Scope of Work, described as Task Three, is only effective for and applies to crops sampled during the 2018 calendar year. The last and final report is due 60 days after receiving comments from the Manager. No additional crop samples will be collected beyond 31 December 2018.

The parties to this agreement for Task Three (Consultant and Permit Holders (through its Administrator)) have the authorization to terminate this Scope of Work under this Task Three at any time for any reason, upon a 30-day written notice to all remaining parties.

Cost

The cost of Task Three shall not exceed \$200,000.00. Any additional costs shall be approved by the Permit Holders' Administrator prior to implementation.

The Parties have agreed upon this Scope of Work as evidenced by the following signatures of authorized representatives of the Parties:

FOR THE CENTRAL VALLEY WATER QUALITY CONTROL BOARD

Date: _____ By: Clay L. Rodgers
for Patrick Pulupa, Executive Officer

FOR North Kern Water Storage District:

Date: _____ By: _____
Richard A. Diamond, General Manager

FOR California Resources Production Corporation:

Date: _____ By: _____
Chad Jones, Vice President of Operations

FOR Kern Tulare Water District:

Date: _____ By: _____
Steven C. Dalke, General Manager

FOR Cawelo Water District:

Date: _____ By: _____
David Ansolabehere, General Manager

FOR Chevron U.S.A. Inc.:

Date: _____ By: _____
Carla Musser, Attorney-in-Fact

FOR Jasmin Ranchos Mutual Water Company:

Date: _____

By: _____
Shae Lehr, Secretary/Treasurer

FOR Hathaway, LLC:

Date: _____

By: _____
Chad Hathaway, President/Chief Executive Officer

FOR Sherwood Hills, LLC:

Date: _____

By: _____
Jeffery Yurosek, Managing Member