

**AMERICULTURE**

**EXHIBIT**

**11**

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
Rio Brazos Road, Aztec, NM 87410  
District IV  
S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Los Lobos Renewable Power, LLC	Contact	Mike Hayter (801) 875-4200 or
Address	136 S. Main, Ste. 600, Salt Lake City, UT 84101	Telephone No.	David Janney (505) 821-1801
Facility Name	Lightning Dock\	Facility Type	Geothermal

Surface Owner	State Trust Land	Mineral Owner	State (Lessee is Rosette, Inc.)	API No.	None
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#### LOCATION OF RELEASE

Unit Letter	Section 6	Township 25 S	Range 19 W	Feet from the 345'	North/South Line South line	Feet from the 930'	East/West Line East line	County Hidalgo
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Latitude 32.152859°N Longitude 108.830964°W

#### NATURE OF RELEASE

Type of Release	Minor	Volume of Release	400 gallons (9.53 barrels)	Volume Recovered	0
Source of Release	Tracer dye injected for testing	Date and Hour of Occurrence	January 23, 2012, noon-1:00 PM	Date and Hour of Discovery	Approx. February 16, 2012
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes (Prior Notice) <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?  Work Plan sent by David Janney(AMEC), to Randy Dade and Craig Shapard (Artesia OCD) and Carl Chavez (Santa Fe OCD) on January 19, 2012; follow up telephone discussion by Michael Hayter (Los Lobos RP, LLC) and David Janney (AMEC) to Jami Bailey, David Brooks, and Carl Chavez (Santa Fe OCD) on January 19, 2012, at approximately 1:30 PM.				
By Whom?	David Janney, AMEC	Date and Hour	See above		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			
If a Watercourse was Impacted, Describe Fully.* N/A					

**Describe Cause of Problem and Remedial Action Taken.\*** Injection of tracer dye in Rosette's State Well #7 (State Engineer well number A-36-A S17) for tracer test.

**Purpose for Test.** During pump testing of Well LDG 45-7 in December 2011, monitoring of Rosette State Well #7 suggested that this well could be vected with Well LDG 45-7. The tracer test was conducted for aquifer delineation to determine whether there is any relationship between wells drilled e shallow geothermal outflow (such as Rosette State Well #7) and wells drilled into the deep geothermal aquifer (such as Wells LDG 45-7 and 53-7).

**Tracer Dye Chemical Constituents.** An MSDS and additional information about Rhodamine WT is contained at Exhibit 1. Operator does not know the percentage of pure Rhodamine WT provided by the supplier, and reasonably believes that chemical constituents included impurities to some degree.

**Injection of Tracer Dye.** 50 kilos of tracer dye was dissolved in a tank containing 400 gallons of fresh water. This solution was injected into Rosette State Well #7. During tracer injection, the wellhead pressure never went above 20 psi on the wellhead.

**Flushing of Tracer Dye.** The solution was first flushed with 800 gallons of water. Then, over a period of seven days, fresh water was injected into Rosette State Well #7 in the following approximate amounts: (a) 24,000 gallons of trucked water, and (b) 2,250,000 gallons of water from a water storage tank owned by Rosette, Inc. The source of injected water was one to three cold freshwater wells owned by Rosette, Inc., State Engineer well numbers A-36-A-S10, A-36-A-S11, and A-36-A-S14, which are connected by pipeline to the water storage tank owned by Rosette, Inc. During water injection, the wellhead pressure never went above 30 psi. After approximately 24 hours, injection was by gravity without any added pressure.

**Test Results and Dye Discovery.** During closed-loop testing, which started prior to the tracer test and was conducted through February 3, 2012, there was no tracer from Rosette State Well #7 found in Wells LDG 45-7 and 53-7. On or about February 16, 2012, we understand that a neighboring property owner, AmeriCulture, Inc., discovered tracer dye in the geothermal fluid it was using from a nearby well, Rosette State Well #1, which is the same shallow geothermal outflow into which the dye was injected. Operator was not made aware of the discovery until February 22, 2012.

**Investigative Action: Sampling.** Operator learned of community concern that the tracer dye may be migrating to non-geothermal water wells used for drinking water and agriculture. On February 29 and March 1, 2012, Dr. Gregory P. Miller, Geochemical, LLC, conducted a sampling and analysis program to evaluate the presence of tracer dye in potable water and agricultural wells. Sixteen wells were sampled. Dye fluorescence analysis was conducted in the laboratory of Dr. Bruce Thompson, University of New Mexico, on March 2, 2012. Laboratory analysis with a tracer dye detection limit of 0.1 parts per billion was used to test the water. Tracer dye was detected only in geothermal wells within 800 feet of the dye tracer test injection well. The remaining 14 agricultural and potable water wells did not contain dye tracer. Dr. Miller's report is attached as Exhibit 2.

**Remedial Action: Treatment.** In addition, Operator understands that the holding ponds used for raising tilapia fish at AmeriCulture's facility have been tinted with a pink hue. Pursuant to a Joint Facility Joint Facility Operating Agreement (JFOA) dated September 6, 1995, Operator must reasonably indemnify AmeriCulture against harms arising out of its activities undertaken pursuant to the JFOA. For this reason, Dr. Gregory P. Miller, Geochemical, visited the AmeriCulture facility on March 1; 7, and 13, 2012 to discuss and plan for water treatment to remove the tracer dye. Dr. Miller verified feasibility of carbon treatment in hot water at the laboratory of Dr. Bruce Thompson, University of New Mexico, on March 5, 2012. Dr. Miller then began working with Calgon Carbon Corporation and Siemens on March 6, 2012, to determine treatment options. Kenneth Hale from AMEC visited the AmeriCulture facility on March 13, 2012 to begin designing a water treatment system that will use carbon filtration to remove tracer dye from the geothermal water before it enters into the AmeriCulture facility. This treatment system and treatment program were offered to AmeriCulture on March 20, 2012. See Exhibit 3.

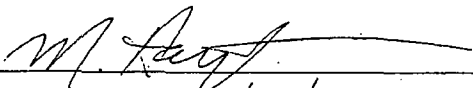
**Additional Remedial Concerns.** To Operator's knowledge, tracer dye is not a "toxic pollutant" as defined in 20.6.2.7 NMAC nor have the standards of 20.6.2.3103 NMAC been exceeded. However, Operator has received from AmeriCulture an article, Exhibit 4, which indicates that Rhodamine WT, when combined with nitrites, could possibly form Diethylnitrosamine. (Several Nitrosamines are on the "toxic pollutant" list, but Diethylnitrosamine is not). Nitrites could exist in AmeriCulture's fish ponds. See Exhibit 4. Because the proposed treatment system and treatment program will remove the tracer dye before geothermal water enters the AmeriCulture facility, this concern for possible formation of Diethylnitrosamine is being addressed as well. Dr. Miller offered to sample the AmeriCulture fish ponds for Nitrosamines on March 1, 7, and 13, 2012, and was not permitted to do so.

**Describe Area Affected and Cleanup Action Taken.\*** Through the sampling program described above, the affected area has been identified. The affected area is solely the shallow geothermal aquifer only in geothermal wells within 800 feet of the dye tracer test injection well. No drinking water or irrigation wells have been affected.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

**OIL CONSERVATION DIVISION**

Signature:



Printed Name:

Michael Hayter

Approved by Environmental Specialist:

Director

Approval Date:

Expiration Date:

E-mail Address:

michael.hayter@cyrgenergy.com

Conditions of Approval:

Attached ☐

Date:

3/21/2012

Phone:

801-875-4720

\* Attach Additional Sheets If Necessary

Lightning Dock Geothermal HI-01, LLC  
Kearns Building, Suite 600  
136 South Main Street  
Salt Lake City, UT 84101

March 20, 2012

Mr. Damon Seawright  
President  
AmeriCulture, Inc.  
25 Tilapia Trail  
Animas, NM 88020

Re: Water Quality Remediation Services

Dear Mr. Seawright,

This letter agreement (this "Agreement"), if signed by you, as authorized representative of AmeriCulture, Inc. (together with its shareholders, directors, officers, and successors in interest, "AmeriCulture"), on or before March 31, 2012, sets forth the agreement between AmeriCulture and Lightning Dock Geothermal HI-01, LLC ("LDG"), with respect to certain water quality remediation services we will provide in connection with LDG's injection in January 2012 of Rhodamine-WT tracer dye into a geothermal well near AmeriCulture's property (the "Occurrence"). In this Agreement, AmeriCulture and LDG are each a "Party" and, together, may be referred to as the "Parties."

This Agreement is being entered into pursuant to that certain Joint Facility Operating Agreement dated September 6, 1995 (the "JFOA"), that delineates the Parties' mutual rights and responsibilities with regard to the geothermal resource under their respective properties. Section IV.B.4 of the JFOA obligates LDG to indemnify AmeriCulture against harms arising out of any activities of LDG permitted by the JFOA.

AmeriCulture operates a commercial tilapia production facility (the "Tilapia Farm") on property located in Hidalgo County, and has alleged that the Occurrence has resulted in some or all of the tilapia fish being raised and sold by AmeriCulture being tinted with a pink hue. This Agreement lays out our mutual responsibilities with regard to remediating any harm caused as a result of the Occurrence.

1. LDG's Provision of a Water Treatment System.

Promptly after the full execution of this Agreement, and subject to any events of force majeure, LDG shall supply and install, and shall thereafter operate and maintain, a water treatment system ("System") substantially in the form as described in Exhibit A hereto, for the purpose of reducing Rhodamine-WT concentrations in the water used to cultivate fish at the Tilapia Farm.

The System will be owned by LDG, and the supply, construction, operation, and maintenance of the System shall be without cost to AmeriCulture, provided that AmeriCulture fully cooperates, assists and allows LDG and its agents and contractors to access AmeriCulture property as necessary and as more fully described in paragraph 2 below.

LDG will periodically monitor and test the quality of the water entering into AmeriCulture's tilapia fish tanks and the operation of the System to ensure its continued functioning. LDG shall have the right to maintain and alter the System as necessary to ensure the water being used to cultivate fish at the Tilapia Farm is substantially free of Rhodamine-WT. The Parties agree to evaluate the effectiveness of the System at least every two years and to make a determination of whether the System continues to be needed.

LDG shall have the right, in its sole discretion, to terminate its obligations under this paragraph 1 if (a) AmeriCulture ceases operation of the Tilapia Farm, or (b) AmeriCulture breaches any of its obligations under this Agreement. In the event that LDG elects to terminate its obligations pursuant to the foregoing sentence, it has the right, but not the obligation, to dismantle and remove the System.

2. AmeriCulture's Consideration.

AmeriCulture agrees, without condition, qualification or payment, to provide LDG and its representatives, contractors and subcontractors, access at all reasonable times to AmeriCulture's property as necessary for the implementation of LDG's obligations under paragraph 1 above, including but not limited to (a) constructing, operating, monitoring, maintaining and implementing the System; (b) conducting investigations relating to contamination at or near the Tilapia Farm; (c) obtaining water samples from the Tilapia Farm and related wells as frequently as weekly; and (d) assessing the need for, planning, or implementing additional response actions at or near the Tilapia Farm.

In further consideration of LDG's obligations hereunder, AmeriCulture restates and reaffirms the JFOA.

3. Non-Disparagement.

AmeriCulture agrees that it will not directly or indirectly make, repeat or publish any false or disparaging, negative, unflattering, or accusatory remarks or references, whether oral or in writing, regarding LDG, its officers, directors, employees and affiliates, in any dealings with third parties including any members of the press or media, and LDG's customers, potential customers, suppliers, contractors and employees.

4. Complete and Binding Agreement; Amendments.

This Agreement sets forth all of the terms and conditions of the agreement between the Parties concerning the subject matter hereof and supersedes any prior oral communications. This Agreement may be amended only by a written document signed by the Parties.

5. Severability.

In the event that any of the provisions of this Agreement are found by a judicial or other tribunal to be unenforceable, the remaining provisions of this Agreement will remain enforceable.

6. Nonadmission.

This Agreement is being entered into solely for the purpose of settling disputed claims, and shall not be construed as: (a) an admission by LDG of any (i) liability or wrongdoing to AmeriCulture, (ii) breach of any agreement, or (iii) violation of a statute, law or regulation; or (b) a waiver of any defenses as to those matters within the scope of this Agreement. LDG specifically denies any liability or wrongdoing with respect to the Occurrence, and AmeriCulture agrees that it will not state, suggest or imply the contrary to anyone, either directly or indirectly, whether through counsel or otherwise.

7. Governing Law.

This Agreement shall be governed by New Mexico law.

8. Dispute Resolution; Waiver of Jury Trial.

Any dispute that arises in connection with this Agreement and that is not resolved informally by the Parties within thirty (30) days after notice of the dispute is given to a Party may be referred by either Party to the American Arbitration Association for arbitration. The arbitration shall be conducted by one (1) mutually agreeable, impartial arbitrator in Albuquerque, New Mexico. The award of the arbitrator shall be final and binding upon the Parties without right of appeal to the courts. Notwithstanding the foregoing, any Party may seek injunctive relief to prevent immediate harm arising from the breach of the other Party's obligations hereunder. To the fullest extent permitted by law, each of the Parties hereby waives any right to trial by jury with respect to any dispute arising out of or relating to the enforcement, interpretation or existence of this Agreement which may be brought in a court of law.

9. Costs.

Each Party shall pay its own costs and fees, including attorneys' fees and other legal fees in connection with and enforcement of this Agreement.

10. Counterparts.

This Agreement may be signed by the Parties in multiple counterparts, each of which shall constitute an original, but all of which together shall be deemed one and the same instrument. No Party to this Agreement shall be bound hereby until a counterpart of this Agreement has been executed by all Parties hereto.

[SIGNATURES FOLLOW ON NEXT PAGE]

Sincerely,

**LIGHTNING DOCK GEOTHERMAL HI-01, LLC**

*Nicholas Goodman*

Printed: Nicholas Goodman

Title: Chief Executive Officer

Date: March 20, 2012

Acknowledged and Agreed,

**AMERICULTURE, INC.**

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Printed: Damon Seawright

Title: President

Date: March \_\_, 2012

**EXHIBIT A - DESCRIPTION OF WATER TREATMENT SYSTEM**

[SEE ATTACHED]



**Water Treatment System – Rhodamine Removal  
AmeriCulture Facility, New Mexico  
CERQ Energy**

**Concept Summary**

The water treatment system will reduce the rhodamine concentration in the process water using granular activated carbon (GAC) as an adsorbent. GAC adsorbent of rhodamine has been bench tested (by others) and is considered an efficient media for rhodamine removal from high temperature water. The water temperature has been reported to range from 180 to 240 degrees F. The new water treatment system will tie into the existing 3" carbon steel (CS) line that runs from the existing well to the existing, 12-inch diameter CS standpipe. The tie-in will be achieved with 3" galvanized steel (GS) piping. Hot (geothermal) well water (180-240°F), will be diverted to a 5,000 gallon, vertical, surge tank where steam will be permitted to vent and large particles will be permitted to settle out of suspension. The surge tank will be fitted with a steam vent to prevent over pressurization, as well as a manway and drain valve to facilitate the removal of settled solids. The process stream will flow from the surge tank through a 3" GS line, to a pump regulated at a flow rate of approximately 100 gallons per minute at 50 psi, to match the incoming flow rate during production well operations. An identical, redundant pump will be installed in parallel to allow servicing of the pumps without having to shut down the entire system. A level transmitter located in the surge tank will control the variable frequency drive of the operating pump to maintain a proper water operating level in the tank, balancing process flow to production flow. A low level set point will be established for low water pump shut off. A high level set point will also be established to activate a local, high water alarm light. A magnetic flow meter with a local, flow indicator and a pressure indicator will be located downstream of the pumps.

The water from the pump will flow through a 3" line to a bank of two bag filters. The first bag filter will have a filter element of 25 microns, and the second will have a filter element of 10 microns. A second bank of identical filters will be installed in parallel in order to allow filter element changes without system shutdown. A pressure indicator will be located before and after each filter housing to provide a means of monitoring filter performance and indicating when filter changes are necessary. The filters will remove large particulates anticipated to accumulate in the surge tank. Removal of these particulates will increase the life of the GAC media.

After passing through the filters, the water will flow through a 3" line to two GAC vessels installed in series. Each vessel will contain 2000 lbs of GAC. The first vessel, or Lead vessel, will remove the majority of the rhodamine in the water, and the second vessel, or Lag, will polish the stream to ensure that rhodamine levels are below detection limits. When the media in the lead vessel reaches rhodamine breakthrough, the media will be refreshed, and placed back online as the new lag vessel. The old lag vessel will be plumbed to become the new lead vessel. Sample valves will be located before, between, and after the GAC units allowing the operator to analyze the performance of the units and to determine media replacement schedules.

A pressure regulator will be located downstream of the GAC units in order to keep the system pressurized and prevent steam flashing within the treatment system. After the pressure regulator, the process stream will be directed either to the existing standpipe or the existing thermal adjustment tank, as needed, before being delivered to the existing process by the facility operator.

The new water treatment components will be installed on a concrete pad near the tie-in point adjacent to the existing standpipe and surge tank. A 20 ft X 20 ft X 8 inch pad is anticipated. The components will be assembled and connected in the field with galvanized steel fittings and EDPM high temperature hose.

Figure 1 shows the General Process Flow Diagram for the system, Table 1 contains an Equipment and Materials Schedule, and Appendix A contains Manufacturer's Data Sheets for the equipment and materials.

