

GTLT - _____4_____

FACILITY INSPECTIONS

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From: Chavez, Carl J, EMNRD
Sent: Thursday, February 19, 2015 12:12 PM
To: dseawright@gmail.com
Cc: Griswold, Jim, EMNRD
Subject: AmeriCulture, Inc. (GTLT-004) OCD Geothermal Facility Inspection Wednesday 2/11/2015
Attachments: AmeriCulture, Inc. GTLT-004 Inspection 2-11-2015.pdf

Mr. Seawright:

Please find attached the above subject inspection information from the New Mexico Oil Conservation Division (OCD).

Please note that there are some deadlines to meet for OCD.

Please contact me if you have questions.

Thank you for your cooperation during the recent inspection.

Carl J. Chavez, CHMM

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**NEW MEXICO OIL CONSERVATION DIVISION
GEOTHERMAL LOW-TEMP FACILITY INSPECTION**

AmeriCulture, Inc. (GTLT-004)
Wednesday, February 11, 2015

Time: 1:30 p.m.
Weather: 62°F Partly Cloudy
AmeriCulture, Inc.: Damon Seawright
OCD Inspector: Carl Chávez

Location: Geothermal Road, North of Cotton City, NM

Introduction: Mr. Seawright did not allow photos to be taken during the inspection. There are no injection wells and 3 surface discharge locations located along the west side of facility aquaculture process areas from S to N.

Field Inspection Observations:

- 1) OCD issued the last permit for the facility on July 5, 2001. Damon believes that the OCD permit terminated because the OCD interpretation of the geothermal regulations at that time was that the regulations did not apply to low-temperature geothermal operations.
- 2) AmeriCulture State No. 1 (AS-1) Production Well is the main geothermal well used to store geothermal water for the extraction of heat and use at the aquaculture process facilities (huts) with BH temp. ~ 225 °F according to Damon. Another AmeriCulture State Well No. 2 (AS-2) was observed to be located ~ 700 ft. NE of AS-1. There are a total of 3 geothermal wells (1 Federal No. 1 Well). The wells are monitored (fluid totalizer) monthly for OSE.
- 3) Geothermal reservoir fluid from AS-1 is routed to a hot water storage tank for use in operations.
- 4) AmeriCulture, Inc. also has an Order with OCD for geothermal power generation, which is still being considered by the operator for use at the facility.
- 5) OCD observed top mounted shaft pumps seated on top of production wells. These pumps are known to accumulate oil on top of the water column within the well when in operation, but the possible presence of oil in the production wells has not been verified.
- 6) Aquaculture operations were in progress during the inspection and a full-tour of the facility and operations was provided by Damon. Optimum aquaculture hatchery process temperature ranges from 82 – 85 °F.
- 7) Three predominantly fresh waste (clear appearance) water discharges (~ 5-20 gpm) just north of the aquaculture process facilities were observed (ponded water). No foul olfactory odor or vegetation kills were detected or observed at the discharge locations. Damon indicated he has performed (frequency not specified) ammonia, nitrite, and nitrate field kit analyses of the effluent. Damon indicated that the mass volume of nutrient loading is miniscule compared to standard agricultural discharges. The effluent discharge to land surface began about 20 years ago.

- 8) Some minor housekeeping issues were observed, i.e., nine broken plastic containers (~ 40-gal. ea.) with white foam beads, in the bone yard east of the facility huts.

OCD Requirements Based on the Meeting and Facility Inspection:

- 1) OCD requests historic G-108 and G-111 Forms for wells at the facility including the Federal Well No. 1 within 60-days of the inspection date.
- 2) Historical Nitrate (NO₃ as N) quality information is requested from each of the 3 aquaculture process facilities and associated discharge locations within 60-day of the inspection date. In addition, all available water quality environmental analytical data summary sheets are requested by OCD to assess effluent water quality at the facility. The operator and OCD shall evaluate water quality data from the facility for compliance with state water quality standards.
- 3) OCD requires the operator to submit a geothermal well bond for the Federal Well No. 1 on or before 90-days of the OCD inspection date.
- 4) OCD requires a description and/or characterization of the type of oil used by the operator in the top mounted well pumps and O&M schedule for oil evacuation and disposition after evacuation.

Damon Seawright
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