

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**MEETING OF JANUARY 14 and 15, 2009
Truckee**

ITEM: 7

SUBJECT: **RESCISSION OF WASTE DISCHARGE REQUIREMENTS FOR CITY OF SUSANVILLE, LITCHFIELD GEOTHERMAL FACILITY, BOARD ORDER NO. 6-97-70, WDID 6A180180909, LASSEN COUNTY**

CHRONOLOGY: June 5, 1997 Waste Discharge Requirements (WDRs) for the City of Susanville (Discharger) to discharge to land the geothermal fluids from the Litchfield Geothermal Facility (Facility).

November 9, 2006 The Discharger submitted a letter to the Water Board stating the discharge ceased on June 30, 2005.

ISSUE: Should the Water Board rescind the WDRs?

DISCUSSION: Water Board Order No. 6-97-70 was adopted for the Discharger to operate the Facility. The Discharger's only client was the California Department of Corrections and Rehabilitation (CDCR). When CDCR ceased purchasing heat from the Discharger, the Discharger shut down the operations.

The Facility pumped hot geothermal water (hot groundwater), extracted heat from that water and used the heat for water and space heating at the adjacent CDCR prisons. The geothermal water was then discharged on to land by a sprinkler system and flowed into an unlined surface impoundment.

CDCR, the owner of the land, dismantled the sprinkler system in the spring of 2008 in preparation to use the land for recycling municipal wastewater (covered under separate WDRs).

The discharge from the Facility has ceased and the ability to discharge has ceased, therefore, it is appropriate to rescind Board Order No. 6-97-70.

A tentative rescission Order was mailed out for comments to the Discharger, interested parties, the land owner and the geothermal resource owner on October 27, 2008. No adverse comments were received. Comments were received from the California Department

07-0001

of Conservation, Division of Oil and Gas and Geothermal Resources, and CDCR. The Tentative Board Order was Revised in Responses to comments from the former (see finding No. 6). Comments are enclosed.

RECOMMENDATION: Adoption of the Order as proposed.

- Enclosures:
1. Fact sheet
 2. Proposed Board Order
 3. Comments from the California Department of Corrections and Rehabilitations
 4. Comments from the California Department of Conservation, Division of Oil, Gas and Geothermal Resources

RTT/clhT:/N Basin Regulatory Unit/WDRs/Rescind Litchfield/Litchfield gs.doc

ENCLOSURE 1

07-0003

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION
FACT SHEET**

ITEM NO: 7

DISCHARGER NAME: City of Susanville

FACILITY TYPE: Geothermal energy production (water and space heating)

PROJECT NAME: Litchfield Geothermal Facility

WDID NO.: 6A180180909

LOCATION: City of Susanville, Lassen County

TYPE OF WASTE: Geothermal fluid (hot groundwater)

PROGRAM: Waste Discharge Requirements (WDRs)

FACILITIES: Wells and piping, earthen levees

DISPOSAL FACILITIES: Land and pond area for receiving hot groundwater

PRESENT FLOW: Maximum flow of up to 800 gallons per minute with average flow of 470 gallons per minute

RECEIVING WATERS: Ground waters of the Honey Lake Valley

BENEFICIAL USES: Groundwater – Municipal and domestic supply (MUN)
Agricultural (AGR)
Freshwater replenishment (FRSH)
Industrial service supply (IND)
Wildlife habitat (WILD)

CEQA COMPLIANCE: This action to rescind requirements is categorically exempt from CEQA pursuant to California Code of Regulations title 14, section 15321.

LANDOWNER: California Department of Corrections and Rehabilitation

NEARBY DEVELOPMENT: Agriculture

NATURE OF AREA: High Desert

RTT/clhT:/N Basin Regulatory Unit/WDRs/Rescind Litchfield

07-0004

ENCLOSURE 2

07-0005

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

BOARD ORDER NO. R6T-2009- (PROPOSED)

**RESCISSION OF WASTE DISCHARGE REQUIREMENTS
BOARD ORDER NO. 6-97-70
WDID 6A180180909
FOR**

**CITY OF SUSANVILLE
LITCHFIELD GEOTHERMAL FACILITY**

Lassen County_____

The California Regional Water Quality Control Board, Lahontan Region (Water Board) finds:

1. The Discharger

The City of Susanville submitted a complete report of waste discharge for the Litchfield Geothermal Facility (Facility) on September 18, 1995. For the purposes of this Order, the City of Susanville is the operator of the Facility and is referred to as the Discharger.

2. History

The Water Board has previously established waste discharge requirements for the Facility under Board Orders No. 6-83-93, No. 6-85-101, No.6-93-57. The current Board Order No. 6-97-70 was adopted on June 5, 1997.

3. Description of the Facility

The Facility consists of two geothermal wells and 34 acres of land for discharge of spent geothermal waters. The Facility is located on lands owned by the California Department of Corrections and Rehabilitation (CDCR). Spent geothermal waters are waters pumped from the ground for the purposes of extracting heat. The Facility pumped groundwater which was passed through heat exchangers to provide hot water and space heating to the California Correctional Center at Susanville and High Desert State Prison, operated by the CDCR. No substances were added to the groundwater prior to being discharged to land.

07-0006

4. Description of the Discharge

The Facility extracted heat from geothermal waters and then discharged the cooled water to land by a sprinkler system. Runoff from the land disposal area went to an unlined pond on the Facility site.

5. Reason for Action

In June 2005, the CDCR stopped purchasing geothermal heat from the Discharger. On November 9, 2006 the Discharger reported to the Water Board, that as of June 30, 2005, the City of Susanville had ceased use of the Facility and ceased the discharge. In the spring of 2008, the CDCR removed the sprinkler system.

6. Geothermal Wells

The Discharger has stopped using the Facility and the two geothermal wells, "Johnston" 1 (API No. 035-90065) and "Johnston" 2 (API No. 035-90068). However, the two geothermal wells have not been legally abandoned. California Division of Oil, Gas and Geothermal Resources (Division) records show these two wells as idle as defined in Section 1920.1.1 of the California Code of Regulations, title 14. According to the Division, the Discharger is the operator of record for the two wells.

7. California Environmental Quality Act (CEQA)

This regulatory action is categorically exempt from CEQA pursuant to California Code of Regulations, title 14, section 15321, subdivision (a)(2). This provision identifies the following actions as categorically exempt from CEQA:

"(a) Action by regulatory agencies to enforce or revoke a lease, permit, license, certificate or other entitlement for use issued, adopted, or prescribed by the regulatory agency or enforcement of a law, general rule, standard, or objective, administered or adopted by the regulatory agency. Such actions include, but are not limited to, the following:

. . . (2) The adoption of an administrative decision or order enforcing or revoking the lease, permit, license, certificate or entitlement for use or enforcing the general rule, standard, or objective."

This regulatory action is categorically exempt from CEQA pursuant to California Code of Regulations, title 14, section 15321, subdivision (a)(2) because this administrative order serves to revoke waste discharge requirements issued under Board Order No. 6-97-70.

8. Water Quality

The discharge of runoff from the sprinkler system to the unlined pond posed a threat to water quality primarily due to arsenic concentrations up to 85 µg/l. The shallow groundwater concentrations fluctuated during the seven years of discrete samples in monitoring well MW-1, near the unlined pond. MW-1 has depth to ground water from between 15 to 28 feet below ground surface and the initial arsenic concentration in 1999 was 19 µg/l and in 2005 it was 22 µg/l. The current drinking water standard for arsenic is 10 µg/l and two drinking water wells (no longer in use) up and cross-gradient of the unlined pond had concentrations of arsenic as high as 152 µg/l prior to the unlined pond being used for the discharge. Therefore, it does not appear that the presence of arsenic in the groundwater is due to surface disposal of geothermal waters but may be widespread within the area due to the presence of naturally occurring arsenic in geothermal groundwater.

9. Summary

The discharge from the Facility has ceased and no longer poses a threat to water quality. Rescinding this Order does not limit the Water Board's authority if information indicates that an actual or threatened condition of pollution or nuisance has occurred due to past operations. Therefore, it is appropriate to rescind Board Order No. 6-97-70.

IT IS HEREBY ORDERED THAT Board Order No. 6-97-70 be rescinded.

Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on January 14, 2009.

HAROLD J. SINGER
EXECUTIVE OFFICER

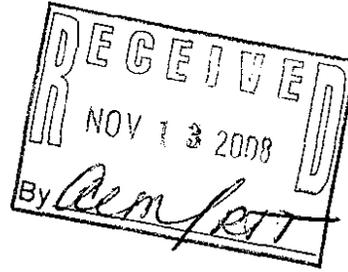
07-0008

ENCLOSURE 3

07-0009

**DIVISION OF ADULT INSTITUTIONS
CALIFORNIA CORRECTIONAL CENTER**

P. O. Box 790
Susanville, CA 96127-0790
(530) 257-2181



November 6, 2008

Rob Tucker
Water Resource Control Engineer
California Regional Water Quality Control Board
Lahontan Region

SUBJECT: RESPONSE TO RESCINDING ORDER NO. 6-97-70

Dear Mr. Tucker:

In response to rescinding order No. 6-97-70, we concur with said order and would like to reiterate that all water which is produced by our ground wells is to be treated at our new arsenic removal plant. This will ensure the safety of all our employees and incarcerated offenders, and comply with the California Regional Water Quality Control Board.

If you have any questions, please call Pat Pearson, Water and Sewage Plant, at (530) 257-2181 extension 4463.

Sincerely,


R. E. BARNES
Warden (A)

07-0010



California Regional Water Quality Control Board
Lahontan Region



Linda S. Adams
Secretary for
Environmental Protection

2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150
(530) 542-5400 • Fax (530) 544-2271
www.waterboards.ca.gov/lahontan

Arnold Schwarzenegger
Governor

OCT 27 2008

TO ALL INTERESTED PERSONS:

TENTATIVE BOARD ORDER TO RESCIND BOARD ORDER NO. 6-97-70 FOR THE CITY OF SUSANVILLE, LASSEN COUNTY, WDID 6A180180909

Enclosed is a tentative order to rescind existing Waste Discharge Requirements (WDRs) Board Order No. 6-97-70 adopted for the City of Susanville as operator of the Litchfield Geothermal Facility. The WDRs are for the discharge of geothermal fluids onto land and a surface impoundment. The Water Board requests that you review the tentative Order and provide your written comments no later than November 24, 2008. Comments received after November 24, 2008, may not be given full consideration in preparing the proposed Order to be presented to the Water Board for adoption at a public meeting scheduled for January 14, 2009 in the northern portion of Lahontan region, at a location to be determined.

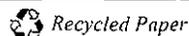
If you need further information regarding the tentative Order, please contact me at (530) 542-5467, or Alan Miller, P.E., Chief, North Basin Regulatory Unit, at (530) 542-5430, or at the letterhead address above.

Robert Tucker
Water Resource Control Engineer

Enclosures: Comment Form
Tentative Rescission Order

RTT/clhT: rescind Litchfield rtt 10-10-08.doc
WDID 6A180180909

California Environmental Protection Agency



07-0011

Submittal of Written Material for Water Board Consideration

In order to ensure that the California Regional Water Quality Control Board Lahontan Regional (Water Board) has the opportunity to fully study and consider written material, it is necessary to submit it at least ten (10) days before the Water Boards meeting. Pursuant to Title 23 of the California Code of Regulations, Section 648.2, the Water Board may refuse to admit written testimony into evidence unless the proponent can demonstrate why he or she was unable to submit the material on time or that compliance with the deadline would otherwise create a hardship. If any other party demonstrates prejudice resulting from admission of the written testimony, the Water Board may refuse to admit it.

PLEASE COMPLETE FORM AND RETURN

TO: California Regional Water Quality Control Board, Lahontan Region
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150
Attn: Rob Tucker

SUBJECT: Comments on Tentative Rescission of Board Order No. 6-97-70 adopted for the City of Susanville for the operation of the Litchfield Geothermal Field, Lassen County.

_____ We concur with the tentative requirements

_____ We concur; comments attached

_____ We do not concur; comments attached

_____ (Sign)

_____ (Type or print name)

_____ (Organization)

_____ (Address)

_____ (City and State)

_____ (Telephone)

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

BOARD ORDER NO. R6T-2009- (TENTATIVE)

**RESCISSION OF WASTE DISCHARGE REQUIREMENTS
BOARD ORDER NO. 6-97-70
WDID 6A180180909
FOR**

**CITY OF SUSANVILLE
LITCHFIELD GEOTHERMAL FACILITY**

Lassen County

The California Regional Water Quality Control Board, Lahontan Region (Water Board) finds:

1. The Discharger

The City of Susanville submitted a complete report of waste discharge for the Litchfield Geothermal Facility (Facility) on September 18, 1995. For the purposes of this Order, the City of Susanville is the operator of the Facility and is referred to as the Discharger.

2. History

The Water Board has previously established waste discharge requirements for the Facility under Board Orders No. 6-83-93, No. 6-85-101, No.6-93-57. The current Board Order No. 6-97-70 was adopted on June 5, 1997.

3. Description of the Facility

The Facility consists of two geothermal wells and 34 acres of land for discharge of spent geothermal waters. Spent geothermal waters are waters pumped from the ground for the purposes of extracting heat. The Facility pumped groundwater which was passed through heat exchangers to provide hot water and space heating to the California Correctional Center at Susanville and High Desert State Prison, operated by the California Department of Corrections and Rehabilitation (CDCR). No substances were added to the groundwater prior to being discharged to land.

07-0013

On June 30, 2005, the City terminated its control and interest of the Facility and ceased the use and discharge.

4. Description of the Discharge

The Facility extracted heat from geothermal waters and then discharged the cooled water to land by a sprinkler system. Runoff from the land disposal area went to an unlined pond on the Facility site.

5. Reason for Action

In June 2005, the CDCR ceased to purchase geothermal heat from the Discharger. The Discharger abandoned the Facility to the owner of the geothermal resource, Johnston Ranch, and the land owner, CDCR. On November 9, 2006, the Discharger submitted a letter stating the discharge had ceased and they were no longer responsible for the Facility. In the spring of 2008, the CDCR removed the abandoned sprinkler system.

6. California Environmental Quality Act (CEQA)

This regulatory action is categorically exempt from CEQA pursuant to California Code of Regulations, title 14, section 15321, subdivision (a)(2). This provision identifies the following actions as categorically exempt from CEQA:

“(a) Action by regulatory agencies to enforce or revoke a lease, permit, license, certificate or other entitlement for use issued, adopted, or prescribed by the regulatory agency or enforcement of a law, general rule, standard, or objective, administered or adopted by the regulatory agency. Such actions include, but are not limited to, the following:

... (2) The adoption of an administrative decision or order enforcing or revoking the lease, permit, license, certificate or entitlement for use or enforcing the general rule, standard, or objective.”

This regulatory action is categorically exempt from CEQA pursuant to California Code of Regulations, title 14, section 15321, subdivision (a)(2) because this administrative order serves to revoke waste discharge requirements issued under Board Order No. 6-97-70.

7. Water Quality

The discharge of runoff from the sprinkler system to the unlined pond posed a threat to water quality primarily due to arsenic concentrations up to 85 µg/l. The shallow groundwater concentrations fluctuated during the seven years of discrete samples in monitoring well MW-1, near the unlined pond. MW-1 has depth to ground water between 15-28 feet below ground surface and the initial arsenic

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8. Summary

The Facility has ceased its discharge and no longer poses a threat to water quality. Rescinding this Order does not limit the Water Board's authority if information indicates that an actual or threatened condition of pollution or nuisance has occurred due to past operations. Therefore, it is appropriate to rescind Board Order No. 6-97-70.

IT IS HEREBY ORDERED THAT Board Order No. 6-97-70 be rescinded.

Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on January 14, 2009 (proposed).

HAROLD J. SINGER
EXECUTIVE OFFICER

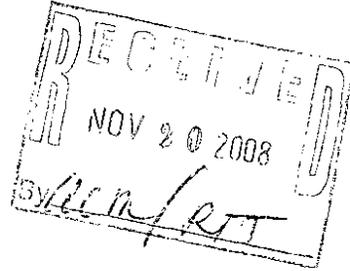
07-0015

ENCLOSURE 4

07-0016

**DEPARTMENT OF CONSERVATION****DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES**

801 K STREET • MS 20-20 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 445-9686 • FAX 916 / 323-0424 • TDD 916 / 324-2555 • WEBSITE conservation.ca.gov

November 4, 2008

Mr. Rob Tucker
California Regional Water Quality Control Board, Lahontan Region
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

Dear Mr. Tucker:

Subject: Board Order No. R6T-2009- (Tentative)

This letter is in response to the Tentative Rescission of Board Order No. 6-97-70, adopted for the City of Susanville for the operation of the Litchfield Geothermal Field, Lassen County.

In Item 1, *The Discharger*, you state that the City of Susanville (subsequently referred to as the Discharger) is the operator of the Litchfield Geothermal Facility (Facility).

In Item 3, *Description of the Facility*, you describe this facility as consisting of two geothermal wells and 34 acres of land for the discharge of spent geothermal waters. You also state that on June 30, 2005, the City [of Susanville] terminated its control and interest of the Facility and ceased the use and discharge.

In Item 5, *Reason for Action*, you state that the Discharger abandoned the Facility to the owner of the geothermal resource, Johnston Ranch, and the landowner, the California Department of Corrections and Rehabilitation.

The California Division of Oil, Gas, and Geothermal Resources (Division) would like to comment as follows:

1. Although the Facility is no longer in use, the two geothermal wells, "Johnston" 1 (API No. 035-90065) and "Johnston" 2 (API No. 035-90068), have not been abandoned. Division records show these two wells as idle, as defined in Section 1920.1.1 of the California Code of Regulations.
2. Division records list the City of Susanville as the operator of these two wells.

If you have any questions or comments, please contact me at his office.

Sincerely,

John P. (Jack) Truschel
Geothermal District Engineer
916.323.1787

07-0017



California Regional Water Quality Control Board Lahontan Region



Linda S. Adams
Secretary for
Environmental Protection

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OCT 27 2008

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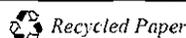
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Water Resource Control Engineer

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Tentative Rescission Order

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WDID 6A180180909

California Environmental Protection Agency



07-0018

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We concur with the tentative requirements

We concur; comments attached

We do not concur; comments attached

J. P. Truschel

(Sign)

JOHN P. (JACK) TRUSCHEL

(Type or print name)

CA DIV. OF OIL, GAS, & GEOTHERMAL RESOURCES (Organization)

801 K. ST., MS 20-21 (Address)

SACRAMENTO, CA (City and State)

916.323.1787 (Telephone)

07-0019