

Lenzi, Chelsea

From: Henson, Chris
Sent: Monday, October 31, 2016 12:39 PM
To: Allen, Michael (COB); Lenzi, Chelsea; sbcob
Cc: Farr, Doreen
Subject: FW: PCEC - Document Request Follow Up
Attachments: 9.15.09 pcec response to seep doc request.pdf; 10.17.09 seep documentation request letter.pdf; 6.15.11 seep letter.pdf; 7.27.11 seep occurrence.pdf; 9.3.09 seep documentation request letter.pdf; 9.4.13 Seep occurrence.pdf; 2011 seep letter occurrence.pdf

-----Original Message-----

From: Briggs, Errin
Sent: Wednesday, October 26, 2016 10:42 AM
To: Farr, Doreen
Cc: Cante, Peter; Black, Dianne; Russell, Glenn; Henson, Chris; Farnum, Elizabeth
Subject: RE: PCEC - Document Request Follow Up

Hello Supervisor Farr,

To wrap up your informational request, we have obtained directly from DOGGR the letters they have in their files to PCEC.

The information is voluminous so it will take several emails in succession to send everything over. Here is the first batch.

Errin Briggs | Energy Specialist | County of Santa Barbara | 805-568-2047

-----Original Message-----

From: Farr, Doreen
Sent: Tuesday, October 18, 2016 6:10 PM
To: Briggs, Errin
Cc: Farr, Doreen; Cante, Peter; Black, Dianne; Russell, Glenn; Henson, Chris; Farnum, Elizabeth
Subject: Re: PCEC - Document Request Follow Up

This is great. Thanks so much, Errin. I really appreciate it.
Doreen

Doreen Farr
Third District County Supervisor

Sent from my iPhone

> On Oct 18, 2016, at 8:50 AM, "Briggs, Errin" <ebriggs@co.santa-barbara.ca.us> wrote:
>
> Good morning Supervisor Farr,
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> I have attached the County documents that you requested including the 2005 Mitigated Negative Declaration, staff report and action letter reflecting the Planning Commission's approval of their existing steaming project. I also included the DOGGR comment letter on the current EIR.
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>
> Errin Briggs | Energy Specialist | County of Santa Barbara |
> 805-568-2047
>
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> Sent: Monday, October 17, 2016 3:03 PM
> To: Cantle, Peter; Briggs, Errin
> Cc: Black, Dianne; Russell, Glenn; Henson, Chris; Farnum, Elizabeth
> Subject: PCEC
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> Hi Peter and Errin
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> As part of my research for the next PCEC hearing, I would like you to find and send to me the staff report and environmental document for the existing PCEC project. I would also like you to send to me all correspondence you have from DOGGR regarding the existing project and the current application, whether that correspondence was between you and DOGGR or the applicant and DOGGR. I know you are really busy but if there was any way you could do this research for me I would really appreciate it. If what I am asking for is already buried in documents I already have, please let me know and I will uncover them for myself.
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- > <DOGGR Geology Work Plan Approval 7.24.15.pdf> <DOGGR Letter
- > 3.14.11.pdf> <DOGGR Comments on EIR 3.25.15.pdf>



September 15, 2009

Patricia A. Abel
Deputy Supervisor
Department of Conservation, DOGGR
5075 S. Bradley Road, Suite # 221
Santa Maria, CA 93455

RECEIVED

SEP 16 2009

DEPARTMENT OF CONSERVATION
5075 S. BRADLEY ROAD
SANTA MARIA, CALIFORNIA

Dear Ms. Abel:

Re: Your letter of September 3, 2009; Re: Orcutt Field Seep Documentation

We have received your letter and request that we conduct "fingerprinting" analysis in the Orcutt Field. We are immediately taking steps to comply with your requests. We have contacted Dr. Loren Slentz, the developer of oil fingerprinting at Chevron Oil Field Research Co. in the late 1950's and early 1960's, to establish the proper procedure for carrying out the oil fingerprinting measurements and their interpretation. We propose to engage PTS Laboratories to collect samples from all active seeps while DOGGR and BreitBurn witness said collection. Then PTS Laboratory will be responsible for the custody of all samples and for the chromatographic measurements in the manner prescribed by Dr. Slentz. Dr. Slentz will then interpret the chromatographic results and present the results to BreitBurn and to the DOGGR. He will also be available for verbal presentation of his results if required. We will consult with the DOGGR before the work is undertaken in order to assure that the proposed procedures meet the request.

We do wish to clarify one item. Your letter begins by saying that: "Recently, BreitBurn has detected oil . . ." There are many historical oil seeps throughout our Orcutt property. We first reported a newly discovered seep to the DOGGR in September of 2005. DOGGR representative, Ross Bernetti, inspected the seep and the French-drain oil collection system that BreitBurn put in place. We have worked hand-in-hand with DOGGR in responding to additional seeps. After regular consultations with the DOGGR, BreitBurn has developed an effective system for fully recovering all oil emanating from such seeps. In each seep we have installed a collection system that captures the oil volumes and either pumps the oil to our gathering system or is accessible to our vacuum trucks for periodic removal of the oil and subsequent sale.

We are not aware of any recent change in the seeps nor the appearance of any recently discovered new seeps. Similarly, we are not aware of any escape of oil from these facilities nor any damage to the environment. In fact, we believe that by producing these natural outcrop areas in a controlled and contained manner, we will be lessening the occurrence of uncontrolled natural seeps in the future. These additional production

BREITBURN ENERGY COMPANY LP
a subsidiary of Prudential Energy Trust

locations allow for the additional production of resources from the field used in conjunction with other traditional shallow wells used to reach these shallow formations. Since Orcutt Hill has considerable relief, both the Diatomite and the Careaga outcrop at numerous places around the hill and within the property. This approach both develops the resource and protects the environment.

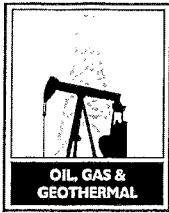
Once we have the fingerprinting results, we would like to meet with you and your superior, Rob Habel, to discuss the background and history of the development of the Orcutt Field and the use of this new technology.

We look forward to the fingerprinting activity and to the opportunity to present the results to you and your superiors in Sacramento. Personnel in our Orcutt office will contact you shortly to coordinate the witnessing of the sample collection.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chris Williamson".

Chris Williamson
Senior Vice President, Western Division.



DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES

5075 S. Bradley Rd. • Suite 221 • SANTA MARIA, CALIFORNIA 93455

PHONE 805 / 937-7246 • FAX 805 / 937-0673 • WEBSITE conservation.ca.gov

October 17, 2009

Chris Williamson
BreitBurn Energy Co. LP
515 S. Flower, 48th floor
Los Angeles, CA 90071

Re: Orcutt Field Seep Documentation

Dear Mr. Williamson:

In your letter of September 15, 2009, you had requested a meeting to review ongoing operations and fingerprinting results from the Orcutt oil field. We would be happy to meet at the field. The Division would like to arrange a meeting for 8:30 a.m. on Thursday, November 5, 2009. In attendance representing the Division will be Elena Miller, State Oil & Gas Supervisor, and Rob Habel, Chief Deputy, along with the District 3 engineering staff.

Please send us the results from the recent fingerprinting analysis, seep map(s), cross sections, production and seep history along with any other pertinent information on field conditions. Also include any plans you may have relative to future field production. Please submit this information by October 28, 2009 to allow for internal distribution and review.

Should you have any questions, please do not hesitate to contact our office.

Looking forward to meeting with you and your staff,

Patricia A. Abel
Deputy Supervisor

cc: Thomas M. Myers
Elena Miller
Rob Habel
Project File



DEPARTMENT OF CONSERVATION

Managing California's Working Lands

Division of Oil, Gas, & Geothermal Resources

5075 SO. BRADLEY ROAD • SUITE 221 • SANTA MARIA, CALIFORNIA 93455

PHONE 805 / 937-7246 • FAX 805 / 937-0673 • WEB SITE conservation.ca.gov

June 15, 2011

Brad Pierce, Agent
BreitBurn Energy Company LP
515 s. Flower St., Suite 4800
Los Angeles, CA 90071

RE: Spill SM 11-14
"Newlove" Pod 3 seep
Orcutt Field

Dear Mr. Pierce:

On June 14, 2011, this office was notified of a new seep on the "Newlove" lease in the Orcutt field. The cause of the spill was due to a newly discovered seep near Pod 3. In the project approval letter dated March, 14, 2011, condition 14 states "Oil, steam, and/or water are prevented from flowing to the surface as a result of cyclic steaming operations, either through new or existing seeps, fissures, or other conduits associated with improperly cased and/or cemented wells."

The above-mentioned discharge constitutes a deficiency. The flow of fluids from the seep must be stopped and the impacted site cleaned up. Satisfactory cleanup will include the removal of all free fluid and removal of all contaminated soil. Please notify this office to inspect the site upon completion of cleanup operations. Also, please review your project approval letter and update all personnel on the appropriate actions to take.

Your prompt attention to this matter will prevent this spill from becoming a violation and possible imposition of civil penalties.

Sincerely,

Patricia A. Abel
District Deputy

Jl:cb

cc: Chrono
Deficiency File
Follow-up
Spill Binder 11-14



DEPARTMENT OF CONSERVATION

Managing California's Working Lands

Division of Oil, Gas, & Geothermal Resources

5075 SO. BRADLEY ROAD • SUITE 221 • SANTA MARIA, CALIFORNIA 93455
PHONE 805 / 937-7246 • FAX 805 / 937-0673 • WEB SITE conservation.ca.gov

July 27, 2011

Brad Pierce, Agent
BreitBurn Energy Company LP
515 S. Flower St., Suite 4800, 48th Floor
Los Angeles, CA 90071

Dear Mr. Pierce:

SPILL SM 11-25; "NEWLOVE" SM 11-13 SEEP RE-ACTIVATION, ORCUTT FIELD

On July 25, 2011, this office was notified of a new seep on the "Newlove" lease in the Orcutt field. The cause of the spill was due to a re-activated seep between pods 2 & 4. In the project approval letter, dated March, 14, 2011, condition 14 states "Oil, steam, and/or water are prevented from flowing to the surface as a result of cyclic steaming operations, either through new or existing seeps, fissures, or other conduits associated with improperly cased and/or cemented wells."

The above-mentioned discharge constitutes a deficiency. The flow of fluids from the seep must be stopped and the impacted site cleaned up. Satisfactory cleanup will include the removal of all free fluid and removal of all contaminated soil. Please notify this office to inspect the site upon completion of cleanup operations. Also, please review your project approval letter and update all personnel on the appropriate actions to take.

Your prompt attention to this matter will prevent this spill from becoming a violation and possible imposition of civil penalties.

Sincerely,

A handwritten signature in black ink, appearing to read "Patricia A. Abel".

Patricia A. Abel
District Deputy

CK:cb

cc: Chrono
Deficiency File
Follow-Up
Spill Binder 11-25

REPORT OF OCCURRENCE

TYPE O DATE 7-25-11

LOCATION Orcutt

Phone 506-9044

Operator BreitBurn

Representative John Fox

Occurrence Detected 7-25-11, 2011 ; 0800 am/pm

Occurrence Ended 7-25-11, 2011 ; 0800 am/pm

Field Orcutt Sec., T., R. Lease and Well "Newlove"

Other Location Description Between pods 2 & 4, seep SM 11-13 re-activation

O.E.S. Notified? N/A (toll-free number: 800-852-7550)

DOGGR Notified by (Name, Affiliation, Phone Number, and Time) John Fox, Environmental, Health & Safety Field Analyst

Volume of Spill less than 1 bbl bbls oil; 0 bbls water

Areal Extent

Property or Waterways Damaged or Threatened none

Weather and Sea Conditions (Offshore Spills Only) n/a

Injuries none

Source and Cause of Occurrence unknown

Containment and Cleanup backhoe, hand crew, french drain will be installed. Pipeline will be installed to transport oil to existing can and pump at SM-11-16

Operator Plans to Prevent Reoccurrence SEE ABOVE

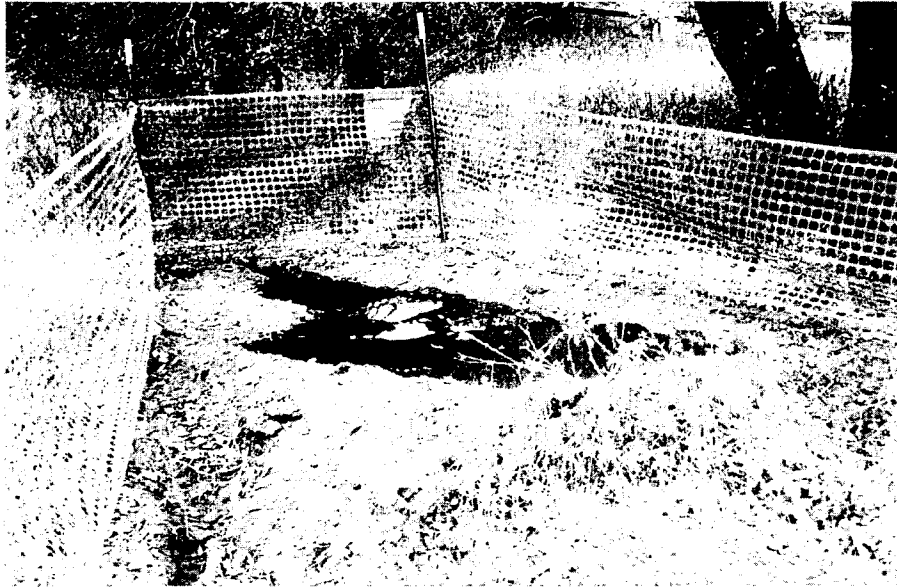
Estimate of Property Damage (dollar loss) or Cleanup Cost

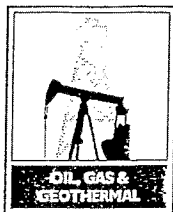
Additional Information

(Use reverse side if additional space is needed.)

Report Prepared by C. Kelly Date 7-25-11

SM 11-25
7-25-11





DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES

5075 S. Bradley Rd. • Suite 221 • SANTA MARIÁ, CALIFORNIA 93455

PHONE 805 / 937-7246 • FAX 805 / 937-0673 • WEBSITE conservation.ca.gov

September 3, 2009

Thomas M. Myers, Agent
BreitBurn Energy Company LP
515 S. Flower St., Suite 4800, 48th Floor
Los Angeles, CA 90071

Re: Orcutt Field Seep Documentation

Dear Mr. Myers:

Recently, BreitBurn has detected oil flowing from cracks and fissures on the "Newlove" lease in the Orcutt oil field. Although BreitBurn's contention is that this is natural seepage, these recent unusual events appear to be associated with cyclic steaming operations in the diatomite zone. Please promptly report any new occurrences of seepage to this office.

Also, because the seepage appears to be related to oil field operations, the Division requests that BreitBurn develop fingerprinting records for the oil seeping to the surface. Verifiable samples of oil from the Careaga and Diatomite formations must be fingerprinted for reference, and oil from each seep must be fingerprinted to determine if the oil is seeping from either of these formations. Any new seepage must also be fingerprinted and the analysis submitted to this office for review. Please notify this office when the samples are to be taken so that a representative from our office may witness sampling operations.

Please supply our office with the results of the fingerprinting tests within 30 days from the date of this correspondence. Should you have any questions regarding the above, please do not hesitate to contact this office at 805-937-7246.

Sincerely,

Patricia A. Abel
Deputy Supervisor

PAA:pd

cc: Lolita Miller



DEPARTMENT OF CONSERVATION

Managing California's Working Lands

DIVISION OF OIL, GAS, & GEOTHERMAL RESOURCES

195 S. BROADWAY • SUITE 101 • ORCUTT, CALIFORNIA 93455-4655

PHONE 805 / 937-7246 • FAX 805 / 937-0673 • WEB SITE conservation.ca.gov

September 4, 2013

Mr. Tom McCollum, Agent
Pacific Coast Energy Company LP
1555 Orcutt Hill Road
Orcutt, CA 93455

Dear Mr. McCollum:

"NEWLOVE" 7 SEEPAGE

This office was notified of new seepage below well "Newlove" 7 in April 2013. During a recent visit to the site, it was noted that water and oil were continuing to stream down the steep dry wash. The fluid is being diverted to a drain and then piped down to a seep collection system. In discussions with John Fox, the slope stability was a major factor preventing the installation of collection piping immediately adjacent to the seep.

In the Division's project approval letter to you, under response conditions, you are to immediately control and contain all discharge. The fluid observed flowing down the dry wash was not being contained by a French drain. An influx of fluid, due to increased flow or potential winter rains, could cause the path to spread out and not be contained. If the seepage is left in its current condition then it does not prevent the threat of damage to life, health, property, and natural resources. Therefore, the Division requests that every effort is used to contain this seepage where the seepage surfaces by November 16, 2013.

Representatives from the Santa Barbara County Petroleum Department and Building and Safety Department, onsite during the recent visit, indicated that actions could be taken with proper permitting to mitigate the slope instability.

Please provide this office with the location and type of measure utilized to contain the associated flow, as well as proper notification to observe and document the installation of features used to contain this seepage.

Sincerely,

Patricia A. Abel
District Deputy

Cc: Kevin Drude, Santa Barbara County Deputy Director/Petroleum Administrator
Jeff Thomas, Santa Barbara County Engineering Supervisor, Building & Safety
Project file/Oil Spill Binder



DEPARTMENT OF CONSERVATION

Managing California's Working Lands

Division of Oil, Gas, & Geothermal Resources

5075 SO. BRADLEY ROAD • SUITE 221 • SANTA MARIA, CALIFORNIA 93455

PHONE 805 / 937-7246 • FAX 805 / 937-0673 • WEB SITE conservation.ca.gov

June 14, 2011

Brad Pierce, Agent
BreitBurn Energy Company LP
515 s. Flower St., Suite 4800
Los Angeles, CA 90071

RE: Spill SM 11-13
"Newlove" seep
Orcutt Field

Dear Mr. Pierce:

On June 13, 2011, this office was notified of a new seep on the "Newlove" lease in the Orcutt field. The cause of the spill was due to a newly discovered seep between Pods 2 & 4. In the project approval letter dated March, 14, 2011, condition 14 states "Oil, steam, and/or water are prevented from flowing to the surface as a result of cyclic steaming operations, either through new or existing seeps, fissures, or other conduits associated with improperly cased and/or cemented wells."

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District Deputy

Jl:cb

cc: Chrono
Deficiency File
Follow-Up
Johanna Rodriguez
Spill Binder 11-13



SM 11-13

Lenzi, Chelsea

From: Henson, Chris
Sent: Monday, October 31, 2016 12:39 PM
To: Allen, Michael (COB); Lenzi, Chelsea; sbcob
Subject: FW: PCEC - Document Request Follow Up
Attachments: 12.16.11 seep occurrence.pdf

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From: Briggs, Errin
Sent: Wednesday, October 26, 2016 10:42 AM
To: Farr, Doreen
Cc: Cattle, Peter; Black, Dianne; Russell, Glenn; Henson, Chris; Farnum, Elizabeth
Subject: RE: PCEC - Document Request Follow Up

No. 2

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To: Briggs, Errin
Cc: Farr, Doreen; Cattle, Peter; Black, Dianne; Russell, Glenn; Henson, Chris; Farnum, Elizabeth
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Doreen Farr
Third District County Supervisor

Sent from my iPhone

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> Subject: PCEC

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Lenzi, Chelsea

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Sent: Monday, October 31, 2016 12:40 PM
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Subject: FW: PCEC - Document Request Follow Up
Attachments: seep remediation documentation 2012.pdf

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> 3.14.11.pdf> <DOGGR Comments on EIR 3.25.15.pdf>

Pacific Coast Energy Company LP

Seep Remediation Report

Seep Can Number: 001 (P-8)

GPS Coordinates: N 34°83385 W120°40433

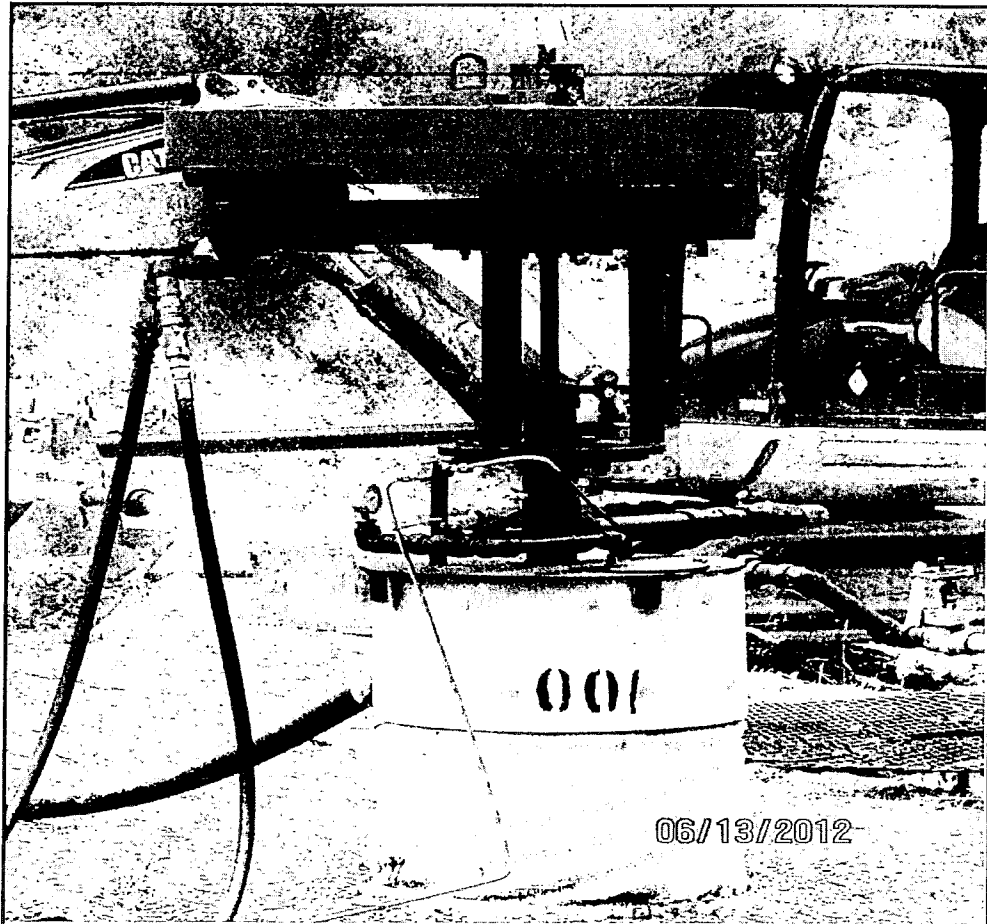
Elevation: 825 ft

Date: 10/13/2008

Active/Not Active: Active

Description: Seep can 1 consists of a rock filled trench. Standard plans attached

Photo:

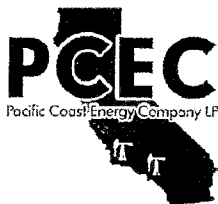


GRADING NOTES

1. ALL GRADING SHALL CONFORM WITH SANTA BARBARA COUNTY CODE CHAPTER AND STANDARDS AND REQUIREMENTS PERTAINING THERETO, THESE CONSTRUCTION DRAWINGS AND THE RECOMMENDATIONS OF THE SOILS ENGINEER AND ENGINEERING GEOLOGIST.
2. WHERE POSSIBLE, CONTRACTOR TO NOTIFY THE COUNTY GRADING INSPECTOR, ENGINEER OF RECORD, AND SOILS LABORATORY AT LEAST 48 HOURS BEFORE START OF GRADING WORK OR PRE-CONSTRUCTION MEETING.
3. CONTRACTOR SHALL EMPLOY ALL LABOR, EQUIPMENT, AND METHODS REQUIRED TO PREVENT HIS OPERATIONS FROM PRODUCING DUST IN AMOUNTS DAMAGING TO ADJACENT PROPERTY, CULTIVATED VEGETATION AND DOMESTIC ANIMALS OR CAUSING A NUISANCE TO PERSONS OCCUPYING BUILDINGS IN THE VICINITY OF THE JOB SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE CAUSED BY DUST FROM HIS GRADING OPERATION
4. WHERE POSSIBLE, BEFORE BEGINNING WORK REQUIRING EXPORTING OR IMPORTING OF MATERIALS, THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE PUBLIC WORKS ROAD DIVISION FOR HAUL ROUTES TO BE USED AND METHODS PROVIDED TO MINIMIZE THE DEPOSIT OF SOILS ON COUNTY ROADS. GRADING/ROAD INSPECTORS SHALL MONITOR THIS REQUIREMENT WITH THE CONTRACTOR.
5. A THOROUGH SEARCH SHALL BE MADE FOR ALL ABANDONED MAN-MADE FACILITIES SUCH AS SEPTIC TANK SYSTEMS, FUEL OR WATER STORAGE TANKS, AND PIPELINES OR CONDUITS. ANY SUCH FACILITIES ENCOUNTERED SHALL BE REMOVED, AND THE DEPRESSION PROPERLY FILLED AND COMPACTED UNDER OBSERVATION OF THE GEOTECHNICAL ENGINEER.
6. AREAS WITH EXISTING SLOPES WHICH ARE TO RECEIVE FILL MATERIAL SHALL BE KEYED AND BENCHED. THE DESIGN AND INSTALLATION OF THE KEYWAY SHALL BE PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATION OR PER COUNTY STANDARD DETAIL NO. G-13.
7. FILL MATERIAL SHALL BE SPREAD IN LIFTS NOT EXCEEDING 6" IN COMPACTED THICKNESS, MOISTENED OR DRIED AS NECESSARY TO NEAR OPTIMUM MOISTURE CONTENT, AND COMPACTED BY AN APPROVED METHOD. FILL MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 90% MAXIMUM DENSITY AS DETERMINED BY THE 1957 ASTM D-1557-91 MODIFIED PROCTOR (AASHO) TEST OR SIMILAR APPROVED METHODS. SOME FILL AREAS MAY REQUIRE COMPACTION TO A GREATER DENSITY IF CALLED FOR IN THE CONSTRUCTION DOCUMENTS. SOIL TESTS SHALL BE CONDUCTED AT NOT LESS THAN ONE TEST FOR EACH 18" OF FILL AND/OR FOR EACH 500 CUBIC YARDS OF FILL PLACED.
8. CUT SLOPES SHALL NOT EXCEED A GRADE OF 1 1/2 HORIZONTAL TO 1 VERTICAL FILL AND COMBINATION FILL AND CUT SLOPES SHALL NOT EXCEED 2 HORIZONTAL TO 1 VERTICAL. SLOPES OVER 3- FEET IN VERTICAL HEIGHT SHALL BE PLANTED WITH APPROVED PERENNIAL OR TREATED WITH EQUALLY APPROVED EROSION CONTROL MEASURES PRIOR TO FINAL INSPECTION.
9. SURFACE DRAINAGE SHALL BE PROVIDED AT A MINIMUM OF 2% FOR 5 FEET AWAY FROM THE FOUNDATION LINE OR ANY STRUCTURE.
10. ALL TREES THAT ARE TO REMAIN ON SITE SHALL BE TEMPORARILY FENCED AND PROTECTED AROUND THE DRIP LINE DURING GRADING.
11. "BEST MANagements PRACTICES FOR CONSTRUCTION ACTIVITIES: ERODED SEDIMENTS AND OTHER POLLUTANT MUST BE RETAINED ONSITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES, OR WIND. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY FORCES OF WIND OR WATER. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS MUST BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED AS A SOLID WASTE. TRASH AND CONSTRUCTION RELATED SOLID WASTE MUST BE DEPOSITED INTO A COVERED WASTE RECEPTACLE TO PREVENT CONTAMINATION OF RAIN WATER AND DISPERSAL BY WIND. SEDIMENTS AND OTHER MATERIAL MAY NOT BE TRACKED FROM TO THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITION MUST BE SWEEP UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO MINIMIZE EROSION BY WIND AND WATER."

GRADING NOTES CONTINUED

12. IF GRADING OCCURS DURING NOV 1 THROUGH APR 15, WHERE POSSIBLE, NO GRADING SHALL OCCUR UNLESS APPROVED EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE. DISCHARGES OF SEDIMENT FROM THE PROJECT SITE MAY RESULT IN A STOP WORK ORDER"
13. ALL EARTHWORK ON HILLSIDES, SLOPING OR MOUNTAINOUS TERRAIN SHALL BE STABILIZED TO PROTECT AND PREVENT LOSS OF SOILS, AS NECESSARY, YEAR ROUND.
14. THE CONTRACTOR SHALL PERFORM WORK IN A SAFE MANNER CONSISTENT WITH SUBCHAP. 4, DIV. 1, TIT. 8 OF THE CA CODE OF REGULATIONS (CALOSHA CONSTRUCTION SAFETY ORDERS) AND OTHER APPLICABLE CODES, REGULATIONS, AND INDUSTRY CUSTOMARY PRACTICE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING, ERECTING, AND MAINTAINING SUCH FENCES, BARRICADES, LIGHTS AND SIGNS THAT ARE NECESSARY TO GIVE REQUIRED PROTECTION TO ITS WORKFORCE AND THE PUBLIC AT ALL TIMES DURING THE PROGRESS OF THE WORK.
15. THE CONTRACTOR SHALL HAVE COPIES OF THE APPROVED PLANS AND SPECIFICATIONS FOR THIS PROJECT ON THE SITE AT ALL TIMES, AND THE CONTRACTOR SHALL BE FAMILIAR WITH ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
16. THE CONTRACTOR SHALL EXPOSE AND VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING IMPROVEMENTS AND UTILITIES PRIOR TO BEGINNING WORK.
17. THE CONTRACTOR MAY BE REQUIRED TO OBTAIN A PERMIT FROM THE STATE OF CALIFORNIA, DEPARTMENT OF INDUSTRIAL RELATIONS, DIVISION OF SAFETY AND HEALTH FOR THE WORK RELATED TO THIS PROJECT. CALL CALOSHA AT 1-818-901-5403 FOR FURTHER INFORMATION. (CALIFORNIA HEALTH AND SAFETY CODE 17922.5)
18. ACCEPTABLE BACKFILL MATERIALS: ACCEPTABLE BACKFILL MATERIALS SHALL HAVE A SAND EQUIVALENT OF 20 AND BE CLASSIFIED BY ASTM D2487 AS GW, SW, SP, GC, SC, GM, OR SM, AND SHALL BE FREE OF TRASH, DEBRIS, ORGANIC MATTER, OR STONES LARGER THAN 3". TESTING AND APPROVAL SHALL BE PROVIDED TO THE ENGINEER PRIOR TO PLACEMENT.
19. CONTRACTOR SHALL ASSIST ENGINEER IN MAKING ANY OBSERVATION, TEST, OR INSPECTION WITH ANY EQUIPMENT AND/OR LABOR AT CONTRACTOR'S EXPENSE INCLUDING UNCOVERING AND REPAIR OF ANY DISTURBED WORK.
20. IN THE EVENT ARCHAEOLOGICAL REMAINS ARE ENCOUNTERED DURING GRADING, WORK SHALL BE STOPPED IMMEDIATELY OR REDIRECTED UNTIL A QUALIFIED ARCHAEOLOGIST AND NATIVE AMERICAN REPRESENTATIVE ARE RETAINED BY THE APPLICANT TO EVALUATE THE SIGNIFICANCE OF THE FIND. IF REMAINS ARE FOUND TO BE SIGNIFICANT, THEY SHALL BE SUBJECT TO A MITIGATION PROGRAM FUNDED BY THE APPLICANT.
21. WHERE POSSIBLE, THE APPLICANT SHALL LIMIT EXCAVATION AND GRADING TO THE DRY SEASON OF THE YEAR (I.e APRIL 15 TO NOVEMBER 1) UNLESS EROSION CONTROL PLAN IS IN PLACE AND ALL MEASURES THERIN ARE IN EFFECT. ALL EXPOSED GRADED SURFACES SHALL BE RESEEDED WITH GROUND COVER VEGETATION TO MINIMIZE EROSION. GRADED SURFACES SHALL BE RESEEDED WITHIN 4 WEEKS OF GRADING COMPLETION, WITH THE EXCEPTION OF SURFACES GRADED FOR THE PLACEMENT OF STURCTURES. THESE SURFACES SHALL BE RESEEDED IF CONSTRUCTION OF STRUCTURES DOES NOT COMMENCE WITH 4 WEEKS OF GRADING COMPLETION.
22. THE CONTRACTOR SHALL FOLLOW THE REGULATIONS THAT REQUIRES AN OPERATOR OF APPLICABLE OFF-ROAD VEHICLES TO LIMIT IDLING TO NO MORE THAN FIVE MINUTES. THESE REQUIREMENTS ARE SPECIFIED IN TITLE 13 OF THE CALIFORNIA CODE OF REGULATIONS 2449(D)(3) IDLING.
23. CONTAMINATED SOILS, IF ENCOUNTERED, SHALL BE HANDLED IN ACCORDANCE WITH THE SB COUNTY FIRE DEPARTMENT AND PETROLEUM DEPARTMENT REQUIREMENT.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MARKERS DURING CONSTRUCTION. ALL SUCH MONUMENTS OR MARKERS DISTURBED SHALL BE RESET AT CONTRACTORS EXPENSE.



Cannon

1540 Sawtooth Drive
San Luis Obispo, CA 93401
P 805 424 4200 F 805 424 3449

THESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND ARE THE PROPERTY OF CANNON. ALL DESIGNS AND INFORMATION ON THESE DRAWINGS ARE FOR USE OF THE SPECIFIC PROJECT AND SHALL NOT BE REPRODUCED OR REUSED WITHOUT THE EXPRESS WRITTEN PERMISSION OF CANNON.

STANDARD NOTES		
PACIFIC COAST ENERGY COMPANY LP		
NOTES		
ORCUTT, CALIFORNIA		
DRAWN BY	DATE	CA JOB NO.
CMM	06/12/2012	060812.65
CHECKED BY	SCALE	SHEET
	NTS	___ OF ___

SEEP NO.: 1

ESTIMATED EARTHWORK QUANTITIES FOR:

CUT: 7 CY

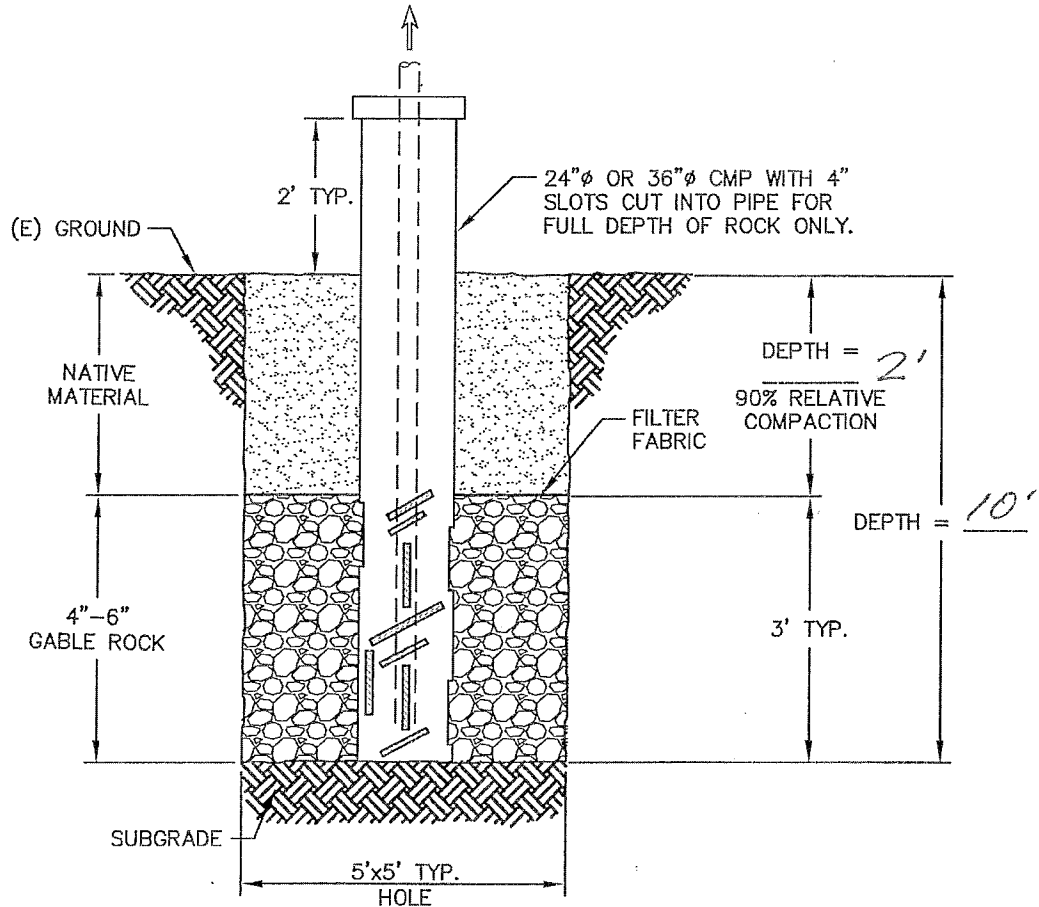
FILL: 7 CY

TOTAL: 14 CY

TOTAL PLANTS REMOVED: NO: _____ TYPE: _____

PUMPED TO: _____

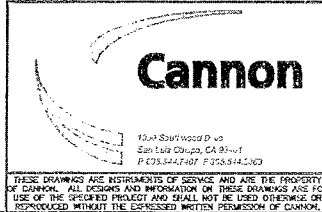
PIPED TO: _____



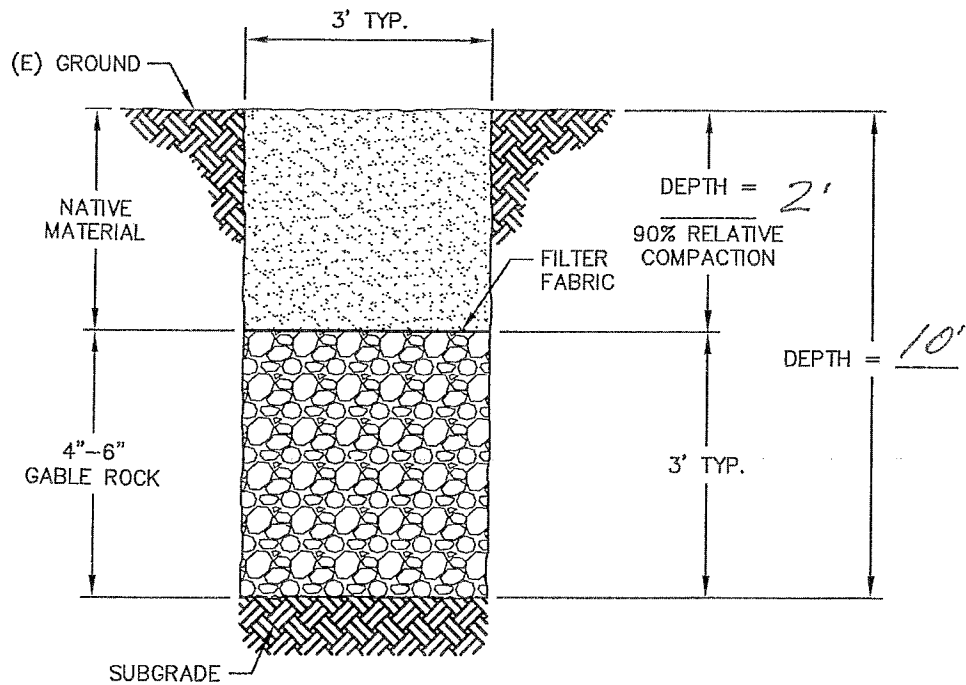
CMP RISER DETAIL

N.T.S.

1



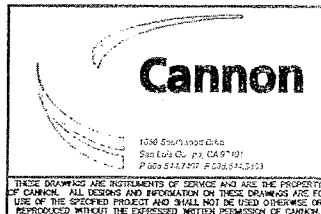
STANDARD DETAIL		
PACIFIC COAST ENERGY COMPANY LP		
CMP RISER DETAIL		
ORCUTT, CALIFORNIA		
DRAWN BY	DATE	CA JOB NO.
CMM	05/12/2012	050812.65
CHECKED BY	SCALE	SHEET
	NTS	OF



ROCK TRENCH DETAIL

N.T.S.

1A



STANDARD DETAIL		
PACIFIC COAST ENERGY COMPANY LP		
ROCK TRENCH DETAIL		
ORCUTT, CALIFORNIA		
DRAWN BY	DATE	CA JOB NO.
CHM	06/12/2012	060812.65
CHECKED BY	SCALE	SHEET
	NTS	___ OF ___

Lenzi, Chelsea

From: Henson, Chris
Sent: Monday, October 31, 2016 12:41 PM
To: Allen, Michael (COB); Lenzi, Chelsea; sbcob
Subject: FW: PCEC - Document Request Follow Up
Attachments: 9.24.13 Steaming Info Request.pdf; 12.13.06 steaming approval letter.pdf; 3.14.11 Steam approval with conditions.pdf; 6.9.12 steaming expansion approval.pdf

-----Original Message-----

From: Briggs, Errin
Sent: Wednesday, October 26, 2016 10:43 AM
To: Farr, Doreen
Cc: Cattle, Peter; Black, Dianne; Russell, Glenn; Henson, Chris; Farnum, Elizabeth
Subject: RE: PCEC - Document Request Follow Up

No. 4

-----Original Message-----

From: Farr, Doreen
Sent: Tuesday, October 18, 2016 6:10 PM
To: Briggs, Errin
Cc: Farr, Doreen; Cattle, Peter; Black, Dianne; Russell, Glenn; Henson, Chris; Farnum, Elizabeth
Subject: Re: PCEC - Document Request Follow Up

This is great. Thanks so much, Errin. I really appreciate it.
Doreen

Doreen Farr
Third District County Supervisor

Sent from my iPhone

> On Oct 18, 2016, at 8:50 AM, "Briggs, Errin" <ebriggs@co.santa-barbara.ca.us> wrote:
>
> Good morning Supervisor Farr,
>
> I have attached the County documents that you requested including the 2005 Mitigated Negative Declaration, staff report and action letter reflecting the Planning Commission's approval of their existing steaming project. I also included the DOGGR comment letter on the current EIR.
>
> I have also attached the DOGGR letters to PCEC that provide context on steaming operations and some recent communications regarding geology. The alleged geologic issue has since been proven false and put to rest. The letters here are not comprehensive of all communications between DOGGR and PCEC but this is everything we have in our files at this time.
>

> We are actively following up with DOGGR staff to obtain “copies of all of their correspondence with PCEC since the original project was applied for.” We will keep you posted on this effort and provide anything we get as soon as practicable.

>

> Let us know if you have any questions in the mean time.

>

>

> Errin Briggs | Energy Specialist | County of Santa Barbara |

> 805-568-2047

>

>

>

>

> From: Farr, Doreen

> Sent: Monday, October 17, 2016 3:03 PM

> To: Cattle, Peter; Briggs, Errin

> Cc: Black, Dianne; Russell, Glenn; Henson, Chris; Farnum, Elizabeth

> Subject: PCEC

>

> Hi Peter and Errin

>

> As part of my research for the next PCEC hearing, I would like you to find and send to me the staff report and environmental document for the existing PCEC project. I would also like you to send to me all correspondence you have from DOGGR regarding the existing project and the current application, whether that correspondence was between you and DOGGR or the applicant and DOGGR. I know you are really busy but if there was any way you could do this research for me I would really appreciate it. If what I am asking for is already buried in documents I already have, please let me know and I will uncover them for myself.

>

> Also, I would like to ask DOGGR, (Pat Abel?), for copies of all of their correspondence with PCEC since the original project was applied for. Do you think they would honor that request if it came from me or would it be better coming from you? Or do you think they would require me to do a PRA request in order to get it?

>

> Any help you could give would be greatly appreciated.

> Thanks so much.

>

> Doreen

>

> P.S. I know you sent me one letter from DOGGR (2013) referencing an earlier letter from DOGGR (2011) but it would be good to have all of them that we might have in the full record of this project. Thanks again.

> <Revised Final MND 11-8-06 (2).pdf>

> <BreitBurn Staff Report-revised.doc>

> <Action Letter 11-14-06.pdf>

> <DOGGR Letter 3.27.13.pdf>

> <DOGGR Letter 6.9.12.pdf>

> <DOGGR Letter 9.3.09.pdf>

> <DOGGR Geology Letter 4.6.15.pdf>

> <DOGGR Geology Work Plan Approval 7.24.15.pdf> <DOGGR Letter

> 3.14.11.pdf> <DOGGR Comments on EIR 3.25.15.pdf>



- Project File -

DEPARTMENT OF CONSERVATION

Managing California's Working Lands

DIVISION OF OIL, GAS, & GEOTHERMAL RESOURCES

195 S. BROADWAY • SUITE 101 • ORCUTT, CALIFORNIA 93455-4655

PHONE 805 / 937-7246 • FAX 805 / 937-0673 • WEB SITE conservation.ca.gov

September 24, 2013

Thomas J. McCollum, Agent
Pacific Coast Energy Company LP
1555 Orcutt Hill Road
Orcutt, CA 93455

Dear Mr. McCollum:

REQUEST FOR DATA: DIATOMITE CYCLIC STEAM PROJECT, ORCUTT FIELD

Under *Prevention Conditions* in the project approval letter (PAL) dated June 9, 2012, the Division requires a continuous tilt monitoring system be installed. While the Division's condition is based on preventing the outbreak of fluid and pressures associated with cyclic steaming operation within the diatomite, there are concerns regarding the amount of soil displacement in the general vicinity of steaming operations.

Under condition #3 of the PAL, this office requests that Pacific Coast Energy Company LP (PCEC) submit to this office past data and on a quarterly basis, starting October 1, 2013, an update on the performance of the monitoring system along with the data and ground movement results both in tabular and graphical format. In addition, please supply to this office baseline data and an analysis of the elevation changes that have been observed at each of the stations. Our records indicate that at least 70 prisms have been installed with measurements taken every 30 minutes.

Under condition #7 PCEC is required to provide quarterly listings of injection anomalies, if any that caused modifications to the injection activity. This office has not received any reports of injection anomalies. Please submit to our office on a quarterly basis, starting October 1, 2013, any reports of injection anomalies or a signed statement that indicates that no anomalies occurred.

Under condition #14 the Division is requesting documentation of any abnormalities falling under the variations listed in the PAL. Starting October 1, 2013, this office requests the submission of documentation of any abnormalities to this office on a quarterly basis. Again, if no abnormalities are observed, please submit a signed statement that indicates that no abnormalities occurred.

September 24, 2013

PCEC – REQUEST FOR DATA: DIATOMITE CYCLIC STEAM PROJECT, ORCUTT FIELD

Page - 2

Under condition #16 design and installation of seep cans must be under the supervision of a registered civil engineer. While in the field at a location where a seep can was being installed I did not identify a registered civil engineer on location. Please provide to this office on or before October 1, 2013 documentation that demonstrates that registered civil engineers have overseen the construction and installation procedures for each designated seep can. Please also ensure that the features listed in condition #16 are properly marked.

Under conditions #17 and #18 the seep cans must be mapped and the locations and types of measures utilized must be provided. This office is not in receipt of the latest map identifying all of the features listed. Please submit to this office a current map by October 1, 2013. Also; the Division has not been consistently notified to witness the installation. Please ensure that your staff is contacting this office at 805-937-7246 or via email at dogdist3@conservation.ca.gov . Failure to notify this office may be deemed as a violation of the PAL conditions.

Under condition #32 the Division may request additional data. Given the extensive cracks, depth of sink holes, and instability of slopes in the vicinity of injection this office requests receipt of the following information within 30 days of the date of this letter:

- Any photographs of the area prior to injection
- A geologic map and report that addresses the fissures and fractures found in the area. This office requests the map in a electronic GIS compatible format.
- Native soil sample analysis from several locations and depths
- A risk assessment of erosional activity in the area during periods of wet weather on average years of precipitation
- A geologic assessment of the cause of the fissures and fractures
- A health and safety plan for persons working in the area
- PCEC's policy for backfilling fractures, fissures and sinkholes and measures employed to prevent damage to life, health, property, and natural resources as it relates to these features.

Should you have any questions, please contact this office.

Sincerely,



Patricia A. Abel
District Deputy

cc: Project File
Santa Barbara County
Chrono
Followup



DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES

5075 S. Bradley Rd. • Suite 221 • SANTA MARIA, CALIFORNIA 93455

PHONE 805 / 937-7246 • FAX 805 / 937-0673 • WEBSITE conservation.ca.gov

December 13, 2006

Thomas M. Myers, Agent
 BreitBurn Energy Company LP
 515 S. Flower St., Suite 4800, 48th Floor
 Los Angeles, CA 90071

Cyclic Steaming Project
 Orcutt Field
 Main Area
 Diatomite Pool

Dear Mr. Myers:

The proposal to initiate a Class II cyclic steam project in wells "Newlove" 25-83A, "Newlove" 25-83D, "Newlove" 25-83G, "Newlove" 25-83L, "Newlove" 25-83O, "Newlove" 25-83B, "Newlove" 25-83E, "Newlove" 25-83J, "Newlove" 25-83M, "Newlove" 25-83C, "Newlove" 25-83F, "Newlove" 25-83K, "Newlove" 25-83N, and "Newlove" 76RD1, Sec.25, T. 9N, R. 34W, SB B& M for the diatomite formation in the Orcutt field is approved provided:

1. This office is notified of any anticipated changes in the project that will alter any of the conditions originally approved, such as: expansion of the project area; a change in the cyclic steam injection interval; a change of injection fluid constituents; a significant increase in volume; or an increase in injection pressure. No such changes shall be carried out without prior Division approval.
2. A monthly injection report is filed with the Division on Form OG110B, or by electronic or magnetic media approved by the Division, on or before the last day of each month, for the preceding month, showing the amount of fluid injected, the surface pressure required, and the source of injection water for each injection well.
3. A chemical analysis of the fluid to be injected is made and filed with this Division initially and whenever the source of cyclic steam injection fluid is changed, or as requested by the office. **ALL FLUIDS MUST CONFORM TO THE DEFINITION OF A CLASS II FLUID AS DEFINED BY THE EPA.**
4. An accurate operating pressure gauge or pressure-recording device is available at all times during cyclic steaming operations, and all cyclic steam wells are equipped for installation and operation of such a gauge or device. Any gauge or device permanently affixed to the well, or any part of the injection system, must be calibrated at least every six months. Portable gauges must be calibrated at least every two months. Evidence of such calibration must be made available to the Division upon request.

Page 2

December 13, 2006

BreitBurn Energy Company LP

5. Injection-zone pressure, as determined by pressure monitoring during the soak portion of the cycle, does not exceed hydrostatic pressure in the general area affected by the project.
6. Data are maintained to establish that no damage to life, health, property, or natural resources is occurring by reason of the project. Injection shall be stopped if there is evidence of such damage, or loss of hydrocarbons, or upon written notice from the Division. Project data must be available for periodic inspection by Division representatives.
7. All injection piping, valves, and facilities meet or exceed design standards for the maximum anticipated injection pressure and are maintained in a safe and leak-free condition.
8. Any remedial well work needed as a result of this cyclic steam injection project to repair idle, abandoned, or deeper-zone wells to protect oil, gas, or freshwater zones, will be the responsibility of the project operator.
9. The Division is notified immediately in the event the project is terminated.
10. An annual project review meeting is held with Division personnel. Information which may be discussed and reviewed include: (1) project & individual well cyclic steam graphs; (2) graphs/statistics outlining the incremental oil production from enhanced oil recovery; (3) Project expansion plans including facilities, new wells & reworks; (4) Recent fluid analysis; (5) Any problems, complaints, or other aspects of the project.

Sincerely,



William E. Brannon
Deputy Supervisor

PA:pd

cc: Regional Water Quality Control Board
Project File



DEPARTMENT OF CONSERVATION

Managing California's Working Lands

Division of Oil, Gas, & Geothermal Resources

5075 SO. BRADLEY ROAD • SUITE 221 • SANTA MARIA, CALIFORNIA 93455

PHONE 805 / 937-7246 • FAX 805 / 937-0673 • WEB SITE conservation.ca.gov

March 14, 2011

Received

Brad Pierce, Agent
BreitBurn Energy Company LP
515 S. Flower St., Suite 4800, 48th Floor
Los Angeles, CA 90071

MAR 16 2011

Orcutt Hill Field

Cyclic Steaming Project
Orcutt Field
Main Area
Diatomite Pool

Dear Mr. Pierce:

The continued operation of your Diatomite Cyclic Steam Project, located in the Orcutt Field, Santa Barbara County, is approved provided:

General Conditions

1. A Notice shall be submitted to the Division whenever wells are going to be added, or when wells are to be reworked or plugged and abandoned. The mechanical conditions of immediately offsetting wells to the proposed cyclic steam well shall be evaluated and any mechanical issues addressed prior to commencing steam injection. This information must be submitted with the notice.
2. This office is notified of any anticipated changes in the project that will alter any of the conditions originally approved, such as: expansion of the project area; a change in the cyclic steam injection interval; a change of injection fluid constituents; a significant increase in volume; or an increase in injection pressure. No such changes shall be carried out without prior Division approval.
3. A monthly injection report is filed with the Division on Form OG110B, or by electronic or magnetic media approved by the Division, on or before the last day of each month, for the preceding month, showing the amount of fluid injected, the surface pressure required, and the source of injection water for each injection well.
4. All production, from methods not associated with a well, shall be reported to the Division on a monthly basis.
5. A chemical analysis of the fluid to be injected is made and filed with this Division initially and whenever the source of cyclic steam injection fluid is changed, or as requested by the office. **ALL FLUIDS MUST CONFORM TO THE DEFINITION OF A CLASS II FLUID AS DEFINED BY THE EPA.**
6. All fluid sampling and analysis required by the Division must be done in accordance with the provisions of the Division's Quality Assurance Program. Please refer to the Division's "Notice to Oil & Gas Operators" dated November 17, 1986 (copy attached).
7. An accurate operating pressure gauge or pressure-recording device is available at all times during cyclic steaming operations, and all cyclic steam wells are equipped for installation and operation of such a gauge or device. Any gauge or device permanently affixed to the well, or any part

of the injection system, must be calibrated at least every six months. Portable gauges must be calibrated at least every two months. Evidence of such calibration must be made available to the Division upon request.

8. Data are maintained to establish that no damage to life, health, property, or natural resources is occurring by reason of the project. Injection shall be stopped if there is evidence of such damage, or loss of hydrocarbons, or upon written notice from the Division. Project data must be available for periodic inspection by Division representatives. Additional data shall be supplied to the Division upon request.
9. All injection piping, valves, and facilities meet or exceed design standards for the maximum anticipated injection pressure and are maintained in a safe and leak-free condition.
10. Any remedial well work needed as a result of this cyclic steam injection project to repair idle, abandoned, or deeper-zone wells to protect oil, gas, or freshwater zones, will be the responsibility of the project operator.
11. The Division is notified immediately if there is a new or re-activated surface expression, if the project is terminated, or if problems occur with operation of the project.
12. All new or reactivated surface expressions that discharge oil in a reportable quantity shall be reported as an oil spill to the California Emergency Management Agency at (800) 852-7550.
13. An annual project review meeting is held with Division personnel. Information which may be discussed and reviewed include: (1) project & individual well cyclic steam graphs; (2) graphs/statistics outlining the incremental oil production from enhanced oil recovery; (3) Project expansion plans including facilities, new wells & reworks; (4) Recent fluid analysis; (5) Any problems, complaints, or other aspects of the project.

Prevention Conditions

14. Oil, steam, and/or water are prevented from flowing to the surface as a result of cyclic steaming operations, either through new or existing seeps, fissures, or other conduits associated with improperly cased and/or cemented wells.
15. A continuous tilt meter array, or other approved ground monitoring system shall be employed that will give adequate warning to prevent surface expressions.
16. Staff shall be on site to monitor operations 24-hours a day when cyclic steam operations are being conducted.
17. Injection-zone pressure, as determined by pressure monitoring during the soak portion of the cycle, does not exceed hydrostatic pressure in the general area affected by the project.
18. A report shall be submitted to the Division every quarter listing the injection anomalies that caused any modifications to the injection activity. This report shall include ground monitoring data and any other data indicating the anomalies, and shall include what steps were taken to prevent surface expressions.
19. Precautions are taken to prevent corrosion from occurring in meter runs, wellheads, wellhead valves, casing, tubing, and packers. This Division shall be furnished with a report detailing the measures to be taken to prevent corrosion.

20. The casing of any well used for cyclic steam injection must be pressure tested prior to commencing injection and once every 5 years thereafter, or as determined necessary by the Division. The Division shall be notified of the scheduled tests, as a Division representative may witness the test.
21. A mechanical integrity test (MIT) must be conducted within 90 days of commencing cyclic steam injection and the results filed within thirty days of completion of the MIT. A MIT shall be performed on all cyclic steam wells at least once every 5 years or as determined necessary by the Division. The Division shall be notified of the scheduled tests, as a Division representative may witness the test.
22. The maximum allowable injection-pressure gradient is limited to a pressure that prevents the steam from migrating out of the intended zone.
23. The lease and injection facilities are maintained in a safe manner, consistent with established oil field practices, and are available for periodic inspection by Division personnel.
24. To prevent steam from migrating out of the intended zone of injection, steam injection rates and pressures shall be continuously monitored. If injection pressures show a variance of more than 15%, or the injection rate indicates a 30% rate change for at least 24 hours, further diagnosis will be required which includes but is not limited to; confirmation of data, inspection of wells and facilities, review of overall system operations, and evaluation of ground monitoring data. Any abnormalities to the approved injection program shall be documented and made available to Division personnel upon request.
25. Daily visual inspection of wells, facilities, flow lines, and roads shall be made by the operator.

Operating Conditions

26. Any measure to address surface expressions shall be reviewed by the Division prior to initiating. This includes, but is not limited to; wells, cisterns, culverts, French drains, or collection boxes.
27. All measures to address surface expressions shall be mapped and the locations and type of measure utilized must be submitted to the Division upon completion.
28. The Division shall be notified to observe and document the installation of wells, cisterns, culverts, French drains, collection boxes, and other measures during the construction phase and upon completion.
29. Wells shut-in associated to surface expressions shall be prominently flagged at the wellhead.

Response Conditions

30. Any water, steam, or oil flowing from a surface expression shall be immediately controlled and contained. All discharged material shall be removed and disposed of in manner approved by all state and local agencies.
31. All surface expressions shall be cordoned off and clearly marked to prevent inadvertent access.
32. All surface expressions within 300 feet of the project must be reported immediately to the Division. This includes reactivation of historic seeps, or increased flow from existing seeps. In the event that a surface expression occurs in a location where operational conditions and prevention systems, such as

cisterns, culverts, or French drains have not been implemented, steam injection shall cease for every well where the bottom-hole location is located within a 150 foot radius from the surface expression. If the surface expression continues to flow after 5 days, all wells within a 300 foot radius shall cease steaming until the surface expression ceases to flow. If the surface expression continues to flow, the damage will be evaluated and at the Supervisor's discretion, will be addressed according to Section 3106 of the Public Resources Code and existing laws and regulations.

33. Prior to re-initiating cyclic steaming in the area of the surface expression, a report will be provided the Division detailing what activity caused the surface expression, including ground monitoring daily reports for the five previous days leading up to the surface expression, and what steps was taken to prevent further surface expressions. Cyclic steaming in the area shall not recommence without notification of the Division.
34. Any cyclic steam well that has been shut-in to prevent or stop surface expressions must be reported to the Division immediately. In addition, any well within the area of influence of the injection project that develops mechanical integrity issues that would potentially provide a conduit outside the intended zone, shall be reported to the Division immediately. Injection within 150 feet of the well with mechanical integrity issues shall cease until the well is either repaired or plugged and abandoned. Cyclic steaming shall not recommence in the area until approval is granted by the Division.

The issuance of this revised injection approval letter does not relieve you of your obligation to obtain necessary permits and approvals from local, state, and federal agencies.

Sincerely,



Patricia A. Abel
District Deputy

JC:pd

Attachment

cc: Regional Water Quality Control Board
Project File
Tom McCollum ✓
Chrono

DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

1416 9th STREET, ROOM 1310
SACRAMENTO, CALIFORNIA 95814
(916) 445-9686



November 17, 1986

NOTICE TO OIL AND GAS OPERATORS

In compliance with the Federal Environmental Protection Agency (EPA) requirements, the Division of Oil and Gas (Division) has prepared a Quality Assurance (QA) Plan for the proper sampling, handling, and testing of fluid samples used in the permitting, surveillance, and enforcement of the Division's Underground Injection Control (UIC) Program.

The provisions of the plan apply to the Division when collecting samples for surveillance and enforcement activities, and apply also to all operators that must collect samples pursuant to Division injection project requirements. The purpose of the plan is to ensure that all persons involved with fluid sampling utilize procedures to obtain data that are technically valid, scientifically defensible, and of proven effectiveness.


Operators collecting samples for compliance with Division requirements must follow an acceptable sampling and testing program. Appropriate bottles, such as glass or polyethylene, must be used for the type of fluid sampled and fluid analysis requested; necessary preservatives or preservation techniques must be used to preserve the stability of the fluid constituents; and appropriate field measurements (i.e., temperature, pH, conductivity) must be taken so that the laboratory can be provided with important information on the physical state of the fluid at the time of sampling.

An accurate written chain-of-custody record must be kept to trace the possession of a sample from the moment of its collection until the time of analysis. A chain-of-custody record provides assurance of the sample's origin and the timeliness of the submittal to the lab. Also, the sample bottle should be labeled to indicate pertinent information about the sample, and the laboratories performing the analyses must use EPA-accepted analytical methodologies. Furthermore, to avoid confusion and errors created when mg/l and ppm are used interchangeably, the Division requires that all analyses be recorded in mg/l. The Division also recommends the use of laboratories that are certified by the State Department of Health Services.

NOTICE TO OIL AND GAS OPERATORS
Page 2
November 17, 1986

Enclosed for your information and use is a copy of the chain-of-custody form and a copy of a label that will be used by the Division when collecting samples. Also, laboratories that will be analyzing your samples should be contacted for information and assistance on all aspects of the fluid collection and record-keeping procedures.

Further instructions on QA compliance requirements will be incorporated into all future injection project approval letters and will be provided at annual project-review meetings. If you have any questions on the QA Program requirements, please do not hesitate to contact the appropriate Division district office.


M. G. Mefford
State Oil and Gas Supervisor

Enclosures



DEPARTMENT OF CONSERVATION

Managing California's Working Lands

Division of Oil, Gas, & Geothermal Resources

195 S. BROADWAY • SUITE 101 • ORCUTT, CALIFORNIA 93455

PHONE 805 / 937-7246 • FAX 805 / 937-0673 • WEB SITE conservation.ca.gov

June 9, 2012

Brad Pierce, Agent
Pacific Coast Energy Co. LP
515 S. Flower St., Suite 4800, 48th Floor
Los Angeles, CA 90071

Cyclic Steaming Project
Orcutt Field
Main Area
Diatomite Pool

Dear Mr. Pierce:

The expansion of the project designated above is approved provided that all field operations pertaining to this project must conform to Division statutes and regulations referenced in the California Public Resources Code, Division 3, Chapters 1- 3 and 5 and the California Code of Regulations, Title 14, Division 2, Chapters 2 and 4, including any subsequent additions or amendments to those statutes and regulations. In addition, the Division's approval is strictly limited to injection operations conducted in accordance with the conditions specified by the Division. The conditions of approval of this injection project specified below may be subsequently modified by the Division in response to surface and well conditions.

Conditions of Approved Injection:

Prevention Conditions

1. Oil, steam, and/or water are prevented from flowing to the surface as a result of cyclic steaming operations, either through new or existing seeps, fissures, or other conduits associated with improperly cased and/or cemented wells.
2. A continuous tilt meter array, or other approved ground monitoring system shall be employed that will give adequate warning to prevent surface expressions.
3. Pacific Coast Energy Co. LP (PCEC) shall employ a continuous real-time well monitoring system with automatic alerts for abnormal conditions to give adequate warnings to prevent surface expressions. The Division may request, upon notice to PCEC, periodic updates on the performance of the monitoring system in relation to the prevention of surface expressions in the project area.
4. Pacific Coast Energy Co. LP (PCEC) can initiate injection into any well for cyclic steaming **only** upon completion of the automatic alert system of any upset or abnormal operation condition for that particular well. The Division may observe, upon notice to Pacific, that this automatic alert system is installed and operating properly.
5. Pacific Coast Energy Co., LP shall have staff on site to monitor operations 24-hours a day when cyclic steam operations are being conducted.
6. Injection-zone pressure, as determined by pressure monitoring during the soak portion of the cycle, does not exceed hydrostatic pressure in the general area affected by the project.
7. A report shall be submitted to the Division every quarter listing the injection anomalies, if any, that caused modifications to the injection activity. This report shall include ground monitoring data, casing integrity data, and any other data indicating the anomalies, and shall indicate what steps were taken to prevent surface expressions.

8. The Division shall be notified of any anticipated changes in the project that will alter any conditions as originally approved, such as: expansion of the project area; a change of injection interval; a change in injection-fluid constituents; a significant increase in volume; or, an increase of injection pressure. No such changes shall be carried out without prior Division approval. Some changes, such as an expansion of the project, may result in a formal project revision.
9. The casing of any well used for cyclic steam injection must be pressure-tested prior to commencing injection and once every 5 years thereafter or as requested by the Division. The Division shall be notified of the scheduled tests, as a Division representative may witness the test.
10. A mechanical integrity test (MIT) must be conducted within 90 days of commencing cyclic steam injection and the results filed within thirty days of completion of the MIT. A MIT shall be performed on all cyclic steam wells at least once every 5 years or as requested by the Division. The Division shall be notified of the scheduled tests, as a Division representative may witness the test.
11. The maximum allowable injection-pressure gradient is limited to a pressure that prevents the steam from migrating out of the intended zone.
12. All injection piping, valves and facilities shall meet or exceed design standards for the maximum anticipated injection pressure and shall be maintained in a safe and leak-free condition.
13. Precautions are taken to prevent corrosion from occurring in meter runs, wellheads, wellhead valves, casing, tubing, and packers. This Division shall be furnished with a report detailing the measures to be taken to prevent corrosion.
14. To prevent the steam from migrating out of the intended zone of injection, the operator shall continuously monitor steam injection rates and pressures. If, over a 24 hour period, injection pressures show a variance of more than 15% or the injection rate shows a variance of more than 30%, the operator shall notify the Division and conduct a diagnosis within 12 hours, including but not limited to:
 - (1) Confirmation of data.
 - (2) Inspection of wells and facilities.
 - (3) Review of overall system operations.
 - (4) Evaluation of tilt meter and/or ground monitoring data.

Any abnormalities in the injection program shall be documented and made available to Division personnel upon request. If the diagnosis indicates that there is a threat of steam leaving the intended zone of injection, then the operator shall immediately terminate steam injection for wells with a bottom-hole location within 150 feet of the variance. The operator shall obtain written approval from the Division prior to resuming injection.

15. Daily visual inspection of wells, facilities, flow lines, and roads shall be made by the operator.

Operating Conditions

16. Any measure to address seeps or surface expressions shall be designed, and the construction supervised, by a registered civil engineer. This includes, but is not limited to cisterns, culverts, French drains or collection wells or boxes. Upon completion, all measures, including and not limited to cisterns, culverts, French drains and collection wells or boxes, shall be clearly marked with warning placards and clearly identified at the surface.
17. All measures to address seeps or surface expressions shall be mapped and the locations and type of measure utilized must be submitted to the Division upon completion.
18. The Division shall be notified to observe and document the installation of cisterns, culverts, French drains, collection wells or boxes, and other measures during the construction phase and upon completion.
19. Wells shut-in associated to surface expressions shall be prominently flagged at the wellhead.

Response Conditions

20. Any water, steam, or oil flowing from a seep or surface expression shall be immediately controlled and contained. All discharged material shall be removed and disposed of in a manner approved by all state and local agencies.
21. All seeps or surface expressions shall be cordoned off and clearly marked to prevent inadvertent access.
22. Air sampling of any emissions, associated to a recent surface expression, shall be done in accordance to the local air board requirements to ensure a health hazard condition does not exist.
23. All surface expressions and seeps within 300 feet of the project must be reported immediately to the Division. This includes reactivation of historic seeps, or increased flow from existing seeps. Steam injection shall be suspended for every well where the bottom-hole location is located within a 150 foot radius from the surface expression until such time that PCEC can demonstrate to the District office that such wells do not have an adverse impact on the surface expression. If the surface expression continues to flow after 5 days, all wells within a 300 foot radius shall cease steaming until the surface expression ceases to active. Wells may be returned to cyclic steaming operations at such time that PCEC demonstrates to the District office that such wells do not have an adverse impact on the surface expression. If the surface expression continues to be active, the damage will be evaluated at the Supervisor's discretion, and will be addressed according to Section 3106 of the Public Resources Code and existing laws and regulations.
24. Prior to re-initiating cyclic steaming within a 150 foot radius of a surface expression, PCEC shall make a presentation to the District office detailing the results of the investigation into the cause of the surface expression, including all data pertinent to the determination of the cause and identification of the relevant well(s). The presentation shall include all the steps PCEC will implement to prevent occurrence of a further surface expression. PCEC may re-initiate cyclic steaming operations in the area of the surface expression upon written approval from the District office
25. Any well to which cyclic steaming has been suspended to prevent or stop surface expressions must be reported to the District office within 24 hours of taking the well out of cyclic steaming. In addition, any well within the project area of PCEC that develops mechanical integrity issues that would potentially provide a conduit outside the intended zone, shall be reported to the District office immediately. Injection within 150 feet of the well with mechanical integrity issues shall be suspended until the well is either repaired or plugged and abandoned, or until PCEC has demonstrated to the District office that the surrounding well(s) will not adversely impact the compromised well. Cyclic steaming shall not recommence in the area until written approval is granted by the Division.

General Conditions

26. A Notice shall be submitted to the Division whenever wells are going to be added, or when wells are to be reworked or plugged and abandoned. The mechanical conditions of immediately offsetting wells to the proposed cyclic steam well shall be evaluated and any mechanical issues addressed prior to commencing steam injection. This information must be submitted with the notice.
27. A monthly injection report is filed with the Division on Form OG110B, or by electronic or magnetic media approved by the Division, on or before the last day of each month, for the preceding month, showing the amount of fluid injected, the surface pressure required, and the source of injection water for each injection well.
28. All production, from methods not associated with a well, shall be reported to the Division on a monthly basis.
29. A chemical analysis of the fluid to be injected is made and filed with this Division initially and whenever the source of cyclic steam injection fluid is changed, or as requested by the office. **ALL FLUIDS MUST CONFORM TO THE DEFINITION OF A CLASS II FLUID AS DEFINED BY THE EPA.**

Diatomite Cyclic Steam Project

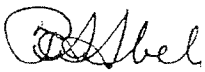
Pacific Coast Energy Co. LP

June 9, 2012

30. All fluid sampling and analysis required by the Division must be done in accordance with the provisions of the Division's Quality Assurance Program. Please refer to the Division's "Notice to Oil & Gas Operators" dated November 17, 1986 (copy attached).
31. An accurate operating pressure gauge or pressure-recording device is available at all times during cyclic steaming operations, and all cyclic steam wells are equipped for installation and operation of such a gauge or device. Any gauge or device permanently affixed to the well, or any part of the injection system, must be calibrated at least every six months. Portable gauges must be calibrated at least every two months. Evidence of such calibration must be made available to the Division upon request.
32. Data are maintained to establish that no damage to life, health, property, or natural resources is occurring by reason of the project. Injection shall be stopped if there is evidence of such damage, or loss of hydrocarbons, or upon written notice from the Division. Project data must be available for periodic inspection by Division representatives. Additional data shall be supplied to the Division upon request.
33. Any remedial well work needed as a result of this cyclic steam injection project to repair idle, abandoned, or deeper-zone wells to protect oil, gas, or freshwater zones, will be the responsibility of the project operator.
34. The Division is notified immediately if there is a new or re-activated seep or surface expression, if the project is terminated, or if problems occur with operation of the project.
35. All new or reactivated seeps or surface expressions that discharge oil in a reportable quantity shall be reported as an oil spill to the California Emergency Management Agency at (800) 852-7550.
36. An annual project review meeting is held with Division personnel. Information which may be discussed and reviewed include: (1) project & individual well cyclic steam graphs; (2) graphs/statistics outlining the incremental oil production from enhanced oil recovery; (3) Project expansion plans including facilities, new wells & reworks; (4) Recent fluid analysis; (5) Any problems, complaints, or other aspects of the project.

The issuance of this revised injection approval letter does not relieve you of your obligation to obtain necessary permits and approvals from local, state, and federal agencies.

Sincerely,



Patricia A. Abel
District Deputy

RB:pd

Attachment

cc. Regional Water Quality Control Board
Project File
Tom McCollum
Chrono

Lenzi, Chelsea

From: Henson, Chris
Sent: Monday, October 31, 2016 12:41 PM
To: Allen, Michael (COB); Lenzi, Chelsea; sbcob
Subject: FW: PCEC - Document Request Follow Up
Attachments: 10.25.11 newlove expression letter.pdf; 6.21.11 nov newlove surface expression.pdf; 7.15.11 project review meeting notes.pdf

-----Original Message-----

From: Briggs, Errin
Sent: Wednesday, October 26, 2016 10:44 AM
To: Farr, Doreen
Cc: Cantle, Peter; Black, Dianne; Russell, Glenn; Henson, Chris; Farnum, Elizabeth
Subject: RE: PCEC - Document Request Follow Up

No. 5 and final.

Errin Briggs | Energy Specialist | County of Santa Barbara | 805-568-2047

-----Original Message-----

From: Farr, Doreen
Sent: Tuesday, October 18, 2016 6:10 PM
To: Briggs, Errin
Cc: Farr, Doreen; Cantle, Peter; Black, Dianne; Russell, Glenn; Henson, Chris; Farnum, Elizabeth
Subject: Re: PCEC - Document Request Follow Up

This is great. Thanks so much, Errin. I really appreciate it.
Doreen

Doreen Farr
Third District County Supervisor

Sent from my iPhone

> On Oct 18, 2016, at 8:50 AM, "Briggs, Errin" <ebriggs@co.santa-barbara.ca.us> wrote:

>

> Good morning Supervisor Farr,

>

> I have attached the County documents that you requested including the 2005 Mitigated Negative Declaration, staff report and action letter reflecting the Planning Commission's approval of their existing steaming project. I also included the DOGGR comment letter on the current EIR.

>

> I have also attached the DOGGR letters to PCEC that provide context on steaming operations and some recent communications regarding geology. The alleged geologic issue has since been proven false and put to rest. The letters here are not comprehensive of all communications between DOGGR and PCEC but this is everything we have in our files at this time.

>
> We are actively following up with DOGGR staff to obtain “copies of all of their correspondence with PCEC since the original project was applied for.” We will keep you posted on this effort and provide anything we get as soon as practicable.

>
> Let us know if you have any questions in the mean time.

>
>
> Errin Briggs | Energy Specialist | County of Santa Barbara |
> 805-568-2047

>
>
>
>
> From: Farr, Doreen
> Sent: Monday, October 17, 2016 3:03 PM
> To: Cantle, Peter; Briggs, Errin
> Cc: Black, Dianne; Russell, Glenn; Henson, Chris; Farnum, Elizabeth
> Subject: PCEC

>
> Hi Peter and Errin

>
> As part of my research for the next PCEC hearing, I would like you to find and send to me the staff report and environmental document for the existing PCEC project. I would also like you to send to me all correspondence you have from DOGGR regarding the existing project and the current application, whether that correspondence was between you and DOGGR or the applicant and DOGGR. I know you are really busy but if there was any way you could do this research for me I would really appreciate it. If what I am asking for is already buried in documents I already have, please let me know and I will uncover them for myself.

>
> Also, I would like to ask DOGGR, (Pat Abel?), for copies of all of their correspondence with PCEC since the original project was applied for. Do you think they would honor that request if it came from me or would it be better coming from you? Or do you think they would require me to do a PRA request in order to get it?

>
> Any help you could give would be greatly appreciated.
> Thanks so much.

>
> Doreen

>
> P.S. I know you sent me one letter from DOGGR (2013) referencing an earlier letter from DOGGR (2011) but it would be good to have all of them that we might have in the full record of this project. Thanks again.

> <Revised Final MND 11-8-06 (2).pdf>
> <BreitBurn Staff Report-revised.doc>
> <Action Letter 11-14-06.pdf>
> <DOGGR Letter 3.27.13.pdf>
> <DOGGR Letter 6.9.12.pdf>
> <DOGGR Letter 9.3.09.pdf>
> <DOGGR Geology Letter 4.6.15.pdf>
> <DOGGR Geology Work Plan Approval 7.24.15.pdf> <DOGGR Letter

> 3.14.11.pdf> <DOGGR Comments on EIR 3.25.15.pdf>



DEPARTMENT OF CONSERVATION

Managing California's Working Lands

Division of Oil, Gas, & Geothermal Resources

5075 SO. BRADLEY ROAD • SUITE 221 • SANTA MARIA, CALIFORNIA 93455
PHONE 805 / 937-7246 • FAX 805 / 937-0673 • WEB SITE conservation.ca.gov

October 25, 2011

Brad Pierce, Agent
BreitBurn Energy Company LP
515 S. Flower St., Suite 4800, 48th Floor
Los Angeles, CA 90071

Dear Mr. Pierce:

DIATOMITE CYCLIC STEAM PROJECT, MAIN AREA, ORCUTT FIELD

On October 15, 2011, there was a significant surface expression on the Newlove lease located adjacent to well "Newlove" 212, Section 25, T9N, R34W S.B B&M, which is within the area of the above permitted project. This surface expression included an eruption of steam, oil and associated debris. A Report of Occurrence for this surface expression is enclosed.

The enclosed project approval letter from the Division of Oil, Gas and Geothermal Resources (Division) dated March 14, 2011 covering the "Newlove" lease provides approval to cyclic steam into the diatomite subject to permit conditions including:

Response Conditions:

33. Prior to re-initiating cyclic steaming in the area of the surface expression, a report will be provided the Division detailing what activity caused the surface expression, including ground monitoring daily reports for the five previous days leading up to the surface expression, and what steps was taken to prevent further surface expressions. Cyclic steaming in the area shall not recommence without notification of the Division.

Please provide the report to the Division as required in the above noted project approval letter condition. The report should include tiltmeter and ground monitoring reports and data and the recorded pressure rates and changes for the five days prior to the surface expression, and those noted during and subsequent to the surface expression. Also, include in the report observations during the surface expression and details to geologic conditions such as uplift and the size of any depression/crater formed at the surface expression or the surrounding area. Provide an estimate of the volume of steam, oil, and associated material that were released and the size of the affected area. Include details in the report that provides data and an explanation about the cause and the events leading up to, during and following the surface expression and any risk or impact to the public health and safety to workers in the area. The report should include which wells within 300' of the surface expression were being steamed at the time, and what rates and pressures were recorded for these wells during the five days prior to the surface expression. Please pay particular attention to include in the report information pertaining to the permit condition requirement about steps BreitBurn Energy LLC

(BreitBurn) will take to prevent further surface expressions. Lastly, the report should include specific details explaining how the site has been remediated to prevent sinkholes and ensure that stability to the site has been restored.

Please note that the project approval letter requires that BreitBurn shall not re-initiate steaming in the area of the surface expression until receipt of the report and written approval is provided by the Division. Steam injection must cease for all wells within a 150' radius of the surface expression. Please include in the report a list of wells that were shut-in following the surface expression and their distance from the site. Through email communication by BreitBurn and a follow-up from the Division, it is understood that cyclic steaming operations in "Newlove 212 have been terminated.

The report is requested to be provided to the Division by November 14, 2011.

In addition several project approval conditions did not appear to have been met upon inspection, and thus constitute a violation of the permit conditions. Those conditions were as follows:

Preventing Conditions

22. The maximum allowable injection-pressure gradient is limited to a pressure that prevents the steam from migrating out of the intended zone.

Operating Conditions

29. Wells shut-in associated to surface expressions shall be prominently flagged at the wellhead.

Response Conditions

31. All surface expressions shall be cordoned off and clearly marked to prevent inadvertent access.

BreitBurn and appropriate contract staff should be made aware of project approval conditions. Non compliance of project conditions could result in future issuance of civil penalties and enforcement action.

Sincerely,



Patricia A. Abel
District Deputy

cc: Project Folder
Chrono



DEPARTMENT OF CONSERVATION

Managing California's Working Lands

Division of Oil, Gas, & Geothermal Resources

5075 SO. BRADLEY ROAD • SUITE 221 • SANTA MARIA, CALIFORNIA 93455

PHONE 805 / 937-7246 • FAX 805 / 937-0673 • WEB SITE conservation.ca.gov

Notice of Violation

V311-08

June 21, 2011

Brad Pierce, Agent
BreitBurn Energy Company LP
515 S. Flower St., Suite 4800, 48th Floor
Los Angeles, CA 90071

RE: Failure to Conduct Injection Operations in Accordance with Approved Conditions
Of The Diatomite Cyclic Steam Project in Orcutt Field, Main Area
"Newlove" 232 (API 083-22622)

Dear Mr. Pierce:

On March 14, 2011, the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (Division) gave BreitBurn Energy Company LP (BreitBurn) approval to conduct a diatomite cyclic steam project in Orcutt Field under specified conditions. (Attachment 1) The conditions for approval of injection include the following:

Condition #11: The Division is notified immediately if there is a new or re-activated surface expression, if the project is terminated, or if problems occur with operation of the project.

Condition #32: All surface expressions within 300 feet of the project must be reported immediately to the Division.

Condition #34: Any cyclic steam well that has been shut-in to prevent or stop surface expressions must be reported to the Division immediately.

The Division has determined that BreitBurn has failed to conduct its injection operations in Orcutt Field in accordance with the approved conditions, a violation of Public Resources Code (PRC) section 3106, and of California Code of Regulations, Title 14, (CCR) sections 1724.6 and 1724.10.

On May 24, 2011, BreitBurn first notified the Division that at approximately 9:30am on May 21, 2011, an "asphaltic eruption" occurred approximately 150' away from well "Newlove" 232, which was being cyclic steamed. The "asphaltic eruption" was

BreitBurn Energy Company LP
Notice of Violation V311-08
June 21, 2011
Page 2

described as being approximately ten feet wide, twenty feet long, and approximately four feet high. Photographs supplied by BreitBurn indicate that steam did surface with the event. BreitBurn reported that steam injection was terminated in "Newlove" 232, and the eruption stopped the following morning.

Each of the conditions cited above require BreitBurn to immediately report to the Division events such as the one that occurred on May 21, 2011. BreitBurn's failure to report the event to the Division until May 24, 2011 is a violation of statute and regulation:

Pursuant to PRC section 3106, the Division supervises the drilling, operation, maintenance, and abandonment of wells so as to prevent, as far as possible, damage to life, property, and natural resources. The Division approved BreitBurn's injection project in Orcutt Field under authority of PRC section 3106, and BreitBurn's disregard of the conditions of approval is in violation of that statute.

Pursuant to CCR section 1724.6, injection operations may only be conducted with prior Division approval. Pursuant to CCR section 1724.10, subdivision (a), the Division shall be notified of any anticipated changes in a project resulting in alteration of conditions originally approved, and such changes shall not be carried out without prior Division approval. BreitBurn's failure to conduct its injection operations in accordance with approved conditions is a violation of CCR sections 1724.6 and 1724.10, subdivision (a).

The Division requests that BreitBurn Energy Company LP reviews the conditions of its approval to conduct injection operations in Orcutt Field and take steps to ensure that future operations conform to those conditions. If there are future violations of this nature, the Division will take enforcement action, including but not limited to imposition of civil penalties.

If you have any questions, please call Pat Abel or Jim Carnahan at 805-937-7246.

Sincerely,



Pat Abel
District Deputy

Attachment

cc: Project File (without attachment)
Violation File/EPA Binder
Well File/Chrono File

CERTIFIED MAIL

July 15, 2011

BreitBurn Energy Company LP

Orcutt Field

Project Review Meeting

Attendees: BreitBurn Energy: R. Spaulding, T. McCollum, D. Miller, J. Fox, & P. Glenn

DOGGR: J. Carnahan & R. Brunetti

Monterey, 3rd Zone, Pt. Sal Waterflood Project

Monterey Water Disposal Project

SX Zone Waterflood Project

Diatomite Cyclic Steam Project

Project operation data was reviewed in a power point presentation that included a review of well status for each project by producing, idle, and injection type. Also, a review of production and injection for each project type was presented that included a table and bar graph representation for each project. The production table included a breakdown of gross, net, water, gas, production for the year, and the current water cut for each project. The injection data was also presented in tabular and bar graph format. Each data set included the gross annual fluid injected, average injection pressure, average MASP, injection pressure range, and average MASP range.

A review of the required surveys, standard annulus pressure tests, and pressure fall-off surveys indicated all the projects were current, with the exception of the Diatomite Cyclic Steam project. Tracer surveys were scheduled to begin on July 25, 2011, on the wells currently cyclic steaming; this was a requirement of the revised PAL issued in February 2011. It was noted that all monitoring and observation data was current and that this data must continue to be submitted in a timely manner.

DOGGR policy updates were discussed and included the current requirement for SAPTs. All wells must be tested to the maximum anticipated surface injection pressure. The maximum allowable surface injection pressure must not exceed the formation fracture gradient. The formation fracture gradient for each zone must be established by a step-rate test. The fracture gradient may be applied to all the wells in the project if 2-3 step-rate tests demonstrate about the same fracture gradient. The operator noted that

some of the older wells' casing may not withstand the higher test pressures and asked if pressure control shut-off valves set at or below the SAPT test pressure could be installed on the casing that would close the valve on the injection line if pressure was detected on the casing.

DOGGR project approval letters were discussed and it was pointed out that these letters outline specific requirements for operation of the project. Failure to follow these requirements could result in rescission of the approval to conduct the project.

Notification is not volume specific for fluid releases related to the project operation. Also, any loss of mechanical integrity, either subsurface or surface must be reported to the Division as specified in the PAL. It was pointed out that all personnel responsible for operation of the projects from field level to management should be familiar with all the conditions and requirements contained in each PAL. In addition, all new engineers and field personnel should be required to review the PALs of the projects in which they are going to be assigned.

Future plans included continued electrification of the Monterey zone wells and removal of internal combustion engines that ran on natural gas produced in the field; drilling 52 Diatomite wells in 8-10 well packages, upgrade facilities to increase oil treating capacity and increase steam generating capacity; upgrade production data gathering systems with alarm alerts; revise and evaluate Diatomite well completions to address cementing and completion problems in Diatomite wells; drill an experimental 150' Careaga zone well in Area 1 to capture oil seepage from Diatomite zone cyclic steam; install Tremble ground monitoring stations to meet Diatomite PAL requirements; have 24 hour personnel monitoring Diatomite cyclic steam injection pressures and rates; repair and return the flare to operation.

A review of two of the recent surface expression events and monitoring data prior to the events were conducted. It was apparent that injection pressures and possible injection rate changes could be used as indicators of impending surface expressions. This prompted the decision to have personnel monitoring the steam data collection system 24 hours per day.

Note: The project review PowerPoint presentation of the project review is located in: <F:\Engineering\Fields\Orcutt\BreitBurn\UIC\2011 BBE - DOGGR Annual Review 7-15-11.pptx>

Jim Carnahan

Lenzi, Chelsea

From: Weber, Erin
Sent: Monday, October 31, 2016 12:42 PM
To: Allen, Michael (COB); Lenzi, Chelsea; sbcob
Cc: Farr, Doreen; Henson, Chris
Subject: FW: Substantial Conformity Determination
Attachments: Substantial Conformity Determination Memo 03-05-09.doc; Substantial Conformity Memo.doc; SCD Letter & Memo dated July 27, 2009.pdf; Substantial Conformity Memo.doc

From: Briggs, Errin
Sent: Wednesday, October 26, 2016 8:52 AM
To: Weber, Erin
Cc: Cattle, Peter; Black, Dianne
Subject: RE: Substantial Conformity Determination

Hi Erin,

To date, PCEC has received four Substantial Conformity Determinations to their existing Diatomite project (05PPP-00000-00001). I have attached the Director memos for each determination for your review. I don't have the physical files for these projects and therefore don't have their application requests.

Let me know if you have any questions,

Errin Briggs | Energy Specialist | County of Santa Barbara | 805-568-2047

From: Weber, Erin
Sent: Tuesday, October 25, 2016 5:39 PM
To: Briggs, Errin
Subject: Substantial Conformity Determination

We learned from a meeting with the EDC that the county issued a Substantial Conformity Determination to PCEC to shut in pod 3 and move wells to different pod. Doreen is wondering if you can send that over, including the applicants request and the director's letter.

Erin Weber
District Representative
Third District Supervisor Doreen Farr
105 East Anapamu Street
Santa Barbara, CA 93101
805-568-2192

COUNTY OF SANTA BARBARA
PLANNING AND DEVELOPMENT

MEMORANDUM

TO: File

FROM: Brian A. Tetley, Planner **BAT**

DATE: March 5, 2009

RE: Substantial Conformity Determination for
BreitBurn Diatomite Expanded Well Pod 1, Orcutt Hill Field
09SCD-00000-00004/05PPP-00000-00001
1555 Orcutt Hill Road, APNs 101-020-041,-074

CC: Analise Merlo, Permit Compliance



On 01/29/09, P&D received an application for a Substantial Conformity Determination to: 1) relocate wellpod 2, 2) construct a second tank battery near the existing Newlove tank battery, 3) construct a new wastewater treatment plant, 4) install new pipelines, and 5) extend wellpod 1. On 02/11/09, P&D received a letter from the applicant modifying their proposed project description. As a result, the applicant's proposal is just to extend wellpod 1.

The project proposal has been reviewed in light of previous permit information, and the Substantial Conformity Determination Guidelines (Land Use & Development Code, Appendix H). We have determined the following:

Since no additional structural development is proposed, the structural development area threshold does not apply. Also the expanded wellpod area is a previously disturbed equipment storage area within an active oilfield. Therefore, the proposed expanded wellpod would be in character with existing on-site development and the surrounding neighborhood. The visual character would remain essentially the same as viewed from local roadways and adjacent properties. In addition, since the expanded wellpod area has been previously disturbed, there are no related biological constraints or impacts.

The proposed changes are therefore determined to be in Substantial Conformity with the originally approved project. The approved project description, with appropriate changes denoted in underline, is shown below:

1. The project description is as follows:

Phase 2 of this Oil Drilling and Production Plan, 05PPP-00000-00001 is based upon and limited to compliance with the project description, the Planning Commission's Hearing Exhibit marked "Attachment G", dated November 8, 2006, and conditions of approval set forth below. Any deviations from the project description, exhibits, or conditions of approval must be reviewed and approved by the Planning Commission for conformity with this approval. Deviations may require modification to the permit and/or further environmental review. Deviations without the above described approval would constitute a violation of permit approval.

This project will result in the construction and operation of up to 96 oil wells that use steam injection to enhance oil recovery. Injecting steam into the shallow (300 to 800 feet below the ground surface) oil reservoir beneath the project site reduces the viscosity of the oil making it easier to recover.

The proposed oil wells and other project-related facilities are located within the Orcutt Hill Oil Field, which covers over 10,000 acres and contains over 300 oil wells. The majority of proposed BreitBurn project is located on Assessor Parcel Number 101-020-74 approximately 1.5 miles south of East Rice Ranch Road and the community of Orcutt. The project site is approximately 2 miles west of U.S. Highway 101, and 2.4 miles east of State Route 135 (Attachment E). Regional access to the project site is provided by East Rice Ranch Road, U.S. Highway 101 and State Route 135. Local access is provided by existing oil field roads. The oilfield is fenced, gated and is not open to the public.

The Orcutt Hill Oilfield Diatomite project includes five major components to be developed in two phases:

Phase 1 of the project consists of the following:

- Up to 32 new oil wells on two drill pads
- One steam generator
- Grading and construction of the tank battery
- Installation of hydrogen sulfide removal equipment
- Steam and oil pipelines (with no truck loading racks)

Phase 2 of the project consists of the following:

- Up to 64 new and existing oil wells (total of 96 for project)
- 2 steam generators
- Phase 2 of the tank battery construction
- Installation of hydrogen sulfide control equipment
- Steam and oil pipelines

The locations of the proposed facilities are depicted on Attachments F and G. All proposed project equipment will be operated 24 hours a day, 365 days a year. All oil produced by the proposed project will be transported from the project site using an existing on-site pipeline. No truck transportation of oil produced by Phases 1 or 2 of the project will occur.

Oil Wells. The project proposes to operate up to 96 oil wells, including 95 new wells and one (1) existing well. The wells will be located in six “pods” with up to 16 wells in each pod. The proposed well pods will be between 0.20 and 0.41 of an acre in size, and each will be located in a relatively level area that has been previously graded and used for oil production operations. Access to each well pod will be provided by an existing paved road. The location of each proposed well pod is shown on Attachments F and G, and as revised by exhibits associated with 07SCD-00000-00049 and 09SCD-00000-00004.

The first well pod to be developed will be Pod 1, located south of and adjacent to the existing BreitBurn Orcutt Hill field office. Pod 1 will consist of fifteen new wells drilled to a depth of 800 feet, and one existing well (Newlove No. 76). The installation order for well Pods 2-6 will be dependent on the success of previous pods. Therefore, successive pods may not be developed in the same order as their numerical designation.

Well steaming will consist of injecting steam into one of the wells in a pod for three to five days. The steam will then be allowed to “soak” in the well for one to two days before the well is returned to production. While the first well is soaking, steam injection will move to the next well in the pod. This process would continue until all 16 wells have been steamed, after which the cycle will be repeated.

Steam Generation. The proposed project includes the installation and operation of three (3) steam generators at a location adjacent to the BreitBurn Orcutt Hill field office (Attachments F and G). The proposed steam generator site is located on a previously cleared area that is

approximately one acre in size. Access to the steam generator site will be provided by an existing access road.

Each steam generator will produce steam for two well pods, and will be rated at approximately 62.5 million (MM) Btu/hr. As required by the Santa Barbara Air Pollution Control District, each steam generator will be equipped with Best Available Control Technology (BACT) to reduce air pollutant emissions. A site plan depicting the proposed steam generator site is provided as Attachments F and G.

Water Use. All water used for steam generation will be obtained from the brine water presently produced by oil production operations on the BreitBurn project site. On average, as much as 75,000 barrels of water are produced from the Monterey and Point Sal formations per day. After the produced water is separated from the oil, it is presently pumped back into the Monterey and Point Sal formations by injection wells located throughout the oilfield.

On average, up to 13,500 barrels of water (4,500 barrels for each steam generator) will be used each day for steam production. This water use rate is equivalent to approximately 635 acre feet per year (AFY). Water for steam generation will be transported to the generator site using existing pipelines. Prior to conversion to steam, the water will be treated using a membrane filtration system to remove impurities (salt, minerals, etc). The filtration units will be located in a proposed building east of adjacent to the steam generators. The new building will be approximately 6,000 square feet (60' by 100') and will have a maximum height of approximately 26 feet. Other equipment at the steam generation site will include a gas floatation system, nutshell filters, water storage tanks and other accessory equipment.

Natural Gas Use. The three proposed steam generators will require the use of 180,000 cubic feet of natural gas per hour (180 mcf/hour). The primary source of natural gas for the project will be an existing utility connection.

The project applicant currently uses most of the natural gas that they produce from the Orcutt Hill Oilfield to operate onsite equipment. Therefore, very little of the natural gas produced on the project site will be available for use by the proposed steam generation project. Some natural gas may be available for purchase from an adjacent oilfield for use on the project site. All natural gas used on the project site will comply with APCD fuel standards.

Tank Battery. The proposed project includes the development of a new tank battery that will be used to store produced oil and water, and to assist in the removal of water from produced oil. The tank battery will be located in a previously cleared one acre area in the northern portion of the project site that is adjacent to the existing field office and proposed steam generator site (Attachments F and G). Access to the tank battery will be provided by existing paved roadways.

The tank battery will be constructed in two phases. The first phase facilities will receive fluids produced from Well Pods 1, 2 and 5; and second phase portion of the tank battery will receive fluids from Well Pods 3, 4 and 6. The tanks that will be provided in the tank battery are listed below.

- Two 5,840 barrel wash tanks (one in each phase). These tanks will be 35 feet in diameter and 32 feet high.
- Two 2,100 barrel reject oil tank (one in each phase). These tanks will be 25 feet in diameter and 24 feet high.
- Two 2,800 barrel produce water/wash tanks (one in each phase). These tanks will be 25 feet in diameter and 32 feet high.
- Two 2,100 barrel dry oil shipping tanks (one in each phase). These tanks will be 25 feet in diameter and 24 feet high.

In addition, both tank battery phases will include accessory and support facilities, including: vapor recovery equipment, heat exchangers, electrical equipment, pumps, lease automatic custody transfer (LACT), and other similar equipment. A site plan depicting the proposed tank battery site is provided as Attachment H.

Grading. Proposed oil well pod sites have been previously graded, but to accommodate the proposed project-related equipment additional site leveling will be required. Existing ground surface contours for each proposed well pod are depicted on Attachments I-N, and the size and grading requirements for each proposed well pod site are summarized on Table 1-1. All project-related grading will be balanced on the project site.

The proposed steam generator and tank battery sites slope gently to the west. To accommodate the proposed steam generators, tanks and other structures, the sites will be recontoured to provide level pad areas. To minimize the creation of cut slopes, retaining walls ranging between five and nine feet in height will be used to create the level pad areas.

Grading at the steam generator and tank battery sites will include over-excavating native soils. The excavated soil will be replaced and recompacted to provide a suitable foundation for the proposed structures. Cross-sections depicting existing and proposed ground contours at the steam generator and tank battery sites, along with the proposed structures and equipment, are provided on Attachment O. Proposed grading volumes for the steam generator and tank battery sites are summarized on Table 1-1.

Table 1-1
BreitBurn Energy Company Diatomite Project
Site Development and Grading Summary

Proposed Facility (existing well number)	Site Dimension		Estimated Grading Required (cubic yards of cut and fill)
	Feet	Acres	
Well Pod 1 (Newlove 76)	74 x 225	0.38	1,200
Well Pod 2 (Newlove 67)	75 x 226	0.39	1,600
Well Pod 3 (Newlove 59)	80 x 226	0.41	1,700
Well Pod 4 (Newlove 103)	67 x 200	0.31	100
Well Pod 5 (Newlove 78)	75 x 117	0.20	1,000
Well Pod 6 (Newlove 53)	75 x 200	0.38	2,100
Steam Generator Site	150 x 270	0.93	26,000 (1)
Tank Battery Site	105 x 270	0.65	15,000 (1)
TOTAL	---	3.65	48,700

(1) Grading volumes include the over excavation of these sites. The over excavated soil will be replaced and recompacted on the project sites.

Hydrogen Sulfide Removal System. The proposed H₂S removal system will treat natural gas produced from the Diatomite formation by the proposed project. The treatment facility will be located at the tank battery site. A single H₂S removal system will serve the phase 1 tank battery, and an additional treatment system may be added when the tanks associated with the phase 2 tank battery are added. The proposed H₂S treatment vessels will be approximately 12 feet in diameter and approximately 30 feet in height.

H₂S removal will occur by passing the produced gas through a granular material (SulfaTreat) that has a high affinity for sulfur. When the H₂S concentration in the treated gas approaches 700 ppmv, the inlet gas stream will be bypassed to the second vessel while the treatment chemical in the first vessel is replaced. Spent treatment chemical would be non-hazardous and disposed off-site. All of the treated gas will remain within the Orcutt Hill Oilfield.

Pipelines. The proposed project will use a network of existing and new pipelines to transport oil, water and steam. All new pipelines will be installed above ground and most will be installed along existing roadways. One proposed pipeline segment will not be located along a roadway and will be adjacent to existing above ground pipelines.

New steam pipelines will extend from the proposed steam generator site to the well pod areas. Two steam lines will extend westward from the steam generator site to serve Pods 2, 3, 4 and 6. One of these lines will serve Pods 2 and 4, and the second line will extend southward to serve Pods 3 and 6. A new single steam line will extend to the east to serve Pod 5, and Pod 1 will be served by an existing steam line. The location of proposed steam lines are depicted on Attachments F, G and P, and as revised by exhibits associated with 07SCD-00000-00049 and 09SCD-00000-00004.

New pipelines will transport produced fluids to the proposed tank battery. New pipelines will connect Pods 1, 2 and 5 to the first phase tank battery; and new pipelines will connect Pods 3, 4 and 6 to the second phase of the tank battery. The locations of proposed steam lines are depicted on Attachments F, G and P, and as revised by exhibits associated with 07SCD-00000-00049 and 09SCD-00000-00004.

After the produced oil meets pipeline specifications, it will be transferred by a new pipeline to the existing Newlove lease LACT units located adjacent to the existing Newlove tank battery. Produced water that will be used to produce steam will be transported to the steam generator site by existing pipelines.

Produced Oil Transportation

Oil produced by the proposed project will be transported from the oilfield using a Conoco-Phillips pipeline connection that exists on the project site. This pipeline will transport the produced oil to the Conoco-Phillips Orcutt Pump Station facility located adjacent to Clark Avenue, approximately 500 yards east of Highway 135. Breitburn has obtained a commitment from Conoco-Phillips to use the existing pipeline.

All oil produced by the proposed project will be transported from the project site using an existing on-site pipeline. No truck transportation of oil produced by Phases 1 or 2 of the project will occur.

Project Phasing

The proposed project will be developed in two phases. The first phase will include the installation of one steam generator, the phase 1 tank battery, two oil well pods (Pod 1 and Pod 2 or 5), and required pipelines. Installation, start-up and evaluation of the first project phase would occur over a 12-18 month period of time. The second project phase will include the installation of two steam generators, the second phase of the tank battery, the remaining four well pods and required pipelines.

Other Project Design Measures

The proposed project will implement the following measures to minimize the potential for environmental impacts.

- a. Pipelines will be located above ground and along existing roadways to facilitate regular inspections and to minimize the potential for corrosion. Pipelines will be buried at road crossings.
- b. Steam generators and accessory equipment will be located at existing well pads, tank farms, treatment or storage areas to the extent feasible to minimize grading and vegetation impacts.

- c. New equipment will be located in areas where vegetation or terrain will minimize views of the equipment by the general public.
- d. Where possible, new equipment will be painted a neutral color to blend with the background environment.
- e. Steam generators will be located in areas that minimize potential noise or vibration impacts to the public.
- f. Lighting that may be visible from the property boundaries (i.e., lighting at proposed Well Pods 2 and 5, the tank battery and the steam generator site) will be low profile and shielded to minimize potential lighting impacts. Existing lighting provided at these locations will be removed and replaced with new low profile and shielded lighting fixtures.
- g. Pumping units and well cellars are not planned for the new wells.

**PLANNING AND DEVELOPMENT
MEMORANDUM**

TO: Zoraida Abresch, Deputy Director
Development Review Division

FROM: Steve Rodriguez, AICP

DATE: May 20, 2008

RE: Recommendation for Finding of Substantial Conformity (07SCD-00000-00049) for the BreitBurn Energy Company Orcutt Hill Diatomite Project Oil Drilling and Production Plan (05PPP-00000-00001).

Orcutt Hill Diatomite Project Well Pod Location Revision

Existing Conditions

On August 24, 2006, the Santa Barbara Planning Commission approved a Mitigated Negative Declaration (06NGD-000000-00018) and an Oil Drilling and Production Plan (05PPP-00000-00001) for Phase 1 of the Orcutt Hill Diatomite project. Phase 1 of the project includes the installation of up to 32 new oil wells located in two “pods” located on two existing drill pads. The installation of steam generation and other accessory equipment and pipelines required for the operation of the new oil wells was also approved. The Planning Commission approved Phase 2 of the project on November 8, 2006. Phase 2 includes the development of up to 64 oil wells in four pods located on four existing drill pads, as well as other project-related accessory equipment. To date, two oil well pods have been developed, including Pod 1 (06LUP-00000-00857) and Pod 3 (06LUP-00001-00857). The locations of the previously approved oil well pod locations are depicted on Figure 1.

Proposed Project Change

Based on information gained from the development of oil wells at Pods 1 and 3 regarding the geologic conditions of the project site, the project applicant has requested to develop oil well Pods 2, 4, 5 and 6 at revised locations on the project site. The proposed pod locations and associated pipeline routes are depicted on Figure 2, and site plans depicting the configuration of each well pod area are provided on Figures 3 through 6. Information regarding the proposed project site locations is summarized on Table 1.

No other changes to the previously approved project are proposed, and all other design and operation characteristics described by Condition No. 1 (Project Description) approved by the Planning Commission on November 8, 2006 will continue to be implemented. Subsequent Land Use Permits for the development of individual oil well pods also remains a requirement to ensure that the development of each oil well pod has complied with applicable conditions of approval.

Substantial Conformity Determination Findings Evaluation

The Substantial Conformity Determination Guidelines provided in Appendix H of the Land Use Development Code are evaluated below. I have reviewed the proposed project change based upon the following evaluation criteria and recommend that you find this change in substantial conformity with previously approved project plans and conditions of approval.

1. *Has the project been the subject of substantial public controversy, or is there reason to believe the change is likely to create substantial public controversy?*

A Mitigated Negative Declaration was prepared for the BreitBurn Diatomite project and was circulated for public review. Hearings for the project were conducted by the Planning Commission on August 24 and November 8, 2006. Comments received regarding the project were generally in regard to the potential use of trucks to transport produced oil from the project site should pipeline transportation become temporarily unavailable due to maintenance or other reasons. Based on the comments received regarding the potential impacts from temporary truck transportation of produced oil, the project description (condition of approval No. 1) was revised to prohibit the use of trucks to transport oil produced by the Diatomite project. No comments were received regarding the location of the proposed oil well sites. Therefore, the location of the oil well pod sites was not the subject of substantial public controversy.

2. *Will the deviation result in a change to the project that would alter the scope and intent of the project the review authority acted on?*

The relocation of the oil pod sites will not increase the number of oil wells developed on the project site as approved by the Oil Drilling and Production Plan; change the operation characteristics of the project; and all oil produced by the project will be transported off of the project site using a pipeline. Therefore, the project would not result in an increase in traffic generation, short- or long-term air emissions, and the requested change will not alter the scope or intent of the project.

Table 1
BreitBurn Energy Company Orcutt Hill Diatomite Project Oil Drilling and Production Plan
07SCD-00000-00049

Project Site Well "Pod" Number	New Pod Location Relative to Approved Location	Pod Size		Grading		Proposed Oil Well Pod and Pipeline Route Conditions
		Previously Approved (acre)	Proposed (acre)	Previously Approved (cu. yds)	Proposed (cu. yds)	
2	500 feet southeast	0.39	0.22	1,600	685	Access to Pod 2 is provided by an existing oil field road. The proposed well site is predominantly barren with patches of grassland and coastal scrub shrubs. Oak trees are located adjacent to the well pad that would be used for oil well development. The proposed project revision includes the relocation of one 28-inch oak tree that would be impacted by site grading. The proposed pipeline route would extend southward to Pod 5 and would follow existing roadways. The above-ground pipeline would extend through areas containing sensitive vegetation, including La Purissima manzanita, Lompoc yerba santa, oak and Bishop pine trees.
4	2,750 feet southeast	0.31	0.24	100	820	Access to Pod 4 is provided by an existing oil field road. The proposed well site is located in an area that is mostly grassland with scattered shrubs. Three La Purissima manzanita plants are located near the well site and are to be protected. There are no oak trees adjacent the well pad site. A small swale that supports a variety of wetland plant species is located near the proposed well site and will be avoided. An above-ground pipeline would extend between Pod 4 and Pod 5. The pipeline route follows a dirt road dominated by ruderal and grassland vegetation, however, several oak trees are adjacent to the pipeline route.
5	2,250 south	0.20	0.36	1,000	895	Access to Pod 5 is provided by an existing roadway, however, the roadway will need to be widened, which will require the removal of several non-native shrubs. Roadway improvements would occur adjacent to several oak trees, however, it is not anticipated that the

						<p>trees would be adversely affected. The proposed well site is located along the existing access road and is predominantly barren. There are no oak trees located adjacent to the well pad site. An above-ground pipeline would extend along the southern side of the well pad area and would not adversely affect trees and shrubs located adjacent to the pipeline route.</p>
						<p>Access to Pod 6 would be provided by a paved oilfield road. The well pad site is covered by sparse grassland and several small shrubs. The pod would be developed in two segments to minimize disturbance to oak trees located on the project site. A proposed four-foot high cut slope on the eastern end of the western pad area would encroach beneath the dripline of a 16-inch oak tree, and may impact more than 20 percent of the tree's dripline area. Other grading at this site would not disturb more than 20 percent of the critical root zone of any tree. The pipeline route for this project site would extend northward to Pod 5 and cross an area dominated by grassland and scattered shrubs. Several oak trees are adjacent to the above-ground pipeline route.</p>
6	1,750 feet southeast	0.38	0.20	2,100	795	
Total	--	1.28	1.02	4,800	3,195	--

3. *Would the deviation alter the public's perception of the project?*

The proposed oil well pod locations are not visible from any areas generally accessible by the public, and the development that would occur at the pod sites would be similar to that approved for the previously approved pod sites. Therefore, the proposed modification would not alter the public's perception of the project.

4. *Would the deviation result in environmental effects not analyzed or discussed at the time of project approval and/or result in the need for additional mitigation measures?*

The environmental effects of developing the previously approved oil well pods on existing oil well pads, and impacts resulting from the installation of proposed pipelines, were evaluated by the Negative Declaration prepared for the Diatomite project. Identified impacts resulting from pod and pipeline development would generally result from the potential for disturbance of sensitive trees and plants adjacent to the project sites. Species of concern include Lompoc yerba santa, La Purisima manzanita, live oak and Bishop pine trees. As described below, several mitigation measures/conditions of approval were adopted to reduce the potential for impacts to sensitive tree and plant species to a less than significant level.

To minimize project-related impacts to sensitive tree species, condition of approval No. 6 (Native Tree Avoidance) requires that tree protection plans be prepared. Ground disturbance within the critical root zone native trees is not permitted unless authorized by an approved tree protection plan. Other requirements of this condition of approval include the installation of temporary fencing around sensitive trees during construction; that impacted trees be replaced at a 10:1 ratio; and that other measures be implemented to minimize construction-related impacts.

To minimize project-related impacts to sensitive plant species, condition of approval No. 7 (Sensitive Plant Avoidance) requires that at each oil well pod area and along proposed pipeline routes, a plant protection plan be prepared. Requirements of this condition of approval include inspections of pod sites and proposed pipeline routes to identify and locate sensitive plants, modification of pipeline routes to avoid sensitive plants, use of protective fencing, and mitigation requirements for plants that would be impacted by construction activities.

As described in Table 1, the proposed oil well pods and pipeline routes are adjacent to sensitive trees and plants. A plant and tree survey of the revised oil well pod sites and pipeline routes was conducted to identify potential impacts to sensitive species (Holland, 2007). The types and numbers of plants that could be affected by project construction activities at the revised pod sites and pipeline routes are generally similar to the impacts

identified for the previously approved project sites. Similar to the impacts of the approved project, implementation of the adopted tree and plant protection mitigation measures would reduce impacts at the revised project sites to a less than significant level and no new mitigation measures would be required. Additional information regarding potential impacts to native trees is provided in item No. 12 below.

The proposed well pod site revisions would not change other project operating characteristics, and would not result in other impacts not previously addressed by the Negative Declaration prepared for the Diatomite project. No additional mitigation measures would be required for the project.

5. *Does not conflict with project conditions of approval and/or final map conditions.*

The proposed modifications to the previously approved oil well pod site and pipeline locations would not conflict with any other conditions of approval applied to the Oil Drilling and Production Plan.

6. *Does not result in health and safety impacts.*

The Negative Declaration prepared for the Diatomite project evaluated the potential for health and safety impacts resulting from exposure to H₂S gas produced by the project. That evaluation determined that the H₂S gas scrubbers provided at the project site would reduce potential impacts to a less than significant level. The relocation of the oil well pods and pipelines on the project site would not effect the potential for H₂S gas exposure impacts, and project-related impacts would continue to be less than significant.

Condition of approval No. 9 (Fire Protection Plan) requires that a fire protection plan be approved by the Fire Department prior to the approval of a Land Use Permit. A fire protection plan was approved by the Fire Department prior to the issuance of the Land Use Permits for oil well pod sites 1 and 3. Clearance by the Fire Department acknowledging that the revised oil well pod locations are consistent with the provisions of the approved fire protection plan will also be required before Land Use Permits are approved for oil well pod sites 2, 4, 5 and 6. Therefore, the proposed project revisions would not result in significant new fire safety impacts.

The revised oil well pod locations on the project site would not result in air emissions, traffic or other conditions that would have the potential to result in public health or safety impacts. Therefore, the proposed project revision would not result in health and safety impacts not previously evaluated by the Negative Declaration prepared for the project.

7. *That the project facilities, operating procedures, environmental impacts, safety impacts, and the project's compliance with policies are substantially the same as those considered in the previous permit issued by the Director*

The previously approved project was evaluated for consistency with applicable Comprehensive Plan policies. These policies require projects to minimize cut and fill; be compatible with existing topography and other environmental conditions; protect water quality; minimize visual resource impacts; protect agricultural resources; and to minimize impacts associated with mineral extraction operations. It was determined that with the implementation of proposed mitigation measures, the Diatomite project would be consistent with applicable Comprehensive Plan policies.

The proposed oil well pod location revisions would result in a small decrease in the amount of grading when compared to grading volumes required for the previously approved project. Similar to the approved project, potential impacts to sensitive tree and plant species resulting from the development of the revised oil well pods and associated pipelines can be reduced to a less than significant level with the implementation of adopted mitigation measures/conditions of approval. The revised oil well pod location sites are not visible to the public and would not result in visual resource impacts, and the revised locations would not interfere with existing grazing operations that occur on the project property. Similar to the approved project, the environmental impacts of the revised project would be reduced to a less than significant level with the implementation of adopted mitigation measures/conditions of approval. Therefore, the revised project would continue to be consistent with applicable policies of the Comprehensive Plan.

8. *That the changes proposed can be effectuated through existing permit conditions.*

Potential impacts of developing the previously approved oil well pods and pipeline routes have been reduced to a less than significant level by adopted mitigation measures/conditions of approval. The environmental characteristics of the revised oil well pod locations and pipeline routes are similar to the previously approved locations. Therefore, existing permit conditions are adequate to reduce project-related impacts and no new conditions of approval are required.

9. *That the impacts and changes do not alter the findings that the benefits of the project outweigh the significant unavoidable environmental effects made in connection with the original approval.*

The Mitigated Negative Declaration prepared for the Diatomite project identified feasible mitigation measures to reduce potentially significant environmental impacts of the project to a less than significant level. All mitigation measures identified by the Negative

Declaration were included as conditions of approval for the Diatomite Project Oil Drilling and Production Plan. The relocation of oil well pods 2, 4, 5 and 6 would not result in environmental impacts not previously addressed by the project's Negative Declaration. As a result, the proposed project revisions would not result in any significant unavoidable impacts.

10. *Does not result in an increase of 1,000 sq. ft. or more than 10% of building coverage of new structures over total project approvals, whichever is less.*

The proposed relocation of previously approved oil well pods and accessory pipelines would not result in the construction of any buildings or changes to project-related structures (storage tanks, water treatment, steam generators, etc).

11. *Is clearly exempt from environmental review or was evaluated in the environmental review document prepared for the project and there are no new significant impacts related to the project change.*

The Mitigated Negative Declaration prepared for the Diatomite project identified feasible mitigation measures to reduce potentially significant environmental impacts of the project to a less than significant level. The proposed oil well pod and pipeline location modifications would not result in any significant environmental impacts that were not previously addressed by the Negative Declaration, and previously adopted tree and plant protection measures would be adequate to reduce impacts of the revised project to a less than significant level. The revised pod locations would not change the operation characteristics of the project and the proposed locations have existing environmental conditions that are similar to the previously approved locations. The proposed project revision would not result in an increase in air emissions, traffic generation, grading, or result in substantial changes to the appearance of the project site. Therefore, the requested modification to the approved project would not result in significant environmental impacts.

12. *Does not require the removal of specimen trees or impact areas defined in the project environmental document as sensitive or designated as areas prohibiting structures.*

The environmental review conducted for the approved project determined that no on-site trees would be removed. However, due to the proximity of trees to the approved oil pod sites and pipeline routes, mitigation measures (condition of approval No. 6 -Native Tree Avoidance) were adopted that require the preparation of tree protection plans. These plans must provide measures to minimize impacts to native trees, and measures to be implemented if it is subsequently determined that trees have been impacted by construction activities. Impacts to trees may also be authorized if such impacts are identified by the tree protection plan and mitigation measures consistent with the tree protection and replacement requirements of condition No. 6 are implemented.

The development of oil well pod No. 2 at the revised location would require the relocation of one 28-inch oak tree to a site adjacent to the existing well pad (Figure 3). A proposed four-foot high cut slope on the eastern end of the western pad area at the relocated Pod No. 6 site (Figure 6) would encroach beneath the dripline of a 16-inch oak tree, and may impact more than 20 percent of the tree's critical root zone area. Disturbance of more than 20 percent is considered to result in a significant impact to the tree.

As indicated above, the relocation of a tree that may otherwise require removal, and construction operations that have the potential to impact a tree may be authorized with the approval of an acceptable tree protection plan. At minimum, the tree protection plan must implement the following measures to reduce impacts to native trees to a less than significant level: construction operations with the potential to impact a tree must be conducted in a manner consistent with the provisions of the tree protection plan; that impacted trees shall be replaced at a 10:1 ratio; and that financial assurances must be provided for the subsequent care of the relocated/impacted trees. Compliance with the previously adopted mitigation requirements would reduce impacts to native trees resulting from the proposed project revision to a less than significant level. Therefore, the proposed project would be consistent with approved conditions of approval and no previously unidentified impacts to native trees would result.

13. *Is consistent with Comprehensive and/or Coastal Plan policies and Development Code requirements.*

The proposed revisions to the previously approved oil well pod locations would be consistent with applicable policies and requirements of the Comprehensive Plan and LUDC. The project site is not located in the Coastal Zone.

14. *Does not result in more than 1,500 cubic yards of net cut and/or fill outside of the coastal Zone, or 50 cubic yards within the Coastal Zone), and avoid slopes of 30% or greater, unless these impacts were addressed in the environmental assessment for the project and mitigation measures were imposed to mitigate said impacts and the proposal would not compromise the mitigation measures imposed or result in additional environmental impacts.*

The environmental review conducted for the approved project evaluated the potential for grading-related impacts. Grading required to construct the revised oil well pod sites would be reduced somewhat when compared to the approved project, and potential grading-related impacts, such as changes to visual conditions, erosion, and air emissions, would generally be similar or slightly reduced. No grading operations are proposed to occur in environmentally sensitive habitats or in areas that would result in impacts not previously addressed by the project's environmental review.

15. *Is located within the same general location as, and is topographically similar to, approved plans. The location shall not be moved more than 10% closer to a property line than the originally approved development.*

The proposed revisions to the approved pod locations would not result in substantial changes to the grading characteristics required to implement the previously approved project. The revised well pod locations would not be near a property line on the 4,125-acre project parcel.

16. *Does not result in an overall height which is greater than 10% above the approved height. The project must remain consistent with height requirements of the zone.*

The revised oil well pod locations would not result in an increase in height of any equipment located at the project sites.

17. *Receives Design Review approvals for landscaping and structures, if necessary.*

The Diatomite project did not require Design Review approval.

18. *Does not result in intensification of use; e.g., no new employees, no increases in traffic, if these were important to the previous environmental/policy analysis.*

The proposed modification to the previously approved oil well pod locations and pipeline routes will not change the previously evaluated and approved operation characteristics of the Diatomite project. Therefore, the modification would not result in an increase in traffic generation, on-site employees, or other changes related to the operation of the oil production project.

19. *Does not affect easements for trails, public access, or open space.*

The project site is generally not open to the public and there are no trails on the project site. The revised oil well pod locations and pipeline routes would not have an adverse effect on the cattle grazing or other open space functions that occur on the project site.

07SCD-00000-00049

BreitBurn Diatomite Project Substantial Conformity Determination

May 20, 2008

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If you agree with my analysis, please sign the attached letter to the applicant indicating that the substantial conformity determination has been approved. Please contact me to discuss any issues prior to making a final determination.

Attachments:

Figure 1 Approved Oil Well Pod Locations

Figure 2 Proposed Oil Well Pod Locations

Figure 3 Proposed Site Plan – Pod 2

Figure 4 Proposed Site Plan – Pod 4

Figure 5 Proposed Site Plan – Pod 5

Figure 6 Proposed Site Plan – Pod 6



County of Santa Barbara Planning and Development

John Baker, Director

Dianne Black, Director Development Services

John McInnes, Director Long Range Planning

July 27, 2009

Mr. John Fox
Tracer Environmental
2601 Skyway Drive, Suite A1
Santa Maria CA 93455

RE: BreitBurn Energy Company Substantial Conformity Determination
APN No.: 101-020-074 & 101-020-041
09SCD-00000-00008 for 05PPP-00000-00001

The applicants are proposing the following modifications to the BreitBurn Oil Drilling and Production Plan (05PPP-00000-00001):

- 1) Based on potential impacts to mature Coast Live Oak trees, the applicants are requesting to revise the location of Pod #2. This new location would not require the removal of any oak trees (the originally approved location would have required the removal of one oak tree).
- 2) Subsequent to the approval of the BreitBurn Oil Drilling and Production Plan (05PPP-00000-00001), a number of the proposed well sites have been relocated through previously approved Amendments, and Substantial Conformity Determinations to the production plan. These revisions to oil well locations have now necessitated a revision in the location of Phase 2 of the tank battery construction. BreitBurn is proposing to construct the diatomite tank battery near the existing Newlove Tank Battery, which would utilize gravity flow from the oil wells to the tank battery, thereby saving significant energy. The building footprint of the tank battery would cover approximately 2-acres, and would require grading of approximately 1,600 cu. yd. of cut, and 4,400 cu. yd. fill.
- 3) BreitBurn is requesting to update and slightly expand the existing produced water treatment plant of approximately 2,000 sq. ft. in size (Attachment C). While the permitted water treatment facility is functional, it isn't capable of providing the quantities of clean water needed for the project.
- 4) A new pipeline route is proposed that would connect the new tank battery to the pods. The proposed pipeline would be constructed above ground and would travel along existing roads, or previously disturbed areas containing numerous pipelines.

John Fox
09SCD-00000-00008
July 27, 2009
Page 2

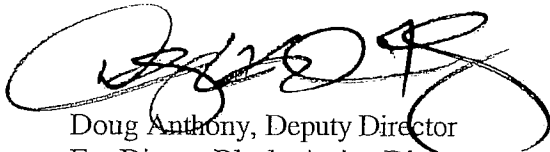
No other changes to the previously approved project are proposed, and all other design and operation characteristics described by Condition No. 1 (Project Description) approved by the Planning Commission on November 8, 2006 would continue to be implemented. Subsequent Land Use Permits for the development of individual oil well pods also remain a requirement to ensure that the development of each oil well pod has complied with applicable conditions of approval.

It has been preliminarily determined by Planning and Development that your request for substantial conformity can be made based upon the information in the attached memorandum.

Be advised that this preliminary SCD approval is based on staff's evaluation of current conditions, policy, and environmental issues. The proposed modifications require a follow-up Land Use Permit in order for the preliminary SCD approval to become final. At the time of approval of the follow-up Land Use Permit, all of the required findings must be made.

Please contact Dana Carmichael at (805) 934-6266 with any questions regarding this letter.

Sincerely,



Doug Anthony, Deputy Director
For Dianne Black, Acting Director

Attachments: Substantial Conformity Determination Criteria Memo

cc: BreitBurn Energy Co., 515 S. Flower Street, 48th Floor, Los Angeles, CA 90071
Cannon Associates, 2318 Skyway Drive, Santa Maria, CA 93455
CD Lyons Construction, Inc., 2329 A Street, Santa Maria, CA 93455
Case File (To Planner)
Accounting (cover letter only)

COUNTY OF SANTA BARBARA
PLANNING AND DEVELOPMENT
MEMORANDUM



TO: Doug Anthony, Deputy Director
Development Review Division

FROM: Dana Carmichael, Planner II

DATE: July 27, 2009

RE: Recommendation for Finding of Substantial Conformity (09SCD-00000-00008) for the BreitBurn Energy Company Orcutt Hill Diatomite Project Oil Drilling and Production Plan (05PPP-00000-00001).

Existing Conditions

On August 24, 2006, the Santa Barbara Planning Commission approved an Oil Drilling and Production Plan (05PPP-00000-00001) for Phase 1 of the BreitBurn Energy Company Orcutt Hill Diatomite project. Phase 1 of the project includes the installation of up to 32 new oil wells located in two "pods" located on two existing drill pads. The installation of steam generation and other accessory equipment and pipelines required for the operation of the new oil wells was also approved. The Planning Commission approved Phase 2 of the project on November 8, 2006. Phase 2 includes the development of up to 64 oil wells in four pods located on four existing drill pads, as well as other project-related accessory equipment. On November 2, 2007, BreitBurn Energy applied for a Substantial Conformity Determination to modify the locations of the well pods. This project was approved on June 3, 2008. On February 11, 2009, BreitBurn Energy applied for a second Substantial Conformity Determination to expand the Pod 1 location. This application was approved and a land use permit issued by staff on March 9, 2009. BreitBurn Energy has now determined that further modifications need to be made to the originally approved Production Plan.

Proposed Project Change

The applicants are proposing the following modifications to the BreitBurn Oil Drilling and Production Plan (05PPP-00000-00001):

- 1) Based on potential impacts to mature Coast Live Oak trees, the applicants are requesting to revise the location of Pod #2 (Attachment A). This new location would not require the removal of any oak trees (the originally approved location would have required the removal of one oak tree).
- 2) Subsequent to the approval of the BreitBurn Oil Drilling and Production Plan (05PPP-00000-00001), a number of the proposed well sites have been relocated through previously approved Amendments, and Substantial Conformity Determinations to the

production plan. These revisions to oil well locations, have now necessitated a revision in the location of Phase 2 of the tank battery construction. BreitBurn is proposing to construct the diatomite tank battery near the existing Newlove Tank Battery (Attachment B), which would utilize gravity flow from the oil wells to the tank battery, thereby saving significant energy. The building footprint of the tank battery would cover approximately 2-acres, and would require grading of approximately 1,600 cu. yd. of cut, and 4,400 cu. yd. fill.

- 3) BreitBurn is requesting to update and slightly expand the existing produced water treatment plant of approximately 2,000 sq. ft. in size (Attachment C). While the permitted water treatment facility is functional, it isn't capable of providing the quantities of clean water needed for the project.
- 4) A new pipeline route is proposed that would connect the new tank battery to the pods. The proposed pipeline would be constructed above ground and would travel along existing roads, or previously disturbed areas containing numerous pipelines. A map showing the proposed pipeline route and the existing approved project compared to the proposed project is included (Attachment D).

No other changes to the previously approved project are proposed, and all other design and operation characteristics described by Condition No. 1 (Project Description) approved by the Planning Commission on November 8, 2006 would continue to be implemented. Subsequent Land Use Permits for the development of individual oil well pods also remain a requirement to ensure that the development of each oil well pod has complied with applicable conditions of approval.

The project description with appropriate changes denoted in underline is shown below:

Phase 2 of this Oil Drilling and Production Plan, 05PPP-00000-00001 is based upon and limited to compliance with the project description, the Planning Commission's Hearing Exhibit marked "Attachment G", dated November 8, 2006, and conditions of approval set forth below. Any deviations from the project description, exhibits, or conditions of approval must be reviewed and approved by the Planning Commission for conformity with this approval. Deviations may require modification to the permit and/or further environmental review. Deviations without the above described approval would constitute a violation of permit approval.

This project will result in the construction and operation of up to 96 oil wells that use steam injection to enhance oil recovery. Injecting steam into the shallow (300 to 800 feet below the ground surface) oil reservoir beneath the project site reduces the viscosity of the oil making it easier to recover.

The proposed oil wells and other project-related facilities are located within the Orcutt Hill Oil Field, which covers over 10,000 acres and contains over 300 oil wells. The majority of proposed BreitBurn project is located on Assessor Parcel Number 101-020-74 approximately 1.5 miles south of East Rice Ranch Road and the community of Orcutt. The project site is approximately 2 miles west of U.S. Highway 101, and 2.4 miles east of State Route 135 (Attachment E). Regional access to the project site is provided by East Rice Ranch Road, U.S. Highway 101 and State Route 135. Local access is provided by existing oil field roads. The oilfield is fenced, gated and is not open to the public.

The Orcutt Hill Oilfield Diatomite project includes five major components to be developed in two phases:

Phase 1 of the project consists of the following:

- Up to 32 new oil wells on two drill pads
- One steam generator
- Grading and construction of the tank battery
- Installation of hydrogen sulfide removal equipment
- Steam and oil pipelines (with no truck loading racks)

Phase 2 of the project consists of the following:

- Up to 64 new and existing oil wells (total of 96 for project)
- 2 steam generators
- Phase 2 of the tank battery construction
- Installation of hydrogen sulfide control equipment
- Steam and oil pipelines

The locations of the proposed facilities are depicted on Attachments F and G. All proposed project equipment will be operated 24 hours a day, 365 days a year. All oil produced by the proposed project will be transported from the project site using an existing on-site pipeline. No truck transportation of oil produced by Phases 1 or 2 of the project will occur.

Oil Wells. The project proposes to operate up to 96 oil wells, including 95 new wells and one (1) existing well. The wells will be located in six “pods” with up to 16 wells in each pod. The proposed well pods will be between 0.20 and 0.41 of an acre in size, and each will be located in a relatively level area that has been previously graded and used for oil production operations. Access to each well pod will be provided by an existing paved road. The location of each proposed well pod is shown on Attachments F and G, and as revised by exhibits associated with 07SCD-00000-00049, 09SCD-00000-00004, and 09SCD-00000-00008.

The first well pod to be developed will be Pod 1, located south of and adjacent to the existing BreitBurn Orcutt Hill field office. Pod 1 will consist of fifteen new wells drilled to a depth of 800 feet, and one existing well (Newlove No. 76). The installation order for well Pods 2-6 will be dependent on the success of previous pods. Therefore, successive pods may not be developed in the same order as their numerical designation.

Well steaming will consist of injecting steam into one of the wells in a pod for three to five days. The steam will then be allowed to "soak" in the well for one to two days before the well is returned to production. While the first well is soaking, steam injection will move to the next well in the pod. This process would continue until all 16 wells have been steamed, after which the cycle will be repeated.

Steam Generation. The proposed project includes the installation and operation of three (3) steam generators at a location adjacent to the BreitBurn Orcutt Hill field office (Attachments F and G). The proposed steam generator site is located on a previously cleared area that is approximately one acre in size. Access to the steam generator site will be provided by an existing access road.

Each steam generator will produce steam for two well pods, and will be rated at approximately 62.5 million (MM) Btu/hr. As required by the Santa Barbara Air Pollution Control District, each steam generator will be equipped with Best Available Control Technology (BACT) to reduce air pollutant emissions. A site plan depicting the proposed steam generator site is provided as Attachments F and G.

Water Use. All water used for steam generation will be obtained from the brine water presently produced by oil production operations on the BreitBurn project site. On average, as much as 75,000 barrels of water are produced from the Monterey and Point Sal formations per day. After the produced water is separated from the oil, it is presently pumped back into the Monterey and Point Sal formations by injection wells located throughout the oilfield.

On average, up to 13,500 barrels of water (4,500 barrels for each steam generator) will be used each day for steam production. This water use rate is equivalent to approximately 635 acre feet per year (AFY). Water for steam generation will be transported to the generator site using existing pipelines. Prior to conversion to steam, the water will be treated using a membrane filtration system to remove impurities (salt, minerals, etc). The filtration units will be located in a proposed building east of adjacent to the steam generators. While the permitted water treatment plant is operational, it is not capable of providing the quantities of clean water needed for the existing project. Therefore, the applicants are proposing to update and slightly expand the existing produced water treatment plant. The new plant will include the replacement of approximately 6 tanks

used for neutralization, storage, and skim/backwash. Other equipment at the site will include a gas flotation system, nutshell filters, pumps, and other accessory equipment. The new building will be approximately 6,000 square feet (60' by 100') and will have a maximum height of approximately 26 feet. ~~Other equipment at the steam generation site will include a gas flotation system, nutshell filters, water storage tanks and other accessory equipment.~~

Natural Gas Use. The three proposed steam generators will require the use of 180,000 cubic feet of natural gas per hour (180 mcf/hour). The primary source of natural gas for the project will be an existing utility connection.

The project applicant currently uses most of the natural gas that they produce from the Orcutt Hill Oilfield to operate onsite equipment. Therefore, very little of the natural gas produced on the project site will be available for use by the proposed steam generation project. Some natural gas may be available for purchase from an adjacent oilfield for use on the project site. All natural gas used on the project site will comply with APCD fuel standards.

Tank Battery. The proposed project includes the development of a two phases of tank battery construction that will be used to store produced oil and water, and to assist in the removal of water from produced oil.

The Newlove tank battery will be located in a previously cleared one acre area in the northern portion of the project site that is adjacent to the existing field office and proposed steam generator site (Attachments F and G). Access to the tank battery will be provided by existing paved roadways. The Newlove tank battery will be constructed in two phases. The first phase facilities will receive fluids produced from Well Pods 1, 2 and 5; and second phase portion of the tank battery will receive fluids from Well Pods 3, 4 and 6. The tanks that will be provided in the tank battery are listed below.

- Two 5,840 barrel wash tanks (one in each phase). These tanks will be 35 feet in diameter and 32 feet high.
- Two 2,100 barrel reject oil tank (one in each phase). These tanks will be 25 feet in diameter and 24 feet high.
- Two 2,800 barrel produce water/wash tanks (one in each phase). These tanks will be 25 feet in diameter and 32 feet high.
- Two 2,100 barrel dry oil shipping tanks (one in each phase). These tanks will be 25 feet in diameter and 24 feet high.

In addition, both tank battery phases will include accessory and support facilities, including: vapor recovery equipment, heat exchangers, electrical equipment, pumps, lease

automatic custody transfer (LACT), and other similar equipment. A site plan depicting the proposed tank battery site is provided as Attachment H.

The second phase of tank battery construction would be constructed within a previously disturbed, cleared area, with a building footprint of approximately two acres in size and consisting of approximately 22,350 sq. ft. of development. This location would maximize gravity flow, as new pod locations are all located at lower elevations than the existing phase 1 portion of the tank battery. Access would be provided by existing roadways. A site plan depicting the proposed tank battery site is provided as Attachment E. The tanks that would be provided in Phase 2 are listed below.

- Two 6,180 barrel wash tanks. These tanks would be 37 feet in diameter and 32 feet high.
- Two 4,000 barrel produced water tanks. These tanks would be 30 feet in diameter and 32 feet high.
- One 3,000 barrel reject oil tank of approximately 30 feet in diameter and 24 feet in height.
- One 3,000 barrel oil shipping tank of approximately 30 feet in diameter and 24 feet in height.

Grading. Proposed oil well pod sites have been previously graded, but to accommodate the proposed project-related equipment additional site leveling will be required. Existing ground surface contours for each proposed well pod are depicted on Attachments I-N, and the size and grading requirements for each proposed well pod site are summarized on Table 1-1. All project-related grading will be balanced on the project site.

The proposed steam generator and tank battery sites slope gently to the west. To accommodate the proposed steam generators, tanks and other structures, the sites will be re-contoured to provide level pad areas. To minimize the creation of cut slopes, retaining walls ranging between five and nine feet in height will be used to create the level pad areas.

Grading at the steam generator and tank battery sites will include over-excavating native soils. The excavated soil will be replaced and re-compacted to provide a suitable foundation for the proposed structures. Cross-sections depicting existing and proposed ground contours at the steam generator and tank battery sites, along with the proposed structures and equipment, are provided on Attachment O. Proposed grading volumes for the steam generator and tank battery sites are summarized on Table 1-1

**Table 1-1
 BreitBurn Energy Company Diatomite Project
 Site Development and Grading Summary**

Proposed Facility (existing well number)	Site Dimension		Estimated Grading Required (cubic yards of cut and fill)
	Feet	Acres	
Well Pod 1 (Newlove 76)	74 x 225	0.38	1,200
Well Pod 2 (Newlove 67 31)	75 x 226	0.39	1,600
Well Pod 3 (Newlove 59)	80 x 226	0.41	1,700
Well Pod 4 (Newlove 103)	67 x 200	0.31	100
Well Pod 5 (Newlove 78)	75 x 117	0.20	1,000
Well Pod 6 (Newlove 53)	75 x 200	0.38	2,100
Steam Generator Site	150 x 270	0.93	26,000 (1)
Newlove Tank Battery Site	105 x 270	0.65	15,000 (1) 9,000 (1)
Phase 2 Tank Battery	105 x 270	0.65	6,000 (1)
TOTAL	---	3.65-4.3	48,700

(1) Grading volumes include the over excavation of these sites. The over excavated soil will be replaced and re-compacted on the project sites.

Hydrogen Sulfide Removal System. The proposed H₂S removal system will treat natural gas produced from the Diatomite formation by the proposed project. The treatment facility will be located at the tank battery site. A single H₂S removal system will serve the phase 1 tank battery, and an additional treatment system may be added when the tanks associated with the phase 2 tank battery are added. The proposed H₂S treatment vessels will be approximately 12 feet in diameter and approximately 30 feet in height.

H₂S removal will occur by passing the produced gas through a granular material (SulfaTreat) that has a high affinity for sulfur. When the H₂S concentration in the treated gas approaches 700 ppmv, the inlet gas stream will be bypassed to the second vessel while the treatment chemical in the first vessel is replaced. Spent treatment chemical would be non-hazardous and disposed off-site. H₂S concentrations in the produced gas treated vary from 400 to 700 ppmv, and outlet concentrations range from zero to 700 ppmv. When outlet H₂S levels in the treated gas are at the upper end of the concentration range, the spent SulfaCheck is removed and new chemical is placed in the treatment vessel. Spent SulfaCheck is used as a corrosion inhibitor in the on-site water injection system. The existing H₂S scrubber is located in the vicinity of the BreitBurn Orcutt Hill

office and will continue to be operated in conjunction with the proposed project. All of the treated gas will remain within the Orcutt Hill Oilfield.

Based on Breitburn's experience with steam enhanced production, the H₂S concentrations in produced gas are expected to be initially low (0-500 ppmv), but increase over time due to the steaming operation. H₂S concentrations would increase because hydrogen atoms from the steam injection water combine with sulfur in the oil. Based on BreitBurn's observations of similar steam enhancement operations in the San Joaquin Valley, the H₂S concentrations in gas produced at the project site could increase to approximately 15,000 ppmv, then level out as the optimum oil reservoir temperature is reached.

The natural gas produced by the proposed project could have a maximum H₂S concentration of approximately 15,000 ppmv, or approximately 1.5 percent. The sulfur treatment systems at the tank battery site would be approximately 1.2-1.5 miles from the southern boundary of the Rice Ranch residential project, and 1.5 miles from residences in Orcutt. The tank battery would also be approximately 2.0 and 2.4 miles from Highway 101 and State Route 135, respectively.

Pipelines. The proposed project will use a network of existing and new pipelines to transport oil, water, natural gas, and steam. All new pipelines will be installed above ground and most will be installed along existing roadways. One proposed pipeline segment will not be located along a roadway and will be adjacent to existing above ground pipelines.

New steam pipelines will extend from the proposed steam generator site to the well pod areas. Two steam lines will extend westward from the steam generator site to serve Pods 2, 3, 4 and 6. One of these lines will serve Pods 2 and 4, and the second line will extend southward to serve Pods 3 and 6. A new single steam line will extend to the east to serve Pod 5, and Pod 1 will be served by an existing steam line. The location of proposed steam lines are depicted on Attachments F, G and P, and as revised by exhibits associated with 07SCD-00000-00049, 09SCD-00000-00004, and 09SCD-00000-00008.

New pipelines will transport produced fluids to the proposed tank battery. New pipelines will connect Pods 1, 2 and 5 to the first phase tank battery; and new pipelines will connect Pods 2, 3, 4 and 6 to the second phase of the tank battery. The locations of proposed steam lines are depicted on Attachments F, G and P, and as revised by exhibits associated with 07SCD-00000-00049, 09SCD-00000-00004, and 09SCD-00000-00008.

After the produced oil meets pipeline specifications, it will be transferred by a new pipeline to the existing Newlove lease LACT units located adjacent to the existing Newlove tank battery. Produced water that will be used to produce steam will be transported to the steam generator site by existing pipelines.

An approximately 4,500 ft. long pipeline is proposed to connect well Pod 2 to the Phase 2 part of the tank battery located southwest of the existing Newlove tank battery (Phase 1). This pipeline will be installed above ground and will travel along existing roadways or adjacent to existing above ground pipelines. No tree or vegetation removal would be required in order to install the pipeline, and as a result impacts to vegetation would be minimal.

Produced Oil Transportation. Oil produced by the proposed project will be transported from the oilfield using a Conoco-Phillips pipeline connection that exists on the project site. This pipeline will transport the produced oil to the Conoco-Phillips Orcutt Pump Station facility located adjacent to Clark Avenue, approximately 500 yards east of Highway 135. Breitburn has obtained a commitment from Conoco-Phillips to use the existing pipeline.

All oil produced by the proposed project will be transported from the project site using an existing on-site pipeline. No truck transportation of oil produced by Phases 1 or 2 of the project will occur.

Project Phasing. The proposed project will be developed in two phases. The first phase will include the installation of one steam generator, the phase 1 tank battery, two oil well pods (Pod 1 and Pod 2 or 5), and required pipelines. Installation, start-up and evaluation of the first project phase would occur over a 12-18 month period of time. The second project phase will include the installation of two steam generators, the second phase of the tank battery, the remaining four well pods and required pipelines.

Other Project Design Measures. The proposed project will implement the following measures to minimize the potential for environmental impacts.

- a. Pipelines will be located above ground and along existing roadways to facilitate regular inspections and to minimize the potential for corrosion. Pipelines will be buried at road crossings.
- b. Steam generators and accessory equipment will be located at existing well pads, tank farms, treatment or storage areas to the extent feasible to minimize grading and vegetation impacts.
- c. New equipment will be located in areas where vegetation or terrain will minimize views of the equipment by the general public.
- d. New equipment will be painted a neutral color to blend with the background environment.

- e. Steam generators will be located in areas that minimize potential noise or vibration impacts to the public.
- f. Lighting that may be visible from the property boundaries (i.e., lighting at proposed Well Pods 2 and 5, the tank battery and the steam generator site) will be low profile and shielded to minimize potential lighting impacts. Existing lighting provided at these locations will be removed and replaced with new low profile and shielded lighting fixtures.
- g. Pumping units and well cellars are not planned for the new wells.

Staff Recommendation and Substantial Conformity Determination Guidelines

The Substantial Conformity Determination Guidelines provided in Appendix H of the Land Use Development Code are evaluated below. I have reviewed the proposed project change based upon the following evaluation criteria and recommend that you find this change in substantial conformity with previously approved project plans and conditions of approval.

a) Does not conflict with project conditions of approval and/or recorded map conditions.

The proposed revisions and additions to the BreitBurn Production Plan (05PPP-00000-00001) would not conflict with the original project conditions of approval. The previously approved project conditions allowed for the construction of a phased construction of the existing tank battery, water treatment facility, and associated pipelines. The relocation of Well Pod #2 would not increase the number of oil wells developed on the project site as approved by the Oil Drilling and Production Plan, or change the operation characteristics of the project. The proposed project meets all required setbacks, and all of the components were originally reviewed under the Mitigated Negative Declaration which was prepared for the BreitBurn Diatomite project and was circulated for public review. Therefore, the proposed project would not conflict with project conditions of approval under 05PPP-00000-00001.

b) Does not result in health or safety impacts.

The Negative Declaration prepared for the Diatomite project evaluated the potential for health and safety impacts resulting from exposure to H₂S gas produced by the project. That evaluation determined that the H₂S gas scrubbers provided at the project site would reduce potential impacts to a less than significant level. Based on the *Safety Element Supplement* requirements, if the separation distance between the H₂S treatment facilities, and a populated area is greater than one mile, and the concentration of H₂S gas is less than five percent, the project is presumed to not result in a significant potential public safety impact and a quantitative assessment of potential public safety impacts is not required.

Based on Breitburn's experience with steam enhanced production, the H₂S concentrations in produced gas are expected to be initially low (0-500 ppmv), but increase over time due to the steaming operation. H₂S concentrations would increase because hydrogen atoms from the steam injection water combine with sulfur in the oil. Based on BreitBurn's observations of similar steam enhancement operations in the San Joaquin Valley, the H₂S concentrations in gas produced at the project site could increase to approximately 15,000 ppmv, then level out as the optimum oil reservoir temperature is reached. The natural gas produced by the proposed project could have a maximum H₂S concentration of approximately 15,000 ppmv, or approximately 1.5 percent. The sulfur treatment systems at the tank battery site would be approximately 1.2-1.5 miles from the southern boundary of the Rice Ranch residential project, and 1.5 miles from residences in Orcutt. The tank battery would also be approximately 2.0 and 2.4 miles from Highway 101 and State Route 135, respectively. Construction of Phase 2 of the tank battery would utilize the same type, quantity, and size of H₂S scrubbers that were analyzed under the previous Negative Declaration.

The relocation of Well Pod #2, and associated pipeline would not affect the potential for H₂S gas exposure impacts, and project-related impacts would continue to be less than significant. In addition, condition of approval No. 9 (Fire Protection Plan) requires that a fire protection plan be approved by the Fire Department prior to the approval of a Land Use Permit. A fire protection plan was approved by the Fire Department prior to the issuance of the Land Use Permit for oil well pod sites 1 and 3. Clearance by the Fire Department acknowledging that the revised oil well pod location is consistent with the provisions of the approved fire protection plan will be required before Land Use Permits are approved. Therefore, the proposed project would not result in significant new fire safety impacts.

c.i) That the project facilities, operating procedures, environmental impacts, safety impacts, and the project's compliance with policies are substantially the same as those considered in the previous permit issued by the Director.

The previously approved project was evaluated for consistency with applicable Comprehensive Plan policies. These policies require projects to minimize cut and fill; be compatible with existing topography and other environmental conditions; protect water quality; minimize visual resource impacts; protect agricultural resources; and to minimize impacts associated with mineral extraction operations. It was determined that with the implementation of proposed mitigation measures, the Diatomite project would be consistent with applicable Comprehensive Plan policies. The proposed changes and revisions to the approved Production Plan are substantially the same as what was previously reviewed and approved under 05PPP-00000-00001. Phase 2 of the tank battery construction would require grading of approximately 1,600 cu. yd. cut, and 4,000 cu. yd. fill, which is far less than what was previously analyzed under the mitigated negative declaration prepared for the

production plan. The upgrades and slight expansion associated with the proposed water treatment facility would not require grading. The size and grading associated with Well Pod #2 is the same as what was originally reviewed, and the environmental characteristics of the revised oil well pod location and pipeline route are similar to the previously approved locations. Similar to the approved project, potential impacts to sensitive tree and plant species resulting from the revised project could be reduced to a less than significant level with the implementation of adopted mitigation measures/conditions of approval. Therefore, the revised project would continue to be consistent with applicable policies of the Comprehensive Plan.

d) That the changes proposed can be effectuated through existing permit conditions.

The potential impacts resulting from the proposed revisions to 05PPP-00000-00001 would be reduced to a less than significant level by adopted mitigation measures and conditions of approval under 05PPP-00000-00001. Therefore, existing permit conditions are adequate to reduce project-related impacts, and no new conditions of approval are required.

e,g) That the impacts and changes do not alter the findings that the benefits of the project outweigh the significant unavoidable environmental effects made in connection with the original approval.

The Mitigated Negative Declaration prepared for 05PPP-00000-00001 identified feasible mitigation measures to reduce potentially significant environmental impacts of the project to a less than significant level. All mitigation measures identified by the Negative Declaration were included as conditions of approval for the Diatomite Project Oil Drilling and Production Plan (05PPP-00000-00001). The potential impacts resulting from the relocation of oil well pod #2, the Phase 2 tank battery construction, and updates to the existing water treatment facility, and the additional above ground pipeline would not result in any significant environmental impacts that were not previously addressed by the Negative Declaration, and previously adopted tree and plant protection measures would be adequate to reduce impacts of the revised project to a less than significant level. The proposed revisions would not change the operation characteristics of the project, and the proposed pod location has existing environmental conditions that are similar to the previously approved locations. The proposed revisions would not result in an increase in air emissions, traffic generation, significant grading, or result in substantial changes to the appearance of the project site. Therefore, the requested modification to the approved project would not result in significant environmental impacts.

- f) *Does not result in an increase of 1,000 sq. ft. or more than 10 percent of building coverage of new structures over total project approvals, whichever is less.*

The relocation of Phase II of the tank battery approval, well pod relocation, associated pipelines, and water treatment facility upgrades would not result in any additions to building coverage which were not previously analyzed and approved under 05PPP-00000-00001.

- h) *Does not require the removal of specimen trees or impact areas defined in the project environmental document as sensitive or designated as areas prohibiting structures.*

The environmental review conducted for the approved project determined that no on-site trees would be removed. The proposed revisions would not require the removal of specimen trees, or impacts to areas determined to be sensitive. However, due to the proximity of trees to the approved oil pod sites and pipeline routes, mitigation measures (condition of approval No. 6 – Native Tree Avoidance) were adopted that require the preparation of tree protection plans. These plans must provide measures to minimize impacts to native trees, and measures to be implemented if it is subsequently determined that trees have been impacted by construction activities. Impacts to trees may also be authorized if such impacts are identified by the tree protection plan and mitigation measures consistent with the tree protection and replacement requirements of condition No. 6 are implemented. At minimum, the tree protection plan must implement the following measures to reduce impacts to native trees to a less than significant level: construction operations with the potential to impact a tree must be conducted in a manner consistent with the provisions of the tree protection plan; that impacted trees shall be replaced at a 10:1 ratio; and that financial assurances must be provided for the subsequent care of the relocated/impacted trees. Compliance with the previously adopted mitigation requirements would reduce impacts to native trees resulting from the proposed project revisions to a less than significant level. Therefore, the proposed project would be consistent with the approved conditions of approval and no previously unidentified impacts to native trees would result.

- j) *Does not result in more than 1500 cubic yards of net cut and/or fill outside of the Coastal Zone, or 50 cubic yards within the Coastal Zone, and avoids slopes of 30% or greater, unless these impacts were addressed in the environmental assessment for the project and mitigation measures were imposed to mitigate said impacts and the proposal would not compromise the mitigation measures imposed or result in additional environmental impacts.*

The environmental review completed for the approved project evaluated the potential for grading-related impacts. A total of approximately 6,000 cu. yd. of grading is proposed for phase 2 of the tank battery construction, which is a portion of the 15,000 cu. yd. of grading which was previously analyzed under the approved production plan (05PPP-

00000-00001). The proposed revisions to the water treatment facility would not require grading. Grading required to construct the revised oil well pod site would be consistent with what was previously approved, and potential grading-related impacts, such as changes to visual conditions, erosion, and air emissions would be generally similar to the approved project. No grading is proposed to occur in environmentally sensitive habitats or in areas that would result in impacts not previously addressed by the project's environmental review. The proposed pipeline would not require grading, and would be constructed above ground, along existing roadways or adjacent to existing pipelines in areas where slopes do not exceed 30%. Therefore, the revised project is consistent with this finding.

- k) Is located within the same general location as, and is topographically similar to, approved plans. The location shall not be moved more than 10 percent closer to a property line than the originally approved development.*

The subject parcels total approximately 4,125-acres in size. The proposed revisions would be located within the same general location as the approved project, and is topographically similar to approved plans. The nearest property line to the phase 2 tank battery is located approximately 1,500 feet to the south, which is not more than 10 percent closer to a property line than the originally approved development (the offices associated with the previously approved BreitBurn Oil Drilling and Production Plan (05PPP-00000-00001) are located approximately 600 feet from the nearest property line).

- l) Does not result in an overall height which is greater than 10 percent above the approved height. The project must remain consistent with height requirements of the zone.*

The proposed revisions would not result in an overall height which is greater than 10 percent above the approved height. The proposed tank heights are consistent with what was approved under the approved Oil Drilling and Production Plan (05PPP-00000-00001).

- m) Receives Design Review approval for landscaping and structures, if necessary.*

The BreitBurn Oil Drilling and Production Plan (05PPP-00000-00001) did not require Design Review. However, condition of approval #3 requires that exterior surfaces of all tanks and structures at the proposed tank battery/stem generator site be painted a dark, non-reflective color compatible with surrounding terrain with the exception of the water treatment equipment building, which will be painted "slate gray".

- n) *Does not result in intensification of use; e.g., no new employees, no increases in traffic, if these were important to the previous environmental/policy analysis.*

The proposed revisions to the BreitBurn Oil Drilling and Production Plan (05PPP-00000-00001) would not result in significant intensification of use, and the approved operation characteristics would be substantially the same. There would be no increase in employees, traffic, air emissions or water usage as a result of the proposed changes. All aspects of the proposed project were previously reviewed as a part of the final mitigated negative declaration, 06NGD-00000-00018. Therefore, the proposed modifications to the production plan would not result in a significant intensification of use.

- o) *Does not affect easements for trails, public access, or open space.*

The project site is generally not open to the public, and there are no trails on the project site. The proposed revisions to the BreitBurn Oil Drilling and Production Plan (05PPP-00000-00001) would not have an adverse effect on the cattle grazing or other open space functions that occur on the project site.

If you agree with my analysis, please sign the attached letter to the applicant indicating that the substantial conformity determination has been approved. Please contact me to discuss any issues prior to making a final determination.

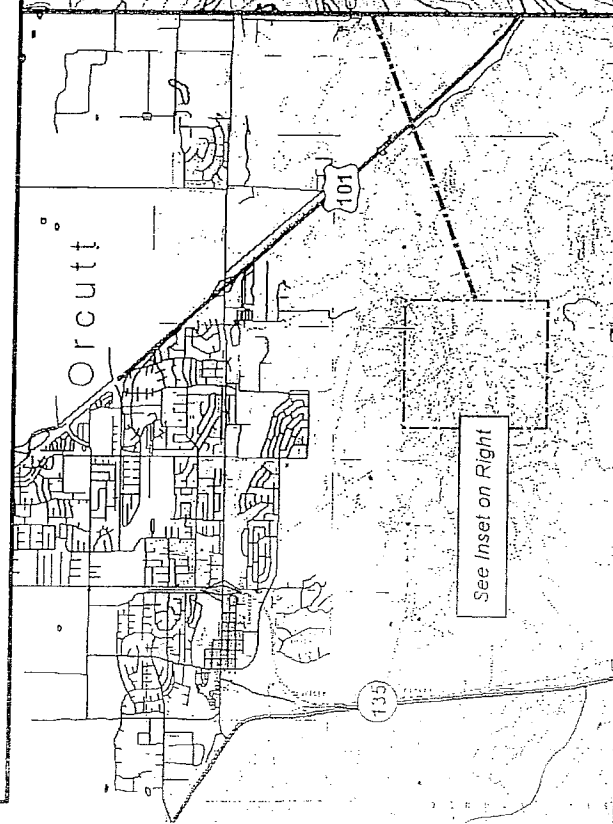
Attachments:

- A Comparison of approved Pod 2 location versus proposed Pod 2 location
- B Proposed location of second diatomite tank battery
- C Proposed location of new water treatment facility
- D Proposed new facility locations and pipeline route
- E Preliminary grading exhibit and site plan for proposed diatomite tank battery.

BreitBurn Energy Orcutt Hill/Diatomite Expansion



Attachment A - Comparison of
Approved Pod 2 Location versus
Proposed Pod 2 Location

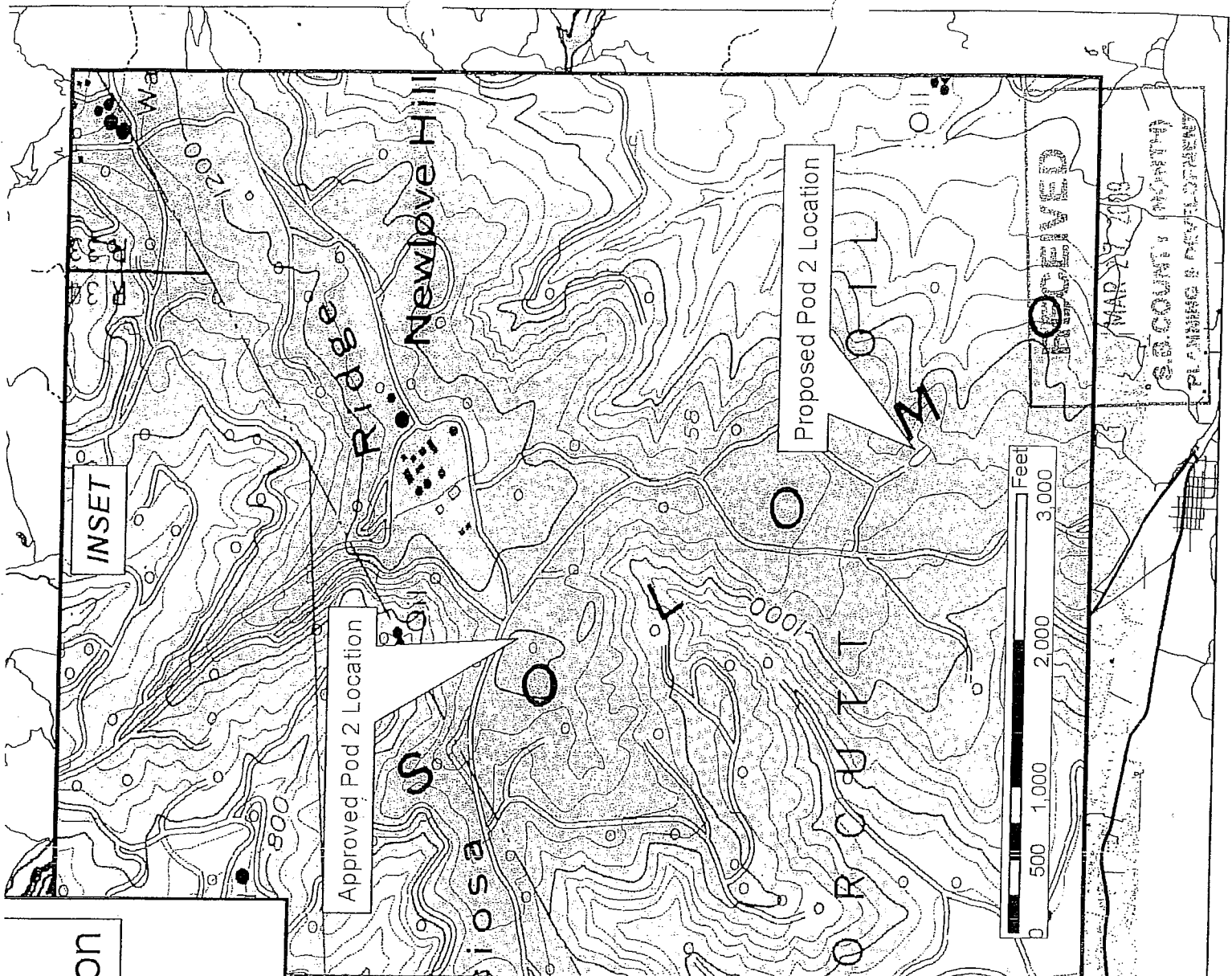


See Inset on Right

Map Legend

- us_highways
- Rivers/Streams
- Roads/Highways
- vehicular_trails

Prepared by Tracer ES&T
 Source: USGS, US Census Bureau
 California Spatial Information Library
 11/7/2008
 GCS NAD 83



INSET

Approved Pod 2 Location

Proposed Pod 2 Location



RECEIVED

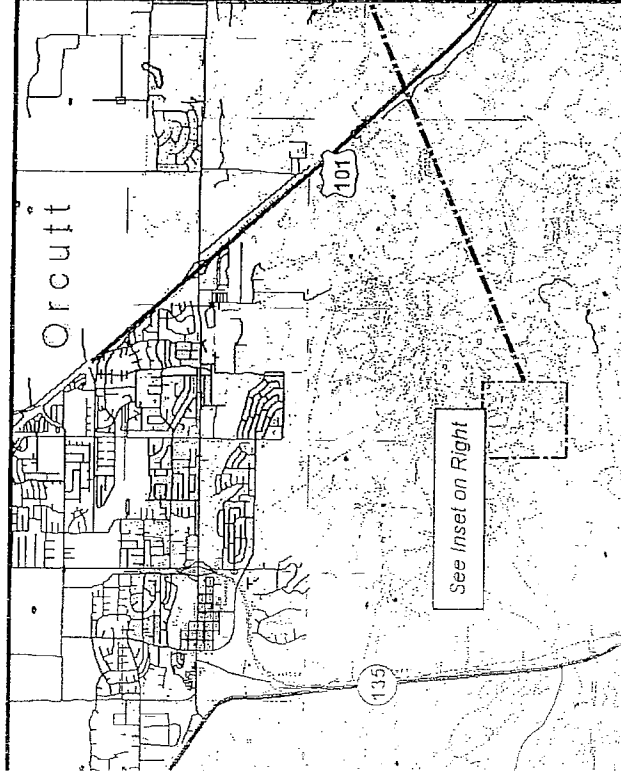
MAR 27 2009

SECOINE CONSULTING
PLANNING & DESIGN

BreitBurn Energy Orcutt Hill/Diatomite Expansion



Attachment B - Proposed Location
of Second Diatomite Tank Battery

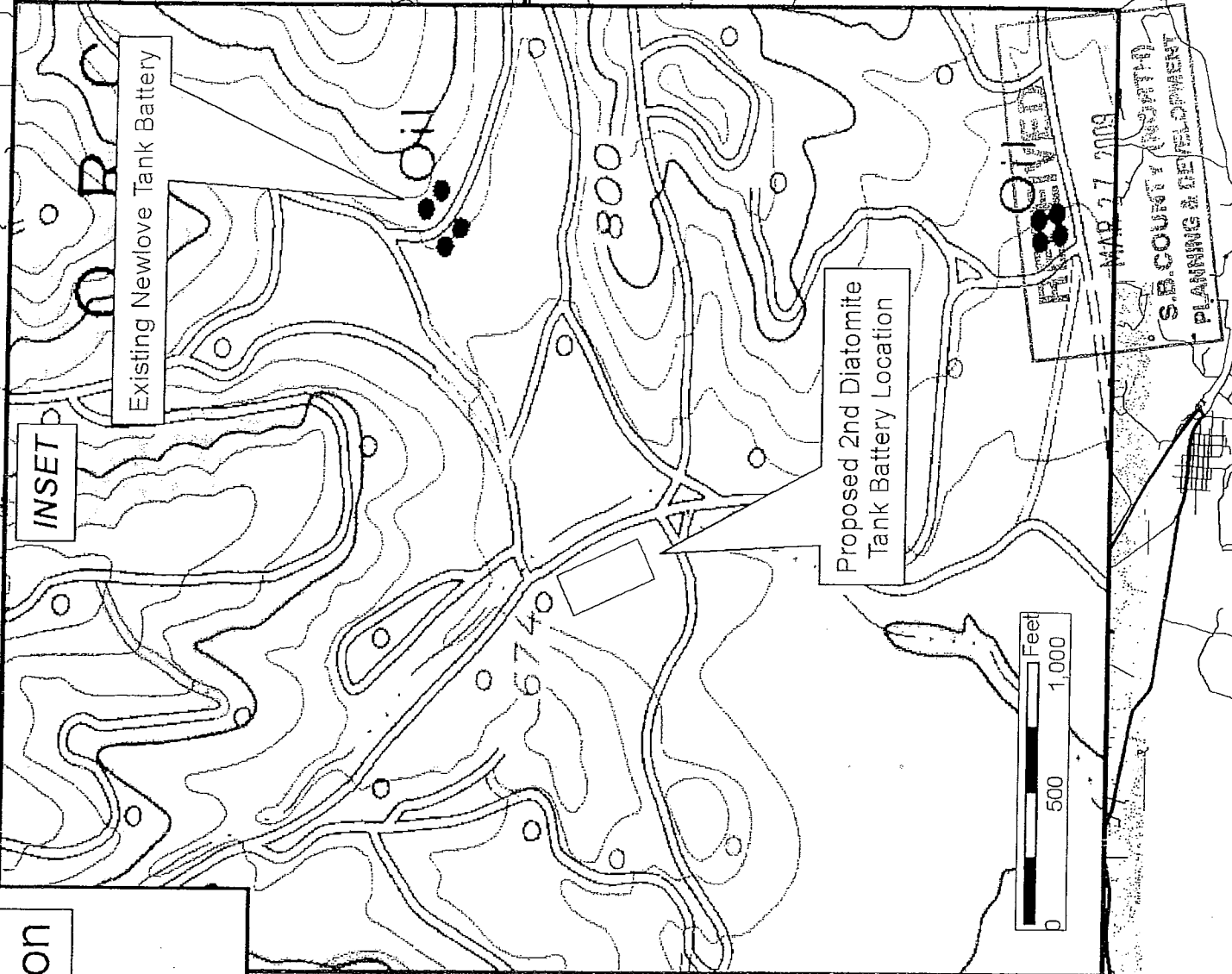


Map Legend

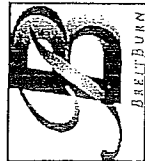
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-  Rivers/Streams
-  Roads/Highways
-  vehicular_trails



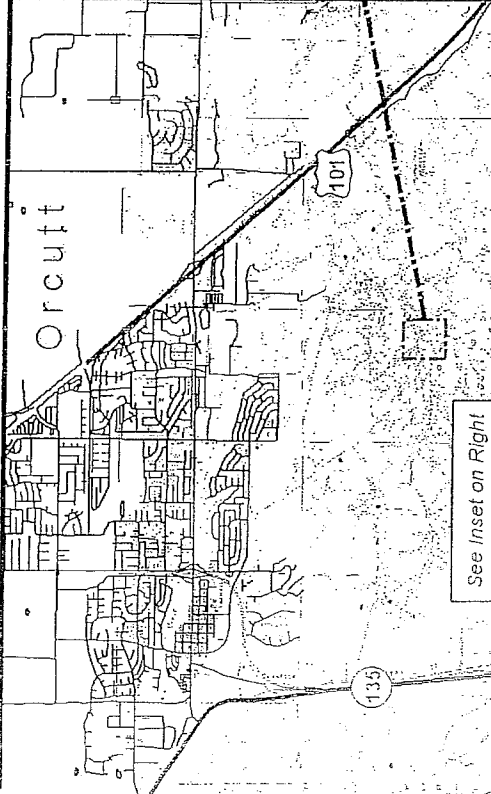
Prepared by Tracer ES&T
 Source: USGS, US Census Bureau
 California Spatial Information Library
 11/7/2008
 GCS NAD 83



BreitBurn Energy Orcutt Hill/Diatomite Expansion



Attachment C - Proposed Location
of New Water Treatment Facility



Map Legend

- us_highways
- Rivers/Streams
- Roads/Highways
- vehicular_trails

Prepared by Tracer ES&T
 Source: USGS, US Census Bureau
 California Spatial Information Library
 11/7/2008
 GCS NAD 83

INSET

Location of Existing Approved
Water Treatment Plant

Proposed Location for New
Water Treatment Plant



NO RECEIVED

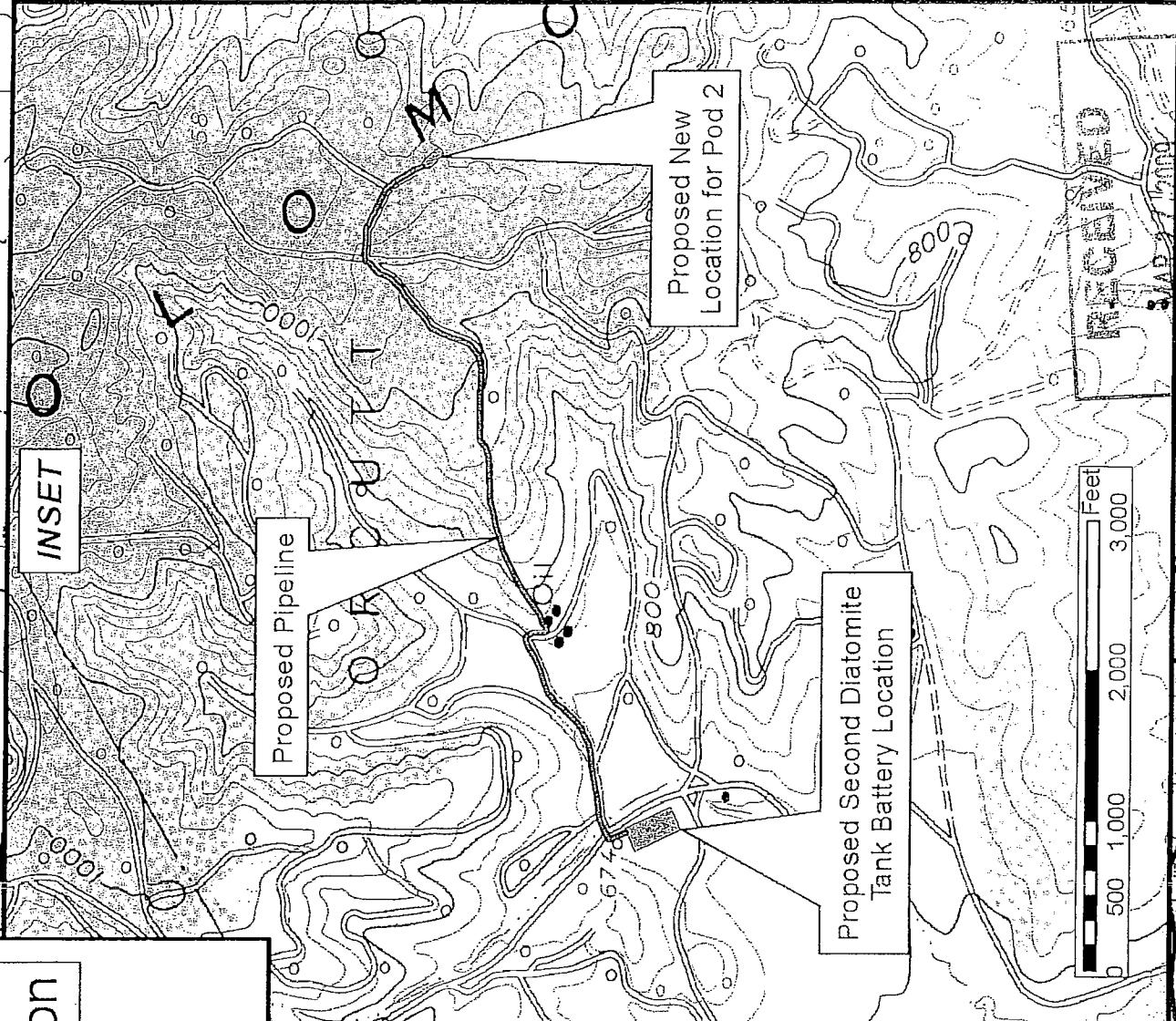
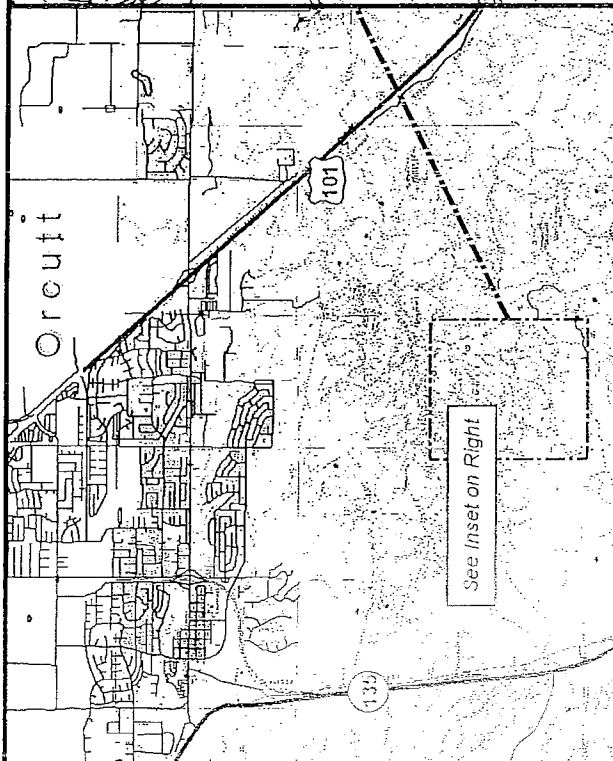
MAR 27 2009

SAN COUNTY (HONOLULU)
PLANNING & DEVELOPMENT

BreitBurn Energy Orcutt Hill/Diatomite Expansion



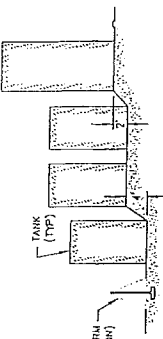
Attachment D - Proposed
New Facility Locations



Map Legend

- us_highways
- Rivers/Streams
- Roads/Highways
- vehicular_trails

Prepared by Tracer ES&T
Source: USGS, US Census Bureau
California Spatial Information Library
11/7/2008
GCS NAD 83



SECTION A-A
NTS

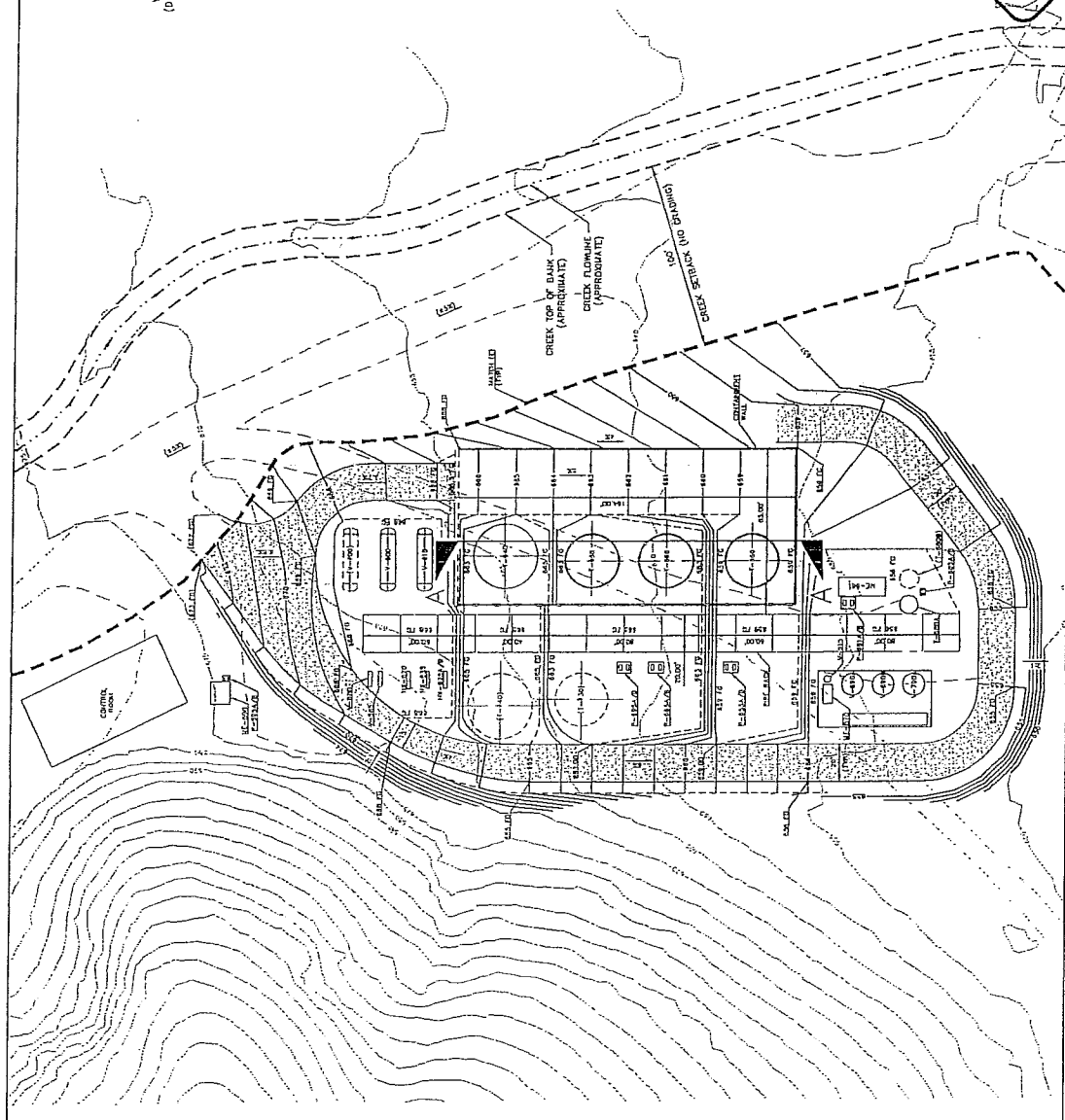
NOTES:

1. THIS PRELIMINARY GRADING EXHIBIT IS A GUIDE FOR APPROXIMATE GRADING. THE FINAL ELEVATIONS SHALL BE DETERMINED BY THE FINAL GRADING PLAN. THE TOP OF BANK DITCH IS APPROXIMATELY 1' BELOW THE FINISHED GRADE.
2. THE EXISTING GROUND SURFACE IS SHOWN BY DASHED LINES. THE PROPOSED GRADING IS SHOWN BY SOLID LINES. THE PROPOSED GRADING SHALL BE AT LEAST 1' ABOVE THE FINISHED GRADE TO PROVIDE PROTECTION AGAINST OVERFLOW.
3. EXISTING OBSTACLES ARE APPROXIMATED FROM AERIAL PHOTOGRAPHY.
4. ELEVATIONS ARE IN FEET.

LEGEND:

- APPROXIMATE ELEVATION OF DITCH
- APPROXIMATE TOP OF BANK OF DITCH
- APPROXIMATE SURFACE FROM DITCH
- PROPOSED DITCH BEING
- PROPOSED WATER CONTROL
- PROPOSED CONFINEMENT WALL
- EXISTING OBSTACLE
- EXISTING MAINT. CONTROL STRUCTURE
- PROPOSED ROAD

NOT FOR CONSTRUCTION



NOTES:

Cannon

BREITBURN

PRELIMINARY GRADING EXHIBIT
DIATOMITE PHASE II PRODUCTION FACILITY
BREITBURN - HIGHTFIELD
COUNTY - SANTA BARBARA COUNTY, CALIFORNIA

DATE: 02/23/09
BY: [Signature]

PROJECT NO: CE688DEX0003
SHEET NO: 1 OF 1

MAR 27 2009

S.B. COUNTY (SHEET)
PLANNING & DEVELOPMENT

COUNTY OF SANTA BARBARA
PLANNING AND DEVELOPMENT
MEMORANDUM



TO: Doug Anthony, Deputy Director
Development Review Division

FROM: Dana Carmichael, Associate Planner

DATE: December 21, 2009

RE: Recommendation for Finding of Substantial Conformity (09SCD-00000-00020) for the BreitBurn Energy Company Orcutt Hill Diatomite Project Oil Drilling and Production Plan (05PPP-00000-00001).

Initial Project Approval

On August 24, 2006, the Santa Barbara Planning Commission approved an Oil Drilling and Production Plan (05PPP-00000-00001) for Phase 1 of the BreitBurn Energy Company Orcutt Hill Diatomite project. Phase 1 of the project includes the installation of up to 32 new oil wells located in two “pods” located on two existing drill pads. The installation of steam generation and other accessory equipment and pipelines required for the operation of the new oil wells was also approved. The Planning Commission approved Phase 2 of the project on November 8, 2006. Phase 2 includes the development of up to 64 oil wells in four pods located on four existing drill pads, as well as other project-related accessory equipment.

Approved Prior Changes:

- 07SCD-00000-00049, (modification to well pod locations), approved June 3, 2008
- 08AMD-00000-00009, (construction of new office), approved April 14, 2009
- 09SCD-00000-00004, (pod 1 expansion), approved March 9, 2009
- 09SCD-00000-00008, (Pod 2 relocation, construction of a second tank battery near the existing Newlove Tank Battery, upgrade and expansion to the existing water treatment plant, and construction of a new pipeline to connect the new tank battery to the pods), approved July 27, 2009

Proposed Project Change

The applicants are proposing the following modifications to the BreitBurn Oil Drilling and Production Plan (05PPP-00000-00001):

- 1) BreitBurn has determined that modifying the existing tank battery is more economically feasible than building the new tank battery as approved under 09SCD-00000-00008. Attachment 1 illustrates the changes proposed to the ancillary equipment and realignment of the main road to accommodate these modifications.

- 2) BreitBurn has determined that production can be maximized by relocating one well to Pod # 1, and three wells to the Newlove 83 location (see Attachment 2). The Newlove 83 location is an existing well location that can accommodate the 3 new wells without increasing the size of the existing well pad. Attachment 3 includes photographs of Pod 1 and the Newlove 83 site which illustrate that there is ample room at these locations for the proposed new wells. The proposed 4 wells would not increase the 96 wells approved by the Planning Commission under the existing Oil Production Plan (05PPP-00000-00001);
- 3) The proposed modifications to the existing tank battery would require grading of approximately 500 cu. yd. cut and 500 cu. yd fill in order to realign the existing access road.
- 4) The previously approved Substantial Conformity Determination (09SCD-00000-00008) approved the installation of a new pipeline route to connect the new tank battery to the pods. As the current proposal no longer includes the construction of a new tank battery, the installation of this pipeline is no longer required and would be eliminated from the project description.

No other changes to the previously approved project are proposed, and all other design and operation characteristics described by Condition No. 1 (Project Description) approved by the Planning Commission on November 8, 2006 would continue to be implemented. Subsequent Land Use Permits for the development of individual oil well pods also remain a requirement to ensure that the development of each oil well pod has complied with applicable conditions of approval.

The project description with appropriate changes denoted in ~~strike-through~~ and underline is shown below:

Phase 2 of this Oil Drilling and Production Plan, 05PPP-00000-00001 is based upon and limited to compliance with the project description, the Planning Commission's Hearing Exhibit marked "Attachment G", dated November 8, 2006, and conditions of approval set forth below. Any deviations from the project description, exhibits, or conditions of approval must be reviewed and approved by the Planning Commission for conformity with this approval. Deviations may require modification to the permit and/or further environmental review. Deviations without the above described approval would constitute a violation of permit approval.

This project will result in the construction and operation of up to 96 oil wells that use steam injection to enhance oil recovery. Injecting steam into the shallow (300 to 800 feet below the ground surface) oil reservoir beneath the project site reduces the viscosity of the oil making it easier to recover.

The proposed oil wells and other project-related facilities are located within the Orcutt Hill Oil Field, which covers over 10,000 acres and contains over 300 oil wells. The majority of proposed BreitBurn project is located on Assessor Parcel Number 101-020-74 approximately 1.5 miles south of East Rice Ranch Road and the community of Orcutt. The project site is approximately 2 miles west of U.S. Highway 101, and 2.4 miles east of State Route 135 (Attachment E). Regional access to the project site is provided by East Rice Ranch Road, U.S. Highway 101 and State Route 135. Local access is provided by existing oil field roads. The oilfield is fenced, gated and is not open to the public.

The Orcutt Hill Oilfield Diatomite project includes five major components to be developed in two phases:

Phase 1 of the project consists of the following:

- Up to 32 new oil wells on two drill pads
- One steam generator
- Grading and construction of the existing tank battery
- Installation of hydrogen sulfide removal equipment
- Steam and oil pipelines (with no truck loading racks)

Phase 2 of the project consists of the following:

- Up to 64 new and existing oil wells (total of 96 for project)
- 2 steam generators
- Phase 2 of the existing tank battery construction
- Installation of hydrogen sulfide control equipment
- Steam and oil pipelines

The locations of the proposed facilities are depicted on Attachments F and G. All proposed project equipment will be operated 24 hours a day, 365 days a year. All oil produced by the proposed project will be transported from the project site using an existing on-site pipeline. No truck transportation of oil produced by Phases 1 or 2 of the project will occur.

Oil Wells. The project proposes to operate up to 96 oil wells, including 95 new wells and one (1) existing well. The wells will be located in six “pods” with up to 16 wells in each pod. The proposed well pods will be between 0.20 and 0.41 of an acre in size, and each will be located in a relatively level area that has been previously graded and used for oil production operations. Access to each well pod will be provided by an existing paved road. The location of each proposed well pod is shown on Attachments F and G, and as revised by exhibits associated with 07SCD-00000-00049, 09SCD-00000-00004, 09SCD-00000-00008, and 09SCD-00000-00020.

The first well pod to be developed will be Pod 1, located south of and adjacent to the existing BreitBurn Orcutt Hill field office. Pod 1 will consist of fifteen new wells drilled to a depth of 800 feet, and one existing well (Newlove No. 76). The installation order for well Pods 2-6 will be dependent on the success of previous pods. Therefore, successive pods may not be developed in the same order as their numerical designation.

Well steaming will consist of injecting steam into one of the wells in a pod for three to five days. The steam will then be allowed to "soak" in the well for one to two days before the well is returned to production. While the first well is soaking, steam injection will move to the next well in the pod. This process would continue until all 16 wells have been steamed, after which the cycle will be repeated.

Steam Generation. The proposed project includes the installation and operation of three (3) steam generators at a location adjacent to the BreitBurn Orcutt Hill field office (Attachments F and G). The proposed steam generator site is located on a previously cleared area that is approximately one acre in size. Access to the steam generator site will be provided by an existing access road.

Each steam generator will produce steam for two well pods, and will be rated at approximately 62.5 million (MM) Btu/hr. As required by the Santa Barbara Air Pollution Control District, each steam generator will be equipped with Best Available Control Technology (BACT) to reduce air pollutant emissions. A site plan depicting the proposed steam generator site is provided as Attachments F and G.

Water Use. All water used for steam generation will be obtained from the brine water presently produced by oil production operations on the BreitBurn project site. On average, as much as 75,000 barrels of water are produced from the Monterey and Point Sal formations per day. After the produced water is separated from the oil, it is presently pumped back into the Monterey and Point Sal formations by injection wells located throughout the oilfield.

On average, up to 13,500 barrels of water (4,500 barrels for each steam generator) will be used each day for steam production. This water use rate is equivalent to approximately 635 acre feet per year (AFY). Water for steam generation will be transported to the generator site using existing pipelines. Prior to conversion to steam, the water will be treated using a membrane filtration system to remove impurities (salt, minerals, etc). The filtration units will be located in a proposed building east of adjacent to the steam generators. While the permitted water treatment plant is operational, it is not capable of providing the quantities of clean water needed for the existing project. Therefore, the applicants are proposing to update and slightly expand the existing produced water treatment plant. The new plant will include the replacement of approximately 6 tanks

used for neutralization, storage, and skim/backwash. Other equipment at the site will include a gas flotation system, nutshell filters, pumps, and other accessory equipment. The new building will be approximately 6,000 square feet (60' by 100') and will have a maximum height of approximately 26 feet. Other equipment at the steam generation site will include a gas floatation system, nutshell filters, water storage tanks and other accessory equipment.

Natural Gas Use. The three proposed steam generators will require the use of 180,000 cubic feet of natural gas per hour (180 mcf/hour). The primary source of natural gas for the project will be an existing utility connection.

The project applicant currently uses most of the natural gas that they produce from the Orcutt Hill Oilfield to operate onsite equipment. Therefore, very little of the natural gas produced on the project site will be available for use by the proposed steam generation project. Some natural gas may be available for purchase from an adjacent oilfield for use on the project site. All natural gas used on the project site will comply with APCD fuel standards.

Tank Battery. The proposed project includes the development of two phases of tank battery construction that will be used to store produced oil and water, and to assist in the removal of water from produced oil. The tank battery will be located in a previously cleared one acre area in the northern portion of the project site that is adjacent to the existing field office and proposed steam generator site (Attachments F and G). Access to the tank battery will be provided by existing paved roadways.

The tank battery will be constructed in two phases. The first phase facilities will receive fluids produced from Well Pods 1, 2 and 5; and second phase portion of the tank battery will receive fluids from Well Pods 3, 4 and 6. The tanks that will be provided in the tank battery are listed below.

- Two 5,840 barrel wash tanks (one in each phase). These tanks will be 35 feet in diameter and 32 feet high.
- ~~Two~~ Three 2,100 barrel reject oil tank (one in each phase). These tanks will be 25 feet in diameter and 24 feet high.
- ~~Two~~ Three 2,800 barrel produce water/wash tanks (one in each phase). These tanks will be 25 feet in diameter and 32 feet high.
- Two 2,100 barrel dry oil shipping tanks (one in each phase). These tanks will be 25 feet in diameter and 24 feet high.

In addition, both tank battery phases will include accessory and support facilities, including: vapor recovery equipment, 2 separators, de-sander, sand pit, free gas knockout, heat exchangers, electrical equipment, pumps, lease automatic custody transfer (LACT),

and other similar equipment. A site plan depicting the proposed tank battery site is provided as Attachment H.

~~The second phase of tank battery construction would be constructed within a previously disturbed, cleared area, with a building footprint of approximately two acres in size and consisting of approximately 22,350 sq. ft. of development. This location would maximize gravity flow, as new pod locations are all located at lower elevations than the existing phase 1 portion of the tank battery. Access would be provided by existing roadways. A site plan depicting the proposed tank battery site is provided as Attachment E. The tanks that would be provided in Phase 2 are listed below:~~

- ~~• Two 6,180 barrel wash tanks. These tanks would be 37 feet in diameter and 32 feet high.~~
- ~~• Two 4,000 barrel produced water tanks. These tanks would be 30 feet in diameter and 32 feet high.~~
- ~~• One 3,000 barrel reject oil tank of approximately 30 feet in diameter and 24 feet in height.~~
- ~~• One 3,000 barrel oil shipping tank of approximately 30 feet in diameter and 24 feet in height.~~

Grading. Proposed oil well pod sites have been previously graded, but to accommodate the proposed project-related equipment additional site leveling will be required. Existing ground surface contours for each proposed well pod are depicted on Attachments I-N, and the size and grading requirements for each proposed well pod site are summarized on Table 1-1. All project-related grading will be balanced on the project site.

The proposed steam generator and tank battery sites slope gently to the west. To accommodate the proposed steam generators, tanks and other structures, the sites will be re-contoured to provide level pad areas. To minimize the creation of cut slopes, retaining walls ranging between five and nine feet in height will be used to create the level pad areas. The realignment of the existing tank battery access road will require approximately 500 cu. yd. of cut and 500 cu. yd. fill.

Grading at the steam generator and tank battery sites will include over-excavating native soils. The excavated soil will be replaced and re-compacted to provide a suitable foundation for the proposed structures. Cross-sections depicting existing and proposed ground contours at the steam generator and tank battery sites, along with the proposed structures and equipment, are provided on Attachment O. Proposed grading volumes for the steam generator and tank battery sites are summarized on Table 1-1.

**Table 1-1
 BreitBurn Energy Company Diatomite Project
 Site Development and Grading Summary**

Proposed Facility (existing well number)	Site Dimension		Estimated Grading Required (cubic yards of cut and fill)
	Feet	Acres	
Well Pod 1 (Newlove 76)	74 x 225	0.38	1,200
Well Pod 2 (Newlove 67 31)	75 x 226	0.39	1,600
Well Pod 3 (Newlove 59)	80 x 226	0.41	1,700
Well Pod 4 (Newlove 103)	67 x 200	0.31	100
Well Pod 5 (Newlove 78)	75 x 117	0.20	1,000
Well Pod 6 (Newlove 53)	75 x 200	0.38	2,100
Steam Generator Site	150 x 270	0.93	26,000 (1)
Tank Battery Site	105 x 270	0.65	15,000 (1)
Tank Battery Access Road Realignment	N/A	N/A	<u>1,000</u>
TOTAL	---	3.65	48,700 49,700

(1)Grading volumes include the over excavation of these sites. The over excavated soil will be replaced and re-compacted on the project sites.

Hydrogen Sulfide Removal System. The proposed H₂S removal system will treat natural gas produced from the Diatomite formation by the proposed project. The treatment facility will be located at the tank battery site. A single H₂S removal system will serve the phase 1 tank battery, and an additional treatment system may be added when the tanks associated with the phase 2 tank battery are added. The proposed H₂S treatment vessels will be approximately 12 feet in diameter and approximately 30 feet in height.

H₂S removal will occur by passing the produced gas through a granular material (SulfaTreat) that has a high affinity for sulfur. When the H₂S concentration in the treated gas approaches 700 ppmv, the inlet gas stream will be bypassed to the second vessel while the treatment chemical in the first vessel is replaced. Spent treatment chemical would be non-hazardous and disposed off-site. H₂S concentrations in the produced gas treated vary from 400 to 700 ppmv, and outlet concentrations range from zero to 700 ppmv. When outlet H₂S levels in the treated gas are at the upper end of the concentration range, the spent SulfaCheck is removed and new chemical is placed in the treatment vessel. Spent SulfaCheck is used as a corrosion inhibitor in the on-site water injection system. The existing H₂S scrubber is located in the vicinity of the BreitBurn Orcutt Hill office and will continue to be operated in conjunction with the proposed project. All of the treated gas will remain within the Orcutt Hill Oilfield.

Based on Breitburn's experience with steam enhanced production, the H₂S concentrations in produced gas are expected to be initially low (0-500 ppmv), but increase over time due to the steaming operation. H₂S concentrations would increase because hydrogen atoms from the steam injection water combine with sulfur in the oil. Based on BreitBurn's observations of similar steam enhancement operations in the San Joaquin Valley, the H₂S concentrations in gas produced at the project site could increase to approximately 15,000 ppmv, then level out as the optimum oil reservoir temperature is reached. The natural gas produced by the proposed project could have a maximum H₂S concentration of approximately 15,000 ppmv, or approximately 1.5 percent.

Pipelines. The proposed project will use a network of existing and new pipelines to transport oil, water, natural gas, and steam. All new pipelines will be installed above ground and most will be installed along existing roadways. One proposed pipeline segment will not be located along a roadway and will be adjacent to existing above ground pipelines.

New steam pipelines will extend from the proposed steam generator site to the well pod areas. Two steam lines will extend westward from the steam generator site to serve Pods 2, 3, 4 and 6. One of these lines will serve Pods 2 and 4, and the second line will extend southward to serve Pods 3 and 6. A new single steam line will extend to the east to serve Pod 5, and Pod 1 will be served by an existing steam line. The location of proposed steam lines are depicted on Attachments F, G and P, and as revised by exhibits associated with 07SCD-00000-00049, 09SCD-00000-00004, and 09SCD-00000-00008.

New pipelines will transport produced fluids to the proposed tank battery. New pipelines will connect Pods 1, 2 and 5 to the first phase tank battery; and new pipelines will connect Pods 2, 3, 4 and 6 to the second phase of the tank battery. The locations of proposed steam lines are depicted on Attachments F, G and P, and as revised by exhibits associated with 07SCD-00000-00049, 09SCD-00000-00004, and 09SCD-00000-00008.

After the produced oil meets pipeline specifications, it will be transferred by a new pipeline to the existing Newlove lease LACT units located adjacent to the existing Newlove tank battery. Produced water that will be used to produce steam will be transported to the steam generator site by existing pipelines.

~~An approximately 4,500 ft. long pipeline is proposed to connect well Pod 2 to the Phase 2 part of the tank battery located southwest of the existing Newlove tank battery (Phase 1). This pipeline will be installed above ground and will travel along existing roadways or adjacent to existing above ground pipelines. No tree or vegetation removal would be required in order to install the pipeline, and as a result impacts to vegetation would be minimal.~~

Produced Oil Transportation. Oil produced by the proposed project will be transported from the oilfield using a Conoco-Phillips pipeline connection that exists on the project site. This pipeline will transport the produced oil to the Conoco-Phillips Orcutt Pump Station facility located adjacent to Clark Avenue, approximately 500 yards east of Highway 135. Breitburn has obtained a commitment from Conoco-Phillips to use the existing pipeline.

All oil produced by the proposed project will be transported from the project site using an existing on-site pipeline. No truck transportation of oil produced by Phases 1 or 2 of the project will occur.

Project Phasing. The proposed project will be developed in two phases. The first phase will include the installation of one steam generator, the phase 1 tank battery, two oil well pods (Pod 1 and Pod 2 or 5), and required pipelines. Installation, start-up and evaluation of the first project phase would occur over a 12-18 month period of time. The second project phase will include the installation of two steam generators, the second phase of the tank battery, the remaining four well pods and required pipelines.

Other Project Design Measures. The proposed project will implement the following measures to minimize the potential for environmental impacts.

- a. Pipelines will be located above ground and along existing roadways to facilitate regular inspections and to minimize the potential for corrosion. Pipelines will be buried at road crossings.
- b. Steam generators and accessory equipment will be located at existing well pads, tank farms, treatment or storage areas to the extent feasible to minimize grading and vegetation impacts.
- c. New equipment will be located in areas where vegetation or terrain will minimize views of the equipment by the general public.
- d. New equipment will be painted a neutral color to blend with the background environment.
- e. Steam generators will be located in areas that minimize potential noise or vibration impacts to the public.
- f. Lighting that may be visible from the property boundaries (i.e., lighting at proposed Well Pods 2 and 5, the tank battery and the steam generator site) will be low profile and shielded to minimize potential lighting impacts. Existing lighting

provided at these locations will be removed and replaced with new low profile and shielded lighting fixtures.

- g. Pumping units and well cellars are not planned for the new wells.

Staff Recommendation and Substantial Conformity Determination Guidelines

The Substantial Conformity Determination Guidelines provided in Appendix H of the Land Use Development Code are evaluated below. I have reviewed the proposed project change based upon the following evaluation criteria and recommend that you find this change in substantial conformity with previously approved project plans and conditions of approval.

- a) *Does not conflict with project conditions of approval and/or recorded map conditions.*

The proposed revisions and additions to the BreitBurn Production Plan (05PPP-00000-00001) would not conflict with the original project conditions of approval. The relocation of 4 wells would not increase the number of oil wells developed on the project site as approved by the Oil Drilling and Production Plan, or change the operation characteristics of the project. The proposed modifications to the existing tank battery, and elimination of the proposed second tank battery, would be within the originally approved footprint, and meets all required setbacks. The proposed revisions were originally reviewed under the Mitigated Negative Declaration which was prepared for the BreitBurn Diatomite project and was circulated for public review. Therefore, the proposed project would not conflict with project conditions of approval under 05PPP-00000-00001.

- b) *Does not result in health or safety impacts.*

The Negative Declaration prepared for the Diatomite project evaluated the potential for health and safety impacts resulting from exposure to H₂S gas produced by the project. That evaluation determined that the H₂S gas scrubbers provided at the project site would reduce potential impacts to a less than significant level. Based on the *Safety Element Supplement* requirements, if the separation distance between the H₂S treatment facilities, and a populated area is greater than one mile, and the concentration of H₂S gas is less than five percent, the project is presumed to not result in a significant potential public safety impact and a quantitative assessment of potential public safety impacts is not required.

Based on Breitburn's experience with steam enhanced production, the H₂S concentrations in produced gas are expected to be initially low (0-500 ppmv), but increase over time due to the steaming operation. H₂S concentrations would increase because hydrogen atoms from the steam injection water combine with sulfur in the oil. Based on BreitBurn's observations of similar steam enhancement operations in the San Joaquin Valley, the H₂S concentrations in gas produced at the project site could increase to approximately 15,000

ppmv, then level out as the optimum oil reservoir temperature is reached. The natural gas produced by the proposed project could have a maximum H₂S concentration of approximately 15,000 ppmv, or approximately 1.5 percent.

The relocation of 4 wells, modifications to the existing tank battery, and road realignment would not affect the potential for H₂S gas exposure impacts, and project-related impacts would continue to be less than significant. The proposed project also eliminates the need for the additional pipeline which was approved under the last Substantial Conformity Determination (09SCD-00000-00008). In addition, condition of approval No. 9 (Fire Protection Plan) requires that a fire protection plan be approved by the Fire Department prior to the approval of a Land Use Permit. A fire protection plan was approved by the Fire Department prior to the issuance of the Land Use Permit for oil well pod sites 1 and 3. Clearance by the Fire Department acknowledging that the revised oil well pod location is consistent with the provisions of the approved fire protection plan will be required before Land Use Permits are approved. Therefore, the proposed project would not result in significant new fire safety impacts.

c,i) That the project facilities, operating procedures, environmental impacts, safety impacts, and the project's compliance with policies are substantially the same as those considered in the previous permit issued by the Director.

The previously approved project was evaluated for consistency with applicable Comprehensive Plan policies. These policies require projects to minimize cut and fill; be compatible with existing topography and other environmental conditions; protect water quality; minimize visual resource impacts; protect agricultural resources; and to minimize impacts associated with mineral extraction operations. It was determined that with the implementation of proposed mitigation measures, the Diatomite project would be consistent with applicable Comprehensive Plan policies. The proposed changes and revisions to the approved Production Plan are substantially the same as what was previously reviewed and approved under 05PPP-00000-00001. The proposed road realignment to accommodate the modifications to the existing tank battery would require approximately 1,000 cu. yd. of grading (500 cu. yd. cut, and 500 cu. yd. fill). Similar to the approved project, potential impacts to sensitive tree and plant species resulting from the revised project could be reduced to a less than significant level with the implementation of adopted mitigation measures/conditions of approval. In addition, the project no longer includes the proposal to construct a 2nd tank battery as a part of Phase II. Therefore, the revised project would continue to be consistent with applicable policies of the Comprehensive Plan.

d) That the changes proposed can be effectuated through existing permit conditions.

The potential impacts resulting from the proposed revisions to 05PPP-00000-00001 would be reduced to a less than significant level by implementing adopted mitigation measures and

conditions of approval under 05PPP-00000-00001. Therefore, existing permit conditions are adequate to reduce project-related impacts, and no new conditions of approval are required.

e,g) That the impacts and changes do not alter the findings that the benefits of the project outweigh the significant unavoidable environmental effects made in connection with the original approval.

The Mitigated Negative Declaration prepared for 05PPP-00000-00001 identified feasible mitigation measures to reduce potentially significant environmental impacts of the project to a less than significant level. All mitigation measures identified by the Negative Declaration were included as conditions of approval for the Diatomite Project Oil Drilling and Production Plan (05PPP-00000-00001). The potential impacts resulting from the proposed modifications to the existing tank battery, and relocation of 4 oil wells would not result in any significant environmental impacts that were not previously addressed by the Negative Declaration, and previously adopted tree and plant protection measures would be adequate to reduce impacts of the revised project to a less than significant level. The proposed realignment of the existing access road would require grading of approximately 500 cu. yd. cut, and 500 cu. yd. fill. The grading is necessary to allow for the required setback from the existing tank battery, and to protect onsite native oak trees.

The proposed revisions would not change the operation characteristics of the project, and the proposed well locations have existing environmental conditions that are similar to the previously approved locations. The proposed revisions would not result in an increase in air emissions, traffic generation, significant grading, or result in substantial changes to the appearance of the project site. Therefore, the requested modification to the approved project would not result in significant environmental impacts.

f) Does not result in an increase of 1,000 sq. ft. or more than 10 percent of building coverage of new structures over total project approvals, whichever is less.

The proposed modification to the existing tank battery, relocation of 4 wells, and road realignment would not result in any additions to building coverage which were not previously analyzed and approved under 05PPP-00000-00001.

h) Does not require the removal of specimen trees or impact areas defined in the project environmental document as sensitive or designated as areas prohibiting structures.

The environmental review conducted for the approved project determined that no on-site trees would be removed. The proposed revisions would not require the removal of specimen trees, or impacts to areas determined to be sensitive. However, due to the proximity of trees to the approved oil pod sites and pipeline routes, mitigation measures

(condition of approval No. 6 – Native Tree Avoidance) were adopted that require the preparation of tree protection plans. These plans must provide measures to minimize impacts to native trees, and measures to be implemented if it is subsequently determined that trees have been impacted by construction activities. Compliance with the previously adopted mitigation requirements would reduce impacts to native trees resulting from the proposed project revisions to a less than significant level. Therefore, the proposed project would be consistent with the approved conditions of approval and no previously unidentified impacts to native trees would result.

- j) Does not result in more than 1500 cubic yards of net cut and/or fill outside of the Coastal Zone, or 50 cubic yards within the Coastal Zone, and avoids slopes of 30% or greater, unless these impacts were addressed in the environmental assessment for the project and mitigation measures were imposed to mitigate said impacts and the proposal would not compromise the mitigation measures imposed or result in additional environmental impacts.*

The environmental review completed for the approved project evaluated the potential for grading-related impacts. The proposed realignment of the existing access road would require 1,000 cu. yd of grading (500 cu. yd. cut, and 500 cu. yd. fill). No grading is proposed to occur in environmentally sensitive habitats or in areas that would result in impacts not previously addressed by the project's environmental review. The proposed modifications to the existing tank battery would not require grading, and grading associated with the 4 relocated wells would be substantially the same as was previously analyzed.

- k) Is located within the same general location as, and is topographically similar to, approved plans. The location shall not be moved more than 10 percent closer to a property line than the originally approved development.*

The subject parcels comprising the project site total approximately 4,125 acres. The proposed revisions would be located within the same general location as the approved project, and is topographically similar to approved plans. The proposed well locations are located within previously approved well pads. Therefore, the proposed revisions would not be located more than 10 percent closer to a property line than the originally approved development.

- l) Does not result in an overall height which is greater than 10 percent above the approved height. The project must remain consistent with height requirements of the zone.*

The proposed revisions would not result in an overall height which is greater than 10 percent above the approved height. The proposed tank heights are identical to what was approved under the approved Oil Drilling and Production Plan (05PPP-00000-00001).

m) Receives Design Review approval for landscaping and structures, if necessary.

The BreitBurn Oil Drilling and Production Plan (05PPP-00000-00001) did not require Design Review. However, condition of approval #3 requires that exterior surfaces of all tanks and structures at the proposed tank battery/stem generator site be painted a dark, non-reflective color compatible with surrounding terrain with the exception of the water treatment equipment building, which will be painted "slate gray".

n) Does not result in intensification of use; e.g., no new employees, no increases in traffic, if these were important to the previous environmental/policy analysis.

The proposed revisions to the BreitBurn Oil Drilling and Production Plan (05PPP-00000-00001) would not result in substantial intensification of use, and the approved operation characteristics would be substantially the same. There would be no increase in employees, traffic, air emissions or water usage as a result of the proposed changes. All aspects of the proposed project were previously reviewed as a part of the final mitigated negative declaration, 06NGD-00000-00018. Therefore, the proposed modifications to the production plan would not result in a significant intensification of use.

o) Does not affect easements for trails, public access, or open space.

The project site is generally not open to the public, and there are no public trails on the project site. The proposed revisions to the BreitBurn Oil Drilling and Production Plan (05PPP-00000-00001) would not have an adverse effect on the cattle grazing or other open space functions that occur on the project site.

If you agree with my analysis, please sign the attached letter to the applicant indicating that the substantial conformity determination has been approved. Please contact me to discuss any issues prior to making a final determination.

Attachments:

1. Proposed modifications to existing tank battery & road realignment
2. Proposed oil well locations
3. Site photos of proposed well locations