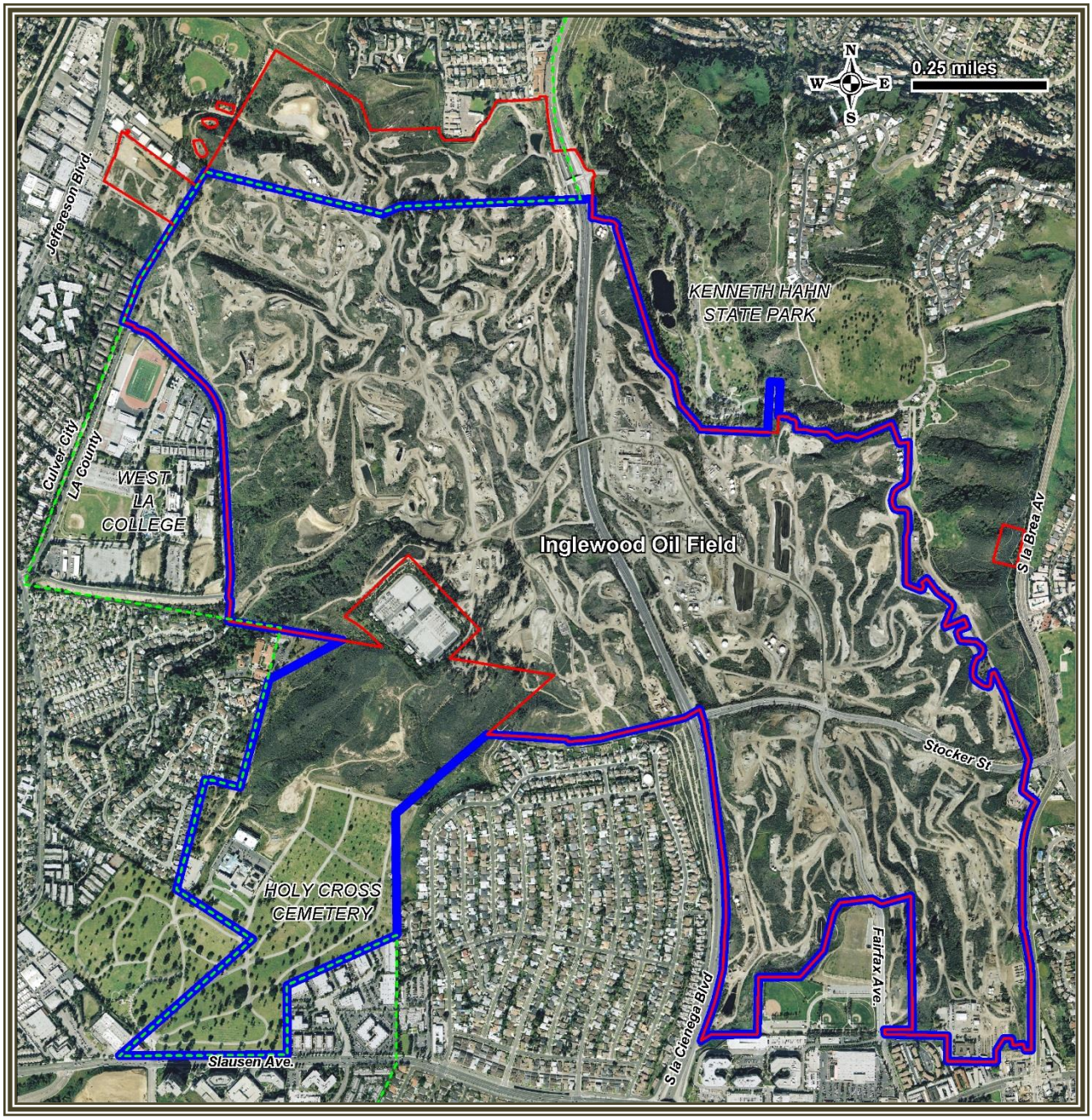
Baldwin Hills Community Standards District

Periodic Review II

Project Number: R2015-02225/RPPL2019005203



FINAL REPORT

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ACRONYMS

AOR	Area of Review
API	American Petroleum Institute
AQMP	Air Quality Management Plan
ASTM	American Society for Testing and Materials
Bbl	barrels
BMP	Best Management Practices
Bpd	barrels per day
BTEX	Benzene, Toluene, Ethyl Benzene, and Xylenes
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CAN	Community Alert Notification
CAP	Community Advisory Panel
CAP	Clean Air Plan
CARB	California Air Resources Board
CCC	California Coastal Commission
CCFD	Culver City Fire Department
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHC	Community Health Councils
CNEL	Community Noise Equivalent Level
CPUC	California Public Utilities Commission
CSD	Community Standards District
CUP	Conditional Use Permit
CWPPP	Construction Storm Water Pollution Prevention Plan
dB	decibel
dBA	decibels, A-weighted
DOGGR	Division of Oil, Gas and Geothermal Resources
DOT	U.S. Department of Transportation
DPH	Department of Public Health
DPW	Department of Public Works
DRP	Department of Regional Planning
ECC	Environmental Compliance Coordinator
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
EQAP	Environmental Quality Assurance Program

ERP	Emergency Response Plan
ESA	Endangered Species Act
ESHA	Environmentally Sensitive Habitat Areas
FEIR	Final Environmental Impact Report
GHG	greenhouse gases
GIS	Geographic Information System
H_2S	Hydrogen sulfide
HAZOP	Hazards and Operability
InSAR	Satellite aperture radar
LACoFD	Los Angeles County Fire Department
LADPW	Los Angeles County Department of Public Works
Leq	equivalent noise level
MACC	Multiple Agency Coordination Committee
MATES	Multiple Air Toxics Exposure Study
Mscfd	thousand standard cubic feet per day
MTBE	methyl tert butyl ether
NFPA	National Fire Protection Agency
NGL	natural gas liquid
NOP	Notice of Preparation
NOV	Notice of Violation
NO_X	Oxides of Nitrogen
NPDES	National Pollution Discharge Elimination System
OPR	Office of Planning and Research
OSC	on-scene coordinator
OSCP	Oil Spill Contingency Plan
OSPR	Office of Spill Prevention and Response
PPM	part per million
QMDP	Quiet Mode Drilling Plan
RECLAIM	Regional Clean Air Incentives Market
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SIMQAP	Safety, Inspection, Maintenance, and Quality Assurance Program
SPCC	Spill Prevention, Control, and Countermeasures Plan
SPR	Sentinel Peak Resources
SWPPP	Stormwater Pollution Prevention Plan
THC	total hydrocarbons
UIC	Underground Injection Control
VOC	volatile organic compounds

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Executive Summary

The majority of the Baldwin Hills Inglewood Oil Field (Inglewood Oil Field), except for the northern-most areas of the field which are within Culver City, is in the unincorporated area of Los Angeles County. As such, the permitting and operations of that portion of the Inglewood Oil Field are under the land use authority of the Los Angeles County Department of Regional Planning (DRP). The DRP performs all land use planning functions for the unincorporated areas of Los Angeles County including the County General Plan, community plans, ordinances, and Community Standard Districts (CSD). A CSD is a supplemental district used to address special issues that are unique to certain geographic areas within the unincorporated areas of Los Angeles County.

On October 28, 2008, the Los Angeles County Board of Supervisors adopted the Baldwin Hills Community Standards District. The CSD is an amendment to the Los Angeles County Zoning Code and establishes additional development standards and operating procedures for the oil and gas production operations at the Inglewood Oil Field. The CSD provides a means for implementing enhanced regulations to address the unique compatibility concerns associated with operating an oil field amid urban development. In addition to the Los Angeles County Zoning Code and the Baldwin Hills CSD, operation of the Inglewood Oil Field is also subject to other local, State, and federal regulatory agencies including; County Public Works, County Fire Department, the South Coast Air Quality Management District, the California Department of Conservation, Division of Oil, Gas and Geothermal Resources, the California Regional Water Quality Control Board, and the California Department of Transportation.

Each provision, or permit condition, of the CSD addresses a specific potential environmental impact or administrative requirement associated with the continuing operation of the Inglewood Oil Field. Provision 22.310.070.G, *Periodic Review*, requires the County to conduct a comprehensive review of the requirements of the CSD every 5 years to determine if the provisions are adequately protecting the health, safety, and general welfare of the public. The first Periodic Review covered years 2008 through 2014 and was approved in September 2015. This report covers years 2014 through 2018 and is jointly prepared by the DRP and the consulting firm MRS Environmental and is the second analysis conducted pursuant to the Periodic Review requirement of the CSD Section 22.310.070.G.

Periodic Review Results

As detailed in the following pages of this report, the results of this Periodic Review demonstrate that the provisions of the CSD have been effective and adequate to protect the health, safety, and general welfare of the public. The report also determined that no recommendations to change the language of the CSD are necessary at this time. The report analysis did determine areas where the implementation of a CSD provision could be improved. These recommendations are summarized in the following list.

1. Based on public input, it is recommended the operator use an alternate geotechnical engineering firm, to the satisfaction of Public Works, for the property damage complaint follow-up investigations. The use of an alternate firm would bring an additional team of subject matter experts to the issue (22.310.050.D).

2. Recommendation that the Operator continue the use of metal and or plastic bins and tanks consistent with current practice as the elimination of the use of below ground sumps is a significant environmental benefit (22.310.050.O).

3. Due to the fact that unannounced drills have not taken place in the past, it is recommended that efforts be made to ensure that unannounced emergency response drills take place at the oil field as allowed for by the provision of the CSD. The Department of Regional Planning may coordinate with the Fire Department to ensure that unannounced drills occur in the future (22.310.060.D). This recommendation was discussed at the Periodic Review Public Hearing and the Hearing Officer recommended a revision to the CSD provision to require an unannounced drill at least once per year. Please see the discussion for Provision 22.310.060.D in Section 5.0.

4. Based on evidence of some incomplete complaint data, it is recommended that the operator meet with staff involved with the complaint process and the 1-800 telephone line vendor to review the required information necessary for filing a complete complaint. Better complaint documentation will improve the quality of the data collected for a complaint, assist in investigation of the complaint, and therefore upgrade the complaint process and data base (22.310.060.G).

5. To improve the communication of oil field activities to the public outlined in CSD Provisions 22.310.100, Public Outreach, it is recommended that the operator post updates of oil field incidents on the oil field website.

6. To improve the communication of oil field activities to the public outlined in CSD Provisions 22.310.100, Public Outreach, it is recommended that the operator provide a Frequently Asked Questions (FAQ) section to the oil field website.

7. To improve the communication of oil field activities to the public outlined in CSD Provisions 22.310.100, Public Outreach, it is recommended that the operator provide an oil and gas primer to the oil field website.

8. To improve the documentation of the oil field wildfire prevention program, it is recommended that the existing electrical maintenance activities be added to the facility Safety, Inspection, Maintenance and Quality Assurance Program (SIMQAP, 23.310.060.c), document.

9. Based on the results of the 2020 Health Risk Assessment (HRA), all future Annual Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plan reviews shall include consideration of the HRA results with respect to the number and location of new wells proposed to be drilled in the plan prior to approval by DRP (CSD 22.310.050.Z.3). If more than 25 wells are proposed, the plan review analysis should consider additional potential mitigation which could include further setbacks, emissions reductions or others as determined in the Annual Drilling Plan review.

Through the provisions of the CSD, and along with the oversight of local and State agencies, DRP staff will continue to monitor the operations at the Inglewood Oil Field to protect the health, safety,

and general welfare of the public and the environment. More information on the Inglewood Oil Field is located on the DRP CSD and the Sentinel Peak Resources (SPR) (operator of the oil field) websites:

- http://planning.lacounty.gov/baldwinhills
- http://www.inglewoodoilfield.com

1.0 Introduction

On October 28, 2008, the Los Angeles County Board of Supervisors adopted the Baldwin Hills Community Standards District (CSD). The CSD is an amendment to the Los Angeles County Zoning Code and establishes additional development standards and operating procedures for the oil and gas production operations at the Inglewood Oil Field. Provision 22.310.070.G, *Periodic Review*, requires the County to conduct a comprehensive review of the requirements of the CSD every five years after the effective date of the ordinance to determine if the provisions are adequately protecting the health, safety, and general welfare of the public. The initial Periodic Review process was initiated in mid-2013, covered the compliance period from the inception of the CSD through December 2013, and was finalized September 2015. This report is the second analysis conducted pursuant to the Periodic Review requirement of the CSD. This review was initiated in October 2018 and covers the compliance period for the calendar years 2014 through 2018.

1.1 CALIFORNIA DEPARTMENT OF CONSERVATION

The California Geologic Energy Management Division (CalGEM), formerly knowns as the California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) oversees the drilling, operation, maintenance, and plugging and abandonment of oil, natural gas, and geothermal wells. CalGEM has jurisdictional authority to regulate all well downhole activities including well stimulation techniques. As such, the County, the CSD, and CalGEM work together to regulate and oversee the operations of the Inglewood Oil Field. The CSD provisions reference CalGEM regulations and authority where applicable.

1.2 INGLEWOOD OIL FIELD BACKGROUND

The Inglewood Oil Field has been in operation for over 85 years with over 1,600 wells being drilled during that time throughout the historical boundaries of the oil field. Current activities at the Inglewood Oil Field involve extracting oil and gas from subsurface reservoirs located between 500 and 10,000 feet deep, processing the crude oil to remove water and processing the gas to remove hydrogen sulfide and gas liquids. Crude oil is then shipped by pipeline to area refineries to be processed into gasoline and other products. The gas is shipped by pipeline to The Gas Company for end use by consumers and industry or is shipped to area refineries for use in the refining processes. Processing activities at the Inglewood Oil Field include, but are not limited to, the following:

- Gross Fluid Production Gathering and Testing;
- Crude Oil Handling;
- Water Processing;
- Water Injection;
- Gas Gathering/Gas Processing;
- Well Drilling, Maintenance and Workovers; and
- Ancillary Systems.

The average production volumes from the Inglewood field for the years 2014 through 2018 are listed in the table below.

Year	Barrels Oil Per Day (BOPD)	Gas - Thousand Standard Cubic Feet per Day (MSCFD)	Barrels Water Per Day (BWPD)
2014	7,298	3,484	349,088
2015	6,512	2,919	339,608
2016	5,702	2,606	330,433
2017	5,567	2,510	337,547
2018	5,463	2,497	351,802

Note: One barrel = 42 gallons.

The current operator of the oil field is Sentinel Peak Resources (SPR), a Quantum Energy Partners portfolio company. SPR's oil and gas operations are located throughout central and southern California, with corporate headquarters located in Englewood, Colorado. SPR took over operations of the Inglewood Oil Field beginning January 1, 2017 from the previous operator Freeport-McMoRan Oil & Gas (FM O&G).

1.3 BALDWIN HILLS COMMUNITY STANDARD DISTRICT

The CSD established new development standards and operating procedures for the oil and gas production operations at the Inglewood Oil Field. The ordinance, number 2008-0057, amended Title 22 Planning and Zoning Code of the County of Los Angeles with the intent to implement regulations, safeguards, and controls for the oil and gas production activities of the Inglewood Oil Field. Further, the supplemental zoning regulations are intended to ensure that oil field operations are compatible with surrounding land uses, to minimize potential adverse impacts, and to enhance appearance of the site with landscaping and other property maintenance requirements. The boundaries of the CSD are shown on Figure 1.1.

Title 22 Zoning Code Update

The Department of Regional Planning completed a technical update to Title 22: Zoning Code to reorganize, clarify, and simplify Title 22. The new ordinance became effective on February 28, 2019. The Baldwin Hills CSD remained intact, but the regulation numbering was changed to reflect the update. The Baldwin Hills CSD is found in Chapter 22.310 of the revised ordinance and is organized as follows:

Title 22 Chapter 22.310 Baldwin Hills Community Standards District
(Previous CSD Title 22.144.22 Ordinance References in Parentheses)

Section

22.310.010. Purpose (A)
22.310.020 Definitions (C)
22.310.030 District Map (B)
22.310.040 Area Specific Development Standards (D)
- *A. Operational Limits (D.1)*

22.310.050 Oil Field Development Standards (E)
- *A. Fire Protection and Emergency Response (E.1)*
- *B. Air Quality and Public Health (E.2)*
- *C. Safety and Risk of Upset (E.3)*
- *D. Geotechnical (E.4)*
- *E. Noise Attenuation (E.5)*
- *F. Vibration Reduction (E.6)*

Section

G. Biological Resources (E.7)
H. Cultural / Historical Resources (E.8)
I. Lighting (E.9)
J. Landscaping, Visual Screening, Irrigation and Maintenance (E.10)
K. Oil Field Waste Removal (E.11)
L. Construction of Private Roads (E.12)
M Signs (E.13)
N. Painting (E.14)
O. Sumps (E.15)
P. Well Cellars (E.16)
Q. Stormwater Drainage Management (E.17)
R. Water Management Plan (E.18)
S. Groundwater Monitoring (E.19)
T. Fencing (E.20)
U. Oil Field Cleanup and Maintenance (E.21)
V. Security (E.22)
22.310.050 W. Vehicle Parking (E.23)
X. Sanitation (E.24)
Y. Storage of Hazardous Materials (E.25)
Z. Drilling, Redrilling, and Reworking Operations (E.26)
AA. Processing Operations (E.27)
BB. Well Reworking Operations (E.28)
CC. Tanks (E.29)
DD. Well Production and Reporting (E.30)
EE. Idle Well Testing and Maintenance (E.31)
FF. Abandoned Well Testing (E.32)
GG. Well and Well Pad Abandonment (E.33)
HH. County Request for Review of Well Status (E.34)
II. Reduced Throughput Triggering Review (E.35)
JJ. Abandonment Procedures (E.36)
22.310.060 Monitoring and Compliance
A. Environmental Quality Assurance Program (EQAP) (F.1)
B. Environmental Compliance Coordinator (ECC) (F.2)
C. Safety, Inspection, Maintenance and Quality Assurance Program (SIMQAP) (F.3)
D. Annual Emergency Response Drills of LA County and Culver City Fire Departments (F.4)
E. Noise Monitoring F.5)
F. Vibration Monitoring (F.6)
G. Complaints (F.7)
22.310.070 Administrative Items (G)
A. Costs of Implementing Monitoring and Enforcing Conditions (G.1)
B. Draw Down Account (G.2)
C. Indemnification (G.3)
D. Insurance Requirements (G.4)
E. Performance Security (G.5)
F. Other Obligations (G.6)
G. Periodic Review (G.7)
H. Multiple Agency Coordination Committee (MACC) (G.8)
I. Related County Code Provision (G.9)
22.310.080 Permitting (H)
A. Ministerial Site Plan Review Required (H.1)
B. Conditional Use Permit (CUP) Required (H.2)
C. Conditional Use Permit (CUP) Requirements (H.3)
D. Application Where Violation Exists (H.4)

Section
22.310.090 Enforcement (I)
A. Civil Penalties and Performance Security
B. Access to Records and Facilities
C. Right of Entry
22.310.100 Public Outreach (J)
A. Community Advisory Panel (CAP) (J.1)
B. Community Relations (J.2)
C. Ombudsperson (J.3)
22.310.110 Modification of Development Standards (K)
22.310.120 Implementation Provisions (L)

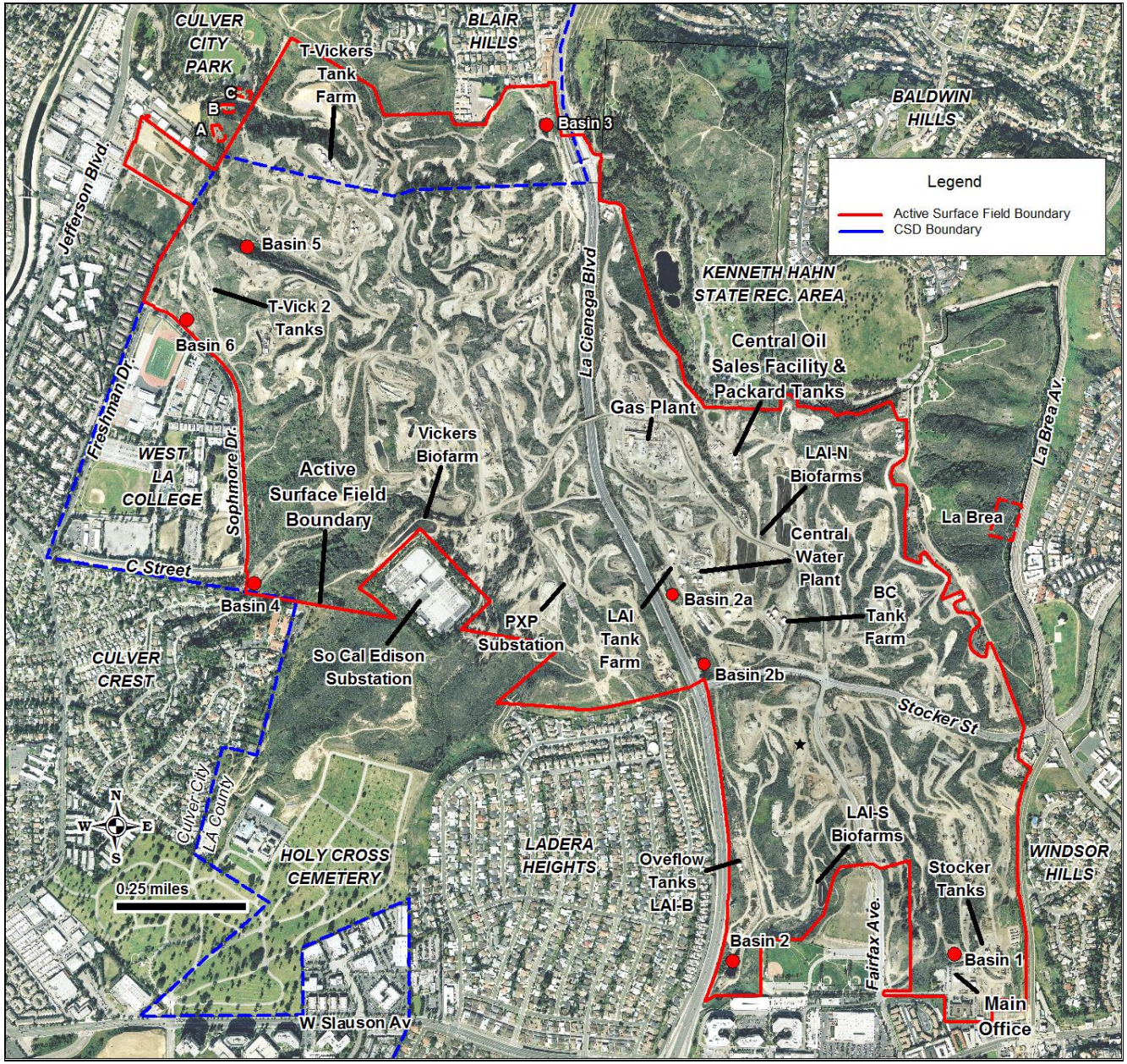

Figure 1.1
Baldwin Hills
Community
Standards
District (CSD)
Boundary Map

1.4 CSD PERIODIC REVIEW (22.310.070 G) PROVISION

Provision 22.310.070.G of the CSD reads as follows:

22.310.070 G. Periodic Review*. The county shall conduct a comprehensive review of the provisions of this section at least every five years to determine if the provisions of this section are adequately protecting the health, safety, and general welfare. Such reviews shall, among other things, consider whether additional provisions should be added, appended, or removed. One of the main goals of the Periodic Review shall be to evaluate if proven technological advances that would further reduce impacts of oil operations on neighboring land uses should be incorporated into the provisions of this section.*

> *1. Review Requirements. Each review shall include a report by a hearing officer designated by the director, which shall be prepared after public notice and an opportunity for public comment. The report shall include a comprehensive analysis of the effectiveness of this section, and shall review and consider enforcement activity, operational records, and any other issues relating to oil operations. The report, at the option of the county, may include a survey of residents near the oil field regarding noise, odors, vibrations, and other issues requested by the director of public health. A draft of the report shall be provided to the CAP and the operator for review and comment. All comments on the draft report from the CAP and the operator shall be submitted to the hearing officer in writing, and will be considered, if timely received, before the report is finalized. The final report by the hearing officer shall include a recommendation as to whether the director should prepare proposed amendment to this section for submission to the board of supervisors.*
>
> *2. Early Reviews. At the discretion of the director, reviews of this section may be conducted more frequently than every five years. Without limiting such discretion, the director shall consider whether an early review should be undertaken if more than three material violations occur within any 12-month period.*
>
> *3. Initial Review. The initial review shall occur no sooner than three years and no later than five years after the effective date of the ordinance establishing this section unless the director determines that such initial annual review shall occur at an earlier time pursuant to subsection b, above.*

1.5 ORIGIN OF THE PERIODIC REVIEW

This review is the second comprehensive review of the CSD provisions as required by Provision 22.310.070 G. As outlined in the provision above, the requirement identifies the timeline for the Periodic Review process as at least five years after the adoption of the CSD and at earlier intervals, if deemed necessary by the County. As noted above, the initial Periodic Review process covered the first five compliance years of the CSD through December 2013 and this review covers the second five-year period from January 2014 through December 2018. There have been no significant non-compliance issues at the Inglewood Oil Field since the provisions of the CSD have been implemented through December 2018. In addition, the County continuously monitors compliance with the CSD through the Environmental Quality Assurance Program. The County has not required the initiation of a Periodic Review of the CSD prior to the five-year schedule requirement.

1.6 PERIODIC REVIEW METHODOLOGY

The Periodic Review process was initiated during a Community Advisory Panel (CAP) meeting on October 25, 2018 with a presentation by the County at the CAP meeting on January 24, 2019. The CAP was established to foster communication between the community, the County, and the oil field operator (SPR) regarding oil field operations (see discussion for Provision 22.310.100 A for more detail on the CAP). The January 2019 presentation provided an overview of the Periodic Review provision of the CSD and solicited public input on the effectiveness of the CSD for input to the Periodic Review. The County received comments on the Periodic Review at CAP meetings and emails with the comment period ending May 31, 2019. All input was considered in the preparation of the Periodic Review public draft document. Appendix A provides a summary and response to those scoping comments.

The analysis reviewed a variety of compliance records and plans to determine the effectiveness of the CSD for protecting the health, safety, and general welfare of the public including:

- Compliance plans
- Compliance records
- Operations and maintenance records
- Results of the Environmental Quality Assurance Program (EQAP) and EQAP Audit
- Multi Agency Coordination Committee (MACC) records
- Violations or enforcement actions
- Incident reports
- CSD administrative requirements
- Regulatory permits activity
- Technological advancements in the operation of oil fields

The draft Periodic Review document was released and distributed to the CAP, MACC, the public and the oil field operator for review and comment in September 2019. A 60-day comment period followed ending on November 23, 2019. The report was then finalized based on input received and scheduled for a public hearing before a County hearing officer. Appendix B summarizes the public draft comments and provides responses. Figure 1.2, Periodic Review Flowchart, presents a timeline of the steps taken in preparation of the Periodic Review document.

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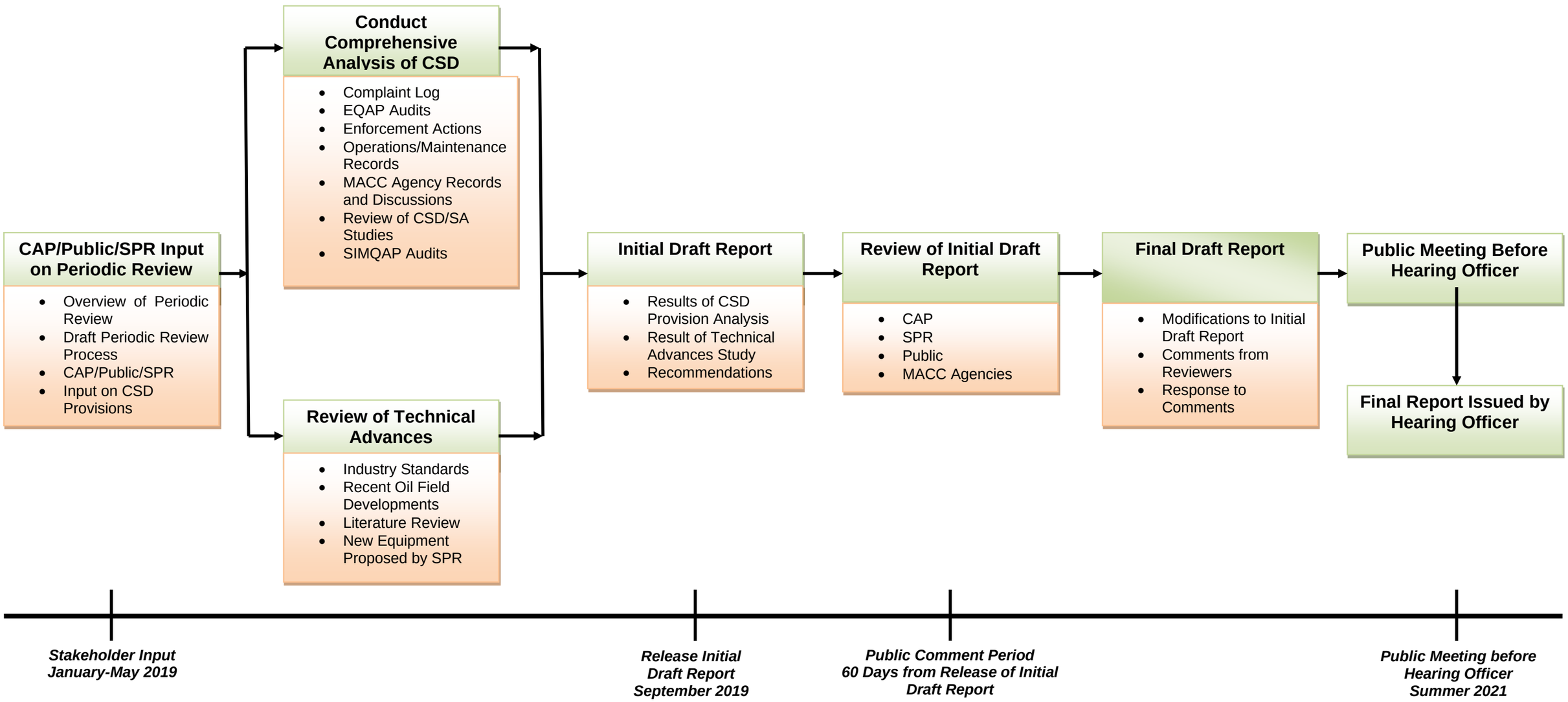
Figure 1.2
Baldwin Hills CSD
Periodic Review Flowchart



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1.7 PERIODIC REVIEW REPORT FORMAT

This report provides a review of the effectiveness and adequacy of the provisions of the CSD to protect the health, safety, and general welfare of the public. The analysis also determines compliance of the oil field with the operational limits, development standards, monitoring, administrative, and permitting requirements of the CSD. Sections 4.0 through 11.0 provide detail on the implementation of each CSD provision and a determination as to whether the requirements have worked as intended.

The review for the development standards contained in CSD Sections 22.310.040 through 22.310.100 are organized as follows:

- Provision Language
- Summary of Complaints
- Summary of Issues Raised by the Public
- Analysis of Compliance and Effectiveness
- New Technology
- Recommendations to Changes in Implementation
- Recommendations to Changes in CSD Language

The Summary of Complaints section discusses whether complaints have been made by the public on the subject CSD provision through the complaint procedure pursuant to Provision 22.310.060 G., *Complaints*. Input from the public outside of the complaint process is discussed in the Summary of Issues Raised by the Public section. This section provides an overview of input received by the County during Community Advisory Panel (CAP) meetings, from the results of email and letter input solicited for comment on the Periodic Review, and from the public concerns that led to the additional requirements stipulated in the lawsuit Settlement Agreement and Mutual Release agreement dated July 15, 2011; a brief overview of the settlement agreement is included in Section 2.0.

The Analysis of Compliance and Effectiveness section provides detail on the implementation of the condition and a determination as to the whether the requirements have worked as intended. The applicability of potential new technologies that may improve and or lessen the environmental impact of oil field operations is noted in the New Technology section. Finally, recommendations to changes in the implementation or language of the provision are discussed in the last two sections of the review.

CSD Sections 22.310.090, *Enforcement* and 22.310.110, *Modification of Development Standards*, have not been triggered through the end of 2018. As such, the analysis for these two subsections is a brief summary of the intent of the provision. Section 22.310.120, *Implementation Provisions*, provides a schedule for completion of many of the compliance plans and action item requirements of the CSD upon the original approval; those milestones have been completed by the oil field operator. The discussion of Section 22.310.120 is therefore provided in a tabular format providing the completion date of each requirement.

1.8 SUMMARY OF RECOMMENDATIONS

This Periodic Review has resulted in several recommendations to enhance the implementation of the provisions of the CSD. These recommendations do not require a modification or change to

the language of the CSD ordinance; rather, the recommendations are improvements in the method of implementation or compliance effort of the subject provision as summarized in the table below.

CSD Provision	Summary of Recommendation
22.310.050.D	Based on public input, it is recommended the operator use an alternate geotechnical engineering firm, to the satisfaction of Public Works, for the property damage complaint follow-up investigations. The use of an alternate firm would bring an additional team of subject matter experts to the issue.
22.310.050.O	Recommendation that the Operator continue the use of metal and or plastic bins and tanks consistent with current practice as the elimination of the use of below ground sumps is a significant environmental benefit.
22.310.050.Z.3	Based on the results of the 2020 Health Risk Assessment (HRA), all future Annual Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plan reviews shall include consideration of the HRA results with respect to the number and location of new wells proposed to be drilled in the plan prior to approval by DRP (CSD 22.310.050.Z.3). If more than 25 wells are proposed, the plan review analysis should consider additional potential mitigation which could include further setbacks, emissions reductions or others as determined in the Annual Drilling Plan review.
23.310.060.C	To improve the documentation of the oil field wildfire prevention program, it is recommended that the existing electrical maintenance activities be added to the facility Safety, Inspection, Maintenance and Quality Assurance Program (SIMQAP) document.
22.310.060.D	Due to the fact that unannounced drills have not taken place in the past, it is recommended that efforts be made to ensure that unannounced drills take place at the oil field as allowed for by the provision of the CSD. The Department of Regional Planning may coordinate with the Fire Department to ensure that unannounced drills occur in the future. The Hearing Officer recommended a revision to this CSD provision to require an unannounced drill at least once per year. Please see the discussion for Provision 22.310.060.D in Section 5.0.
22.310.060.G	Based on evidence of some incomplete complaint data, it is recommended that the operator meet with staff involved with the complaint process and the 1-800 telephone line vendor to review the required information necessary for filing a complete complaint. Better complaint documentation will improve the quality of the data collected for a complaint, assist in investigation of the complaint, and therefore upgrade the complaint process and data base.
22.310.100.B	To improve the communication of oil field activities to the public it is recommended that the operator post updates of oil field incidents on the oil field website.
22.310.100.B	To improve the communication of oil field activities to the public outlined in CSD Provisions 22.310.100, Public Outreach, it is recommended that the operator provide a Frequently Asked Questions (FAQ) section to the oil field website.
22.310.100.B	To improve the communication of oil field activities to the public outlined in CSD Provisions 22.310.100, Public Outreach, it is recommended that the operator provide an oil and gas primer to the oil field website.

2.0 Summary of Previous Environmental Reviews

Prior environmental reviews on the Inglewood Oil Field with a nexus to the provisions of the CSD include the *Final Environmental Impact Report, Baldwin Hills Community Standards District, October 2008,* the *Settlement Agreement and Mutual Release, July 15, 2011,* the *Annual Well Increase Evaluation*, December 2011, and the initial *Periodic Review Report, September 2015*. In addition, Stipulation 8 of the Settlement Agreement required a supplemental air quality monitoring study which was initiated (Baldwin Hills Air Quality Study) in June 2012 with the final report dated February 2015.

2.1 BALDWIN HILLS CSD FEIR

The *Final Environmental Impact Report, Baldwin Hills Community Standards District, October 2008 (*FEIR) is the environmental document that was prepared under the California Environmental Quality Act (CEQA). The FEIR was used to provide information to the general public and by Los Angeles County as one element in the decision-making process for adoption of the CSD for the Inglewood Oil Field. The provisions and requirements of the CSD were developed in part from the mitigation measures identified in the FEIR. The FEIR is available on the Los Angeles County Department of Regional Planning web site.

2.2 SETTLEMENT AGREEMENT

In November 2008 the adequacy of the CSD measures in protecting human health and the environment and the FEIR were legally challenged. The litigation was brought by the following petitioners representing the public and public groups; Community Health Councils, Inc., Natural Resources Defense Council, Mark Salkin, the City of Culver City, Citizens Coalition for a Safe Community and the Concerned Citizens of South-Central Los Angeles. The result of this legal action was the *Settlement Agreement and Mutual Release, July 15, 2011* as negotiated by the various parties, Los Angeles County and Plains Exploration and Production Company (PXP), the operator of the oil field at the time. The Settlement Agreement contains additional or revised requirements on: slant drilling, noise, the number of drill rigs, the number of wells, a health assessment and environmental justice study, a clean technology assessment, an electrical distribution study, supplemental air quality monitoring, flaring stipulations, well plug dimensions, landscaping requirements, oil field cleanup plan, a hydraulic fracturing study, and revised review based on reduced production.

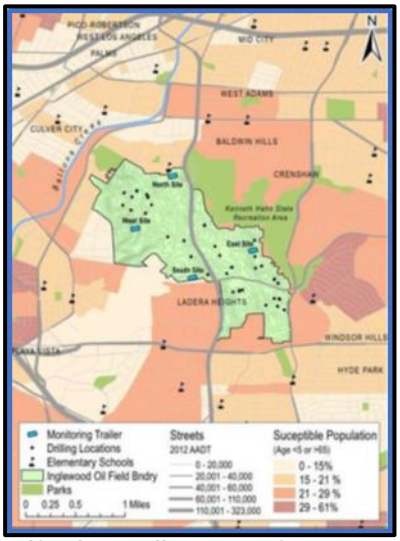
The additional or revised requirements are discussed where applicable in the following analysis of the CSD provisions sections of this document, and the *Settlement Agreement and Mutual Release* document is attached as Appendix B. Stipulation 5 of the Settlement Agreement, the *Health Assessment and Environmental Justice Study*, required a study in addition to the updated health risk assessment condition of CSD Provision 22.310.050 B.11. The study followed a report completed by the County Department of Public Health dated February 2011. The February 2011 Study analyzed the mortality rates, low birth rate births, birth defects, and cancer rates of the communities surrounding the Inglewood Oil Field as compared to Los Angeles County as a whole. The report was followed with an updated report, dated May 22, 2012, as required by the Settlement Agreement, based on community input, a community survey, and additional data obtained from drilling activities at the oil field. A second health study is currently under preparation by Public Health with the assistance of a Health Working Group composed of members of the public and the CSD Community Advisory Panel (CAP).

2.3 ANNUAL WELL INCREASE EVALUATION

Provision 4.b of the Settlement Agreement allows for a modification to the number of wells drilled in a calendar year. For the modification to be approved, the County must evaluate whether the CSD has been effective in protecting the health, safety, and general welfare of the public. This analysis, the *Annual Well Increase Evaluation*, was completed in December 2011 and included a review of the following CSD compliance subject areas; noise, vibration, air emissions, odors, ground movement, visual and aesthetics, hazards, fire protection and emergency response, and ground water quality. The results of the review concluded that for these areas of review, the CSD has been effective in protecting the health, safety, and general welfare of the public. Additional detail on the report is provided in the following applicable analysis of the CSD provision sections of this document; the *Annual Well Increase Evaluation* is included as Appendix C.

2.4 BALDWIN HILLS AIR QUALITY STUDY

Stipulation 8, *Air Quality Monitoring*, of the Settlement Agreement required a supplemental air quality monitoring study to address stakeholder concerns on potential acute and chronic exposure to air contaminants from the Inglewood Oil Field. Sonoma Technology Inc. was selected by the County to perform the Air Quality Study (Study) which commenced June 2012 consistent with the Settlement Agreement deadline of July 15, 2012. The monitoring was conducted between November 2012 and November 2013, and the report was finalized in February 2015.



The primary focus of the Study was to quantify the air toxic emissions from the Inglewood Oil Field operations and assess the health risk of both acute and chronic exposure to the emissions of oil field operations. The Study also estimated other area sources of toxic emissions and, to the extent feasible, assessed the contribution of the oil field to the overall health risk in the areas surrounding the oil field.

The Study reviewed 37 air toxics emitted by Inglewood Oil Field operations and conducted a hazard prioritization analysis to identify the pollutants of greatest concern to be analyzed in the Study. The following pollutants were identified as pollutants of potential concern; diesel particulate matter (DPM), cadmium, benzene, nickel, formaldehyde, mercury, manganese, acrolein, arsenic, and lead. Four monitoring stations were set up along the perimeter of the oil field in approximate north, south, east, and west locations. The Study was conducted for one year for DPM and, due to the availability and expense of the monitoring devices, 2.5 months for the other pollutants.

Results of the air monitoring data were used to calculate the health risk of acute and chronic exposure to the air toxics emitted from oil field operations. The health risk estimates were completed pursuant to the risk assessment guidelines outlined by the California EPA Office of Environmental Health Hazard Assessment (OEHHA) following the same methodology as used in the SCAQMD Multiple Air Toxic Exposure Study (MATES) studies. The MATES study is a monitoring and evaluation study conducted in the South Coast Air Basin; the study included a monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to characterize risk across the Basin. The study focuses on the carcinogenic risk from exposure to air toxics. The fourth such study, MATES IV, was completed with the final report

dated May 1, 2015. SCAQMD has initiated a fifth effort, MATES V, which includes a fixed site monitoring program with ten stations, an updated emissions inventory of toxic air contaminants, and an updated risk assessment.

The Baldwin Hills Air Quality Study determined the primary toxic pollutant associated with excess cancer risk to be DPM; the determination is consistent with the MATES IV study results. The results for excess cancer risk attributed to Inglewood Oil Field operations ranged from less than 1 per million to the west and south of the oil field to 6.7 per million on the east side of the oil field. Total excess cancer risk from all area sources plus the oil field was estimated at 340 per million, with vehicle exhaust the primary cause. Therefore, results of the Study indicate the Inglewood Oil Field contribution to the total area excess cancer risk is less than 2% of the total. Results of the MATES IV determined an average excess cancer risk value for the Los Angeles Basin at 418 per million. Both the MATES IV study and the Baldwin Hills Air Study determined that the primary cancer risk in the area is attributable to vehicle diesel exhaust (DPM), a determination further evidenced by the fact that the highest cancer risk areas identified in the MATES IV study were near the Port of Long Beach, the Port of LA, and along transportation corridors. Results for non-cancer chronic hazard potential and acute exposure values from oil field operations were both below 1.0, the health reference level where no adverse human health effects would occur.

2.5 INITIAL PERIODIC REVIEW

The first Periodic Review resulted in several recommendations to enhance the implementation of the provisions of the CSD. The recommendations did not require a modification or change to the language of the CSD ordinance; rather, the recommendations detailed improvements in the method of implementation or compliance effort of the subject CSD provision. The recommendations and status as of 2018, are summarized in the table below. The CSD provision citation used prior to the February 2019 ordinance update is included in *parentheses* as that was the regulation reference used in the first Periodic Review.

CSD Provision	Summary of Recommendation	Status
22.310.050 A.1 *(E.1.a)*	In response to requests made by the public, it is recommended that the annual Community Alert Notification (CAN) tests include interested residents.	The operator has included all interested CAP members in the annual tests performed. It is noted that at least one community member appears to not be receiving the annual notifications. It is recommended that the operator continue to work with all interested community members to be included on the notification list.
22.310.050 J *(E.10)*	Recommendation that FM O&G (now SPR) schedule installation of the remaining landscaping phases to achieve the landscaping required by this provision in a timely manner.	All landscaping was completed in December 2018.
22.310.050 O.1 *(E.15.a)*	Recommendation that the Operator continue the use of metal and or plastic bins and tanks consistent with current practice as the elimination of the use of below ground sumps is a significant environmental benefit.	The operator has continued the use of this practice as confirmed by the County Environmental Compliance Coordinator (ECC).

CSD Provision	Summary of Recommendation	Status
22.310.050 S *(E.19)*	Based on comments by the RWQCB regarding potential additional monitoring locations, it is recommended that the Operator coordinate with the RWQCB and install additional groundwater monitoring wells if deemed necessary.	SPR received updated RWQCB permit in February 2018, no additional monitoring wells are required.
22.310.050 T *(E.20)*	Due to un-authorized access through damaged fencing, it is recommended the ECC and the Operator increase monitoring of the condition of the perimeter fencing and conduct any necessary repairs as soon as possible.	The ECC and the Operator have increased monitoring of the facility perimeter fencing. Recent ECC inspections have not noted any fence issues.
22.310.050 Z.3.j *(E.26.c.x)*	In consideration of the usefulness and substantial costs associated with the preparation of the topographic vertical profiles, it is recommended considering removing the subject figures/maps from the Annual Drilling Plan until the information is deemed useful for inclusion in future plans.	The subject graphics are not included in the annual drilling plan submittals.
22.310.050 BB.2 *(E.28.b)*	It is recommended that the Operator facilitate better coordination when scheduling reworking and the other types of rigs at the oil field to avoid concentrating too many reworking rigs in one area.	The ECC has not noted over concentration of rigs in any one area during recent inspections. The County has not received any recent complaints on the subject.
22.310.060 C *(F.3)*	A comprehensive SIMQAP audit has not been conducted to date. It is recommended that a SIMQAP audit be conducted over the next year in coordination with the EQAP audit and that appropriate interested regulatory agencies be noticed of the audit for participation as applicable.	Two SIMQAP audits have been completed to date with reports dated July 2016 and August 2018.
22.310.060 D *(F.4)*	Due to the fact that unannounced drills have not taken place in the past, it is recommended that efforts be made to ensure that unannounced drills take place at the oil field as allowed for by the provision of the CSD. The Department of Regional Planning will coordinate with the Fire Department to ensure that unannounced drills occur in the future.	Up to the discretion of the Fire Department. No unannounced drills have occurred to date.
22.310.100 A.1 *(J.1.a)*	In response to requests by the public to update CAP membership, allow new members to fill vacant panel seats and replace absentee members, the DRP Director will review CAP membership and determine how to proceed under the existing provision of the CSD.	The Director of Regional Planning notified the public of three vacant seats on the CAP on June 13, 2017. Currently two of the three CAP vacancies have been filled.
22.310.100 B.1 *(J.2.a)*	In response to public input on the 2013 Community Meeting, it is recommended that agendas for future Community Meetings be specific to oil field operations and issues and that measures be implemented to ensure questions from the public are addressed appropriately.	The Community Meetings held in 2014 through 2018 have been specific to oil field operations. The 2018 meeting was held at the oil field and was well attended.

2.6 2020 HEALTH RISK ASSESSMENT

The County requested that an updated HRA be prepared to ensure that potential current health risks are adequately evaluated in view of this Periodic Review effort and comments received regarding potential health issues. The intent of the HRA is to also provide information that could be used to improve mitigation to potential health impacts if those are found. The updated HRA also addresses the changes to the State Office of Environmental Health Hazard Assessment (OEHHA) HRA guidelines as revised in 2015. The updated HRA was prepared in 2020. The purpose of an HRA analysis is to determine whether a significant health risk would result from the public's continued exposure to facility emissions as routinely emitted during project operations. An HRA was also prepared in 2008 as part of the oil field Community Standards District (CSD) EIR. The 2020 HRA included all potential sources of Toxic Air Contaminants (TACs) including mobile sources and utilized the same approach that was utilized in preparing the previous 2008 EIR HRA during the development of the CSD.

Operations at the Inglewood Oil Field create combustion products and fugitive hydrocarbon emissions, and potentially expose the general public and workers to these airborne pollutants as well as the toxic chemicals associated with other aspects of oil production and facility operations. The HRA used emissions levels from the oil field equipment, as reported to the SCAQMD, and operations along with historical site-specific meteorological data and computerized dispersion models to estimate the pollutant concentrations at receptors and the resulting short (acute) or longer term (chronic and cancer) health impacts. The HRA followed the guidance documents promulgated by the California Office of Health Hazard Assessment (OEHHA) and the South Coast Air Quality Management District (SCAQMD). In addition, the SCAQMD reviewed the emissions calculation methodology and model inputs prior to completion of the analysis.

The HRA analysis examined two operating scenarios:

- Year 2019 actual operations (no drilling activity); and,
- Worst-case future operating with a maximum allowed drilling program scenario.

Results of the HRA are shown in the table below.

Location	Location Description	Cancer Risk, per million	Acute Risk, Hazard Index	Chronic Risk, Hazard Index
2019 Year Operating Scenario				
PMI	Highest value along the oil field fence line	5.2	0.48	0.06
MEIR	Highest value at any residence	1.0	0.09	0.01
MEIW	Peak value at any work location	0.07	0.05	0.003
School	Highest value at any school	0.63	0.04	0.004
Worst-case Future Year Operating Scenario				
PMI	Highest value along the oil field fence line	13.8	0.55	0.18
MEIR	Highest value at any residence	5.6	0.11	0.03
MEIW	Peak value at any work location	0.34	0.05	0.005
School	Highest value at any school	5.1	0.05	0.014
SCAQMD Threshold		**10**	**1.0**	**1.0**
Exceed Threshold		**No**(1)	**No**	**No**

Note: health index (HI), point of maximum impact (PMI), the maximally exposed individual resident (MEIR), the maximally exposed individual worker (MEIW).

(1) Regulatory (SCAQMD for AB2588 facilities) threshold for risk taken at the highest value at any residence.

For the 2019 operations scenario, the estimated peak risks at any residence would be 1.0 cancer cases per million, 0.09 acute risk and 0.01 chronic risk, all values would be below the SCAQMD AB2588 thresholds. Risk at the facility boundary would be a peak cancer risk of 5.2 cases per million, and an acute and chronic risk of 0.48 and 0.06 Hazard Index (HI), respectively, which are also below the SCAQMD thresholds.

For the worst-case future operations scenario including drilling of 46 wells per year, the estimated peak cancer risks at the nearest residence would be 5.6 cancer cases per million, and an acute and chronic HI of 0.11 and 0.03, all values below the SCAQMD thresholds. The point of maximum impact (PMI) cancer risk would be 13.8 which is above the threshold, located at the facility boundary near Kenneth Hahn Park along the fence line. Based on the worst-case scenario at the fence line, which is more conservative than current SCAQMD methodology (but coordinated with the thresholds in use for the 2008 EIR), the level of drilling that would result in peak cancer risk levels below the SCAQMD threshold level at the fence line would correspond to about 25 wells drilled per year average. The complete Health Risk Assessment report is available on the County Baldwin Hills CSD web site at Baldwin Hills CSD | DRP (lacounty.gov).

3.0 Area Specific Development Standards (22.310.040)

CSD Section 22.310.040 contains a single requirement which limits the areas for drilling and operations.

3.1 A. OPERATIONAL LIMITS

No surface drilling or other surface oil operations shall be allowed within the portions of the district consisting of the Southern California Edison facility, the Holy Cross Cemetery, and the small non-contiguous parcel located east of La Brea Avenue.

Summary of Complaints:
The County has not received any complaints regarding the operational limits provision of the CSD.

Summary of Issues Raised by the Public:
In the past, the public has expressed concern at the Community Advisory Panel (CAP) meetings about the potential, due to slant drilling technology, for the oil field operator to drill outside the boundaries of the CSD. The concern was not specific to the operational limits provided by this provision but rather the potential for well bottom hole locations to be under a residence and thus outside the CSD boundary. The County and the oil field operator have confirmed that no surface or bottom hole well locations have been drilled outside the CalGEM established boundaries of the CSD/Inglewood Oil Field. Down-hole operations are regulated by CalGEM.

Analysis of Compliance and Effectiveness:
As noted above, no surface or bottom hole well locations have been drilled outside the boundaries of the Inglewood Oil Field. In addition, no surface drilling operations have been conducted within the areas consisting of the Southern California Edison facility, the Holy Cross Cemetery, or the small non-contiguous parcel located east of La Brea Avenue. All new drill sites are subject to review and approval by the County pursuant to Provision 22.310.050 Z, the *Annual Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plan* and this provision prevents approval of surface hole locations in those subject areas. The ECC inspects the field regularly to ensure compliance with all operational requirements of the CSD.

The provision is considered fully effective at this time and no further analysis is recommended.

New Technology:
This provision prevents drilling from occurring in certain geographic areas, thus a discussion on new technology is not applicable.

Recommendations to Changes in Implementation:
The provision has been implemented and is considered fully effective at this time, no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
The provision is fully effective at this time, no recommendations to the CSD language are recommended.

4.0 Oil Field Development Standards (22.310.050)

Section E provides the development standard requirements of the CSD.

4.1 A. FIRE PROTECTION AND RESPONSE

The operator shall comply with the following provisions:

1. Community Alert Notification System ("CAN"). The operator shall maintain and test on an annual basis a CAN for automatic notification of area residences and businesses in the event of an emergency arising at the oil field that could require residents or inhabitants to take shelter, evacuate, or take other protective actions.

2. Spill Containment Response Training. The operator shall conduct annual spill containment response training and shall at all times have available, on-site, sufficient and properly maintained equipment and/or facilities so that a spill of the entire contents from the largest oil tank on the oil field can be responded to and contained in a timely manner to reduce the likelihood that the spill reaches a catch basin.

3. Emergency Response Plan ("ERP"). The operator shall at all times maintain and fully implement and comply with all provisions of an emergency response Plan and shall further ensure that the then current ERP satisfies all rules and regulations of the United States Environmental Protection Agency and California Code of Regulations relating to emergency action plans and spill prevention control and countermeasure plans, as well as the rules, regulations, and requirements of the California Office of Spill Prevention and Response. The ERP shall also satisfy the rules and regulations of the United States Department of Transportation relating to onshore pipeline spills.

Summary of Complaints:
No complaints regarding the annual operation testing of the CAN system have been received by the County and the CAN system has not been utilized for an emergency at the Inglewood Oil Field to date. Spill containment response training is conducted annually onsite and no complaints have been received by the County regarding the training. County has not received any complaints regarding the ERP.

Summary of Issues Raised by the Public:
The CAN system has been discussed at CAP meetings noting that the annual system tests did not include residents that have requested to be on the test notification list. SPR has updated the test notification list and all interested residents will be included in the 2019 test. Additional input was received regarding the public notification after the tank overflow incident on November 22, 2018 resulted in odors in the Ladera Heights community, see discussion for 22.310.050 C and CC for discussion of the release. Input from the public and in scoping comments for this review noted that the CAN system should have been used for that incident and potentially for other odor compliant incidents. However, the CAN system is not activated by the operator alone and requires the input from the applicable Fire Department, the agency that makes the ultimate decision on notification to residents. With respect to the odor incident on November 22, 2018, the incident was reported and responded to by Cal-OES, CalGEM, and local CUPA/Fire Departments. None of these agencies required activation of the CAN system.

Input was also received during the scoping of this document requesting that the CSD require neighborhood or community health and safety/evacuation plans in addition to the ERP. Evacuation plans and the safety of the public is under the jurisdiction of first responder agencies such as local Fire Departments, law enforcement, and other emergency response agencies such as the County Office of Emergency Management and the Culver City Fire Department Emergency Services. These agencies have their own plans/protocols and operate under an Incident Command System (ICS), which is a standardized approach to the command, control, and coordination of emergency response agencies for an effective response from multiple agencies. As such, the implementation of an additional emergency plan for the public from the operator is not appropriate and could conflict with the agencies responsible for the safety of the public. As noted below, local first response agencies attend the annual oil field spill drills and are therefore familiar with the ERP and practice the coordination and implementation of the plan on an annual basis.

No issues on the spill containment response training or the ERP have been raised by the public to date.

Analysis of Compliance and Effectiveness:
A CAN system is a system that allows for an emergency alert, message, or notification to people located within a specific area. The oil field CAN system is designed to provide such notification to area residents and businesses of an emergency that would require one to take shelter, evacuate or take other protective actions. The *PXP 2009 Community Alert Notification (CAN) System* was approved by the Los Angeles County Fire Department (County Fire Department) on February 18, 2010. The reverse dialing system provided by the vendor *CodeRED* was installed on September 16, 2010. The system has been successfully tested each year since installation with test dates over the last five years occurring on December 22, 2014, December 10, 2015, December 15, 2016, December 27, 2017, and December 5, 2018. The CAN test connects to a subset of the notification list made up of local agency and Fire Department contacts; the general public is not contacted during the test to avoid the potential for unnecessary alarm. The *PXP 2009 Community Alert Notification (CAN) System* Plan is available at www.inglewoodoilfield.com.

Annual spill containment response training for the years 2014 to 2018 was completed by the operator on October 3, 2014, November 5, 2015, November 3, 2016, June 29, 2017, and March 14, 2018. As documented in the *PXP 2009 Tank Leak Detection and Containment at Inglewood Oil Field* report, approved in May 2009, all tanks have secondary containment consisting of a wall, berm, or combination of the two types. The report also concluded that all tank secondary containment structures comply with California Division of Oil, Gas and Geothermal Resources (CalGEM) requirements and that the volume of the available secondary containment can contain volumes in excess of the full volume of each tank.

The *Spill Prevention, Control and Countermeasure Plan* (SPCCP), required under CSD Provision 22.310.050.Q.2, provides detail on the maintenance of tank and related equipment at the oil field which include inspection programs, corrosion prevention/corrosion monitoring techniques, and clean up equipment. The Plan, current version dated July 2018, also includes potential spill scenarios for each tank with containment calculations documenting the adequacy of the containment structures. Review and use of this Plan is a component of the annual spill containment response exercise.

The ERP, current version dated June 2019, is submitted to the following agencies: CalGEM, California Department of Fish and Wildlife Office of Spill Prevention and Response (OSPR), U.S. Environmental Protection Agency Region 9, California State Lands Commission Marine Facilities

Division Planning Branch, and the U.S. Department of Transportation Office of Pipeline Safety. Specific response considerations for biological resources were added to the ERP in March 2010 per CSD Provision 22.310.050.G.1.

The ERP is utilized in annual emergency response drills as required by CSD Provision 22.310.060.D. The annual drills may be attended by County and Culver City Fire Departments. CSD Provision 22.310.060.D requires that the drills demonstrate the adequacy of the ERP. As noted above, emergency response/spill drills were conducted annually by the operator on October 3, 2014, November 5, 2015, November 3, 2016, June 29, 2017, and March 14, 2018.

This provision of the CSD is considered fully effective at this time, no further modifications in implementation or language are recommended.

New Technology:
The CAN system was recently upgraded to include notifications via cellular phones and email in addition to the original land line-based system; this represents a significant improvement in the ability of the system to contact the public that could potentially be affected by an emergency at the oil field.

The SPCCP is reviewed, evaluated, and updated as necessary every five years as required by Section 1.5 of the Plan. A component of the evaluation includes review of the applicability of new prevention and control technology which may significantly reduce the likelihood of a spill event. The annual spill response training also allows for new technology to be reviewed and implemented as applicable.

The annual emergency response drills and updates to the ERP document allow for new technology and techniques to be introduced and included as they become available.

Recommendations to Changes in Implementation:
The CAN, spill containment response training and ERP have been fully implemented and are tested each year, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
The existing CSD language requires annual updating and testing of the fire protection and response provisions, thus no changes in CSD language are needed or recommended at this time.

4.2 B. AIR QUALITY AND PUBLIC HEALTH

The operator shall at all times conduct oil operations to prevent the unauthorized release, escape, or emission of dangerous, hazardous, harmful and/or noxious gases, vapors, odors, or substances, and shall comply with the following provisions:

1. Emission Offsets. The operator shall obtain emission offsets or RECLAIM credits as defined and required by SCAQMD Regulations for all new or modified emission sources that require a new or modified SCAQMD permit.

2. New Gas Plant. No new gas plant or flare shall be installed at any steam drive plant that may be constructed on the oil field. The operator shall connect any such steam drive plant to the existing gas plant to eliminate the need for a new gas plant or flare at the steam drive plant.

3. Odor Minimization. At all times the operator shall comply with the provisions of an odor minimization Plan that has been approved by the director. The odor minimization Plan shall include any measures requested by the director. The Plan shall provide detailed information about the facility and shall address all issues relating to odors from oil operations. Matters addressed within the Plan shall include setbacks, signs with contact information, logs of odor complaints, method of controlling odors such as flaring and odor suppressants, and the protocol for handling odor complaints. The odor minimization Plan shall be reviewed by the operator on an annual basis to determine if modifications to the Plan are required. Any modifications to the odor minimization Plan shall be submitted to the director for review and approval.

4. Air Monitoring Plan. At all times the operator shall comply with the provisions of an air monitoring Plan that has been approved by the director. The air monitoring Plan shall include any measure requested by the director. During drilling, redrilling, and reworking operations, the operator shall monitor for hydrogen sulfide and total hydrocarbon vapors as specified in the approved Plan. Total hydrocarbon vapors shall be monitored at the gas plant as specified in the approved Plan. Such monitors shall provide automatic alarms that are triggered by the detection of hydrogen sulfide or total hydrocarbon vapors. For drilling, redrilling, or reworking monitors, the alarms shall be audible and/or visible to the person operating the drilling, redrilling, or reworking equipment. For the gas plant monitors, the alarms shall be audible or visible to the gas plant operator. Actions to be taken shall be as follows when specified alarm levels are reached:

> *a. At a hydrogen sulfide concentration of equal to or greater than five parts per million but less than 10 parts per million, the operator shall immediately investigate the source of the hydrogen sulfide emissions and take prompt corrective action to eliminate the source. The corrective action taken shall be documented in the drilling, redrilling, or reworking log. If the concentration is not reduced to less than five parts per million within four hours of the first occurrence of such concentration, the operator shall shut down the drilling, redrilling, or reworking operations in a safe and controlled manner, until the source of the hydrogen sulfide emissions has been eliminated, unless shutdown creates a health and safety hazard.*
>
> *b. At a hydrogen sulfide concentration equal to or greater than 10 parts per million, the operator shall promptly shut down the drilling, redrilling, or reworking operations in a safe and controlled manner until the source of the hydrogen sulfide emissions has been eliminated, unless shutdown creates a health and safety hazard. The corrective action taken shall be documented in the drilling, redrilling, or reworking log. When an alarm is received, the operator shall promptly notify the county fire department - Health Hazardous Materials Division, the Culver City Fire Department, the Office of Emergency Services, and the SCAQMD.*
>
> *c. At a total hydrocarbon concentration equal to or greater than 500 parts per million but less than 1,000 parts per million, the operator shall immediately investigate the source of the hydrocarbon emissions and take prompt corrective action to eliminate the source. The corrective action taken shall be documented in the drilling log for drilling, redrilling, or reworking and in the gas plant log for the gas plant. If the concentration is not reduced to less than 500 parts per million within four hours of the first occurrence of such concentration, the operator shall shut down the drilling, redrilling, reworking, or gas plant operations in a safe and controlled manner, until the source of the hydrocarbon emissions has been eliminated, unless shutdown creates a health and safety hazard.*

d. At a total hydrocarbon concentration equal to or greater than 1,000 parts per million, the operator shall promptly shut down the drilling, redrilling, or reworking or gas plant operations in a safe and controlled manner, until the source of the hydrocarbon emissions has been eliminated, unless shutdown creates a health and safety hazard. The corrective action taken shall be documented in the drilling log for drilling, redrilling, or reworking and in the gas plant log for the gas plant. When an alarm is received, the operator shall promptly notify the county fire department - Health Hazardous Materials Division, the Culver City Fire Department, and the SCAQMD.

e. All the monitoring equipment shall keep a record of the levels of total hydrocarbons and hydrogen sulfide detected at each of the monitors, which shall be retained for at least five years. The operator shall, on a quarterly basis, provide a summary of all monitoring events where the hydrogen sulfide concentration was at five parts per million or higher and the total hydrocarbon concentration was at 500 parts per million or higher to the fire chief. At the request of the fire chief, the operator shall make available the retained records from the monitoring equipment.

5. Portable Flare for Drilling. The operator shall have a gas buster and a portable flare, approved by the SCAQMD, at the oil field and available for immediate use to remove any gas encountered during drilling operations from drilling muds prior to the muds being sent to the shaker table, and to direct such gas to the portable flare for combustion. The portable flare shall record the volume of gas that is burned in the flare. The volume of gas burned in the flare shall be documented in the drilling log. The operator shall notify the fire chief and the SCAQMD within 48 hours in the event a measurable amount of gas is burned by the flare and shall specify the volume of gas that was burned in the flare. No drilling or redrilling shall be conducted in areas that are known to penetrate the Nodular Shale zone unless a fully operational and properly maintained gas buster and portable flare are installed on the rig. All other drilling and redrilling operations shall be conducted so that any measurable gas that is encountered can, and will, be retained in the wellbore until the gas buster and portable flare are installed on the rig, after which the gas will be run through the system. The operator shall immediately notify the fire chief and the SCAQMD in the event any gas from drilling or redrilling operations is released into the atmosphere without being directed to and burned in the flare.

6. Oil Tank Pressure Monitoring and Venting. All oil tanks that contain or could contain oil shall have a fully operational pressure monitoring system that continuously measures and digitally records the pressure in the vapor space of each tank. The detection system shall notify the operator via an alarm when the pressure in the tank gets within 10 percent of the tank relief pressure. In the event of an alarm, the operator shall immediately take corrective action to reduce the tank pressure. The corrective action shall be documented in the operator's log. The operator shall notify the fire chief and the SCAQMD within 24 hours if the pressure in any tank covered by this subsection ever exceeds such tank's relief pressure. Within seven calendar days after any tank vapor release, the operator shall report the incident to the SCAQMD as a breakdown event pursuant to Rule 430 and shall provide the fire chief with a written report of the event and the corrective measures undertaken and to be undertaken to avoid future oil tank vapor releases. The operator shall make any changes to such report that may be required to obtain approval from the fire chief and the SCAQMD and shall promptly institute all corrective measures called for by the report.

7. Odor Suppressant for Bioremediation Farms. When loading material or tilling material at the bioremediation farms, the operator shall use an odor suppressant such that no odor from the bioremediation farms can be detected at the outer boundary line.

8. Odor Suppressant for Drilling and Redrilling Operations. The operator shall use an odor suppressant spray system on the mud shaker tables for all drilling and redrilling operations to ensure that no odors from said operations can be detected at the outer boundary line.

9. Closed Systems. The operator shall ensure all produced water and oil associated with production, processing, and storage, except those used for sampling only, are contained within closed systems at all times.

10. Meteorological Station. The operator shall maintain and operate a meteorological station at the oil field in good operating condition and in compliance with all applicable Environmental Protection Agency ("EPA") and SCAQMD rules, regulations, and guidelines, and to the satisfaction of the director. The operator shall conduct an audit of the meteorological station on an annual basis and submit the results of the audit to the SCAQMD and the director. The operator shall maintain the data files for the meteorological station for a period of not less than 10 years. All such data shall be available upon request to the SCAQMD and the director.

11. Updated Health Risk Assessment. After every five years of operation of the meteorological station, the operator shall provide the previous five years of metrological data to the SCAQMD and the director. If the SCAQMD or the director determines that the previous five years of metrological data from the oil field could result in significant changes to the health risk assessment that was conducted as part of the Baldwin Hills Community Standards District Environmental Impact Report, then the county may elect to re-run the health risk assessment using the previous five years of metrological data from the metrological station.

12. Off-Road Diesel Construction Equipment Engines. All offroad diesel construction equipment shall comply with the following provisions:

> *a. Utilize California Air Resources Board ("CARB") EPA Certification Tier III or better certified engines or other methods approved by the CARB as meeting or exceeding the Tier III standard or Tier II certified engines as long as no drilling or redrilling occurs during construction.*
>
> *b. Utilize a CARB Verified Level 3 diesel catalyst. The catalyst shall be capable of achieving an 85 percent reduction for diesel particulate matter. Copies of the CARB verification shall be provided to the director. Said catalysts shall be properly maintained and operational at all times when the off-road diesel construction equipment is in use.*

13. Drill Rig Engines. All drilling, redrilling, and reworking rig diesel engines shall comply with the following provisions:

> *a. Utilize CARB/EPA Certification Tier II or better certified engines, or other methods approved by CARB as meeting or exceeding the Tier II standard.*
>
> *b. Utilize second generation heavy duty diesel catalysts capable of achieving 90 percent reductions for hydrocarbons and for particulate matter smaller than 10 microns. Said catalysts shall be properly maintained and operational at all times when the diesel engines are running.*

14. Drilling and Redrilling Setbacks. The following setbacks shall apply within the oil field for drilling or redrilling:

a. At least 400 feet from developed areas.

b. At least 20 feet from any public roadway.

15. Construction Schedule. To reduce construction air emissions, no overlap shall be permitted in major facility construction and installation activities such as the steam drive plant, the water processing facility, or the oil cleaning plant.

16. Fugitive Dust Control Plan. The operator shall comply with the provisions of a fugitive dust control Plan that has been approved by the director. The Plan shall be based upon the requirements of SCAQMD Rule 403 and the SCAQMD CEQA Guideline Fugitive Dust Control Measures. The fugitive dust control Plan shall be reviewed by the operator every five years to determine if modifications to the Plan are required. Any modifications to the fugitive dust control Plan shall be submitted to the director for review and approval. The fugitive dust control Plan shall include any measured requested by the director.

Summary of Complaints:
The County has logged 104 odor complaints and 4 dust complaints from the public on oil field operations for the years 2014 through 2018. Determining the source of an odor is an extremely difficult task due to the transient nature of an odor itself and the myriad of potential odor sources both from the oil field and the urbanized areas surrounding the oil field. As such, the source for most of the complaints associated with odors was not able to be unequivocally identified in follow up investigations as documented in the table below. Sources of odor in addition to the oil field have been identified as dead animals, skunks, So Cal Gas operations, area sewers, and home improvement projects such as roofing. Air quality monitoring data, the wind speed and direction from the onsite meteorological monitoring station, field visits, and assistance from SCAQMD staff have been used to investigate odor complaints. As discussed below, the oil field air monitoring equipment has not detected an exceedance of the pollutant criteria stipulated in subsection 22.310.050.B.4.a through 22.310.050.B.4.d nor has any elevated data been correlated with the time and day of any of the odor complaints.

Odor Complaints with Source Determination	
Number of Complaints	**Cause**
14	November 22, 2018 Tank Overflow
3	Sewer System
3	Southern Cal Gas Odorant System
2	Skunk
1	Non-Oil Field Roofing Project
81	Unknown
Total	**104**

One of the four complaints for dust were associated with very high wind events where the onsite meteorological station measured wind speeds above 30 mph.

Summary of Issues Raised by the Public:
Input on air quality issues was received in the scoping comments for this document and can be grouped into the following two categories; requests for updated air quality and toxic air quality studies including the use of the forthcoming SNAPS and Department of Public Health (DPH) Health Assessment reports and climate change/GHG emissions. Several commenters provided

a list of reports on other oil fields for input into the Periodic Review, however, studies on other oil wells, oil fields and other areas are not relevant to the Inglewood Oil Field and are outside the scope of the Periodic Review. Oil fields have different characteristics depending on what reservoirs are targeted and what method of extraction is being used. In addition, different regulations and requirements may be in place to mitigate potential impacts of oil and gas production for any given oil field. Oil or gas fields where fracking is occurring in different areas with different regulations and different geology are not applicable to the Inglewood Oil Field. It should be noted here that the Periodic Review is a review of the provisions of the CSD and the potential impacts of the Inglewood Oil Field, therefore, reports on different operations without the regulations and mitigations found in the CSD are not applicable to this analysis. Both the SNAPS and DPH Health Assessment Projects have not been completed, thus, use of those studies is not possible in this review. The County is looking forward to the results of the SNAPS monitoring effort and will consider the results in future reviews.

The Settlement Agreement required supplemental air quality monitoring to assess the risk of both acute and chronic exposure to air contaminants from oil field operations. The monitoring study included sampling and analysis for air toxics including diesel particulate matter, gaseous volatile organic compounds (VOCs), and trace metals. Four monitoring sites were identified and used at the perimeter of the oil field corresponding to locations to the north, south, east, and west of the facility. The monitoring equipment was housed in a trailer with meteorological instrumentation located on a 10-meter tower to collect study site specific wind speed, wind direction and temperature data. The study took place from November 2012 to November 2013, a time period when significant drilling activity was occurring, no drilling has taken place at the oil field since June 2014. The air monitoring study was completed in the fall of 2013; the final report was released in February 2015.

The Settlement Agreement also contains a requirement regarding operation of the gas plant back up flare. The stipulation allows for the operation of only one gas plant flare at any given time and requires the installation of the new flare be completed within 180 days of receipt of the SCAQMD permit for the flare. The Operator does not operate the gas plant flares simultaneously; the installation of the new flare was completed in 2012.

Climate change, sea level rise and other associated issues are beyond the scope of the Periodic Review analysis. The CSD does not have a requirement specific to GHG emissions as the SCAQMD and the County did not have significance thresholds for that pollutant at the time of adoption of the CSD. As GHG emissions are under the jurisdiction of CARB and the SCAQMD, the County currently uses the SCAQMD threshold to determine the significance of a project's GHG emissions impact. Current GHG emissions at the IOF are under the SCAQMD's 10,000 metric ton CO2 equivalent per year threshold for industrial facilities as documented on Annual Emissions Reports (AERs) submitted to SCAQMD. This is primarily due to the fact that the oil field is powered by electricity and all oil field pumps at the IOF are electric. Sources of air emissions, and thus GHGs, at the oil field include heaters and treaters and other equipment at the gas plant, fugitive emissions, the maintenance rigs, and other mobile sources. Total GHG emissions for these sources are less than the SCAQMD GHG threshold, therefore, the Inglewood Oil Field is not a significant source of GHG emissions and further mitigation, or analysis is not required.

On the evening of November 22, 2018, a tank at the Inglewood Tank Battery overflowed due to the failure of a level controller. A level controller is a device that, when working properly, can control the operation of one or more pumps that move fluid through a tank or system of tanks. In this case, the controller failed, and a pump was not activated resulting in an overflow of produced

water into the secondary containment area of the tank battery. Approximately 630 gallons (15 barrels) of oil/water mixture was spilled over a 15 to 20-minute time frame into the secondary containment area. Odors from the spill were noted by residents living to the east of the oil field in the Ladera Heights neighborhood with fourteen odor complaints filed on the Inglewood Oil Field complaint system. Follow up investigation into the incident by the County included an engineering analysis with the Canary® Model, an application-specific hazard model for vapor dispersion, fire radiation, and vapor cloud explosions. Results of the analysis showed short term health effects from benzene and odor impacts approximately eight times the odor threshold in the Ladera Heights neighborhood. The analysis report was discussed at the Community Advisory Panel (CAP) meeting on April 25, 2019 and is available on the County DRP Baldwin Hills website. In June 2019 the SCAQMD issued the operator a Notice of Violation (NOV) for a violation to the public nuisance regulations due to the odor complaints. Additional investigation into the tank level controller device is discussed in CSD 22.310.050.CC.

Analysis of Compliance and Effectiveness:
Subsection 22.310.050.B.1 requires the operator of the oil field to obtain emission offsets or RECLAIM credits for all new or modified emission sources requiring a SCAQMD permit. No activities or emission sources requiring SCAQMD oversight required emission offsets or the purchase of RECLAIM credits during this review period 2014 through 2018. The requirements listed under 22.310.050.B.2 have also not been implemented to date because a new gas plant or new steam drive plant has not been proposed or installed.

The Odor Minimization Plan was submitted on February 25, 2009 and revised and approved on April 15, 2010. The Plan describes the four main sources of potential odors at the oil field as fugitive emissions from equipment, operation of the bioremediation farms, drilling muds, and accidental release from drilling activities. The Plan identified the use of suppressants for odor minimization at the bioremediation farms and for drilling muds and the use of a portable flare/gas buster for drilling operations. The Plan is reviewed by the operator and the County annually and has not been required to be updated to date. The use of closed systems for all equipment associated with produced water and oil, consistent with provision 22.310.050.B.9, is described for odor minimization from fugitive emissions.

Operation of the bio farms has not occurred during this 2014 to 2018 review period. During drilling activity, the drilling muds and cuttings are sprayed with suppressants as they pass through the “mud shakers” via overhead misters connected to a drum of liquid suppressant. A portable flare/gas buster, as required by provision 22.310.050.B.5, is available for use at drilling and redrilling sites for potential odors from drilling operations. These odor minimization measures are inspected for operation to document compliance during the periodic inspections completed by the County Environmental Compliance Coordinator (ECC). It should be noted here that no drilling has occurred at the oil field since June 2014.

The Air Monitoring Plan was submitted on February 29, 2009, revised in November and December of 2009 and approved by the County on January 4, 2010. The Plan is reviewed by the operator and the County annually and has not been required to be updated to date. The Plan presents information on meteorological conditions at the oil field, air contaminants associated with oil and gas operations, air monitoring instrumentation and procedure requirements, and Air Monitoring Plan training for oil field personnel. Portable air monitoring trailers with Total Hydrocarbon (THC) and Hydrogen Sulfide (H_2S) monitors that meet the specifications outlined in the Plan are employed at drilling and redrilling sites. The drilling site monitor data is recorded on a data logger which is downloaded and transferred to the oil field air monitoring data base at the end of each drilling project. The portable monitoring system includes an alarm system with both

visual and auditory capabilities; the sound alarm is turned off at night pursuant to the requirements of the Quiet Mode Drilling Plan (QMDP).

Air monitoring at the gas plant consists of THC sensors located at each of the four corners of the gas plant facility footprint. The sensors are connected to the gas plant computer Supervisory Control and Data Acquisition (SCADA) system which provides for real time data access by gas plant personnel and alarm capability. The SCADA system logs the monitoring data for later download to the oil field air quality monitoring database. The sensors are calibrated monthly with the calibration documents reviewed during the periodic inspections completed by the ECC. In addition, the ECC conducts independent monitoring for emissions and odors with the use of a portable gas monitor during each site inspection.

The CSD does not require an annual compliance report for the air quality monitoring data, however, the data must be available to the County for review upon request. Air monitoring results along with the monitoring sensor calibration data are reviewed by the County ECC periodically during site visits and at the annual Environmental Quality Assurance Program (EQAP) audit. To date, no exceedance of the air monitoring criteria specified in subsections 22.310.050.B.4.a through d has been measured at the oil field and thus the drilling or gas plant corrective actions required by these subsections have not been necessary to implement.

The portable flare for drilling required by subsection 22.310.050.B.5 was custom built by PXP, a former operator of the oil field. The flare system was reviewed, approved, and permitted by the SCAQMD and meets the requirement for recording the volume of gas burned. The oil field has SCAQMD permits for two of these portable flare systems. Current operating procedure at the oil field calls for the flare to be installed at every drilling and re-drilling operation whereas subsection 22.310.050.B.5 requires that only drilling activity in the Nodular Shale zone require the installation of the flare system or if gas in the well bore is encountered. As noted above, no gas has been flared through the portable gas flare system to date.

All tanks that contain oil and/or produced water are connected to the oil field operational pressure monitoring system as required by subsections 22.310.050.B.6 and 9. The system is connected to the SCADA system and is monitored by gas plant personnel. The tanks and associated valves, pipeline flanges, and pressure relief systems are subject to SCAQMD permit requirements and the associated fugitive emissions program. The fugitive emissions program requires quarterly inspections of oil field equipment for fugitive emissions with the use of a portable handheld organic vapor analyzer. The results of these inspections are submitted to the SCAQMD. The oil field uses a third-party consultant specializing in air quality monitoring for the fugitive emissions inspection program. The SCAQMD audits the results of the fugitive inspection monitoring program by performing an annual inspection of the subject oil field equipment. The tanks and associated equipment are also subject to the breakdown provisions of AQMD Rule 430. Failure of the pressure monitoring system requires notification and calculation of any air emissions associated with the breakdown. Two were filed for this review period, the first in April 2016 for a broken tank hatch connector due to high winds and the second in November 2018 for the level controller failure incident discussed above.

As discussed above regarding the Odor Minimization Plan, odor suppressants are used at the bioremediation farms (when in operation) and for drilling and redrilling operations as required by subsections 22.310.050.B.7 and 8. Odor suppressant at the bioremediation farms is applied manually with a sprinkler system when odors are detected during loading, pre-tilling and tilling operations. The odor suppressant system for the drill rig is a custom-made mister system where the suppressant is pumped from a drum source up to tubing installed across the top of the mud shaker. Sprinkler type misters are installed in the tubing every few feet and spray the odorant downward over the mud and drill cuttings material. Periodic inspections by the County ECC, including monitoring for odors with the use of a portable gas monitor during each site inspection, document the installation and operation of these odor suppressant systems.

The meteorological monitoring system required by subsection 22.310.050.B.10 was approved by the SCAQMD in July 2009, installed and tested in December 2009, and was operational on January 21, 2010. Monitoring data is collected on a data logger which is downloaded monthly to the oil field air monitoring data base. Some data collected during the December 2016 through March 2017 was lost due to data logger download issues. The County researched the data download problems and recommended an alternate approach to both the data download and calibration procedures for the meteorological station. Those changes have been implemented and a new data logger is scheduled for installation in the Fall of 2019. The meteorological instrumentation is calibrated annually by instrumentation vendor technicians. The annual Data Validation Reports are posted on the oil field website at www.inglewoodoilfield.com. Operation of the meteorological station is checked by the ECC during periodic site inspections and the annual Data Validation Report is reviewed during the EQAP audit.

The updated Health Risk Assessment required by subsection 22.310.050.B.11 has not been required to date. The required 5 years of onsite meteorological data was collected in January 2015 and the data was reviewed and found to be consistent with the data used for the analysis in the Baldwin Hills Environmental Impact Report (EIR). Therefore, the County determined an updated Health Risk Assessment was not required. Subsections 22.310.050.B.12 and 13 require that engines associated with off road diesel construction equipment and drill rig engines, respectively, meet California Air Resources Board (CARB) emission reduction requirements. Subsection 22.310.050.B.14 provides setbacks for drilling or redrilling sites. Review and approval of the *Annual Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plan* confirms compliance with these provisions where engine certification documents are checked, and drilling locations are reviewed for compliance with setback requirements. Subsection 22.310.050.B.15 construction schedule limitations for major facility construction, has not been implemented to date because no major construction projects have been proposed or constructed to date.

Pursuant to Provision 22.310.050.B.13, CARB/EPA Certification Tier II or better certified engines and heavy-duty diesel catalysts are required for all drilling, redrilling, and reworking rig diesel engines. All rigs operated at the Inglewood Oil Field meet the CARB/EPA Tier III engine standards.

The Fugitive Dust Control Plan was submitted on March 26, 2009 and revised and approved in April 2010. The Plan describes potential dust generating activities associated with oil field operations and outlines dust control measures to minimize offsite dust. Some of the primary dust control measures included in the Plan are limiting oil field vehicle speeds to 15 mph, the use of water trucks on unpaved roads, limiting vehicle travel on unpaved roads and parking surfaces, and the use of tarps or soil stabilizers to prevent dust from soil stockpiles. Other dust control measures include procedures for loading and unloading material from trucks, pipe track out grid devices to knock mud from vehicles leaving the oil field, and minimizing dust generating activities during high wind speed times. As noted above, one of the four dust complaints was associated with a day with wind speeds in excess of 30 mph.

The SCAQMD issued four Notice to Comply or Notice of Violation (NTC/NOV) citations during this 2014 to 2018 review period as summarized in the table below.

SCAQMD NTC/NOV Actions 2014 through 2018			
Action	**Date**	**Issue**	**Resolution**
NTC E40783	7/13/18	Non-submittal of workover rig/well maintenance records.	Compliance documented 11/29/18.
NTC E41975	4/13/18	Source test not completed on three-year test schedule.	Compliance documented 7/11/18.
NOV P67907	6/18/18	Fixed roof storage tank not maintained in vapor tight condition (vapor leak).	Compliance/repair documented on same day, 6/18/18.
NOV P60712	8/3/13	Rule 1148.2 notification not filed with SCAQMD.	Resolved and void on 2/4/15.

The air quality and public health requirements of this provision have been implemented and are ongoing. This condition is considered fully effective at this time, no further evaluation is recommended.

New Technology:
New emission sources at the oil field require permitting by the SCAQMD and may require offsets or RECLAIM credits. The compliance plans for odor minimization, air monitoring, meteorological monitoring, and fugitive dust are required to be updated periodically or as required by the County. Closed monitoring systems and oil field engines are subject to SCAQMD or CARB rules, respectively. The oil field drill rigs are subject to CARB diesel exhaust reducing programs, those programs include the exhaust emission standards program that require engine replacement and/or installation of emission control devices on diesel engines. For example, CARB Rule 2449 requires that the diesel engines in the oil field rigs meet specific emissions limitations for pollutants such as NO_X and diesel particulate matter (DPM). The allowable emissions requirements decrease each year through the year 2023, providing a significant annual decrease in air pollutants from oil well drilling, re-working and maintenance activities associated with the operation of the rigs.

Therefore, technical improvements that provide cleaner burning drill rig engines are currently required at the oil field through the year 2023 as part of the SCAQMD regulatory framework. In addition, as new technology is developed in air quality monitoring, emission controls, or oil field equipment that can lower the air quality impact of oil field operations, that technology can be implemented by this provision by reference.

Recommendations to Changes in Implementation:
This requirement has been implemented and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

4.3 C. SAFETY AND RISK OF UPSET

The operator shall at all times conduct oil operations in a manner that minimizes risk of accidents and the release of hazardous materials, and shall comply with the following provisions:

1. Natural Gas Liquid Blending. Natural gas liquids at the gas plant shall be blended with the oil to the maximum allowable pipeline system vapor pressure. Natural gas liquids storage shall be limited to the volume allowed in the risk management Plan approved by the fire department.

2. Propane and Natural Gas Liquids Bullet Fire-Proofing. The operator shall install and maintain fire-proofing insulation on all propane and natural gas liquids bullets within the oil field. The fire-proofing insulation shall have a minimum two-hour fire rating and otherwise be acceptable to the fire chief. All propane and natural gas liquid bullets shall be equipped with an automatic deluge system.

3. Steam Drive Plant Setback. The steam drive plant, if constructed, shall be located at least 1,000 feet from a developed area and shall use urea or equivalent, low toxicity material for any nitrogen oxide emission reduction that is required by the SCAQMD.

4. Secondary Containment for Oil. The operator shall comply with the following provisions:

> *a. The operator shall ensure that all existing oil tank areas in the oil field, unless determined by the director to be infeasible, and all the new oil tank areas shall have secondary containment (berms and/or walls) that can contain at least 110 percent of the largest oil tank volume to reduce the likelihood of oil spills entering the retention basins. In the event the director determines that it would be infeasible to provide 110 percent containment for a particular existing oil tank, the operator shall provide such containment as the director determines is feasible.*
>
> *b. All retention basins in the oil field shall be adequately sized, and maintained to handle a 100-year storm event plus a potential spill of the volume of the largest tank that would drain into each basin.*
>
> *c. All above ground piping in the oil field that contains or could contain oil shall be protected by basins or secondary containment measures (berms and/or walls).*

Summary of Complaints:
The County has not received any public input on the natural gas liquid blending or the fire proofing of the propane and natural gas liquid bullets requirements to date. A steam drive plant has not been constructed to date and no public input has been received by the County. No complaints regarding secondary containment for oil have been received by the County.

Summary of Issues Raised by the Public:

Provisions 22.310.050.C.1 through 3 are operational requirements developed from the EIR to minimize potential impacts to public safety from the operation of the gas plant, the propane storage and loading facilities, and a potential new steam drive plant. The County has not received any public input on natural gas blending or the propane and natural gas liquid fireproofing; a new steam drive plant has not been constructed or proposed to date.

Analysis of Compliance and Effectiveness:
SPR blends the natural gas liquids (NGLs) to the maximum allowable pipeline system vapor pressure as required by the subject CSD provision requirement and for economic reasons. Blending of NGLs can provide several main benefits when added to crude oil; the NGLs can decrease the viscosity and improve the API gravity value of the oil and reduce offsite transportation costs. Current production and operation of the oil field allow for all NGL produced to be blended with the oil and transported off site with the crude oil via pipeline. The storage of the NGL tank is in compliance with the criteria in the Risk Management Plan.

The propane and natural gas liquids bullet fire proofing was completed on February 23, 2009 with the associated documentation submitted to the LA County Fire Department on February 25, 2009. The approved fire proofing system has a two-hour fire rating and is equipped with an automatic deluge system. With this fireproofing and deluge system the potential for a propane or natural gas fire at the bullets has been substantially reduced. The *PXP 2009 Third Party Audit of Fire Protection Capabilities at Inglewood Oil Field* report analyzed the oilfield's fire protection capabilities for compliance with National Fire Protection Agency (NFPA) Requirements, the County Fire Code, County Fire Department Regulations, California Code of Regulations, and American Petroleum Institute (API) Standards and Recommended Practices. The report, completed in March 2009, determined that all the tanks, vessels, and other equipment associated with fire potential were in compliance with all referenced codes and requirements and the report further documented the oil field is in compliance with industry best practices for similar facilities.

The A*nnual Well Increase Evaluation, December 2011,* included a review of the fire proofing and automatic deluge systems. The report concluded that the potential for a propane or natural gas fire at the bullet storage area has been substantially reduced. The report also concluded that the secondary containment and retention basin systems, discussed in more detail below, are adequately sized for both a worst-case spill and a 100-year storm event.

A steam drive plant has not been constructed to date. An analysis of the location and emission reduction equipment will be completed by the DRP and SCAQMD during the processing of the project application if such a new plant is proposed. SPR does not currently Plan to construct a new steam drive plant.

As documented in the *PXP 2009 Tank Leak Detection and Containment at Inglewood Oil Field* report, approved in May 2009, all tanks have secondary containment consisting of a wall, berm, or combination of the two types. The report also concluded that all tank secondary containment structures comply with CalGEM requirements and that the volume of the available secondary containment is capable of containing volumes in excess of the full volume of each tank.

The oil field contains six retention basins; Dabney Lloyd, Vickers 2 Upper, Vickers 2 Lower, Vickers 1, Stocker, and LAI Last Chance. If these basins discharge, they discharge directly or indirectly to the Los Angeles Department of Public Works (LADPW) storm drains. During the dry season, the basins are maintained to be free of debris and are periodically inspected by the County ECC. The basins have two stage outlet control features consisting of outlet orifices and

dual water and oil weir systems to prevent oil from reaching the storm drain system. The *PXP Retention Basin Study*, completed in March 2009 and revised in September 2009 and January 2010, analyzed and modeled the capacities of the basins along with a 100-year storm event. The study concluded that the onsite basins have the capability to handle a 100-year storm event without flooding per the CSD requirement. The study further determined that in the event of an oil tank failure during a 100-year storm event, the basin weir system would prevent oil from going offsite. The County Public Works Department has reviewed and approved the retention basin capacities.

Most of the above ground piping throughout the oil field is not protected by individual pipeline specific secondary containment or basin structures; however, the oil field retention basin system is designed to prevent any fluid from the above ground piping from traveling offsite. Although outside this review period and the CSD boundary, it should be noted that, on April 1, 2019, oil from a leaking pipe was able to flow offsite and into the Culver City storm drain system. Investigation of the path of the oil flow from the leaking pipe indicated a breach in the earthen berm system of the well pad area near the leak. The cause of the damaged berm was determined to be erosion from recent rain fall and damage by service vehicles. As a result of the offsite consequence of the spill, the operator has added a formal inspection protocol of areas to inspect the integrity of the berms necessary to ensure storm water and any other fluid is routed to the oil field retention basin system. The County, through routine inspections completed by the Environmental Compliance Coordinator, is also reviewing the containment berms on a regular basis.

The mitigations for safety and risk of upset required by this provision have been implemented and are considered fully effective at this time, no further analysis is recommended.

New Technology:
Blending of NGLs with oil is standard industry best practice and the transportation of NGL by pipeline significantly reduces the risk to public safety when compared to other modes of transportation such as truck or rail.

As noted above, the propane and natural gas liquids bullets are subject to regulatory agency codes and requirements, therefore, new or modified equipment will be updated as required by future changes to those codes and requirements. New technologies associated with the operation of a steam drive plant will be reviewed by the DRP, SCAQMD, and other interested agencies during review of a project application should a new plant be proposed.

The facility oil tank secondary containment and retention basin systems are sufficient to handle a worst-case oil spill along with a 100-year storm event. As applicable plans such as the ERP and SPCCP are periodically updated and through the annual EQAP audit process, new technologies for the prevention and control of potential leaks or spills are reviewed and can be implemented as applicable, without the need to modify the CSD.

Recommendations to Changes in Implementation:
The requirements for safety and risk of upset to minimize risk of accidents and the release of hazardous materials of this provision have been implemented, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
The provision is considered fully effective at this time and no changes to the CSD language are recommended.

4.4 D. GEOTECHNICAL

The operator shall comply with the following provisions:

1. Grading. The operator shall comply with all of the following provisions:

a. All proposed grading shall be subject to prior review and approval by the director of public works.

2. Grading involving up to 5,000 cubic yards and grading associated with the bioremediation farms may be undertaken pursuant to a county master grading Plan stamped by a registered professional engineer and a California certified engineering geologist and approved by the director of public works.

3i. No slope of cut or fill shall have a gradient steeper than two to one (2:1) unless specifically approved by a site specific geotechnical report.

4. Cuts and fills shall be minimized to avoid erosion and visual impacts.

2. Geotechnical Investigations. The operator shall comply with the following provisions:

a. A site-specific geotechnical investigation shall be completed for grading in excess of 5,000 cubic yards, unless associated with the on-site Bioremediation Farms and approved pursuant to a master grading Plan approved by the director of public works, and for any grading that supports or impacts a critical facility as determined by the director. The investigation shall be completed by a California certified engineering geologist and submitted to the director and the director of public works for review and approval, in conjunction with an application for a revised grading permit.

b. A site-specific geotechnical investigation shall be completed for all proposed permanent structures. The investigation shall include analysis and recommendations associated with potential seismically induced ground failure, such as differential settlement and lateral spreading. The geotechnical investigation shall be completed by a California-certified engineering geologist and submitted to the director of public works for review and approval.

3. Erosion Control. The operator shall comply with the following provisions:

a. The operator shall comply with all provisions of an erosion control Plan that has been approved by the director. The erosion control Plan shall be reviewed by the operator every two years to determine if modifications to the Plan are required. Any modifications to the erosion control Plan shall be submitted to the director for review and approval. The erosion control Plan shall include any measures requested by the director.

b. Erosion shall be controlled on all slopes and banks so that no mud or other substances are washed onto public streets or surrounding property. Such control measures may consist of planting and irrigation, dams, cribbing, riprap, sand bagging, netting, berms, or other devices.

4. Restoration of Slopes. Slopes shall be restored to their original grade once the use that required the grading of the slope has been discontinued. However, if restoration of a slope would negatively affect existing drainage patterns or slope stability, then the slope shall be restored to a grade that avoids these negative effects.

5. Ground Movement Surveys. The operator shall conduct ground movement surveys once every 12 months, or more frequently if determined necessary by the director of public works, following all provisions of a ground movement monitoring Plan that is acceptable to CalGEM and the director of public works, that calls for both vertical and horizontal ground movement surveys, at specified survey locations within, and in the vicinity of, the oil field, utilizing high precision Global Positioning System technology, in combination with a network of ground stations (or any alternative technology specified in the ground movement monitoring Plan approved by the director of public works), and following other survey methods outlined in the Plan. The surveys shall be conducted by a California-licensed surveyor. The survey results shall be analyzed in relation to oil field activities, such as production, steam injection, and waterflooding, taking into consideration individual oil producing zones, injection schedules, rates, volume, and pressure. The analysis shall be completed in collaboration by a California-registered professional petroleum engineer, registered geotechnical engineer, and certified engineering geologist. The results of the annual monitoring survey and analysis shall be forwarded to CalGEM and the director of public works. If requested by CalGEM or the director of public works, the operator shall make modifications to the ground movement monitoring Plan. In the event that survey indicates that on-going ground movement, equal to or greater than 0.6 inches at any given location, or a lesser value determined by the director of public works is occurring in an upward or downward direction in the vicinity of or in the oil field, the operator shall review and analyze all claims or complaints of subsidence damage that have been submitted to the operator or the county by the public or a public entity in the 12 months since the last ground movement survey. Based thereon, the operator shall prepare a report that assesses whether any of the alleged subsidence damage was caused by oil operations and submit said report to CalGEM and the department of public works. The department of public works shall review the report to determine if it concurs with its conclusions. If the report concludes that damage has not been caused by oil operations, and the department of public works does not concur in that conclusion, it shall forward its conclusions to CalGEM for its review and possible action. If the report concludes that damage was caused by oil operations and the department of public works concurs with any such conclusion, the department of public works shall forward the department of public works' conclusions to CalGEM and ask CalGEM to evaluate the operator's fluid injection and withdrawal rates to determine whether adjustments to these rates may alleviate the ground movement, and if so, where in the oil field such adjustments should be made. The operator shall implement whatever adjustments in the rates of fluid injection and/or withdrawal that CalGEM determines are necessary and appropriate to alleviate any ground movement damage. The county shall promptly notify the CAP of any such action that is taken pursuant to this subsection. Injection pressures associated with secondary recovery operations (i.e., water flooding) or disposal of produced fluids shall not exceed reservoir fracture pressures as specified in Title 14 of the California Code of Regulations, section 1724.10, and as approved by the CalGEM.

6. Construction of Permanent Structures. No permanent structures shall be constructed in an Alquist-Priolo Fault Zone without preparation of a fault study by a California-certified engineering geologist. Following the fault study, no permanent structures shall be placed within 50 feet of a known active fault. The fault investigation report shall be submitted to the director of public works for review and approval.

7. Oil Field Accelerometer. The operator shall operate and maintain an accelerometer at the oil field to determine site-specific ground accelerations as a result of any seismic event in the region (Los Angeles/Orange County and offshore waters of the Santa Monica Bay and San Pedro Channel). Readings from the accelerometer shall be recorded at the oil field and transmitted in real-time to the Caltech Seismological Laboratory. The operator shall cease operations and inspect all oil field pipelines, storage tanks, and other infrastructure following any seismic event that exceeds a ground acceleration at the oil field of 13 percent of gravity (0.13 g) and promptly notify the director. The operator shall not reinstitute operations at the oil field and associated pipelines until it can reasonably be determined that all oil field infrastructure is structurally sound.

8. Pipeline Management Plan. The operator shall maintain and implement a pipeline management Plan that meets the requirements of CalGEM regulations.

9. Paleontological Monitor. The operator shall have a qualified paleontologist, approved by the director, monitor all rough grading and other significant ground disturbing activities in paleontological sensitive sediments. The sensitive sediments that have been identified within the oil field include the Lower to Middle Pleistocene San Pedro Formation and the Middle to Upper Pleistocene Lakewood Formation. A paleontologist will not be required on site if excavation is only occurring in artificial fill or Holocene alluvium.

Summary of Complaints:
Six complaints on property damage were received by the County for this review period (2014 through 2018); the County did not receive any complaints on ground movement. The property damage complaints listed various types of property damage from cracks in walls, garages, driveways, and hills sides. As listed in the analysis section below, each of the complaints was followed up with a property damage claim investigation.

Summary of Issues Raised by the Public:
Members of the public have expressed frustration with the requirements of the provision of the CSD on ground movement. The primary issue involves the lack of updated input from CalGEM on the subject to date, however, all data requested from the operator has been submitted and is under review by CalGEM. As additional input from CalGEM on the ground movement subject in the Baldwin Hills is received, the County will provide the information to the public via the Community Advisory Panel (CAP) meetings and/or the DRP Baldwin Hills website. In the past, CalGEM has expressed that there isn't sufficient data over the years of ground movement testing to suggest a pattern that requires regulatory intervention.

Additional input was received during recent 2019 CAP meetings whereby members of the public have expressed a desire to have the follow up geotechnical investigations performed by a different consulting firm than those involved in the annual ground movement survey reports. Currently, and consistent with Provision 22.310.050.D.5, the geotechnical consulting firm that assists with the preparation of the annual ground movement survey reports performs the follow-up investigations for property damage complaints. Also, consistent with CSD requirements, the property damage reports are completed by California-registered geotechnical engineers and certified engineering geologists. As these subject matter experts assist in the preparation and review the ground movement survey reports, they are very familiar with the geotechnical issues of the Baldwin Hills and are therefore uniquely qualified to perform the property damage complaint investigations. Since the current practice meets the requirements of the CSD the County does not recommend a change at this time, however, in deference to the interest of the public on the

issue, the County suggests the operator consider the use of an alternate firm for the property damage complaint investigations.

Analysis of Compliance and Effectiveness:
All grading at the oil field has been reviewed and approved by the County Public Works Department by the annual submittal of a master Grading Plan, submitted in October or November of each year. Grading associated with the operation of the bio farms is also included in the master Grading Plan. The Plan is prepared by a registered professional engineer and a California certified engineering geologist. Approval of the master Grading Plan by the County ensures no slopes have a gradient greater than two to one without a geotechnical report and that cut and fill is minimized to avoid erosion and visual impacts. The grading projects at the oil field to date have been 5,000 cubic yard or less, therefore, a site-specific geotechnical investigation pursuant to Provision 22.310.050.D.2.a has not been required. Geotechnical investigations have been completed for the installation of permanent structures at the oil field with the geotechnical reports submitted along with the County DRP Site Plan and Building and Safety permit applications. Examples of permanent structures requiring this analysis include the installation of two water tanks at the Upper Water Plant.

The *PXP 2009 Erosion Control Plan Inglewood Oil Field* was initially submitted on May 26, 2009, revised in October 2009 and approved by County Public Works in May 2010. The Plan describes the oil field site and the surrounding public streets and includes a discussion on typical erosion control strategies and the erosion control strategies used onsite at the oil field. Restoration of slopes at the oil field from grading activities has been completed consistent with the Erosion Control Plan and the master Grading Plan. In addition to the Erosion Control Plan, the oil field Storm Water Pollution Prevention Plan (SWPPP) contains measures and management practices to control mud from washing onto public streets or surrounding properties. The operator utilizes an environmental consulting company with expertise in storm water management to assist them in the implementation of the provisions of the SWPPP.

Ground movement surveys have been completed annually as required pursuant to the *Accumulated Ground Movement Plan* approved by County Department of Public Works (DPW) on November 10, 2009 and CalGEM on November 30, 2009. The surveys are completed using Global Positioning (GPS), Geodetic Leveling, and DifSAR processes and procedures as documented in the Ground Movement Monitoring Plan as approved by DPW and CalGEM. Baseline survey reports were submitted in January 2011 with revisions in March and October 2012. Annual survey reports are submitted each year to CalGEM and the DPW as required, the reports are available on the Inglewood Oil Field web site at www.inglewoodoilfield.com.

Results of the ground movement surveys for 2014 through 2018 indicated vertical movement equal or greater than 0.6 inches in each year except 2015. CSD Provision 22.310.050.D.5 requires the operator to investigate all property damage complaints from the public in any year the 0.6-inch trigger is recorded. The previous and current operators have provided follow-up geotechnical investigations for each of the damage complaints independent of the Provision 22.310.050.D.5 trigger requirement. As noted above, six property damage complaints were received during this review period and five follow-up investigation reports were completed (one

complaining party did not provide access to the subject property). Results of the reports, and as concurred by Public Works and CalGEM geologists, determined local factors to be the most likely cause of the cracking of structures. These factors include construction in areas with substantial slopes on unconsolidated, unstable material that was not properly compacted at the time of construction; and that the construction of many residences preceded modern building codes and therefore were not built to today's more stringent construction standards. In addition, the areas surrounding the oil field are all within a seismically active location. The combination of all these factors is more likely to contribute to ground movement and potential property damage than the operations at the Oil Field which is monitored by the County and CalGEM.

No permanent structures have been constructed in an Alquist-Priolo Fault Zone since the adoption of the CSD, therefore, the preparation of a fault study required by subsection D.6 has not been required to date. The office, warehouse, and associated buildings are built within the fault zone overlay; however, construction of these structures predates the CSD requirement.

The oil field accelerometer seismic station was installed and began collecting data on May 20, 2009. The data is transmitted in real time by cell link to the CalTech Seismological Laboratory where the data is recorded and stored. The accelerometer has not measured ground acceleration in excess of the 13 percent of gravity (0.13 g) criteria of this provision to date, thus the oil field has not been required to shut in due to a ground acceleration event.

The Pipeline Management Plan required by subsection D.8 was submitted to CalGEM as required in December 2009; it has not been necessary to update the Plan to date.

The provision is considered fully effective at this time and no further analysis is recommended.

New Technology:
The scientific equipment used for the technical studies required pursuant to this provision is considered to be state of the art. The accelerometer is scheduled to be updated by CalTech in 2019. No recommendations for new technology are recommended at this time.

Recommendations to Changes in Implementation:
As discussed above, the County recommends that the operator use an alternate geotechnical engineering firm, to the satisfaction of Public Works, for the property damage complaint follow-up investigations. The use of an alternate firm would bring an additional team of subject matter experts to the issue.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

4.5 E. NOISE ATTENUATION

All oil operations on the oil field shall be conducted in a manner that minimizes noise and shall comply with the following provisions:

1. Noise Limits. The operator shall comply with the following provisions:

a. All oil operations on the oil field shall comply with the noise provisions of Chapter 12.08 of Title 12 (Environmental Protection) of the County Code, with the exception of drilling, redrilling, and reworking, which are exempt from the provisions of said chapter.

b. Hourly, A-weighted equivalent noise levels associated with drilling, redrilling, and reworking shall not elevate existing baseline levels by more than five dBA at any developed area. For daytime activities (7:00 a.m. to 7:00 p.m.) existing baseline noise levels shall be defined as the maximum daytime equivalent noise level (Leq) at the closest monitoring site as shown in Table 4.9.3 of the 2008 Baldwin Hills Community Standards District Environmental Impact Report. For nighttime activities (7:00 p.m. to 7:00 a.m.), existing baseline noise levels shall be defined as the minimum nighttime equivalent noise level (Leq) at the closest monitoring site as shown in Table 4.9.3 of the 2008 Baldwin Hills Community Standards District Environmental Impact Report. Updated baseline noise levels may be set, and additional monitoring sites may be established, from time to time by the director. In no case shall baseline noise levels include any drilling, redrilling, or reworking operations.

c. Noise produced by oil operations shall include no pure tones when measured at a developed area.

2. Backup Alarms. Backup alarms on all vehicles operating within the oil field shall be disabled between the hours of 8:00 p.m. and 8:00 a.m. During periods when the backup alarms are disabled, the operator shall employ alternate, low-noise methods for ensuring worker safety during vehicle backup, such as the use of spotters.

3. Quiet Mode Drilling Plan. All drilling and redrilling on the oil field between the hours of 6:00 p.m. and 8:00 a.m. shall be conducted in conformity with a quiet mode drilling Plan that has been approved by the director and the director of public health. The quiet mode drilling Plan shall be reviewed by the operator every year to determine if modifications to the Plan are required. The operator shall make changes to the Plan if requested by the director or the director of public health. Any modifications to the quiet mode drilling Plan shall be submitted to the director and the director of public health for review and approval. The quiet mode drilling Plan shall include any measures requested by the director or the director of public health.

4. Equipment Servicing. All noise producing oil field equipment shall be regularly serviced and repaired to minimize increases in pure tones and other noise output over time. The operator shall maintain an equipment service log for all noise-producing equipment.

5. Deliveries to the Oil Field. Deliveries to the oil field shall not be permitted after 8:00 p.m. and before 7:00 a.m. except in cases of emergency. Deliveries on Sundays or legal holidays shall not be permitted after 8:00 p.m. or before 9:00 a.m., except in cases of emergency.

6. Deliveries within the Oil Field. Deliveries to areas of the oil field located within 500 feet of any residential property shall not be permitted after 5:00 p.m. or before 7:00 a.m. except in cases of emergency. Deliveries to such areas on Sundays or legal holidays shall not be permitted after 5:00 p.m. and before 9:00 a.m., except in cases of emergency.

7. Time Limits for Construction. Construction of permanent structures shall not be permitted after 7:00 p.m. and before 7:00 a.m., or during Saturdays, Sundays, or legal holidays.

8. Construction Equipment. All construction equipment shall be selected for low-noise output. All construction equipment powered by internal combustion engines shall be properly muffled and maintained.

9. Construction Equipment Idling. Unnecessary idling of construction equipment internal combustion engines is prohibited.

10. Worker Notification. The operator shall instruct employees and subcontractors about the noise provisions of this subsection E.5 prior to commencement of each and every drilling, redrilling, reworking, and construction operation, and shall annually certify to the director that such employees and subcontractors have been properly trained to comply with such noise provisions. The operator shall prominently post quiet mode policies at every drilling and redrilling site.

Summary of Complaints:
A total of 23 complaints for the years 2014 through 2018 have been logged regarding noise from the oil field with 10 identified with oil field activities, 2 associated with the SCE facility located on the oil field, 2 with offsite sources and 9 unknown as listed in the table below.

Noise Complaints 2014 through 2018	
Number of Complaints	**Source**
9	Unknown
2	SCE Facility
2	Drilling Rig
2	Maintenance Rig (banging pipe)
1	Crane Use
1	Pumping Unit
1	Well Abandonment near West LA College
1	Gas Meter Equipment
1	Heavy Equipment for Catch Basin Cleanout Activities
1	Oil Field Equipment
1	Offsite Construction Activities
1	Fourth of July Fireworks
23	**Total**

For noise that was identified with a source from the oil field, a drill rig, maintenance rig, or piece of oil field equipment was identified to be the primary cause of noise. Noisy equipment operation, such as the pumping unit noted in the table above, was ceased when identified and the equipment was repaired or replaced by the operator in a timely fashion. Maintenance of the catch/debris basins is required by the CSD and the noise from the equipment necessary to perform the work was limited to daytime, weekday hours.

Summary of Issues Raised by the Public:
Noise from the oil field has not caused any significant issues nor has the County received any input on noise during this review period.

Oil field noise was a discussion issue of the Settlement Agreement dated July 15, 2011 negotiated between concerned public parties, the County and the operator. The agreement revised the CSD with regards to allowable nighttime maximum noise levels at baseline monitoring locations. The agreement lowered the nighttime (10:00 p.m. to 7:00 a.m.) maximum noise level above the baseline value from the 5 dBA referenced in this provision to 3 dBA for drilling, redrilling, and reworking activities. The agreement also stipulated that if those operations elevate nighttime

baseline noise levels by more than 10 dBA for more than 15 minutes in any one hour, the source of the noise must be identified, and steps implemented to avoid such a noise elevation in the future.

Analysis of Compliance and Effectiveness:
Noise measurements were taken at seven sites around the perimeter of the oil field to assist in the preparation of the noise analysis section of the Final Environmental Impact Report, Baldwin Hills Community Standards District, October 2008 (FEIR). The FEIR was prepared as part of the environmental documentation used to develop the CSD. The seven monitoring sites were selected to represent the closest residential, recreational and educational uses to the oil field and included locations in Ladera Heights, Windsor Hills, Culver Crest, Kenneth Hahn State Recreation Area, and West Los Angeles College. The results of the noise monitoring were used to set baseline values for the noise limit criteria of sub-section E.1.b. of this provision.

The revised baseline monitoring locations were developed by a team of noise experts from the County Health Department, County DRP, the County ECC, and noise consultants assisting the County. PXP, the operator at the time, also provided noise expert consultants to assist with the determination of the baseline monitoring site selection. Six monitoring sites were selected (four new locations and two of the locations used for the EIR were retained) and monitoring occurred for 72 hours to generate the revised baseline data. The baseline monitoring data reports are available at the oil field web site at www.inglewoodoilfield.com.

Sub-section E.1.b requires that noise levels from the operation of the oil field drilling, redrilling, and reworking shall not elevate existing baseline levels by more than 5 dBA at any developed area. As noted above, this requirement was revised to a maximum of 3 dBA from 10:00 p.m. to 7:00 a.m. by the Settlement Agreement for nighttime operations. Prior to the commencement of drilling, redrilling or reworking operations, noise monitoring equipment is set up at one of the six baseline monitoring stations and monitoring occurs 24 hours a day until the well work activity is completed. The monitoring location is selected by a noise expert consulting for the operator during an onsite visit; this review also includes direction to the operator in sound wall installation locations.

The County Department of Public Health (DPH) conducts noise monitoring at sampling points, dates, and times of day selected at random in locations within the surrounding communities with the highest risk of noise exposure from field operations. Noise monitoring was completed by DPH 59 times between February 12, 2014 and August 7, 2018 during both day and night hours, on weekends, and during different seasons with 60-minute sampling intervals. The average noise level recorded is 54.5 dBA, which is within the community noise background level.

Sub-section E.1.c requires that noise produced by oil operations shall include no pure tones when measured at a developed area. Pure tone noise is noise in which a single frequency stands out, usually high pitched, and can be more noticeable than sources that do not contain pure tones. The County has not documented any issues regarding pure tone noise to date.

The Quiet Mode Drilling Plan (QMDP) was first submitted in February 2009 and revised in April, July and September 2009. The Plan provides for quiet mode measures to reduce noise from drilling activities. Many of the measures are intended to reduce metal to metal contact activities known to increase noise around drilling operations. The QMDP also includes training of service personal and subcontractor staff and quiet mode signage posted at drilling sites listing the quiet mode drilling rules. The training occurs twice each day prior to the start of each drilling shift. As noted above, two noise complaints associated with the drilling rig occurred during this review

period. The drilling rig was approximately 600 feet from a residence for both subject complaints which occurred in March 2014. No recent drilling activity has occurred at the oil field with the last well drilled in June 2014.

The Annual Well Increase Evaluation, December 2011, included a discussion of the effectiveness of the CSD noise provisions. The report identified that some of the noise complaints may have been associated with operation of the pipe storage rack. In response to this finding, the storage rack was relocated to the center of the oil field east of the Vickers bioremediation farm. The new location is a greater distance from residential noise receptors. The report also concluded that none of the noise complaints were found to be related to drilling operations. The report concluded that the CSD has been effective at keeping noise to a level that would be considered protective of the health and general welfare of the public.

The County ECC checks field operations with a portable noise meter for compliance during the regular EQAP site inspections and annual audits. The QMDP also includes the other noise minimization measures required by this provision. Back-up alarms are not used during nighttime hours and deliveries to the oil field and within the oil field are restricted as required in sub-sections E.5 and E.6. The delivery restrictions are posted at the main gates consistent with the requirements of Provision 22.310.050.M, *Signs.* The operator complies with the time limits for construction of permanent structures, no construction occurs after 7:00 p.m. and before 7:00 a.m., or during Saturdays, Sundays, or legal holidays.

Subsections E.8 and E.9 list requirements for construction equipment maintenance and operation. Equipment is serviced and is properly muffled pursuant to the manufacturer's specifications. Subsection E.10 lists the requirement for worker notification of the noise minimization measures listed by this condition. All employees and sub-contractors are trained to comply with these noise provisions each year during annual certification training.

As documented above, the noise provisions of the CSD have been implemented, are ongoing, and considered to be fully effective at this time, with no further analysis recommended.

New Technology:
The noise minimization measures required by this provision and as contained in the QMDP represent current best industry practice to limit noise from the operation of an oil field. In addition, this provision requires that *"oil operations on the oil field shall be conducted in a manner that minimizes noise…",* thus new technologies in noise minimization methods can be implemented as applicable to oil field operations in the course of ongoing compliance monitoring without the need for amendments to the CSD.

Recommendations to Changes in Implementation:
This provision is implemented as intended and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No recommendations in the CSD language are recommended at this time.

4.6 F. VIBRATION REDUCTION

All oil operations on the oil field shall be conducted in a manner that minimizes vibration. Additionally, vibration levels from oil operations at the oil field shall not exceed a velocity of 0.25 mm/s over the frequency range 1 to 100 Hz at any developed area.

Summary of Complaints:
The County has received five complaints associated with vibration from 2014 through 2018. Two of the complaints were associated with heavy equipment used to clean out a debris basin in advance of winter weather as required by CSD Provision 22.310.050.C.4.b. One complaint was associated with a resident landscaping project and the source of two complaints was not identified.

Summary of Issues Raised by the Public:
The County did not receive any input on vibration during the 2014 through 2018 time frame except for the complaints discussed above.

Analysis of Compliance and Effectiveness:
The *Final Environmental Impact Report, Baldwin Hills Community Standards District, October 2008 (FEIR)*, prepared as part of the documentation necessary to develop the CSD, analyzed potential vibration issues at the oil field. Section 4.9 of the FEIR, *Noise and Vibration*, includes vibration monitoring data for typical drilling activities at the oil field. Results of the drilling activity vibration monitoring indicated the measured vibration levels did not exceed the criteria specified by this provision. The vibration criteria were not exceeded even with some monitoring data points as close as 50 feet from the drilling rig. Based on these monitoring results, the FEIR concluded that vibration impacts from drilling would not be considered significant.

The report prepared by the County in response to the request by PXP in October 2011 to increase the annual number of wells allowable for drilling or redrilling, the *Annual Well Increase Evaluation, December 2011*, includes analysis on the implementation of the vibration provision of the CSD. The report concluded that the CSD requirements have been effective at keeping vibration to a level that is considered protective of the health and general welfare of the public. Section 22.310.060.F of the CSD, *Vibration Monitoring*, provides for the County Public Health Department to request vibration monitoring as deemed necessary in areas surrounding the oil field. Based on the compliance reports documented for the oil field and the minimal amount of public complaints on vibration; additional vibration monitoring has not been deemed necessary to date.

The condition is considered fully effective at this time, no further evaluation is recommended.

New Technology:
No other new technologies for vibration minimization for oil field operations have been identified at this time.

Recommendations to Changes in Implementation:
This requirement has been implemented and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

4.7 G. BIOLOGICAL RESOURCES

All oil operations on the oil field shall be conducted in a manner that minimizes impacts to biological resources and shall comply with the following provisions:

1. Oil Spill Response. The operator shall comply with all provisions of an Emergency Response Plan ("ERP") that has been approved by the director, to protect biological species and to revegetate any areas disturbed during an oil spill or clean-up activities. The operator shall make changes to the ERP if requested by the director. Any modifications to the ERP shall be submitted to the director for review and approval. The ERP shall include any measures to protect biological species that may be requested by the director.

2. Special Status Species and Habitat Protection. The operator shall comply with all provisions of a special status species and habitat protection Plan that has been approved by the director. The operator shall make changes to the Plan if requested by the director. Any modifications to the Plan shall be submitted to the director for review and approval. The special status species and habitat protection Plan shall include any measures requested by the director.

3. Habitat Restoration and Revegetation Plan. Prior to any disturbance of sensitive natural habitat areas, as identified in the special status species and habitat protection Plan, the operator shall hire a biologist, approved by the county, to conduct a survey of the area to determine if significant impact to sensitive natural habitat, including coastal sagebrush, coyote bush scrub, riparian scrub, and oak woodland will occur. If the biologist determines that significant impact to sensitive natural habitat will occur, then the operator shall have a county-approved restoration specialist, with expertise in southern California ecosystems and revegetation techniques, prepare a habitat restoration and revegetation Plan. The Plan shall be submitted to the director for review and approval. The director shall make best efforts to complete the review of the Plan as expeditiously as possible and shall then either approve the Plan or provide the operator with a list of specific items that must be included in the Plan prior to approval. No removal of sensitive natural habitat shall occur until the Plan has been approved by the director. The habitat restoration and revegetation Plan shall include any measures requested by the director.

4. Pre-Construction Surveys. The following surveys shall be conducted prior to any significant vegetation removal in sensitive natural habitat as identified in the special status species and habitat protection Plan.

> *a. The operator shall hire a county-approved ecologist/botanist to conduct sensitive plant surveys.*
>
> *b. The operator shall hire a county-approved biologist to conduct sensitive wildlife surveys in habitat areas that could support sensitive wildlife species.*
>
> *c. The operator shall hire a county-approved biologist to conduct breeding and nesting bird surveys if the construction activities would occur during the breeding season (February 1 to August 31 for raptors, and March 15 to September 15 for sensitive/common birds).*
>
> *d. The operator shall hire a county-approved wetland delineator to delineate any wetlands that would be affected by construction.*

5. Listed Plant or Wildlife Species. If federal- or State-listed plant or wildlife species are found, then the operator shall comply with all applicable United States Fish and Wildlife and California Department of Fish and Game rules and regulations.

6. Construction Monitoring. If the pre-construction surveys find sensitive plant, wildlife species, or nesting birds, a biological monitor hired by the operator, and approved by the County, shall be on site during construction to monitor the construction activities. The biological monitor shall be responsible for the following:

a. Establishing a 300-foot buffer around any active breeding bird nests.

b. Assuring that vegetation removal does not harm sensitive wildlife species.

c. Monitoring the construction area for sensitive wildlife species and relocating them to suitable habitat outside of the construction area.

d. Ensuring that exclusionary fencing is installed around the construction area to prevent sensitive wildlife species from entering the construction area.

7. Tree and Riparian Scrub Removal. Removal of native or non-native trees and riparian scrub vegetation shall be scheduled, as possible, for removal outside the nesting season to avoid impacts to nesting birds. If avoidance of removal of trees or riparian scrub during the recommended periods is not possible, a county-approved biologist shall perform a survey to ensure that no nesting birds are present prior to removal. If for any reason a nest must be removed during the nesting season, the operator shall provide written documentation to the director demonstrating concurrence from the United States Fish and Wildlife Service and California Department of Fish and Game authorizing the nest relocation and a written report documenting the relocation efforts.

8. Habitat Restoration. Within 60 days of completion of construction activities that have significantly impacted sensitive natural habitat, the operator shall begin habitat restoration consistent with the approved native habitat restoration and revegetation Plan discussed in subsection E.7.c. Restoration priority shall be given to areas of degraded habitat connecting areas of higher quality habitat and where restoration would produce larger corridors to support the migration and movement of wildlife. The operator shall replace any significant loss of sensitive natural habitat at the following ratios:

a. 1:1 for each acre of coastal sagebrush or coyote bush scrub.

b. 2:1 for each acre of riparian scrub or oak woodland.

Summary of Complaints:
No complaints regarding the biological resources or the provisions for protection of biological resources have been received by the County.

Summary of Issued Raised by the Public:
No issues have been raised by the public on biological resources or the provisions for protection of biological resources.

Analysis of Compliance and Effectiveness:
The Emergency Response Plan (ERP), current version dated June 2019, was updated for specific response considerations for biological resources in March 2010. The ERP is submitted to the following agencies; California Division of Oil, Gas, Geothermal Resources (CalGEM), California Department of Fish and Wildlife Office of Spill Prevention and Response (OSPR), U.S. Environmental Protection Agency Region 9, California State Lands Commission Marine Facilities

Division Planning Branch, and the U.S. Department of Transportation Office of Pipeline Safety. To date, the ERP has not been needed to be activated to protect biological resources at the oil field.

The *Special Status Species and Habitat Protection Plan* was first prepared in 2009 and was approved on November 15, 2010. The Plan was prepared by a County approved ecologist/biologist. Compliance with subsections G.2 through G.8 is documented annually since 2010. Annual compliance documentation consists of a *Special Status Species Compliance Report.* The report documents the status and activities for the subject year involving biological resources at the oil field and includes an appendix compliance matrix which details the construction and well activities, any impacts to biological resources and the associated surveys or compliance requirements conducted pursuant to this provision. The reports are reviewed each year by the County.

Prior to the initiation of drilling activities for each year, the operator provides a County approved biologist with the forthcoming drilling schedule and associated compliance matrix for review. The biologist prepares a schedule for pre-construction biological surveys required by subsection G.4 and the surveys are completed within one week of the initiation of construction activities or vegetation removal. Monitoring occurs if necessary and a final survey is conducted upon completion of construction activities to document final impacts. Biological surveys are submitted with each of the site Plan permit requests submitted to the county for each well proposed to be drilled. Drilling activities during this review compliance period (2014 through 2018) were completed by June 2014 with a total of 18 wells drilled; none of these wells required a biological survey.

Construction projects may also impact sensitive resources and require pre-construction biological surveys. Biological surveys for construction projects for the years 2014 through 2018 are summarized in the table below.

Construction Project Biological Survey Summary 2014-2018					
Year	**Number Projects**	**Nesting Bird**	**Additional Bird Surveys Required**	**Vegetation**	**Wildlife**
2014	12	Yes	No	No	No
2015	2	Yes	No	No	No
2016	3	Yes	No	No	No
2017	0	No	No	No	No
2018	0	No	No	No	No

The habitat restoration requirements of subsection G.8 have not been triggered to date because the cumulative amount of sensitive habitat disturbed has not reached the one-acre criterion, therefore, no habitat restoration activities have occurred at the oil field. A habitat restoration plan will be prepared and submitted to the County for review and approval when the impact to sensitive habitat reaches the one-acre trigger.

The provision is considered fully effective at this time noting that the habitat restoration requirements have not been triggered to date, no further analysis is recommended.

New Technology:
The ERP, special status species and habitat protection, and habitat restoration plans required by this provision are submitted and approved by regulatory agencies. As these plans are periodically updated and/or the CSD language allows flexibility for additional measures as required by the

County, improvements in habitat protection and restoration can be required by the County without the need for amendments to the CSD and can be adopted as they arise. No improvements are deemed necessary at this time and none are proposed.

Recommendations to Changes in Implementation:
This requirement has been implemented and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

4.8 H. CULTURAL/HISTORIC RESOURCES

The operator shall comply with all of the following provisions:

1. Cone Trust House. Oil operations shall not result in impacts to the Cone Trust House.

2. Archeological Training. The operator shall provide archeological training for all construction personnel who will be involved with ground disturbance activities at the oil field. All such construction personnel shall be required to participate in the training and will receive training material prepared by a qualified archaeologist prior to working on ground disturbance activities.

3. Construction Treatment Plan. The operator shall comply with all provisions of a construction treatment Plan, approved by the director, to ensure that any new archeological discoveries are adequately recorded, evaluated, and, if significant, mitigated. In the event that unknown archaeological artifacts are encountered during grading, clearing, grubbing, and/or other construction activities, work shall be stopped immediately in the vicinity of the find and the resource shall be evaluated by a qualified archaeologist, approved by the director. The construction treatment Plan shall include any measures requested by the director.

Summary of Complaints:
No complaints on cultural or historic resources have been received from the public. The oil field is private property and is not open to the public.

Summary of Issued Raised by the Public:
The County received comments during the scoping comment period for the Periodic Review from an Environmental Group coalition. The comments concerned consultation with the Tongva Nations, Tongva Nation resources and suggested mitigation measures for tribal cultural resources. Section 4.12 of the Baldwin Hills CSD EIR addressed cultural resources including the potential for presence of archaeological resources at the oil field. Over 30 cultural resource investigations have been conducted within ½ mile of the Inglewood Oil including a study completed in April/May 2007 specific to the EIR to identify any existing resources that would be potentially affected by activities on the oil field. Two historic archaeological sites, both trash scatters consisting of bottles and other refuse dated between 1915 and 1935, and a historic architectural resource, the Cone Trust house, were identified.

Due to the fact that field survey could not exclude the possibility that unrecorded buried archaeological material could exist and be encountered during grading, clearing, grubbing, and/or other construction activities mitigation measures were developed to protect potential cultural resources. Baldwin Hills CSD EIR mitigations measures CR.2-1 and CR.2-2 as summarized in the table below were incorporated into the CSD as Provision 22.310.050.H.

Cultural Resource Mitigation Measures/CSD Requirements		
Mitigation Measure	**Summary**	**CSD Provision**
CR.2-1	Training of construction workers to identify sensitive archeological resources.	22.310.050.G.1 Worker Training
CR.2-2	Contract with a qualified archeologist to evaluate and record any unknown cultural sites that may be discovered during construction.	22.310.050.G.2 Construction Treatment Plan

Analysis of Compliance and Effectiveness:
The Cone Trust House and surrounding area are off limits to oil field staff to prevent any impacts to the historic building. A representative from the Cone Fee Family Trust sits on the Community Advisory Panel (CAP). A discussion of the significance of the Cone Trust House is included in the cultural resource sensitivity training of the oil field archaeological training program.

The archeological training program, as required by subsection H.2, was initially conducted on May 26, 2009. This training program is repeated annually along with the other employee awareness training requirements of the CSD.

The *Construction Treatment Plan* was initially submitted in May 2009, revised in July 2010, and was formally approved on January 24, 2011. The Plan includes a cultural history of the oil field site, an overview of cultural resource artifacts, the presence of cultural resources at the oil field, a discussion of the Cone Trust House, and a section on cultural resources sensitivity training. The Plan also includes the Inadvertent Cultural Resource Discovery and Impact Form, Cultural Resource Training Materials, and an Inadvertent Cultural Resource Discovery Communication Chart. The Plan is available on the oil field web site at www.inglewoodoilfield.com. No incidents requiring the implementation of the Inadvertent Cultural Resource Discovery procedure occurred during the 2014 through 2018 time period covered by this report.

The cultural resource training along with the Cultural Resource Discovery and Impact Form and Inadvertent Cultural Resource Discovery Communication Chart provide measures to protect potential cultural resources. In addition, the qualified archaeologist as required through CSD subsection H.2 can consult with representatives from the Tongva Nations as applicable for a discovery of cultural resources. The condition is considered fully effective at this time and no further evaluation is recommended.

New Technology:
The annual cultural sensitivity and archaeological training required under Provision 22.310.050.H.2 allows for the introduction and implementation of new technologies in cultural resource protection as they become available and applicable to the oil field. However, no improvements are identified at this time. If in the future improvements are deemed merited, they can be adopted as part of compliance review without the need for a Periodic Review.

Recommendations to Changes in Implementation:
This requirement has been implemented and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

4.9 I. LIGHTING

Outdoor lighting shall be restricted to only those lights which are required by code for the lighting of building exteriors, drilling, and redrilling rigs and for safety and security needs. In addition, the operator shall comply with the following provisions:

1. Screening. All new point lighting sources within the oil field shall be screened and directed to confine direct rays to the oil field and to prevent offsite spillover lighting effects to the extent feasible.

2. Lighting Plan. A detailed lighting Plan shall be prepared for each new permanent structure and submitted to the director for review and approval. No work may be commenced on such permanent structure until the lighting Plan therefore has been approved by the director. The lighting Plan shall include any measures requested by the director.

Summary of Complaints:
No complaints regarding lighting have been documented for the period 2014 through 2018.

Summary of Issues Raised by the Public:
The County has not received any concerns regarding the lighting at the Inglewood Oil Field.

Analysis of Compliance and Effectiveness:
Lighting at the oil field is primarily associated with the gas plant and tank farm facilities. Additional lighting is used with drill rig equipment as those operations occur 24 hours a day; office and outbuilding security lighting, and with limited vehicle traffic. The gas plant and the tank farms require lighting for operational and safety reasons. The lighting fixtures are screened to orient the light downward toward the area requiring illumination as feasible. Other lighting, such as security lighting at the office building, uses hood type screening fixtures to focus the light downward. Shortly after the CSD was implemented in November 2008, an assessment of all oil field lighting was completed to confirm compliance with the CSD lighting provisions and to confirm that there were no offsite lighting impacts.

Lighting for drilling rig operations at the oil field has been minimized to the maximum extent feasible given the operational and safety requirements necessary. Lights are focused downward from the monkey board of the drilling derrick as opposed to ground-based flood lighting orientated upwards. Other rig operations at the oil field such as well reworking rigs are limited to daytime operations from 7:00 am to 7:00 pm as required by subsection BB.3. Except for drill rigs which are required and permitted to operate 24 hours a day, SPR operations policy for all other rig operations in the oil field is to limit work activities to day light hours only and to avoid using lighting whenever possible. When operational or safety issues require working past sundown, as may occur during the wintertime, portable lights are brought in to complete the necessary work. These portable lights are shielded and focused downward toward the work area and work is halted by 7:00 pm as required by the CSD.

No new permanent structures requiring a lighting Plan have been proposed by the previous operators or SPR, therefore, CSD provision E.9.b has not been activated to date.

Lighting at the oil field meets the criteria outlined in CSD Provision 22.310.050.I. Lighting has not been an issue with the public, the provision is considered fully effective at this time and no further analysis is recommended.

New Technology:

New permanent structures at the oil field are subject to CSD Provision 22.310.050.I.2 which requires a lighting Plan approved by the County. As such, as new technologies in lighting become available, the County can require implementation of those technologies through the lighting Plan review and approval process for any new permanent structure.

Recommendations to Changes in Implementation:
The lighting at the oil field is consistent with the CSD requirements for lighting and thus the provision has been implemented; no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
The lighting at the oil field is in compliance with the CSD requirement and there have been no complaints or public issues from oil field lighting to date. Therefore, no changes in the CSD language are recommended.

4.10 J. LANDSCAPING, VISUAL SCREENING, IRRIGATION AND MAINTENANCE

The operator shall comply with the conceptual landscaping Plan for the oil field prepared by Mia Lehrer & Associates, dated October 2008, on file at the department of regional planning, which is intended to beautify and screen the oil field from adjoining residential, recreational, and institutional areas or adjacent public streets or highways. Landscaping required by this Plan shall be completed in phases over a two-to five-year period as approved by the director. All landscaping on the oil field shall be routinely inspected (on at least a monthly basis) and maintained in a neat, clean, and healthful condition, including proper watering, pruning, weeding, fertilizing, and replacement of plants as needed. Litter shall also be removed on a regular basis.

Summary of Complaints:
Two complaints were received on landscaping during this review period. One complaint stated the landscaping was unacceptable, but the complaining party did not follow up with the operator on the issue. The second complaint involved landscaping trees/plants damaged by high winds in March 2015. The ECC followed up on the damaged trees on March 26, 2015 with an inspection and noted several recently planted trees required readjustment of support poles which was corrected by the landscape contractor. Subsequent inspections found the subject trees growing normally and in good condition.

Summary of Issues Raised by the Public:
Input on the aesthetics of the oil field relative to vegetation and landscape screening was received by the County in comments solicited for the Periodic Review. Culver City commented that the

landscaping does not adequately screen the oil field from Culver City and requested the CSD be revised to include more landscaping measures to screen the oil field from adjacent residences, parks, and public view areas. However, it should be noted that Culver City was a participating litigant in, and in agreement with the terms of, the Settlement Agreement which revised and enhanced the CSD landscaping plans. The landscaping section of the Settlement Agreement is further discussed below.

Input on the landscaping effort was also received as part of the Settlement Agreement dated July 15, 2011 negotiated between concerned public and government parties, the County and PXP (now SPR). The agreement requires the operator to prepare and implement a series of landscaping plans that enhance the *Mia Lehrer Landscape Improvements Concept Plan* referenced by this provision. The agreement further requires the landscape plans be submitted to the Community Advisory Panel (CAP) for review, and to install the first two phases of landscaping within nine months of County final approval of the plans. The agreement further required the operator will complete the entire landscaping required by the County-approved Landscape Plans within three years after approval by the County of the final phase. As noted below, the landscaping plans and installations were completed pursuant to the revised agreement.

Analysis of Compliance and Effectiveness:
The *Landscaping Plan Inglewood Oil Field* was first submitted in May 2009 and was revised in November 2010. This base Plan outlines seven phases of landscaping effort, prioritized by concerns for screening areas of public corridors and water conservation considerations with subsequent plans prepared for each landscaping phase. Landscaping for Phase 1 and 2 involved the areas at the Ladera Crest residential viewshed looking north and along the Windsor Hills/La Brea traffic corridor viewshed, respectively. Phase 3 landscaping addresses the Ladera Crest residential viewshed looking east. Phases 4 and 5 involve a roadway buffer along La Cienega Boulevard. Phase 6 is a landscape buffer for the Fairfax Avenue roadway and Phase 7 is a landscaping buffer for Stocker Street. All landscaping was completed in December 2018 as listed in the table below.

Phase	Plan	Landscaping
1 - Ladera Crest View-shed North	Approved May 2011	Completed October 2011
2 – Windsor Hills/ La Brea View-shed	Approved October 2011	Completed June 2012
3– La Brea View-shed East/La Cienega Blvd.	Approved June 2013	Completed December 2018.
4 - La Cienega Blvd. Roadway	Approved June 2013	Completed November 2016
5 – La Cienega Blvd. Roadway	Approved June 2013	Completed November 2016
6 – Fairfax Avenue Roadway	Approved April 2016	Completed November 2017
7 – Stocker Street Roadway	Approved April 2016	Completed December 2018.

The ECC reviews the landscaping during site inspections and the landscaping contractor is monitoring the progress of the recently completed phases and will replace any trees or shrubs as necessary during the calendar year 2019. All landscaping required by the CSD and Settlement Agreement has been completed. This provision is considered fully effective at this time, no further analysis is recommended.

New Technology:
Water saving drip irrigation is used where feasible; use of recycled water has not been implemented to date because it is not available to the oil field at this time.

Recommendations to Changes in Implementation:
As noted above, all required landscaping has been completed and is being monitoring by the County and the operator. This provision is implemented as intended, no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
This provision has been implemented and was augmented by the Settlement Agreement and no changes in the CSD language are recommended.

4.11 K. OIL FIELD WASTE REMOVAL

The operator shall comply with the following provisions:

1. Waste Collection. All drilling, redrilling, and reworking waste shall be collected in portable steel bins compliant with United States Department of Transportation standards. Any drilling, redrilling, and reworking wastes that are not intended to be injected into a Class II Well, as permitted by CalGEM, shall be removed from the oil field no later than 30 days following completion of the drilling, redrilling, and reworking. This provision does not apply to active sumps and mud pits.

2. Waste Discharge. No oil field waste shall be discharged into any sewer, storm drain, irrigation systems, stream or creek, street, highway, or drainage canal. Nor shall any such wastes be discharged on the ground provided that the foregoing shall not prohibit the proper use of active drilling sumps and mud pits.

3. Recycling Plan. The operator shall comply with all provisions of a recycling Plan that has been approved by the director. The recycling Plan shall include any elements requested by the director.

Summary of Complaints:
No complaints associated with waste removal at the Inglewood Oil Field have been received by the County.

Summary of Issues Raised by the Public:
The County has not received any public input regarding waste removal for the period 2014 through 2018.

Analysis of Compliance and Effectiveness:

Waste generated by drilling, redrilling, and reworking activities is collected in bins and emptied with the use of a vacuum truck as necessary. The previous operators and SPR do not use sumps or mud pits (see discussion for CSD Provision 22.310.050.O), and all such waste is contained in metal or plastic bins. All waste from drilling, redrilling, and reworking sites is removed within 30 days of the completion of the activity; waste is trucked to several facilities permitted to accept the subject materials. Inspection of drilling, redrilling, and reworking is part of the periodic inspections completed by the County ECC as required by CSD Provision 22.310.060.B. As noted above, the subject waste is collected in bins and is not discharged to the ground. As mentioned in the discussion for CSD Provision 22.310.050.C.4 and as documented in the *PXP Retention Basin Study*, the oil field retention basins are adequately size and maintained to handle the contents of the largest tank at the oil field along with 100-year storm event precipitation volume. Therefore, any spilled fluid waste material will remain within the oil field secondary containment and or retention basin system and not cause any offsite impacts. The retention basins are visually inspected during the dry months by the County ECC to confirm they are clean and free of debris and are prepared for each rain year by a storm water management consultant.

Subsection K.3 requires compliance with an approved Recycling Plan. The PXP *Recycling Plan Inglewood Oil Field* was approved on October 3, 2011. The Plan, originally submitted as required by CSD Provision 22.310.120, on May 26, 2009, details the approach to recycling various types of waste at the oil field. The Plan provides protocols for the following types of recycled waste; tires, cell phones, batteries, scrap metal, computer components, industrial waste, office waste, and landscaping waste. The Plan also includes an education program for employees and contact information for waste recycling and disposal vendors.

The provision is considered fully effective at this time and no further analysis is recommended.

New Technology:
The oil field waste removal system currently implemented at the oil field is consistent with current technology. The oil field contains all waste from drilling, redrilling, and reworking activities in bins and does not use in-ground sumps or pits. The Recycling Plan approved by the County includes current recycling techniques and waste streams, however, new technologies in recycling in the future should be considered as applicable at the oil field.

Recommendations to Changes in Implementation:
This provision is implemented as intended, oil field waste is contained and recycled as required; therefore, no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
This requirement is implemented as intended consistent with the CSD language, and no changes in CSD language are recommended.

4.12 L. CONSTRUCTION OF PRIVATE ROADS

Roads and other excavations shall be designed, constructed, and maintained to provide stability of fill, minimize disfigurement of the landscape, prevent deterioration of vegetation, maintain natural drainage, and minimize erosion. Prior to construction of any new road, the operator shall prepare and submit to the director of public works for review and approval a private road construction Plan. The operator shall thereafter comply with all provisions of the approved private road construction Plan. All new private access roads leading off any surfaced public street or

highway shall be paved with asphalt or concrete not less than three inches thick for the first 50 feet of said access road from the public street or highway.

Summary of Complaints:
No private roads have been constructed at the Inglewood Oil Field since the adoption of the CSD; no complaints on this provision have been received by the County.

Summary of Issues Raised by the Public:
No private roads have been constructed at the Inglewood Oil Field since the adoption of the CSD and no issues regarding the construction of private roads have been raised by the public to date.

Analysis of Compliance and Effectiveness:
No private roads have been constructed to date and all oil field activities utilize existing access roads. This requirement has not been activated to date, and no further evaluation is recommended.

New Technology:
No private roads have been constructed at the oil field since the adoption of the CSD; however, as required by the CSD provision, any new road requires the preparation and approval of a private road Construction Plan. Required review of any plan for a private road by the director of public works will allow for review of new technology or updated County grading requirements. Therefore, implementation of such new technology can be required as applicable.

Recommendations to Changes in Implementation:
This requirement has not been activated to date; therefore, no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
This requirement has not been activated to date and no changes to the CSD language are recommended.

4.13 M. SIGNS

All signage shall comply with Chapter 22.114 (Signs). In addition, the operator shall comply with the following provisions:

1. Perimeter Identification Signs. Identification signs, at intervals acceptable to the director, shall be posted and maintained in good condition along the outer boundary line fence and along the fences adjoining the public roads that pass through the oil field. Each sign shall prominently display current and reliable emergency contact information that will enable a person to promptly reach, at all times, a representative of the operator who will have the expertise to assess any potential problem and recommend a corrective course of action. Each sign shall also have the telephone number of the county department of regional planning zoning enforcement section and the number of SCAQMD that can be called if odors are detected.

2. Main Entrance Sign. A sign shall be posted and maintained in good condition at the main entrance of the oil field prominently displaying a telephone number by which persons may contact a representative of the operator at all times to register complaints regarding oil field operations.

3. Other Required Signs. All identification signs, warning signs, no trespassing signs, and other signs required by county, State and federal regulations shall be properly posted and maintained in all required locations and in good condition.

4. Well Identification Signs. Well identification signs including the well name and well number shall be posted and maintained in good condition at each well location.

5. No Littering Signs. "No littering" signs shall be prominently posted and maintained in good condition on all oil field entrance gates.

Summary of Complaints:
The County approved the *Signage Plan Inglewood Oil Field* on May 18, 2009 and the required signage was installed. No complaints regarding the signage have been received by the County.

Summary of Issues Raised by the Public:
The County has not noted any issues raised by the public regarding the facility signage.

Analysis of Compliance and Effectiveness: The installation of the signage required by this CSD provision was completed upon approval of the *Signage Plan Inglewood Oil Field* dated January 2009 (Revision 1) approved by the County on May 18, 2009. The required signage is periodically reviewed during inspections completed by the County ECC. Faded or damaged signage is noted and recommended for repair or replacement. The 1-800 24-hour contact number, the South Coast Air Quality Management District, and the L.A. County Department of Regional Planning Zoning Enforcement section have all received calls from the public inquiring about oil field activities since the installation of the signs. Some of this correspondence indicates the signage may be providing the public with contact information as intended under CSD Provisions M.1 and M.2 (the contact information is also available via the Inglewood Oil Field and County DRP web sites).

SPR has completed the process of reviewing and replacing applicable signs to reflect the name change from FM O&G to SPR. The provision is considered fully effective at this time, no further analysis is recommended.

New Technology:
As noted above, the County ECC inspector notes when signage requires replacement or repair. Therefore, signs will be updated periodically to ensure they are legible and meet the requirements of the CSD.

Recommendations to Changes in Implementation:
The required signage at the oil field was installed per the Signage Plan approved on May 18, 2009; no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

4.14 N. PAINTING

All oil operation-related structures visible from public roadways and surrounding properties within the oil field shall be painted or otherwise surfaced or textured with a color that is compatible with the surrounding areas and has been approved by the director. The painting or other surfacing of all structures covered by this subsection shall thereafter be maintained in good condition.

Summary of Complaints:
No complaints regarding the painting of the Inglewood Oil Field have been received by the County.

Summary of Issues Raised by the Public:
The County has not noted any issues raised by the public about the painting of the Inglewood Oil Field.

Analysis of Compliance and Effectiveness:
The painting of the Inglewood Oil Field structures and equipment was completed on November 12, 2012. The paint color, *licorice*, was chosen with assistance of a landscape architect and was approved by the LA County Department of Regional Planning. The color, which is much darker than the previous industry standard paint color tan or light brown, is intended to blend and be compatible with surrounding areas. The *Annual Well Increase Evaluation, December 2011,* included a discussion of the painting of the oil field facilities and the darker color of paint. The report concluded that the dark color helps to blend the equipment into the background, thereby reducing the visual and aesthetics of the oil field.

Prior to completion of the painting in November 2012, semi-annual status reports were submitted to the County for review to document progress of the facility painting. Although the initial painting effort for the oil field was completed in late 2012, maintenance of the painting and coatings of the equipment and structures at the oil field is a continuous process. The operator maintains a painter and a specialty painter on contract along with a schedule and priority list for the painting contractors to maintain the coatings on the structures and equipment at the oil field. The operator also maintains a priority list and schedule for the painting of equipment and tanks; the schedule is periodically reviewed by the County ECC.

The Inglewood Oil Field has been painted with a color approved by the County and the coatings are maintained by the operator. The provision is considered fully effective at this time, no further analysis is recommended.

New Technology:
As noted above, the painting color approved is darker than the previous industry standard color of tan or light brown. Darker colors have been shown to blend and be more compatible with surrounding areas than the lighter shades previously chosen for oil field facilities.

Recommendations to Changes in Implementation:
The required painting of the Inglewood Oil Field was completed with the approved color in November 2012. The coatings are maintained by the operator; therefore, the implementation of the condition is complete and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:

The required painting and maintenance of the coatings of the Inglewood Oil Field structures and equipment has been implemented; no changes to the CSD language are recommended.

4.15 O. SUMPS

The operator shall comply with the following provisions:

1. Sump Clean Out. All sumps that are used, installed, or maintained for use in connection with any well, and which have not been used for 90 days for the operation of or the drilling, redrilling, or reworking of such well or any other well in the vicinity, shall be cleaned out, and all oil, rotary mud, and rubbish removed.

2. Sump Fencing. Around each sump of any depth, there shall be erected and continuously maintained a fence that encloses the sump and complies with the requirements of Sections 11.48.010 - 11.48.050, Title 11 (Health and Safety) of the County Code. This provision shall not apply to sumps that are constantly and immediately attended while drilling, redrilling, and reworking operations are proceeding as specified in Section 11.48.020 in Title 11 (Health and Safety) of the County Code.

Summary of Complaints:
All sumps were cleaned out, filled in with clean soil and re-graded to surrounding topography in 2007. No new sumps have been installed or used for any oil field activities since the adoption of the CSD; no complaints regarding sumps have been received by the County.

Summary of Issues Raised by the Public:
As noted above, all oil field sumps have been cleaned out and filled in and no new sumps have been installed since the adoption of the CSD. The County has not noted any issues raised by the public regarding sumps.

Analysis of Compliance and Effectiveness:
As discussed above, all historical sumps that existed on site were cleaned out, filled in with clean soil, and re-graded to match the surrounding topography in 2007. No operator, including SPR, has installed or used sumps for any oil field activities since the adoption of the CSD. The use of bins and portable tanks, often called by the vendor name “Baker Tanks”, is now common and standard practice in most oil and gas fields in California. These metal and plastic container structures have eliminated the need for the installation and use of in the ground sumps. The use of these portable structures has also eliminated the need for provision language requiring the clean out of sumps upon cessation of the associated drilling activity as the structures are not permanent and are moved from one job site to the next.

The requirement has not been activated to date because the oil field no longer contains sumps or sump fencing and the use of portable metal or plastic bins and tanks have replaced the need for them. It is recommended that the Operator continue the use of metal and or plastic bins and tanks consistent with standard industry practice. Eliminating the use of below-ground sumps with above-ground metal or plastic containment structures is considered to be an environmental benefit due to the fact that the oil, drilling mud and other fluids are confined to a better containment structure that is both easier to clean and remove from the drill site and does not have the potential to contaminate surrounding soils.

New Technology:

As noted above, the use of below ground sumps has been widely replaced by metal or plastic bins and tanks for most oil and gas facilities in California. SPR does not use below-ground sumps at the oil field and continues the use of the portable bins and tanks as standard operating procedure for all drilling activities.

Recommendations to Changes in Implementation:
As previously discussed, the Inglewood Oil Field does not contain sumps and the use of sumps was discontinued prior to the adoption of the CSD. It is recommended that the Operator continue the practice of using above-ground bins, and no other changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

4.16 P. WELL CELLARS

All well cellars shall be constructed in accordance with the most current American Petroleum Institute standards. In addition, the operator shall comply with the following provisions:

1. Cellar Fluids. Well cellars shall be kept free of all oil, water, or debris at all times. During drilling, redrilling, and reworking, the cellar shall be kept free of excess fluids by a pump which discharges into a waste tank, mud pit, vacuum truck, or other approved disposal system.

2. Access to Multi-Well Cellars. All multi-well cellars exceeding three feet in depth and 25 feet in length shall have two means of entrance and exit and an additional exit for every 50 feet in length thereafter. At least one means of entrance or exit for all multi-well cellars of 25 feet in length shall be a stairway constructed to California Division of Industrial Safety standards.

3. Single-Cellar Covers. All single-cellars shall be covered with open grating and have no openings larger than three inches at any point. Covers shall be capable of supporting vehicle weight or guardrails shall be erected to prevent vehicle access.

4. Cellar Ladder Openings. All openings for ladders through grating shall be designed to allow exit from underside without obstruction and shall be kept free of storage of any type. Said openings shall not be less than 24 inches on either side.

Summary of Complaints:
No complaints regarding the oil field well cellars have been received by the County.

Summary of Issues Raised by the Public:
There have been no issues raised by the public regarding well cellars.

Analysis of Compliance and Effectiveness:
The well cellars at the oil field are inspected annually by CalGEM and any time the associated well is re-worked, a CalGEM permit is required and thus reviewed. The cellars are kept free of fluid and debris and are inspected daily by operations staff. The well cellars are also checked periodically by the County ECC during site inspections. As noted in the discussion on CSD Provision 22.310.050.O, bins and tanks are used for all drilling, redrilling and reworking activities

on the oil field; mud pits or sumps are no longer utilized. The oil field does not contain any multi-well cellars; all well cellars are of the single-well cellar type; therefore, subsection P.2 does not currently apply to any existing oil field structures.

All well cellars in the oil field are covered with an open grating and surrounded with fencing to prevent vehicle access. The well fencing includes signage depicting the name of the well per the requirements listed in CSD Provision 22.310.050.M.4. None of the wells require cellar ladder openings due to the shallow depth of the cellars.

Well cellars at the oil field meet current API standards as required and reviewed during CalGEM and County inspections, the provision is considered fully effective at this time, no further analysis is recommended.

New Technology:
As noted above, the well cellars on the oil field are required to meet the standards and specifications of the API. Therefore, as new technologies for well cellars are developed and adopted by the API; those technologies would be required by the CSD without a need for any specific provision language changes.

Recommendations to Changes in Implementation:
This provision is implemented as intended, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No recommendations in the CSD language are recommended at this time.

4.17 Q. STORMWATER DRAINAGE MANAGEMENT

The operator shall comply with the following provisions:

1. Construction Storm Water Pollution Prevention Plan ("CWPPP"). The operator shall maintain and implement all provisions of a storm water pollution prevention plan ("SWPPP") that has been inspected by the Regional Water Quality Control Board and the county department of public works. The operator shall provide the director and the director of public works with a copy of the SWPPP, and any future modifications, revisions, or alterations thereof, or replacements therefore. The SWPPP shall be updated prior to new construction activities as required by the Regional Water Quality Control Board.

2. Spill Prevention, Control, and Countermeasure Plan ("SPCCP"). The Operator shall maintain and implement all provisions of a spill prevention, control, and countermeasure Plan ("SPCCP") which meets the requirements of the Local California Unified Program Agency and the United States Environmental Protection Agency. The operator shall provide the director and the fire chief with a copy of the SPCCP and any future modifications, revisions, or alterations thereof, or replacements therefore.

3. Hydrological Analysis. A site-specific hydrologic analysis shall be completed to evaluate anticipated changes in drainage patterns and associated increased runoff at the site for any new grading that results in the loss of vegetated, sandy, permeable ground areas, which could alter surface runoff at the site. The analysis shall be completed consistent with Standard Urban Stormwater Mitigation Plan regulations, as specified in the county department of public works Hydrology Manual as amended. The hydrological analysis shall be submitted to the director of

public works for review and approval. The new grading that required the hydrologic analysis shall not occur until approval of the analysis by the director of public works.

Summary of Complaints:
A member of the public expressed concern via the oil field complaint process in February 2017 regarding stormwater drainage below the Vickers 1 basin in a Culver Crest neighborhood (Flaxton Street and Youngworth Road). The operator was discharging rainwater consistent with their CSD and Regional Water Quality Control Board permit requirements. The rainwater entered the storm drain system and then entered the street from a storm drain system street discharge point, sheet flowed down the street, and then reentered the system at a curb opening. The operator and ECC investigated the situation and determined the storm drain system was designed to flow onto the street and confirmed the water routing with the DPW. The subject storm drain system is in Culver City.

Summary of Issues Raised by the Public:
The County has not received any input from the public on the oil field SWPPP or SPCCP.

Analysis of Compliance and Effectiveness:

The oil field SWPPP is updated as needed and submitted to the RWQCB and the DPW for review. Recent versions of the SWPPP include the requirements and associated general permit (CA0057827) for compliance with the National Pollution Discharge Eliminations System (NPDES). The RWQCB issued the operator an NOV on March 22, 2018 resulting from the results of stormwater testing completed from a planned release. The released stormwater had been routed through a stormwater filter and treatment system consistent with RWQCB guidance prior to the release, however, the water contained concentrations of two metals that did not meet permit standards. The operator is continuing to work with the RWQCB on finalizing the discharge permit standards for the facility permit with the most recent updated permit adopted on September 30, 2019. Resolution of the NOV includes enhanced testing in forthcoming rain years including testing stormwater that enters the oilfield retention basins from offsite sources such as Kenneth Hahn Park and the Ladera Heights neighborhood.

Recent updates to the SWPPP have been submitted annually along with the Master Grading Plan, the current SWPPP is dated June 2018. SPR utilizes an environmental consulting company with expertise in storm water management to assist with implementation of the provisions of the SWPPP and prepare the oil field for each storm season.

The *Spill Prevention, Control and Countermeasure Plan* (SPCCP), required under subsection Q.2, provides detail on the maintenance of tank and related equipment at the oil field which include inspection programs, corrosion prevention/corrosion monitoring techniques, and clean-up equipment. The Plan also includes potential spill scenarios for each tank with containment

calculations documenting the adequacy of the containment structures. The Plan is updated every five years, current version dated July 2018; the most recent spill containment response training was completed on March 27, 2019.

The hydrologic analysis listed under subsection Q.3 has not occurred to date because no oil field projects have triggered the requirement. Projects at the oil field to date, as detailed and reviewed in the annual master grading plan submittals, have not resulted in enough disturbance or loss of vegetated, sandy, or permeable ground areas that have altered surface runoff at the site. Therefore, this provision has not been triggered to date.

The provision is considered to be effective at this time, no further analysis is recommended.

New Technology:
Both the SWPPP and the SPCCP are reviewed by applicable regulatory agencies. As noted above, agencies involved in overseeing these plans include the County, RWQCB, the Local California Unified Program Agency and the United States Environmental Protection Agency. These evaluations allow for new technologies in storm water drainage management and spill control to be added to the subject plans as needed, and those new technologies can be required by the CSD through Plan changes and compliance and do not necessitate amendments to the CSD language.

Recommendations to Changes in Implementation:
The required storm water and spill control plans and measures are current and in place, therefore, no change in the implementation of the provision is recommended.

Recommendations to Changes in CSD Language:
The CSD language allows for review and revision of the subject plans through the oversight of the agencies listed above, thus the requirements of this provision can be updated as necessary; therefore, no changes in CSD language are recommended.

4.18 R. WATER MANAGEMENT PLAN

The operator shall comply with all provisions of a water management plan that has been approved by the director and the director of public works. The plan shall include best management practices, water conservation measures, the use of a drip irrigation system, and shall include provisions for the use of surface water runoff in the retention basins for dust suppression and landscaping. The plan shall also address the availability of reclaimed water for use at the oil field. The water management plan shall be reviewed by the operator every three years to determine if modifications to the plan are required. The operator shall make changes to the plan if requested by the director or the director of public works. Any modifications to the water management plan shall be submitted to the director and the director of public works for review and approval. The water management plan shall include any elements requested by the director or the director of public works. In addition, the operator shall comply with the water conservation measures and reporting requirements specified in Sections 20.09.020 - 20.09.080, Title 20 (Utilities) of the County Code.

Summary of Complaints:
No complaints associated with the water management plan for the oil field have been received by the County.

Summary of Issues Raised by the Public:
The public has not provided any input on the water management plan for the oil field.

Analysis of Compliance and Effectiveness:
The *Water Management Plan Inglewood Oil Field* was initially submitted in May 2009 and was formally approved by County Public Works on August 8, 2012 and the County DRP on September 13, 2012. The Plan includes water conservation measures for office, landscaping, operations, and maintenance water uses. The Plan also includes a section on employee awareness to encourage water conservation. One of the main water conservation measures is the use of water contained in retention basins for dust suppression. This measure has been fully implemented as documented by the County ECC during periodic inspections. A pump and portable above-ground storage tank system is currently at use at the Dabney-Lloyd retention basin to supply water for dust control applications. Starting with the 2014/2015 rain season, the previous operator FM O&G installed temporary pumps and storage tanks at all the oil field retention basins to allow for recycling of storm water when feasible.

The CSD does not require submittal of water usage records, however, 2018 water use was obtained from the operator for this report at 15,242,000 gallons or approximately 41,760 gallons per day water use. The Baldwin Hills CSD EIR provided the average water use for 2006-2007 as 160,104 gallons per day, therefore, current water use at the oil field is one fourth the baseline level from the CSD EIR. The Plan has been submitted and approved as required and current water use is below previous levels, the provision is considered fully effective at this time.

New Technology:
The CSD provision language includes requirements for operator review of the Plan every three years to determine if modifications are required and for the operator to make changes to the Plan if requested by the director of DPW. In addition, the language also requires compliance with the water conservation measures as specified in the County Code. Therefore, as new technologies in water management are developed and new requirements are added to the County Code, the CSD provision allows for implementation of those new technologies as directed by the director of DPW or by reference to the County Code.

Recommendations to Changes in Implementation:
The Water Management Plan is approved and implemented as intended, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

4.19 S. GROUNDWATER MONITORING

The operator shall develop, implement, and carry out a groundwater quality monitoring program for the oil field that is acceptable to the director and consistent with all requirements of the Regional Water Quality Control Board. Pursuant to the approved program, the operator shall install and maintain groundwater monitoring wells in the vicinity of each surface water retention basin, which is permitted by the Regional Water Quality Control Board. Such monitoring wells shall be completed to the base of the permeable, potentially waterbearing, alluvium, Lakewood Formation, and San Pedro Formation, and to the top of the underlying, non-water bearing Pico

Formation, as determined by a California-certified professional geologist. The Regional Water Quality Control Board and the director shall be regularly advised of the results of such monitoring and shall be immediately advised if such monitoring indicates a potential problem.

Summary of Complaints:
No complaints associated with the groundwater monitoring program for the Inglewood Oil Field have been received by the County.

Summary of Issues Raised by the Public:
Comments have been received at several CAP meetings regarding questions on the monitoring results and on arsenic levels in the monitoring data. Questions on the laboratory detection limits, laboratory quality assurance/quality check sample blanks, and how the monitoring results compare to the drinking water standard have also been noted by the public. Arsenic, because it is prevalent in the geology throughout the LA basin, is often detected in the monitoring wells at the oil field. Both the data questions and the arsenic issue have been discussed and have been resolved at past and recent CAP meetings.

Analysis of Compliance and Effectiveness:
The *Groundwater Monitoring Program and Work Plan Inglewood Oil Field Plan* was submitted in August of 2009. The Plan described the groundwater quality monitoring program including the site geology/hydrology, proposed monitoring well locations, the sampling and monitoring procedures, well installation method, data collection, and data quality assurance and control procedures. The Plan was approved by the RWQCB in September 2009 and by the County in November 2009. Monitoring wells were installed between January 2010 and March 2010 with monitoring reports starting the first quarter of 2010. Monitoring reports have been submitted quarterly to the RWQCB and the County since the monitoring effort began in early 2010.

Groundwater monitoring samples are analyzed for a variety of contaminants and compared to State Maximum Contaminant Levels (MCLs) for drinking water standards. Sampled contaminants include petroleum hydrocarbons, diesel range organics, benzene, toluene, ethyl benzene, xylenes (BTEX), Methyl Tert Butyl Ether (MTBE), metals, oxygen, nitrate, and nitrite. Results from the monitoring program for all sampled parameters to date are below the applicable MCL for drinking water standards except for arsenic. As noted above, naturally occurring arsenic is common throughout the LA basin geology. The groundwater sampling program has also determined that the water bearing zones at the oil field are discontinuous with each other and are discontinuous with the water supply aquifers in the Los Angeles Basin.

The groundwater monitoring program has been implemented and is ongoing with quarterly reports submitted to the RWQCB and the County as required. The provision is considered fully effective at this time.

New Technology:
The CSD provision language requires that the monitoring program be consistent with all requirements of the RWQCB. As new technologies in groundwater monitoring are reviewed and adopted by the RWQCB, the new technologies can be required pursuant to RWQCB direction.

Recommendations to Changes in Implementation:
No changes to the provision implementation are recommended.

Recommendations to Changes in CSD Language:
The groundwater monitoring program has been implemented with the required reports submitted to the RWQCB and the County. No change to the CSD language is recommended.

4.20 T. FENCING

All portions of the oil field on which oil operations are conducted shall be enclosed with a fence compliant with CalGEM regulations codified at California Code of Regulations Title 14, Article 3, sections 1778 and 1779, or as may be subsequently amended by the State.

Summary of Complaints:
The oil field is completely fenced with a chain-link type fence that meets the requirements of the CSD fencing provision; the County has not received any complaints on the facility fencing.

Summary of Issues Raised by the Public:
The oil field is completely fenced with a chain-link type fence that meets the requirements of the CSD fencing provision; no issues on the facility fencing have been raised by the public.

Analysis of Compliance and Effectiveness:
The CSD requirement references the California Code of Regulations, CalGEM regulations for oil field enclosures (fencing). The oil field is completely fenced with chain-link type of fencing. The CalGEM requirement for chain link fencing is as follows; *(1) fences shall be not less than 5 feet high and mounted on 1 1/4" diameter steel posts with at least three strands of barbed wire mounted at a 45-degree angle from the top of the fence, (2) the fence shall be constructed of chain link or other industrial-type fencing of not less than 11-gauge wire and of not greater than 2-inch nominal mesh, (3) supporting posts shall be securely anchored to the surface, spaced no more than 14 feet apart, and (4) Tension wires of at least No. 9 gauge coil spring wire, or equivalent, shall be stretched at the top and bottom of the fence fabric and shall be fastened to the fabric at 24-inch intervals, there shall be no aperture large enough to permit any child to crawl under.*

The CalGEM fencing requirement further lists criteria for gates and sump screening. Gates are required to be *of a structure substantially the same as the required fences and shall be kept secured when not attended by an adult.* The gates at the oil field are chain link and are constructed consistent with the chain link fencing structure. As discussed for CSD Provision 22.310.050.O, *Sumps*, the facility does not have sumps nor are sumps used for any current oil field activity thus the CalGEM requirement for sumps is not applicable.

The ECC has requested that fencing be inspected by the Operator on a regular basis to address vulnerable areas and ensure that breaches can be avoided. Overall, the chain link fencing at the

Inglewood Oil Field meets the CalGEM requirements listed above, therefore the provision is effective at this time.

New Technology:
As listed above in the CSD Provision language, the requirement lists the CalGEM regulation as *may be subsequently amended by the State.* Therefore, if the regulation is amended to reflect new technologies or requirements in fencing, the new requirements will be incorporated into the CSD as needed.

Recommendations to Changes in Implementation:
The installed fencing at the Inglewood Oil Field meets the CSD provision requirements. Further, the fencing is periodically reviewed during the County ECC inspection process. With continued inspections by the operator and the ECC no additional implementation changes are recommended.

Recommendations to Changes in CSD Language:
The installed fencing at the Inglewood Oil Field meets the CSD Provision requirements. In addition, the requirement provides for amended language should the State regulations change; therefore, no changes in the CSD language are recommended.

4.21 U. OIL FIELD CLEANUP AND MAINTENANCE

The operator shall maintain the site in a clean and orderly condition and shall comply with the following provisions:

1. Equipment Removal. All facilities that have reached the end of their useful economic life shall be properly decommissioned and removed from the oil field within one year. Areas not slated for future use shall be restored and revegetated within 90 days of termination of use, unless such restoration and revegetation would interfere with fire safety or access to oil operations.

2. Equipment Maintenance. All equipment, improvements, facilities, and other personal property or fixtures located on the oil field shall be maintained in good condition to the satisfaction of the director and the director of public works.

3. Site Debris and Vegetation. The operator shall keep the property free of debris and vegetation overgrowth to the satisfaction of the director. All outside storage of parts or equipment shall comply with Chapter 22.140.430 (Outdoor Storage).

Summary of Complaints:
No complaints regarding the cleanup and maintenance of the Inglewood Oil Field have been received by the County.

Summary of Issues Raised by the Public:
Input on equipment removal, and the equipment removal plan required by CSD Provision 22.310.120.N, was received as part of the Settlement Agreement dated July 15, 2011 negotiated between concerned public parties, the County and PXP (now SPR). The Unused or Abandoned Equipment Removal Plan Inglewood Oil Field was submitted and implemented as required in

2009. Term 12 of the Settlement Agreement requires the operator to update the Plan periodically should equipment not included in the 2009 Plan become unused or abandoned. The Plan was most recently updated in December 2012. The public has not provided any input on the oil field clean up or maintenance at the oil field.

Analysis of Compliance and Effectiveness:
The *Unused or Abandoned Equipment Removal Plan Inglewood Oil Field* describes the equipment removal activities completed since the adoption of the CSD. Figure 1 of the Plan provides a table listing 64 pieces of equipment that were removed in 2008 and 2009. The table also includes four tanks that were removed in 2012 documenting that the update of the Plan required by the Settlement Agreement has been implemented. The Plan includes removal procedures to ensure equipment is removed with appropriate removal measures for safety and to minimize environmental impact.

Equipment at the oil field is inspected and maintained by the field operations staff with operators completing rounds of the facility daily. All oil field equipment, and the associated maintenance of that equipment, is tracked and scheduled with a vendor- supplied computer-based maintenance management program. The operator also conducts annual internal safety audits of the facility which provide for review and inspection of the oil field equipment. There have been no issues with equipment maintenance requiring County DRP or Public Works involvement since the adoption of the CSD.

Section 22.140.430 of the County Code stipulates that a property cannot be used for outside storage or display of raw materials, equipment or finished products unless the storage meets certain Code requirements. Outside storage of equipment at the oil field is consistent with this requirement and typical for an oil and gas operation. Examples of outside equipment storage include the pipe rack yard and hazardous materials area.

The operation of the oil field meets the requirements of the site cleanup and equipment maintenance stipulations of this provision. The amended requirement for periodic updating of the Equipment Removal Plan ensures equipment no longer in use will be removed from the facility in a timely fashion. Equipment at the oil field is maintained and stored as required, therefore, the provision is considered fully effective at this time and no further analysis is recommended.

New Technology:
The Equipment Removal Plan includes measures for the safe and environmentally beneficial removal of equipment at the oil field. The Plan is updated and reviewed periodically by the County which will allow for new technologies associated with equipment removal to be implemented as they are developed.

Recommendations to Changes in Implementation:
The requirements for site cleanup and equipment maintenance of this provision have been implemented. Further, the periodic update of the Equipment Removal Plan required by the Settlement Agreement strengthens the intent of the requirement. No changes to implementation are recommended.

Recommendations to Changes in CSD Language:

As noted above, the Settlement Agreement augmented the existing CSD language to require periodic updates to the Equipment Removal Plan. No changes in the CSD language are recommended.

4.22 V. SECURITY

All unmanned entrances to the oil field shall be equipped with sliding gates which shall be kept closed at all times except when authorized vehicles are entering or leaving the oil field. The operator shall have a security guard on duty 24 hours per day.

Summary of Complaints:
The Inglewood Oil Field is completely fenced with a chain-link type fence that meets the requirements of the CSD fencing provision with sliding gates at all unmanned entrances. The County has not received any complaints regarding security at the Inglewood Oil Field.

Summary of Issues Raised by the Public:
The County has not received any concerns regarding security at the Inglewood Oil Field.

Analysis of Compliance and Effectiveness:
CSD requirement 22.310.050.T requires the oil field facility to be enclosed by fencing that meets CalGEM regulations. The gates associated with the facility fencing are also required to meet the CalGEM regulations for oil field enclosures. All gates at the oil field are consistent with these regulations and all unmanned entrances are equipped with the required sliding type gates. Current security at the oil field includes a 24-hour guard at the main entrance gate to the field off Stocker Street and a gated entrance with a call box to the field and offices off of Fairfax Street. All vehicles must check in with the guard and sign in prior to gaining access to the oil field. The guard shack facilities have land line telephone access to the main office building to obtain authorization clearance to allow access for visitors not previously cleared for entrance. The oil field security provisions are inspected annually by CalGEM.

The unmanned gates and site security at the oil field meet the requirements of the CSD provision and no significant issues regarding the security of the facility have occurred during this review period. This provision is considered fully effective at this time and no further analysis is recommended.

New Technology:
As noted above, CSD provision 22.310.050.T, requires that facility gates meet CalGEM regulations as *may be subsequently amended by the State.* Therefore, if the regulation is amended to reflect new technologies with regards to gates, the new requirements will be incorporated into the CSD provision by reference.

Recommendations to Changes in Implementation:
The unmanned gates and site security at the oil field meet the requirements of the CSD provision; no changes to implementation are recommended.

Recommendations to Changes in CSD Language:

The unmanned gates and site security at the Inglewood Oil Field meet the requirements of the CSD provision and no significant issues regarding the security of the facility have occurred, therefore, no changes in the CSD language are recommended.

4.23 W. VEHICLE PARKING

Vehicular parking shall comply with Chapter 22.112 (Parking).

Summary of Complaints:
The parking facilities at the Inglewood Oil Field meet both the requirements of the CSD provision and the demand of the SPR oil field operations. The County has not received any complaints with regards to vehicle parking.

Summary of Issues Raised by the Public:
All vehicle parking for SPR oil field operations occurs on-site and does not impact the public; no issues relating to vehicle parking have been raised by the public.

Analysis of Compliance and Effectiveness:
The CSD requirement references the parking requirements of the LA County Code. The applicable requirements for an industrial land use are detailed in Section Table 22.112.070-A as follows; *one space per 500 square feet and 1 space per vehicle directly used for business*.

The oil field contains sufficient parking for all employee, subcontractor, visitor, and heavy equipment vehicles. Marked parking spaces at the office building and warehouse areas are consistent with County code requirements. No vehicles associated with oil field operation park off-site; therefore, parking of vehicles for oil field operations does not impact any public parking facility. This provision is considered fully effective at this time and no further analysis is recommended.

New Technology:
The vehicle parking capacity at the oil field is sufficient and meets County code requirements, a discussion on new technology is not applicable.

Recommendations to Changes in Implementation:
This requirement has been appropriately implemented, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

4.24 X. SANITATION

The operator shall comply with the following provisions:

1. Garbage and Refuse. The oil field shall be maintained in a clean, sanitary condition, free from accumulations of garbage, refuse, and other wastes.

2. Toilets and Wash Facilities. Sanitary toilet and washing facilities shall be installed at any site where personnel are permanently stationed. Portable facilities shall be provided wherever crews

are temporarily employed. Such facilities shall be maintained in a clean and sanitary condition at all times.

Summary of Complaints:
No complaints associated with garbage and refuse at the oil field have been received by the County. Oil field toilets and wash facilities are not open to the public.

Summary of Issues Raised by the Public:
No issues regarding garbage and refuse at the Inglewood Oil Field have been raised by the public. Oil field toilets and wash facilities are not open to the public.

Analysis of Compliance and Effectiveness:
Garbage and refuse are picked up and removed weekly by a subcontractor garbage collection company. Garbage bins are located at the office, the warehouse, and other locations throughout the oil field.

Permanent toilet and wash facilities are located at the office building, the warehouse, the gas plant, the "halfway house" across from the gas plant, and at two modular buildings used by sub-contractors. The restroom facilities are maintained by a sub-contractor janitorial service. Portable facilities are located throughout the field and moved as needed, the portable restrooms are maintained by the subcontractor providing the units.

The provision is considered fully effective at this time, no further analysis is recommended.

New Technology:
New technologies in garbage and refuse collection such as improvements in the collection trucks would be implemented by the subcontractor providing the service as required by regulations outside the scope of the CSD.

Recommendations to Changes in Implementation:
This provision is implemented as intended, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes in the CSD language are recommended at this time.

4.25 Y. STORAGE OF HAZARDOUS MATERIALS

The operator shall comply with all provisions of a hazardous materials business plan that has been submitted to the fire chief. The operator shall deliver to the fire chief for review and approval an updated hazardous material business plan on an annual basis. This plan shall provide the location of where hazardous materials are stored at the oil field. Hazardous materials shall be stored in an organized and orderly manner and identified as may be necessary to aid in preventing accidents and shall be reasonably protected from sources of external corrosion or damage to the satisfaction of the fire chief.

Summary of Complaints:
No complaints associated with the Hazardous Materials Business Plan for the Inglewood Oil Field have been received by the County.

Summary of Issued Raised by the Public:

No issues regarding the Hazardous Materials Business Plan for the Inglewood Oil Field have been raised by the public.

Analysis of Compliance and Effectiveness:

The Hazardous Materials Business Plan (HMBP) for the oil field is submitted to the Fire Department for review and approval on an annual basis as required. Hazardous materials at the oil field are primarily stored in a location near the facility pipe yard. The storage area consists of a concrete pad with secondary containment to capture potential spills. Hazardous materials are organized by chemical type and containers are labeled per Department of Transportation (DOT) and National Fire Prevention Association (NFPA) regulations. Hazardous materials in small amounts are also used in various locations throughout the field and are placed in individual secondary containment bins. The hazardous materials storage area is periodically inspected by the Fire Department.

On September 17, 2014 LA County Fire and the DRP issued the operator, FM O&G at the time, a Notice of Violation (NOV) for inaccurate and missing information on the HMBP resulting from an inspection completed by LA County Fire. The HMBP data was subsequently corrected and approved by the Fire Department and the DRP NOV was cleared by the DRP on October 22, 2014. No other compliance issues have occurred regarding the storage of hazardous materials during this review period. The provision is considered fully effective at this time, no further analysis is recommended.

New Technology:
The Hazardous Materials Business Plan is submitted to, reviewed, and approved by the Fire Department annually. As new technologies are developed in the storage of hazardous materials the Fire Department can request implementation of those new technologies through the Business Plan review and approval process.

Recommendations to Changes in Implementation:
This provision is implemented as intended, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes in the CSD language are recommended at this time.

4.26 Z. DRILLING, REDRILLING, AND REWORKING OPERATIONS

The operator shall comply with all of the following provisions:

1. CalGEM Regulations. All CalGEM regulations related to drilling, redrilling, and reworking operations.

2. Number of Drilling and Redrilling Rigs. No more than three drilling or redrilling rigs shall be present within the oil field at any one time.

3. Annual Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plan. Before the end of each calendar year, the operator shall develop and deliver to the director an annual drilling, redrilling, well abandonment, and well pad restoration plan, which shall describe all drilling, redrilling, well abandonment, and well pad restoration activities that may be conducted during the upcoming calendar year. Drilling and redrilling shall be scheduled to avoid over concentration of such activities in that year in any one area if located near a developed area. The operator may at any time submit to the director proposed amendments to the then current annual plan. No drilling, redrilling, or abandonment activity may be commenced unless it is described in a current annual plan (or an amendment thereto) which has been approved by the director. The annual plan (and any amendments) shall be provided to the CAP for review and comment. All comments on the annual plan from the CAP shall be submitted to the director in writing, and, if timely submitted, will be considered as part of the director's review and approval. The director shall complete the review of the annual plan (and any amendments) within 45 days of receipt and shall either approve the annual plan or provide the operator with a list of deficiencies. The annual plan shall comply with the provisions of this subsection, and shall include the following:

a. The maximum number of wells proposed to be drilled or redrilled;

b. Approximate location of all wells proposed to be drilled or redrilled;

c. Approximate location of all proposed new well pads, including their size and dimensions;

d. Estimated target depth of all proposed wells and their estimated bottom hole locations;

e. A discussion of the steps that have been taken to maximize use of existing well pads, maximize use of redrilled wells, and maximize the consolidation of wells;

f. Location of all proposed well abandonments, if known, in accordance with CalGEM integrity testing program of idle wells;

g. Location of all well pads proposed to be abandoned and restored;

h. A proposed schedule and phasing of the drilling, redrilling, well abandonment, well pad abandonment, and restoration activities;

i. A discussion of the latest equipment and techniques that are proposed for use as part of the drilling and redrilling program to reduce environmental impacts; and

j. A topographic vertical profile showing proposed location of new wells that reflects local terrain conditions and that addresses the potential visibility of existing and proposed wells and other production facilities from residential and recreation areas.

4. Drill Rig Engines. All engines used for drilling and redrilling operations shall be operated by muffled internal-combustion engines or by electric motors.

5. Fire Safety Regulations. All drilling, redrilling, and reworking shall be in conformance with applicable fire and safety regulations.

6. New Technology. Proven reasonable and feasible technological improvements which are capable of reducing the environmental impacts of drilling and redrilling shall be considered as they become, from time to time, available.

7. Derricks and Portable Masts. All derricks and portable masts used for drilling, redrilling, and reworking shall meet the standards and specifications of the American Petroleum Institute as they presently exist or as may be amended.

8. Equipment Removal. All drilling and redrilling equipment shall be removed from the site within 90 days following the completion of drilling or redrilling activities unless the equipment is to be used at the oil field within five days for drilling or redrilling operations.

9. Drill Site Conditions. All drilling sites shall be maintained in a neat and orderly fashion.

10. Belt Guards. Belt guards shall be required over all drive belts on drilling, redrilling, and reworking equipment. Guarding shall be as required by Title 8 of the California Code of Regulations, section 6622, or as may be subsequently amended.

Summary of Complaints:
The County has received complaints on several different issues that have the potential to be associated with drilling, redrilling and reworking operations at the oil field, however, no drilling has occurred at the oil field since June 2014. The complaints included issues with odor, noise, vibration, and property damage. Discussion of these issues is included in the applicable analysis section of this Periodic Review.

Summary of Issues Raised by the Public:
Aside from the comments on the annual drilling plans, no significant issues regarding drilling have been received by the County during this review period. As noted earlier, no drilling has occurred at the oil field since June 2014.

Hydraulic fracture well enhancement techniques are not in use at the oil field at this time nor are they proposed in any of the Annual Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plans for this review period. In addition, the Operator has committed to providing advance notice of any potential future hydraulic fracturing that could occur at the field.

Annual Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plan
The public provided input on the 2014 and 2015 *Annual Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plans* that are submitted to the County on an annual basis as required by this provision (no public comments were received on those plans submitted in 2016 – 2018). For both the 2014 and 2015 Plans, the public requested a review of the feasibility analysis of using a natural gas-powered rig the operator presented in the plan. The County review of the analysis concurred that the use of a natural gas rig was infeasible or more impactful than the current proposed operations. The other comment on the plans involved the extensive use of graphics in the viewshed analysis of the report; the County concurred, and the graphics are no longer required as was discussed in the first Periodic Review.

The 2011 Settlement Agreement

The Settlement Agreement resulted in additional documentation requirements for wells that involve slant drilling and for wells located in certain mid-zone and shallow depth locations. Operations that meet the criteria for these types of wells must be detailed in a supplemental review section of the annual drilling Plan. Other requirements included revising the limit on the number of drilling rigs, as discussed below, clean technology for drilling equipment, and increasing the length of cement well plugs. Well plugs are discussed in the analysis of Provision 22.310.050.GG, *Well and Well Pad Abandonment.*

Analysis of Compliance and Effectiveness:
Subsection Z.1 requires that all well activities related to drilling, redrilling, and reworking operations meet the applicable CalGEM regulations. Drilling, redrilling, and reworking and operations at the oil field are regularly inspected by CalGEM to ensure compliance with these State regulations. The CalGEM inspections often include specific review for the drilling rig blow out preventer (BOP) system. The Operator is required to notify CalGEM to witness BOP function for all permitted new or redrilled production and injection wells.

The Settlement Agreement revised the provision subsection regarding the allowable number of drilling and redrilling rigs at the oil field. The original provision listed a maximum of three of these rig types; the Settlement Agreement limits that number to two. Current and historic operations since the applicability of the CSD have had a single drilling rig onsite; however, the 2014 drilling Plan contained a drilling schedule set up for two such rigs, however, a single drill rig was used during 2014. At no time since the adoption of the CSD has the oil field had two drilling and redrilling rigs operating at the same time.

The *Annual Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plan* has been submitted to the County on an annual basis as required. The Plan is reviewed and approved prior to the initiation of drilling activities for the given year. The Plans have also been provided to the CAP for comment consistent with this provision. County review of the plans includes consideration of input received from the CAP. These annual drilling plans must contain the information required under subsections Z.3.a. through 3.j to be approved by the County. Annual plans have been amended as necessary, as allowed by subsection Z.3 to reflect changes that may occur during the drilling year. The annual Plans for the calendar years 2014 through 2018 were approved by the County. The plans are available at the Inglewood Oil Field web site at www.inglewoodoilfield.com.

Drill rig engines used at the oil field are properly muffled as required. Fire and safety regulations and orderly drill site conditions are followed at all drilling, redrilling, reworking sites in the oil field; compliance for these requirements is checked periodically during CalGEM and County ECC inspections. As noted above the Operator is required to notify CalGEM for specific permitted well operations. The County inspections and permits document compliance with the rig standards for derricks, portable masts and belt guards as required under subsections Z.7 and 10. New technology for reducing the environmental impacts of drilling and redrilling is discussed in the annual drilling plans submitted to the County for review prior to each drilling activity year. Natural gas-powered drill rigs have been discussed in recent drilling plans, but this technology has not been proven feasible to date due to the lack of available rigs using this technology. In addition, gas rigs are typically significantly taller and would have a bigger footprint than a standard rig. Air emissions were also found to have a negligible benefit when compared with using the conventional rigs with the CSD mandated emission controls.

Because the drilling, redrilling, and reworking rigs at the oil field are provided and operated by sub-contractors to SPR, these rigs are not idle and are removed from the oil field pursuant to subsection Z.8 if no longer scheduled for use on the oil field.

The number of wells drilled and redrilled is limited on an annual and overall project basis by the conditions of Provision 22.310.080.A, *Ministerial Site Plan Review Required*. The drilling limits prescribed in the CSD were revised by the Settlement Agreement; please see the analysis for Provision 22.310.080 for a discussion on the well limits for the oil field.

It should be noted here that hydraulic fracture well enhancement techniques are not in use at the oil field at this time nor are they proposed in any of the Annual Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plans for this review period. In addition, the Operator has committed to providing advance notice of any potential future hydraulic fracturing that could occur at the field.

The 2020 Health Risk Assessment (HRA) worst case maximum drilling scenario identified the potential for offsite cancer risk above the SCAQMD threshold at fence line receptors along the east facility property line. While the SCAQMD regulatory threshold compliance determination is taken at a residential receptor location and not at the facility fence line, the more conservative, potential for a health risk threshold exceedance at any receptor location is a concern to the County. The 2020 HRA determined the maximum number of wells that could be drilled in a year

without any risk issues to any receptors was approximately 25 wells. Therefore, it is recommended that future annual drilling Plans proposing the drilling of 25 or more wells per year should be analyzed in detail during the review of the annual drilling plan.

The provision is considered fully effective at this time, and with the recommendation to a change in the implementation on the annual drill Plan noted below, no further analysis is recommended.

New Technology:
Subsection Z.6 requires that reasonable and feasible technological improvements capable of reducing the environmental impacts of drilling and re-drilling activities be considered as they become available. The *Annual Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plan* includes a discussion on applicable new technologies with this Plan submitted to the County for review. See discussion for Provision 22.310.050.B for information on CARB oil rig engine technology and emissions requirements.

Recommendations to Changes in Implementation:
The 2020 HRA results identified potential long term cancer risk above the SCAQMD threshold at fence line receptor locations from drilling new wells at the maximum allowed under the CSD (as the average until 2028). The HRA further identified the maximum number of wells that could be drilled that would result in a potential cancer risk below the threshold at any receptor location to be approximately 25 wells. While it is important to note that the current SCAQMD criteria for the maximum individual cancer risk threshold is calculated at a residential receptor location and the results for all residential receptor locations in the 2020 HRA were under the threshold, review of future drilling plans to confirm that the number of new wells proposed, if more than 25 wells are proposed, will not have a health risk impact at residential receptors is warranted. Therefore, it is recommended that based on the results of the 2020 Health Risk Assessment (HRA), all future Annual Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plan reviews shall include consideration of the HRA results with respect to the number and location of new wells proposed to be drilled in the plan prior to approval by DRP (CSD 22.310.050.Z.3). If more than 25 wells are proposed, the plan review analysis should consider additional potential mitigation which could include further setbacks, emissions reductions or others as determined in the Annual Drilling Plan review.

Recommendations to Changes in CSD Language:
No changes in the CSD language are recommended at this time.

4.27 AA. PROCESSING OPERATIONS

The operator shall comply with the following provisions:

1. Limits on Processing Operations. Unless otherwise expressly required by CalGEM, the only processing operations permitted at the well site shall be the dehydration of oil and gas produced from the well; the storage, handling, recycling, and transportation of such materials; and those processing operations required for water injection purposes.

2. Refining. No refining shall be conducted within the oil field.

3. Well Pump Motors. All well pumping units shall be operated by electric motors.

4. Well Pumps. Downhole submersible pumps and low-profile pumping units for production wells must be used wherever feasible.
5. Removal by Pipeline Only. All oil, gas, and other hydrocarbons produced from any well in the oil field shall be shipped and transported through pipelines, except in case of an emergency or when access to a pipeline becomes unavailable. Excluded from this requirement are propane and other related natural gas liquids that are in amounts in excess of what can be blended into the pipeline. Should any pipeline through which oil or gas is currently transported become unavailable for the safe transportation of said products due to maintenance problems with the pipeline, or lack of sufficient capacity within the pipeline to handle the volume of oil and gas needing transportation, or because the owner or operator of such pipeline elects to discontinue transporting oil or gas through such pipeline, then the operator shall within 180 days of the date the existing pipeline becomes unavailable, seek to acquire a private right of way or easement, or shall file an application for a right of way, easement, encroachment permit, or franchise for the construction of a replacement pipeline and shall diligently prosecute such application until such pipeline is completed. During any emergency situation, or during such time as any existing pipeline becomes unsafe or unavailable, oil and gas may be transported by truck until the emergency situation is resolved or until a replacement pipeline shall be permitted and constructed in compliance with all applicable laws and regulations.

6. Pipelines. The operator shall comply with the following provisions:

a. New pipelines that remove oil or gas from the oil field shall be buried below the surface of the ground;

b. All pipelines which are not enclosed within a fence shall be placed underground or covered with materials approved by the fire chief. Said covers shall be maintained in a neat, orderly, and secure manner;

c. Any and all water or brine produced during pipeline construction shall either be injected in accordance with CalGEM requirements, or disposed of in accordance with other local, State or federal regulations;

d. New pipeline corridors shall be consolidated with existing pipelines or electrical transmission corridors where feasible; and

e. Upon completion of pipeline construction, the site shall be restored to the approximate previous grade and condition.

7. Active Pipeline Plot Plan. The operator shall submit to the fire chief a plot Plan depicting the approximate location of all active pipelines regulated by the United States Department of Transportation or California State Fire Marshall owned by the operator that are located outside the outer boundary line, including waste water, and trunk and gathering lines to transport oil or petroleum products. The plot Plan shall be submitted within 30 days of the installation of any new pipelines or the relocation of an existing pipeline.

8. Machinery Enclosures. The operator shall maintain enclosures around machinery with moving parts consisting of a fence, screening, or housing. Said enclosures shall be installed in compliance with Section 11.16.020, Title 11 (Health and Safety) of the County Code.

9. Opening Protections. The operator shall cap, close, or protect the openings in all oil wells, test holes, and similar excavation in compliance with Section 11.54.010, Title 11 (Health and Safety), of the County Code.

Summary of Complaints:
No complaints associated with the requirements on the processing operations at Inglewood Oil Field have been received by the County.

Summary of Issues Raised by the Public:
No issues specific to the requirements on the processing operations at the oil field have been raised by the public.

Analysis of Compliance and Effectiveness:
The processing operations at Inglewood Oil Field follow the requirements of this provision. The only processing occurring at the oil field is associated with the dehydration of oil and gas; the storage, handling, recycling, and transportation of those materials; and water injection operations. The oil field does not need to process hydrogen sulfide or other impurities prior to transportation to offsite refineries.

All well pump motors at the oil field are powered electrically; the field does not have any internal combustion engine well pump motors. Down hole submersible pumps require specific engineering and geologic conditions to be feasible. Specifically, the amount of sand in the formation is the primary determining factor in the use of submersible pumps because high levels of sand cause significant deterioration of the pump mechanisms. As of May 2019, 113 well pumps out of the total of 442 producing wells (25.6%) are using submersible pump technology. The oil field does not currently have any low-profile pumping units in operation. All oil, gas, and other hydrocarbons produced in the oil field are shipped and transported via pipelines and all natural gas liquids are blended into the oil and thus transported by pipeline. No trucking offsite of oil or gas occurred between the years 2014 and 2018.

No new pipelines that transport oil or gas from the oil field have been constructed since the adoption of the CSD. As noted in the discussion regarding CSD Provision 22.0310.050.T regarding oil field fencing, the oil field is completely fenced in with chain link fencing that meets the CalGEM requirements, thus all oil field pipelines are also enclosed by a fence.

All water or brine generated at the oil field is injected in accordance with CalGEM requirements, new injection wells are subject to review through the annual drilling Plan submittal to the County and the CalGEM Area of Review (AOR) process. Pipeline construction within the oil field is consolidated to the maximum extent feasible in existing pipeline routes and corridors. Pipeline corridors are returned to pre-existing grade and condition upon completion of construction consistent with the Oil Field Master Grading Plan. The Active Pipeline Plot Plan was submitted to the Fire Department on December 9, 2009 and has not been required to be updated to date.

Machinery enclosures and openings associated with wells, test holes, and excavations are inspected by oil field operators during daily rounds. This equipment is also reviewed annually during safety audits performed by the operator and periodically inspected by the County ECC. The equipment at the oil field complies with the referenced County code requirements under Title 11 for health and safety requirements for hazards. Maintenance, safety inspections, and safety audits of this equipment are implemented consistent with the Safety, Inspection, Maintenance, and Quality Assurance Program (SIMQAP) as required by CSD Provision 22.310.060.C.

The provision is considered fully effective at this time, no further analysis is recommended.

New Technology:
Any new pipelines that transport oil or gas offsite from the oil field would require permits from local and State regulatory agencies. The assessment and potential implementation of new technology in pipelines or pipeline construction would be part of the review and approval process of the pipeline permit applications. The machinery enclosure and opening protection requirements outlined in subsections AA.8 and 9 above; are linked to County Code requirements, updates to those requirements are therefore incorporated by reference to the CSD.

Recommendations to Changes in Implementation:
This provision is implemented as intended, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes in the CSD language are recommended at this time.

4.28 BB. WELL REWORKING OPERATIONS

The operator shall comply with the following provisions:

1. CalGEM Regulations. The operator shall comply with all CalGEM regulations related to well reworking operations.

2. Number of Reworking Rigs. No more than eight reworking rigs shall be present within the oil field at any one time, unless an emergency condition requires additional Reworking rigs. This does not include equipment used for well maintenance or well abandonment.

3. Hours of Operation. With exception of emergencies, well reworking operations shall not be allowed after 7:00 p.m. or before 7:00 a.m., nor on Sundays or legal holidays.

4. Specifications. Reworking rigs shall meet the standards and specifications of the American Petroleum Institute.

5. Equipment Removal. Reworking rigs shall be removed from the oil field within seven days following the completion of reworking operations unless such rig will be used on another well at the oil field within five days.

Summary of Complaints:
The County has received complaints regarding noise associated with rig operations at the oil field. The most common complaint is noise from pipe sections banging against each other. Two complaints regarding noise were identified with maintenance rig operations during the 2014 through 2018 compliance period.

Summary of Issues Raised by the Public:
The public has noted the observation of too many rigs in one area in the past, however, this has not been an issue during the 2014 to 2018 compliance period.

Analysis of Compliance and Effectiveness:

Wells associated with reworking operations require a permit from CalGEM and thus must meet the applicable well reworking requirements. It should be noted that these well activities are not part of the *Annual Drilling, Redrilling, Well Abandonment, and Well Restoration Plan*; the permitting is a separate process completed directly with CalGEM with permits copied to the County. Compliance with the number of reworking rigs at the oil field is documented by weekly email updates to the County listing the number of reworking rigs and the well location of the work. This data is confirmed by periodic County ECC inspections.

Standard policy for the operation of reworking rigs operation is daylight hours only. Operation during non-daylight hours only occurs when necessary to complete a critical task or for an emergency. Reworking rigs are not operated outside 7:00 am to 7:00 pm or on Sundays or legal holidays consistent with the CSD requirements. The reworking rigs at the oil field are provided and operated by a sub-contractor. The rigs must have a valid Department of Motor Vehicles license and meet the specifications of the American Petroleum Institute (API) to operate in California. The reworking rigs are removed from the field to be used elsewhere by the sub-contractor unless scheduled for use at another well in the oil field.

The provision is effective at this time, no further analysis is recommended.

New Technology:
As noted above, the well reworking rigs are required to meet the standards and specifications of the API. Therefore, as new technologies are developed and adopted by the API, those technologies would be consequently required by the CSD. See discussion for Provision 22.310.050.B for information on CARB oil rig engine technology and emissions requirements.

Recommendations to Changes in Implementation:
This provision is implemented as intended, no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes in the CSD language are recommended at this time.

4.29 CC. TANKS

The operator shall comply with the following provisions:

1. New Tank Specifications. All new tanks and appurtenances shall be designed, constructed, installed, and maintained in accordance with current County Fire Code, American Petroleum Institute, CalGEM, California Division of Industrial Safety, Environmental Protection Agency Standards, applicable provisions of Title 14 of the California Code of Regulations section 1774, and applicable CalARP Program requirements.

2. Setbacks. No new storage Tank, excluding a replacement tank, shall be constructed closer than 500 feet from any developed area, or closer than 200 feet from a public road. No building shall be constructed within 50 feet of any oil storage tank.

3. Vapor Recovery. Oil, wash, and produced water tanks shall be vapor tight and shall be equipped with a vapor recovery system.

4. Specifications for New Tank Piping, Valves, Fittings, and Connections. All new tank piping, valves, fittings, and connections including normal and emergency relief venting, shall be installed

and maintained in accordance with current American Petroleum Institute standards to the satisfaction of SCAQMD and CalGEM.

5. Detection of Tank Bottom Leaks. The operator shall design, implement, and comply with a program, approved by the fire chief, for controlling and detecting tank bottom leaks on all tanks at the oil field. The operator may use a combination of methods including but not limited to diversion walls, dikes, tank foundations of concrete or gravel, and a tank bottom leak detection system in compliance with Title 14 of the California Code and Regulations section 1773, or subsequently enacted State regulations regarding tank bottom leaks.

Summary of Complaints:
As discussed in CSD 22.310.050.B, on November 22, 2018 a tank at the Inglewood Tank Battery overflowed due to the failure of a level controller. A level controller is a device that, when working properly, can control the operation of one or more pumps that move fluid through a tank or system of tanks. In this case, the controller failed, and a pump was not activated resulting in an overflow of produced water into the secondary containment area of the tank area. Approximately 630 gallons (15 barrels) of oil/water mixture was spilled over a 15 to 20-minute time frame into the secondary containment area causing multiple odor complaints from the community, the odor complaints are discussed above for CSD provision 22.310.050.B. The County follow up of the tank overflow and subject level controller is discussed below.

Summary of Issues Raised by the Public:
No issues other than the tank overflow discussed above regarding the operation of tanks at Inglewood Oil Field have been received by the County during this review period.

Analysis of Compliance and Effectiveness:
Two new tanks have been constructed during this 2014 through 2018 review period. Both tanks were installed at the Water Plant in 2015. Construction of the new tanks required County building and land use permits and a South Coast Air Quality Management permit for the vapor recovery system. The permitting of these tanks included the tank piping, valves, fittings, and connections. Neither tank was built within the setback criteria described in subsection CC.2. No buildings have been constructed within 50 feet of an oil tank. Thus, the tanks were built pursuant to the agency requirements for new tank specifications outlined in subsections CC.1 and 4 above.

All oil, wash, and produced water tanks at the Inglewood Oil Field are vapor tight and are equipped with a vapor recovery system; this requirement is enforced and documented by annual and periodic inspections by the South Coast Air Quality Management District and by periodic ECC inspections. The level controller failure on November 22, 2108 discussed above resulted in a SCAQMD Notice of Violation (NOV) for Rule 402, Nuisance, due to the number of complaints due to the odor release from the released fluids. As discussed above for Provision 22.310.050.B, Air Quality and Public Health, the County completed an engineering analysis which documented the level of odor and health issues from the tank overflow incident. The follow-up investigation by the County also required the operator to install a second, redundant, alarm system to the tank to prevent a future overflow incident. The second system, a high-level alarm, was installed and

tested in May 2019 with the County ECC observing a test of the system on May 15, 2019. The high-level alarm provides notification to the operator via a visual red light at the tank farm, a notice on the tank farm control panel and an alert sent to field operators via cellphones. Other tanks at the oil field with similar VOC gas levels are under review for similar additional alarm sensors.

As outlined in the Safety, Inspection, Maintenance, and Quality Assurance Program (SIMQAP) required under Provision 22.310.060.C, all tanks at the Inglewood Oil Field have a program to detect tank bottom leaks. The SIMQAP and leak detection program are required to be reviewed and approved for compliance with Title 14 of the California Code of Regulations and other State regulations. The leak detection for all tanks at the oil field consists of either direct view monitoring of the exterior surface and bottom or using tank foundations of either concrete or gravel. A Tank Leak Detection and Containment Plan was approved by County Fire on 2/18/10. The A*nnual Well Increase Evaluation, December 2011,* also confirmed that the required tank leak detection measures are in place.

The provision is considered fully effective at this time; no further analysis is recommended.

New Technology:
All new tanks require permits from County Departments of Public Works and Regional Planning and from the South Coast Air Quality Management District. New technologies in the construction and monitoring of oil field tanks would be part of the review and approval process for the permitting of those tanks. Therefore, any new technologies applicable to oil field tanks can be required pursuant to the subject agency permitting requirements and would be consequently incorporated into the CSD by reference.

Recommendations to Changes in Implementation:
This provision is implemented as intended, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes in the CSD language are recommended at this time.

4.30 DD. WELL PRODUCTION AND REPORTING

The operator shall deliver annual production reports to the director and the fire chief. The reports shall provide the following information:

1. A copy of all CalGEM Forms 110 and 11 OB submitted during the previous 12 months.

2. Number and mapped location of wells drilled or redrilled, including well identification numbers.

3. Number and mapped location of water injection wells, including well identification numbers.

4. Number and mapped location of idled wells, including well identification numbers and the date each well was idled.

5. Number and mapped location of abandoned wells, including date each well was abandoned and/or re-abandoned.

6. Any additional information requested by the director or the fire chief.

Summary of Complaints:
No complaints regarding the well reports required by this provision have been received by the County.

Summary of Issues Raised by the Public:
The public has not raised any issues specific to this CSD requirement; the public does provide comment on the oil field wells through the public outreach provisions of the CSD by commenting on the *Annual Drilling, Redrilling, Well Abandonment and Well Restoration Plan*. Community Advisory Panel (CAP) members have requested to have information on the start and end date for the drilling of each well. Information summarizing the start and end dates of each well drilled for the previous quarter has been recently provided verbally by the County at the CAP meetings.

Analysis of Compliance and Effectiveness:
The reports requested by this provision have been submitted annually to the County and Fire Chief as required. The forms listed under subsection DD.1 are submitted to CalGEM monthly and are compiled for the annual submittal to the County. The County submittal consists of three document packets; Well and Production Report Maps, Well and Production Report Production Forms, and Well and Production Report Injection Forms. These documents are available at the oil field web site at www.inglewoodoilfield.com.

Projected location of wells drilled or redrilled is provided in the Annual Drilling Plan submitted according to CSD Provision 22.310.050.Z. The provision is considered fully effective at this time and no further analysis is recommended.

New Technology:
This CSD provision is not directly linked to technology; however, as new technologies in well reporting are implemented by CalGEM and added to the reporting forms, the new reporting information would be incorporated into the CSD provision by reference.

Recommendations to Changes in Implementation:
The provision has been implemented and is considered fully effective at this time; therefore, no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
The provision is considered fully effective at this time, and no changes to the CSD language are recommended.

4.31 EE. IDLE WELL TESTING AND MAINTENANCE

The operator shall comply with Title 14 of the California Code of Regulations section 1723.9 regarding testing and maintenance of idle wells, or subsequently enacted State regulations regarding testing and maintenance of idle wells. The operator shall carry out all additional tests, remedial operations, and mitigation measures required by CalGEM if any idle wells do not meet the test standards.

Summary of Complaints:
This provision is administrated and regulated by CalGEM. The County has not received any complaints or comments on idle well testing or maintenance.

Summary of Issues Raised by the Public:

The public has not raised any issues specific to this CSD requirement; however, wells at the oil field are discussed in the *Annual Drilling, Redrilling, Well Abandonment and Well Restoration Plan* and the public has the opportunity to provide comments on the Plan through the public outreach provisions of the CSD. In comments received during the scoping of this document the public noted that updates to the CalGEM updates to idle well regulations be considered in the review.

Analysis of Compliance and Effectiveness:
In California, an idle well is a well that has not been used for two years or more and has not yet been properly plugged and abandoned to CalGEM satisfaction. Updated regulations to improve maintenance of idle wells became effective on April 1, 2019. The regulations specify far more rigorous testing requirements that better protect public safety and the environment from the potential threats posed by idle wells. The regulations require idle wells to be tested and, if necessary, repaired, or permanently sealed (plugged and abandoned).

The CalGEM idle well updates include a Long-Term Idle Well Management & Elimination Plan (Plan) pursuant to Section 3206 of the Public Resources Code (PRC). The Plan contains three components: the terms of the Plan and operator agreement to the terms, the long-term idle well elimination schedule, and an annual review. Included in the plan is an elimination schedule for idle wells.

The well testing includes the determination of the fluid level of the well and may include other diagnostic tests as required by CalGEM. FMO&G and now SPR complete the required testing and maintenance pursuant to the CalGEM and submit the results to CalGEM pursuant to the regulations in an annual report. CalGEM inspects or waives the right to inspect at the various points stipulated in the permit during the plug and abandonment process. CalGEM also witnesses setting of the surface plug, capping the well, and remediating the immediate area around the well.

The provision is considered fully effective at this time and no further analysis is recommended.

New Technology:
This CSD provision is not directly linked to technology; however, the requirement language is linked to CalGEM regulations. As new technology regarding idle well testing and maintenance is developed and added to the State regulations, those requirements would be incorporated into the CSD provision by reference.

Recommendations to Changes in Implementation:
The provision has been implemented and is considered fully effective at this time, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
The provision considered fully effective at this time, and no changes to the CSD language are recommended.

4.32 FF. ABANDONED WELL TESTING

The operator shall conduct annual hydrocarbon vapor testing of areas within the oil field that contain abandoned wells. The testing shall be done using a soil gas vapor probe, or another method approved by the director. The results of the testing shall be submitted to the director and CalGEM on an annual basis. Abandoned wells that are found to be leaking hydrocarbons that could affect health and safety shall be reported to the director and CalGEM within 24 hours of the

abandoned well test. If directed by CalGEM, the operator shall re-abandon the well in accordance with CalGEM rules and regulations. If the test results for an abandoned well area are at or below the background levels for two consecutive years that area shall thereafter be tested every five years.

Summary of Complaints:
Abandoned well area testing has occurred annually since the adoption of the CSD as required; no complaints associated with the testing have been received by the County.

Summary of Issues Raised by the Public:
No issues regarding the abandoned well testing have been raised by the public. However, as part of the Settlement Agreement dated July 15, 2011 between concerned public parties, the County and PXP (now SPR), the length of cement plugs used in the well abandonment process at the Inglewood Oil Field was increased from the 25 feet required by CalGEM to 150 feet.

Analysis of Compliance and Effectiveness:
Abandoned well area hydrocarbon vapor testing has been completed annually by a third-party consultant since the adoption the CSD. Results of the sampling were compared to the regulations and requirements of the City of Inglewood, LA County Department of Public Works, LA County Fire Department, the California Code, and the South Coast Air Quality Management District in reports submitted to LA County and CalGEM. The reports completed for this review period, 2014 through 2018 concluded that there is no evidence of leaking or natural seepage from abandoned wells at the oil field. However, the sampling for the 2018 compliance year did indicate very high levels of methane in the data for the area around Well BC-14. The sampling results for Well BC-14, completed in September 2018, contained methane at 72,000 ppmv. As a result of this very high level, and in coordination with the County, the operator researched the plug and abandonment data for the subject well and excavated the area surrounding the well down to the well cap. Results of the investigation documented that the well was plugged and abandoned properly in 1994. Further, the excavated well head was in good condition with the top containing an intact welded cap; test results of the well head and surrounding area did not indicate any significant amount of methane.

As a result of the non-conclusive tests surrounding the BC-14 well head the operator expanded sampling in the area with the installation of three permanent soil gas monitoring well locations. During follow-up testing of the three area wells, results showed elevated readings to the east and north-east of Well BC-14 and lower readings immediately above the well head. As a result of the re-testing, the operator excavated the area with the elevated readings and identified a gas pipeline with a pin hole leak; approximately 300 feet of the leaking pipeline was replaced. Both the operator and the County ECC test the area and the three permanent soil gas monitoring locations on a monthly basis and all three locations are scheduled for formal testing for the 2019 testing schedule.

With the exception of the leaking gas pipeline found in late 2018, the annual abandoned well area hydrocarbon vapor testing program to date has concluded that there is no evidence of leaking wells or natural seepage. The reports further conclude that the low levels of hydrocarbons detected are likely the result of natural degradation of crude oil in the near surface soil resulting from historic oil operations. The Annual Abandoned Well Testing reports are available at the Inglewood Oil Field web site at www.inglewoodoilfield.com.

Finally, all wells abandoned since the settlement agreement was adopted have exceeded the 150 feet length of cement plugs as verified by the County. The annual abandoned well area hydrocarbon vapor testing has been completed as required. The provision is considered fully effective at this time and no further analysis is recommended.

New Technology:
The annual abandoned well area hydrocarbon vapor testing is performed by a third-party consultant consistent with accepted sampling procedures and lab analysis per the American Society for Testing and Materials (ASTM) D1945 analytical techniques. As new techniques in soil testing and analysis are developed and implemented, the testing program will be modified accordingly.

Recommendations to Changes in Implementation:
The required annual abandoned well area hydrocarbon vapor testing has been completed as required; no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
The provision has been completed as required to date and no abandoned wells have been found to be leaking hydrocarbons that could affect health and safety. No wells have been required by CalGEM to be re-abandoned due to leaking hydrocarbons. Therefore, no changes to the CSD language are recommended.

4.33 GG. WELL AND WELL PAD ABANDONMENT

If CalGEM orders the operator to plug and abandon any wells on the oil field, the operator shall deliver to the fire department, on a timely basis, all notices of intent to plug and abandon a well that the operator files with CalGEM and shall commence promptly and proceed diligently with the plugging and abandonment operations in accordance with CalGEM rules and regulations and the terms of the CalGEM permit to plug and abandon the well. Well abandonment may commence once all necessary permits and approvals are obtained. If the well pad associated with the abandoned well does not contain other production, injection, or idle wells, and will not be used for future drilling, then the operator shall promptly abandon the well pad consistent with the following provisions:

1. Closure of Sumps. The operator shall clean out all sumps, cellars, and ditches, and level and fill all sumps and depressions pursuant to CalGEM requirements. If sumps are lined with concrete, bottoms and walls shall be broken up and removed. Sumps shall be closed in accordance with Regional Water Quality Control Board and California Department of Toxic Substances Control requirements.

2. Well Pad Site Cleanup. The operator shall leave the site entirely free of oil, rotary mud, oil-soaked earth, asphalt, tar, concrete, litter, debris, and other substances to the satisfaction of CalGEM and in compliance with federal requirements.

3. Contaminated Materials. All contaminated soils and materials within the well pad boundaries shall be removed and treated or disposed of in accordance with all local, county, State, and federal regulations.

4. Well Pad Revegetation. The Well pad shall be revegetated following the requirement of the native habitat restoration Plan.

Summary of Complaints:
This provision has not been implemented by CalGEM to date and the County has not received any complaints on the requirement to date.

Summary of Issues Raised by the Public:
There have been no issues raised by the public specific to this provision and CalGEM has not ordered any wells to be plugged or abandoned pursuant to this requirement. Wells at the oil field associated with plugging and abandonment activities are discussed in the *Annual Drilling, Redrilling, Well Abandonment and Well Restoration Plan* and may be subject to CalGEM Area of Review (AOR) requirements as discussed below. The public has the opportunity to provide comments on the *Annual Drilling, Redrilling, Well Abandonment and Well Restoration Plan* through the public outreach provisions of the CSD.

While no public input was received on this CSD provision, the terms of the Settlement Agreement negotiated between concerned public parties, the County and PXP (now SPR) included additional requirements to the CSD regarding well plugs. The agreement language increases the length of the cement surface plug from the 25-foot CalGEM requirement to 150 feet. The applicable language from the settlement agreement is listed below.

Well Plugs. CalGEM requires oil field operators to utilize a minimum 25-foot cement surface plug at the top of a well when abandoning any such well pursuant to Title 14 of the California Code of Regulations section 1723.5. To augment this requirement, for all wells abandoned at the Oil Field from the date of this Agreement, PXP shall utilize a total of 150-foot cement surface plug.

Analysis of Compliance and Effectiveness:
As noted above, CalGEM has not implemented this provision to require the operator to plug and abandon any wells to date. Wells voluntarily scheduled for plugging and abandonment are included in the *Annual Drilling, Redrilling, Well Abandonment and Well Restoration Plan* subject to CalGEM and the County review and approval. In addition, idle or previously plugged and abandoned wells are subject to the CalGEM Area of Review (AOR) process which is implemented when a new injection well is proposed as summarized below.

In California, injection wells associated with oil and natural gas production operations (Class II injection wells) are regulated by CalGEM pursuant to their Underground Injection Control (UIC) Program. The program is coordinated with the EPA for regulation of Class II injection wells under the federal Safe Drinking Water Act. When injection wells are included in the *Annual Drilling, Redrilling, Well Abandonment and Well Restoration Plan*, CalGEM implements the AOR process for the area with the potential to be affected by the proposed injection well. CalGEM defines the AOR surrounding a proposed injection well bore as a minimum one quarter mile radius, with local geology and reservoir characteristics providing other input to the determination of the size of an AOR. The Inglewood oil field is divided into 15 AOR sections. The AOR process analyzes all wells, including idle and abandoned wells, in the area of a proposed new injection well to ensure the wells will not cause damage to life, health, property, or natural resources.

The provision language also includes requirements for closure of sumps, well pad clean up, contaminated materials, and well pad revegetation. As discussed for CSD 22.310.050.O *Sumps*, the Inglewood Oil Field does not contain any sumps and sumps are no longer used at the oil field. Existing well pads have been cleaned up but are not scheduled for abandonment or restoration

because SPR standard practice is to re-use the well pad sites as feasible to avoid the impact of developing new well pad areas.

The provisions requiring abandonment of wells, closure of sumps and well pads cleanup have not been activated to date, however, the intent of the requirement is met through other CSD and CalGEM regulations, no further analysis is recommended.

New Technology:
This CSD provision is not directly linked to technology; however, the requirement language is linked to CalGEM regulations. As new technology or requirements regarding plugging and abandonment of wells are developed and added to the State regulations, those requirements would be incorporated into the CSD provision by reference.

Recommendations to Changes in Implementation:
The provision requirement has not been implemented to date; however, the intent of the requirement is accomplished through CalGEM requirements and other CSD provisions. No further analysis is recommended.

Recommendations to Changes in CSD Language:
The provision requirement has not been activated to date and the oil field wells are reviewed annually through CalGEM requirements and other CSD provisions. There is the potential for CalGEM to require the plugging and abandonment of a well that is not part of an annual Plan or associated with an injection well project in the future. Therefore, the requirement should remain and no changes to the CSD language are recommended at this time.

4.34 HH. COUNTY REQUEST FOR REVIEW OF WELL STATUS

The director may periodically review the status of the operator's wells and submit to CalGEM a list of wells the director believes should be plugged and abandoned as specified in Public Resources Code section 3206.5 or any subsequently enacted State law related to a local jurisdiction's right to request State-agency review of idle wells.

Summary of Complaints:
There have been no complaints regarding the County's discretion to request CalGEM review of wells as provided for in this provision.

Summary of Issues Raised by the Public:
There have been no issues raised by the public specific to County's discretion to request CalGEM review of wells as provided for in this requirement. The public can provide comments on oil field documents such as compliance reports, plans, audits, and studies including the *Annual Drilling, Redrilling, Well Abandonment and Well Restoration Plan*.

Analysis of Compliance and Effectiveness:
The County has not requested that CalGEM require the Operator to plug or abandon any wells pursuant to this provision to date; therefore, the requirement has not been activated to date. Well status is reviewed by the County through other provisions of the CSD such as the *Well Abandonment and Well Restoration Plan* which must be approved prior to the initiation of each year's drilling program. CSD provision 22.310.050.FF, *Abandoned Well Testing*, requires abandoned well areas to be tested for hydrocarbon contamination and these reports be submitted

to the County and CalGEM on an annual basis. If the County discovers any anomalies regarding the well testing, the County can request that CalGEM require the Operator to abandon or plug a well that could be emitting hydrocarbons. As stated above, this has not been necessary to date.

The provision requirement has not been activated to date and no further analysis is recommended.

New Technology:
This CSD provision is not directly linked to technology; however, the requirement language does include the associated State law, Public Resources Code section 3206.5. Should the State law be revised, operational status of wells, or the plugging and abandonment schedules of wells based on new technology, the new law would be incorporated into the CSD provision by reference.

Recommendations to Changes in Implementation:
The provision requirement has not been implemented to date and County review of the status of wells is accomplished through other CSD provisions. No further analysis is recommended.

Recommendations to Changes in CSD Language:
The provision requirement has not been activated to date and well status is reviewed annually through other CSD provisions. There is the potential for the need to review a well or wells that may not be part the *Annual Drilling, Redrilling, Well Abandonment and Well Restoration Plan* or other required plans. Therefore, the requirement should remain and no changes to the CSD language are recommended at this time.

4.35 II. REDUCED THROUGHPUT TRIGGERING REVIEW

When oil or gas throughput is less than 630 barrels per day, the director shall conduct a public hearing to determine if shut down of the oil field or other actions are appropriate.

Summary of Complaints:
This provision is intended to be implemented at or near the end of the Inglewood Oil Field's project life to determine if the oil production at the site remains economically viable and whether abandonment of the oil field is merited. The oil field has not reached the production levels that trigger this review and this provision has not been activated to date. The County has not received any complaints on the requirement.

Summary of Issues Raised by the Public:
The public, specifically the parties involved in the Settlement Agreement dated July 15, 2011, requested additional language be added to the requirement. The Settlement Agreement details additional requirements to the CSD as negotiated between the concerned public parties, the County and PXP (now SPR). The additional language from the Settlement Agreement regarding *CSD 22.310.050.II, Reduced Throughput Triggering a Review* is listed below:

CSD Review Based On Reduced Production. When production drops to three percent of the estimated peak production of 21,000 barrels of oil per day, the County will review the CSD to consider whether modifications or closure of the Oil Field is necessary or appropriate or at such earlier date as the County determines appropriate.

Analysis of Compliance and Effectiveness:
As noted above, the intent of this provision is to assist in the determination of the end of the project life of the oil field and therefore has not been activated to date. The provision requirement was augmented by additional language documented in the 2011 Settlement Agreement dated July 15, 2011, which provided for County review prior to the production throughput trigger of 3 percent of the estimated peak production to date of 21,000 barrels. The original CSD language required oil production throughput to reach 630 barrels per day to trigger County review. It should be noted that the numerical trigger for throughput review in both the original CSD language and the additional language from the Settlement Agreement is the same, 630 barrels per day (3% of 21,000 = 630).

The provision is considered fully effective at this time and no further analysis is recommended.

New Technology:
This provision is intended to assist in the determination of the end of the project life of the oil field based on a production throughput value. However, the additional language from the Settlement Agreement allows for County review *"at such earlier date as the County determines appropriate"*. Therefore, should the County decide that a review is appropriate prior to the oil production reaching the trigger value in the provision; the County can initiate the review.

Recommendations to Changes in Implementation:
The provision is intended to be implemented at or near the end of the oil fields project life and therefore has not been activated to date. The existing language and the amendments made through the Settlement Agreement provide sufficient flexibility to allow a review as the County considers appropriate. No changes to implementation are recommended.

Recommendations to Changes in CSD Language:
The provision has not been activated to date and the requirement has been revised by additional language from the Settlement Agreement dated July 15, 2011. No additional changes to the CSD language are recommended.

4.36 JJ. ABANDONMENT PROCEDURES

Within 180 days of permanent facility shut down, the operator shall submit an abandonment Plan to CalGEM and submit to the director for review and approval a timeline for facility removal, site assessment, and remediation as necessary. The operator shall begin abandonment of the site no later than 20 days after the director's approval of the timeline and shall provide to the director quarterly updates on the abandonment process until such time as the oil field is abandoned and remediated. The operator shall post a performance bond to insure compliance with all provisions of this subsection and the operators and landowners shall continue to pay property taxes at the rates assessed during oil field operation until all site restoration work has been fully completed, as determined by the director.

Summary of Complaints:
This provision is intended to be implemented at the cessation of oil field activities and permanent shut down of the Inglewood Oil Field; therefore, the provision has not been activated to date. The County has not received any complaints on the requirement.

Summary of Issues Raised by the Public:
This provision will not be implemented until permanent shut-down of the Inglewood Oil Field occurs. The County has not received any public input on the requirement.

Analysis of Compliance and Effectiveness:
As noted above, the provision will not be implemented until the Inglewood Oil Field is permanently shut down. The requirement includes that the facility Abandonment Plan be submitted to CalGEM and reviewed and approved by the County. This review process will allow for both CalGEM and the County to ensure the abandonment Plan meets all applicable requirements for plugging and abandonment of wells, equipment removal and remediation of the site. The requirement also includes a performance bond and the continuation of property tax payments until the County determines all site restoration work has been successfully completed. The Operator has provided an abandonment bond consistent with the provisions of this subsection.

The actual abandonment provision of this subsection has not been activated, and no further analysis is recommended at this time.

New Technology:
As the facility has not been shut down to date, this provision has not been activated. However, the condition language requires that the Abandonment Plan be submitted to CalGEM and to the County for approval. Therefore, new technologies involving facility removal, site assessment, and remediation available at the time the facility ceases operation may be reviewed, required and implemented as applicable to the abandonment Plan.

Recommendations to Changes in Implementation:
The provision involves requirements for abandonment and restoration of the Inglewood Oil Field and therefore has not been implemented. No changes to implementation are recommended.

Recommendations to Changes in CSD Language:
The provision has not been activated. In addition, new technology or improvements in facility removal, site assessment, and remediation can be included to the CSD requirement through the review and approval of the abandonment Plan. Therefore, no changes to the CSD language are recommended.

5.0 Monitoring and Compliance (22.310.060)

This section of the CSD outlines the monitoring, compliance, and the complaint process requirements of the CSD.

5.1 A. ENVIRONMENTAL QUALITY ASSURANCE PROGRAM ("EQAP")

The operator shall comply with all provisions of an environmental quality assurance program that has been approved by the director. The following provisions relate to the EQAP:

1. EQAP Requirements. The EQAP shall provide a detailed description of the steps the operator shall take to assure compliance with ***all*** *provisions of this section, including but not limited to, all of the monitoring programs called for by this section.*

2. Annual EQAP Reports. Within 60 days following the end of each calendar year, the operator shall submit to the director an annual EQAP report that reviews the operator's compliance with the provisions of the EQAP over the previous year and addresses such other matters as may be requested by the director. The annual EQAP report shall include the following:

> *a. A complete list and description of any and all instances where the provisions of the EQAP, or any of the monitoring programs referred to therein or in this section, were not fully and timely complied with, and an analysis how compliance with such provisions can be improved over the coming year.*
>
> *b. Results and analyses of all data collection efforts conducted by the operator over the previous year pursuant to the provisions of this section.*

3. EQAP Updates. The EQAP shall be updated as necessary and submitted to the director for approval along with the annual EQAP report. The EQAP updates shall be provided to the CAP and MACC for review and comment. Comments from the CAP and MACC, if timely received, shall be considered by the director before making a decision to approve the same. The director shall complete the review of EQAP updates as soon as practicable, and shall either approve the updated EQAP or provide the operator with a list of specific items that must be included in the EQAP prior to approval. The operator shall respond to any request for additional information within 30 days of receiving such request from the director, unless extended by the director.

Summary of Complaints:
The County has not received any complaints regarding the EQAP provision of the CSD.

Summary of Issued Raised by the Public:
The public has not raised any issues specific to the EQAP provision. CAP members have received briefings at the CAP meetings regarding audits conducted at the oil field by the ECC and the ECC responded to questions from the CAP members as appropriate.

Analysis of Compliance and Effectiveness:
The EQAP was approved by the County in February 2009 and was revised on August 25, 2009. The EQAP contains sections on the background and operations of the oil field, the relationship of the EQAP with other CSD monitoring compliance programs, the EQAP compliance program and the compliance monitoring conducted by the oil field operator. The document also discusses the organization and relationship of the oil field compliance team consisting of County staff, the Environmental Compliance Coordinator (ECC), the MACC, the CAP, third-party consultants and

auditors, the ombudsperson, and the oil field operator staff. The EQAP contains the documentation requirements for the compliance program including the Environmental Quality Control Report, reporting of onsite inspection visits, and the format for the annual EQAP report. Subsection A.3 requires periodic updates to the EQAP as determined by the County. The EQAP has not been required to be updated since August 2009.

Annual EQAP compliance reports have been prepared and submitted by the operator as required by this provision with the first report completed on March 1, 2010. Reports for the compliance years 2014 through 2018 have been submitted to the County in March of each of the following compliance years. The annual reports are typically composed of three components; a narrative summary of the compliance status of the oil field, a compliance matrix in tabular format, and records of compliance documents completed for the subject year. The annual EQAP reports are reviewed by the County and are one of the primary documents analyzed during the compliance audits completed by the ECC.

EQAP audits have been completed for the operating years 2010, 2011, 2012, and 2016. EQAP audits were not completed for the years 2013, 2014, 2015, 2017, and 2018 due to preparation of the initial Periodic Review and SIMQAP audits completed in 2016, and 2018. Note the annual EQAP compliance reports are reviewed along with the associated compliance data and reports every year.

The audits are scheduled after review of the annual EQAP reports submitted by the Operator. Results of the audits are documented in a report that includes findings and recommendations for potential improvements in continued compliance with the EQAP-related provisions of the CSD. The suggestions are then tracked and monitored by the ECC to document the implementation of the recommendations. Overall, the Operator has been found to be in substantial compliance with all provisions of the CSD and the results of the audits have been favorable. However, recommendations for improvement have been provided after each yearly audit. Compliance verification with recommendations is reviewed by the County during ECC inspections and compliance report reviews.

The annual EQAP audits provide the County with the opportunity to complete a formal review of compliance activities and compliance documentation of the provisions of the CSD. The results of the audits indicate that the oil field is being operated in compliance with those requirements. The provision is considered fully effective at this time and no further analysis is recommended.

New Technology:
Subsection A.3 requires periodic updates to the EQAP as required by the County, therefore, as new technologies are developed for environmental protection and compliance for oil field operations, those requirements may be added to the EQAP as applicable.

Recommendations to Changes in Implementation:
The provision has been implemented and is considered fully effective at this time, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
The provision is considered fully effective at this time, and no changes to the CSD language are recommended.

5.2 B. ENVIRONMENTAL COMPLIANCE COORDINATOR

The operator shall recommend and fund the environmental compliance coordinators. The number of environmental compliance coordinators shall be determined by the county and shall take into account the level of oil operations at the oil field. The environmental compliance coordinator(s) shall be approved by, and shall report to, the director. The responsibilities of the environmental compliance coordinator(s) shall be set forth in implementation guidelines that may be developed by the county for the oil field and shall generally include:

1. On-site, day-to-day monitoring of construction or drilling and redrilling activities as determined by the director.

2. Taking steps to ensure that the operator, and all employees, contractors, and other persons working in the oil field, have knowledge of, and are in compliance with all applicable provisions of this section.

3. Evaluating the adequacy of drilling, redrilling, and construction impact mitigations, and proposing improvements to the operator or contractors and the county.

4. Reporting responsibilities to the various county agencies with oversight responsibility at the oil field, as well as other agencies such as CalGEM, and SCAQMD.

Summary of Complaints:
The County has not received any complaints regarding the ECC provision.

Summary of Issues Raised by the Public:
The County received input on the ECC in the scoping comments solicited for the Periodic Review regarding the current ECC. Input included requests that a different third-party consultant be considered by the County and that public input be included as part of the selection process for the ECC. As allowed for by this provision, the current ECC is not a singular individual but rather a third-party consulting firm familiar with the oil and gas industry and the CSD as further discussed below. The ECC is required to be approved by, and report to, the Director of DRP.

Analysis of Compliance and Effectiveness:

An ECC position has been funded by the operator as required by this provision since the adoption of the CSD. The ECC has met the qualification requirements for the position and have been approved by the County. The ECC is familiar with the compliance requirements of the CSD and the environmental impacts and mitigation associated with oil field operations. The oil field site visits performed by the ECC include an inspection of the drilling or redrilling rig to check compliance on the CSD provisions such as the Quiet Mode Drilling Plan, air quality monitoring equipment, and noise monitoring equipment. The ECC site inspections are coordinated with oil field management to gain access to oil field staff, oil field contractors and for access to the oil field

to check on the compliance provisions of the CSD. The ECC also participates in reviewing and commenting of all plans submitted by the Operator in compliance with the CSD. The ECC also includes a number of oil field related subject matter experts that can be used at any given time depending on the compliance needs of the County in ensuring compliance with the CSD. Experts include acoustical engineers, air quality, biology, landscape architects, risk assessment and planning experts, among others. As outlined in the EQAP, the ECC is part of the coordinated compliance effort of the County, other resource agencies, and the oil field operator.

The provision is considered fully effective at this time and no further analysis is recommended.

New Technology:
The EQAP and ECC provisions allow new technologies in environmental compliance equipment to be used by the ECC as those technologies are developed.

Recommendations to Changes in Implementation:
This provision is implemented as intended, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes in the CSD language are recommended at this time.

5.3 C. SAFETY INSPECTION, MAINTENANCE, AND QUALITY ASSURANCE PROGRAM ("SIMQAP")

The operator shall comply with all provisions of a safety inspection, maintenance, and quality assurance program that has been approved by the director and the fire chief.

1. SIMQAP Requirements. The SIMQAP shall, at a minimum provide for:

a. Inspection of construction techniques;

b. Regular maintenance and safety inspections;

c. Periodic safety audits;

d. Corrosion monitoring and leak detection; and

e. Inspections of all trucks carrying hazardous and/or flammable material prior to loading.

2. SIMQAP Updates. The operator shall periodically review and revise the SIMQAP to incorporate changes in procedures, and new safety and maintenance technologies and procedures. The operator shall make such revisions at least every five years, or more frequently, if the operator determines changes are necessary or if requested by the director or the fire chief. The operator shall submit SIMQAP updates to the director and the fire chief for their review and approval. The director shall complete the review of SIMQAP updates as soon as practicable, and shall either approve the updated SIMQAP or provide the operator with a list of specific items that must be included in the SIMQAP prior to approval. The operator shall respond to any request for additional information within 30 days of receiving such request from the director, unless extended by the director.

3. Worker Notification. The operator shall ensure that all persons working on the oil field comply with all provisions of the currently approved SIMQAP.

4. Inspections. The SIMQAP shall provide for involvement of county staff or the environmental compliance coordinator in all inspections required by this section.

Summary of Complaints:
The County has not received any complaints regarding the SIMQAP provision of the CSD.

Summary of Issues Raised by the Public:
Input from the scoping comments for this review was received on the SIMQAP documentation and reports. The comments requested links to the SIMQAP updates and SIMQAP documents, however, the SIMQAP documentation for both the SIMQAP document itself and the audit reports are available on the oil field website.

Maintenance and maintenance frequency were discussed at CAP meetings after a level controller failure and subsequent tank overflow event on November 22, 2018. The tank overflow event resulted in 14 odor complaints in the Ladera Heights neighborhood and a request by the public for more information on the amount and type of gas released by the overflow event. As a result of this request, the County ECC staff coordinated with the operator to obtain gas sample data from the subject tank and performed a modeling analysis to calculate the offsite concentrations and health impacts of the gas release. The results of the analysis were presented and discussed at the April 25, 2019 CAP meeting. The Tank Overflow Modeling analysis report is available in a power point format on the County DRP oil field website.

The level controller that failed was part of the inspection and maintenance program required by subsection C.1.b of this provision. While the piece of equipment failed, it had been inspected as part of the maintenance program on November 2, 2018, approximately 20 days before the failure. The inspection and maintenance program provide for sufficient inspection and maintenance of equipment but cannot completely ensure against potential malfunctions that could occur to various pieces of equipment. Due to the fact that the November 22, 2018 tank level controller failure resulted in offsite impacts to the public, the County required the installation of a second, redundant backup system, to prevent the potential re-occurrence of a tank overflow event. The backup system, a high-level alarm, was installed in May 2019 and successfully tested for the ECC on May 23, 2019. Additional tanks are under review by the operator and the County to determine applicability of additional alarm systems.

Input was also received from the public regarding concern about wildfires and what types of maintenance is performed on the electrical system at the oil field. Therefore, to allow the County to better review this maintenance and in response to the continued threat of wildfire, it is recommended that the documentation of the oil field wildfire prevention protections be improved by adding the existing electrical maintenance activities to the facility Safety, Inspection, Maintenance and Quality Assurance Program (SIMQAP), document.

Analysis of Compliance and Effectiveness:
The SIMQAP was completed and implemented in May 2009 and approved on April 13, 2011. The document was prepared with the assistance of a professional engineer familiar with the equipment, environmental impacts, and environmental regulations of oil field facilities. The SIMQAP includes requirements for facility staffing, fire protection systems, process controls, gas detection, emergency systems, and leak prevention and detection measures. The inspection and maintenance section of the document provides details on the preventive maintenance program,

safety device inspections, equipment inspections, electrical equipment inspection, and the inspection and maintenance of flow lines. The document also includes a discussion of the Transportation Security Plan which lists the requirements for trucks carrying hazardous and/or flammable materials as required by subsection C.1.e. Oil field staff has received training on the SIMQAP as a component of the training on the CSD completed on an annual basis.

All oil field equipment, and the associated maintenance of that equipment, is tracked and scheduled with a vendor-supplied computer-based maintenance management program. This schedule is linked to the requirements of the SIMQAP. The operator also conducts annual internal safety audits of the facility which provide for review and inspection of the oil field equipment.

The previous Periodic Review recommended that SIMQAP audits be completed pursuant to subsection C.1.c, two SIMQAP audits have been completed with reports dated July 2016 and August 2018. The next SIMQAP Audit is scheduled for 2020.

The provision is considered fully effective at this time and no further analysis is recommended.

New Technology:
The SIMQAP is required by this provision to be periodically reviewed and revised to incorporate changes in procedures, new safety technologies, and new maintenance technologies. As noted above, the oil field tanks are under review by the County for additional alarms with one additional redundant alarm system installed in May 2019.

Recommendations to Changes in Implementation:
This provision is adequately implemented; however, as stated above, it is recommended that to improve the documentation of the oil field wildfire prevention protections, it is recommended that the existing electrical maintenance activities be added to the next update of the facility Safety, Inspection, Maintenance and Quality Assurance Program (SIMQAP), document.

Recommendations to Changes in CSD Language:
No changes in the CSD language are recommended at this time.

5.4 D. ANNUAL EMERGENCY RESPONSE DRILLS OF THE COUNTY AND CULVER CITY FIRE DEPARTMENTS

The operator shall demonstrate the effectiveness of the emergency response Plan by responding to one planned emergency response drill per year which shall be conducted in conjunction with the county and Culver City fire departments. Emergency response drills required by other agencies that involve the county and Culver City fire departments can be used to satisfy this provision. In addition, the operator shall demonstrate the effectiveness of the emergency response Plan by responding to not more than two unannounced drills each year which may be called by the county fire department at the oil field. If critical operations are then underway at the oil field, the operator need not respond to a unannounced drill to the extent such a response would, as a result of such critical operations, create an undue risk of personal injury or property damage, but in such case the operator must promptly explain the nature of the critical operations, why response is not possible, and when the critical operations will be completed.

Summary of Complaints:
The County has not received any complaints regarding the emergency response provision of the CSD.

Summary of Issues Raised by the Public:
In the comments received for the scoping of this document, Culver City requested that the County encourage that the unannounced drills allowed for under this provision occur periodically. This issue was noted and was a recommendation in the first Periodic Review (see Section 2.5) and is also a recommendation in this review (see Section 1.8).

Analysis of Compliance and Effectiveness:
Emergency response drills were conducted annually by the operator on October 3, 2014, November 5, 2015, November 3, 2016, June 29, 2017, and March 14, 2018. Each drill is coordinated by the State Office of Spill Prevention and Response (OSPR) with notice to other resource agencies including the County and Culver City fire departments. The emergency response drills include a demonstration of the field capabilities and equipment for emergency response and are well attended by regulatory agencies; the drill conducted on March 14, 2018 included staff from the Culver City Fire Department, LA County Fire Department, Fish and Wildlife Service, OSPR, and the County ECC. All agencies involved in the March 2018 drill passed the operator, SPR, with high marks for preparedness, documentation, and coordination with agency staff. In addition to operator staff and the regulatory agencies, the drills also include staff from local spill response contractors. The spill response contractor is the same contractor that would be utilized in the event of a spill and their participation in the annual drills provides with familiarity with both the oil field, oil field equipment, and oil field staff.

This provisions also calls for up to two unannounced drills per year at the discretion of the Fire Department; no unannounced drills have taken place at the oil field to date.

The provision is considered fully effective at this time and no further analysis is recommended. However, it is recommended that efforts be made to ensure that at least one unannounced drill per year take place at the oil field as allowed for by the provision of the CSD. The Department of Regional Planning may coordinate with the County Fire Department to encourage that unannounced drills occur in the future. This recommendation was discussed in detail at the Periodic Review Public Hearing by the Hearing Officer. It was noted that the previous Periodic Review included the recommendation to have the Fire Department initiate the unannounced drills suggested by the provision and that no unannounced drills have occurred at the oil field to date. It was further noted that an unannounced drill is a very effective way to document the operator and public agencies response to an incident and their implementation of the oil field emergency response plan. Therefore, the Hearing Officer recommended a revision to the language of the provision to require that the Fire Department conduct at least one unannounced drill each year.

New Technology:
The annual emergency response drills and updates to the ERP document allow for new technology and techniques to be introduced and included as they become available.

Recommendations to Changes in Implementation:
This provision is implemented as intended, and no changes to implementation are recommended. However, as stated above, it is important to encourage that at least one unannounced drill per year is conducted at the oil field.

Recommendations to Changes in CSD Language:

As stated above, due to the fact that no unannounced drills have taken place to date at the oil field, the Hearing Officer recommends a revision to the CSD language to require the Fire Department to conduct at least one unannounced drill per year.

5.5 E. NOISE MONITORING

The public health department shall retain an independent qualified acoustical engineer to monitor ambient noise levels in the areas surrounding the oil field as determined necessary by the director or the director of public health. The monitoring shall be conducted unannounced and within a time frame specified by the director or the director of public health. Should noise from the oil operations exceed the noise thresholds specified in this section, no new drilling or redrilling permits shall be issued by the county until the operator in consultation with the director and director of public health identifies the source of the noise and the operator takes the steps necessary to assure compliance with thresholds specified in this section. The results of all such monitoring shall be promptly posted on the oil field website and provided to the CAP.

Summary of Complaints:
The County has not received any complaints regarding the requirement for noise monitoring of this provision. Noise complaints are discussed in the analysis for CSD Provision E.5.

Summary of Issues Raised by the Public:
See the discussion of CSD Provision 22.310.050.E, *Noise Attenuation*, for detail on noise issues with the oil field.

Analysis of Compliance and Effectiveness:
The provision requires that the County Department of Public Health use of an independent qualified acoustical engineer for noise monitoring if deemed necessary. As discussed in the analysis for the noise attenuation provision, no exceedances of the noise regulations in the County Code or of the noise limits specified in subsection 22.310.050.E.1 of the CSD have been recorded. Therefore, the County has not determined that the additional noise monitoring required by this provision has been necessary.

The provision has not been activated to date and no further analysis is recommended.

New Technology:
The provision requires the use of an independent qualified acoustical engineer for noise monitoring; therefore, any noise monitoring required by this provision would be completed with current noise measurement technology.

Recommendations to Changes in Implementation:
This provision has not been implemented to date; however, no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes in the CSD language are recommended at this time.

5.6 F. VIBRATION MONITORING

The public health department shall retain an independent qualified acoustical engineer to monitor vibration in the areas surrounding the oil field as determined necessary by the director or the director of public health. The monitoring shall be conducted unannounced and within a time frame specified by the director or the director of public health. Should vibration from the oil operations exceed the vibration thresholds specified in this section, no new drilling or redrilling permits shall be issued by the county until the operator in consultation with the director and director of public health identifies the source of the vibration and the operator takes the steps necessary to assure compliance with thresholds specified in this section. The results of all such monitoring shall be promptly posted on the oil field web site and provided to the CAP. A telephone number by which persons may contact the operator at all times to register complaints regarding oil operations shall be posted in the main entrance sign to the facility and included in the annual newsletter required by subsections Section 22.310.100.B.2 (Newsletter) and on the oil field web site required by subsection Section 22.310.100.B.3 (Oil Field Web Site).

Summary of Complaints:
The County has not received any complaints regarding the requirement for vibration monitoring of this provision. Vibration is discussed in the analysis for CSD Provision 22.310.050.F.

Summary of Issues Raised by the Public:
See the discussion of CSD Provision 22.310.050.F, *Vibration Reduction*, for detail on vibration issues within the oil field.

Analysis of Compliance and Effectiveness:
The provision requires that the County Department of Public Health use an independent qualified acoustical engineer for vibration monitoring if deemed necessary. As discussed in the analysis for the vibration reduction provision, no exceedances of the vibration criteria specified in Section 22.310.050.F of the CSD have been recorded. Therefore, the County has not determined that the additional vibration monitoring required by this provision has been necessary.

The provision has not been activated to date and no further analysis is recommended.

New Technology:
The provision requires the use of an independent qualified acoustical engineer for vibration monitoring; therefore, any vibration monitoring required by this provision would be completed with current vibration measurement technology.

Recommendations to Changes in Implementation:
This provision has not been implemented to date, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes in the CSD language are recommended at this time.

5.7 G. COMPLAINTS

All complaints related to oil operations received by the operator shall be reported on the same business day to the environmental compliance coordinator and to the director. In addition, the operator shall maintain a written log of all complaints and provide that log to the director, the MACC, and CAP on a quarterly basis. Depending upon the nature of the complaint, the operator shall report the complaint to the SCAOMD, CalGEM, and any other appropriate agencies with

oversight authority regarding the complaint at issue. If the complaint is received after normal business hours, it shall be reported to the environmental compliance coordinator and the agencies at the opening of the next business day

Summary of Complaints:
The County has received complaints on a variety of issues regarding the operation of the oil field including odor, noise, vibration, property damage, and dust. These complaints are discussed in the applicable sections of this Periodic Review and are summarized in the table below.

Summary of Issues Raised by the Public:
Comments have been noted on the complaint process with requests by the public for more detail in both the follow-up investigation of complaints and the documentation of that follow-up investigation. Complaint logs are posted on the County web site by quarter. The public has also expressed dissatisfaction with the results of the follow-up investigation and documentation of complaints, particularly odor complaints. In addition, the County Department of Public Health noted in scoping comments for this document that the complaint system should be audited by an independent party to follow up on complaints and evaluate the complaint system.

Analysis of Compliance and Effectiveness:
The oil field assigns a primary and a back-up staff person to be on call to respond to complaints. In addition, the oil field ombudsperson is available to coordinate directly with the public to discuss complaint issues with the oil field. Oil field personnel responding to a complaint follow a procedure for logging in and responding to complaints from the public. The procedure first requires that oil field staff call back the complaining party and obtain the following information:

- Name, address, phone number.
- Location of the issue (noise, odor, vibration, other).
- Specific detail on the complaint (sound type, smell, other).
- Time the issue was first noticed.
- Confirm with caller that the issue will be investigated.

The next step in the complaint procedure is to contact the oil field operator currently in charge of the field and initiate an investigation on the complaint. The oil field operator is required to correspond back as soon as possible on the results of the investigation. The oil field staff person handling the complaint then reports the results of the investigation back to the member of the public that filed the complaint and updates the complaint log. The incident is reported to the oil field ombudsperson no later than the next business day and the Director, ECC, and any other appropriate agency staff with oversight authority are notified of the complaint. A follow-up of the complaint is then a component of the ECC site inspection. The SCAQMD has also assisted the oil field operator on complaint investigations and their input is noted on the complaint logs.

The complaint procedure required by this provision has been implemented, is ongoing, and has improved over time. Improvements during this Periodic Review period from the initial years of the CSD to the complaint process follow up investigations include the addition of meteorological data and mapping analysis. The County ECC has also provided neighborhood onsite follow-up on certain complaints such as the odor issues noted by the Village Green community in the third quarter of 2018 where the ECC visited the community and interviewed select residents. A summary of the complaint log for the years 2014 through 2018 is provided in the table below.

Complaint Log Summary						
Type/Year	**2014**	**2015**	**2016**	**2017**	**2018**	**Total**
Odor	28	9	13	13	41	104
Noise	7	6	2	3	5	23
Vibration	5	0	0	0	0	5
Property Damage	1	2	0	3	0	6
Dust	1	2	1	0	0	4
Other	0	2	1	1	1	5
Total	42	21	17	20	47	**147**

As noted above, the complaint process has improved over time with the addition of meteorological and mapping data, but review of the complaint logs indicates some of the documentation on the complaint itself is not documented completely. Specifically, the address, phone number, or pertinent detail on the complaint is not provided by the complaining party. Therefore, it is recommended that the operator and the 1-800 telephone line vendor improve the data collected for each complaint to provide a more effective follow-up investigation and tracking of oil field complaints.

New Technology:
Complaint logs are posted to the County web site quarterly and the equipment used for follow-up investigations, such as noise or air quality monitoring equipment or air, odor, and noise modeling, represent current technology. The monitoring equipment and modeling software can be updated as this new technology becomes available.

Recommendations to Changes in Implementation:
This provision is adequately implemented; however, as stated above, it is recommended that the operator meet with staff involved with the complaint process and the 1-800 telephone line vendor to review the required information necessary for filing a complete complaint; this will improve the quality of the data collected for a complaint, assist in investigation of the complaint, and therefore upgrade the complaint process and data base. This recommendation should be implemented by the end of 2021.

Recommendations to Changes in CSD Language:
No changes in the CSD language are recommended at this time.

6.0 Administrative Items (22.310.070)

This section of the CSD outlines the administrative requirements including cost of enforcement, insurance and bond obligations.

6.1 A. COST OF IMPLEMENTING MONITORING AND ENFORCING CONDITIONS

The operator shall be fully responsible for all reasonable costs and expenses incurred by the county or any county contractors, consultants, or employees, in implementing, monitoring, or enforcing this section, including but not limited to, costs for permitting, permit condition implementation, mitigation monitoring, reviewing and verifying information contained in reports, undertaking studies, research and inspections, administrative support, and including the fully burdened cost of time spent by county employees on such matters.

Summary of Complaints:
This requirement involves the County cost recovery methodology for CSD compliance; no complaints from the public have been received on this provision.

Summary of Issues Raised by the Public:
The public is not involved in this condition; the payment of CSD compliance and enforcement costs is a legislative procedure implemented through the CSD and the Los Angeles County Code requirements. No public input has been received on this provision.

Analysis of Compliance and Effectiveness:
SPR and prior operators (FM O&G and PXP), have made timely payments on all CSD monitoring and enforcement costs to the County through the draw down account required by CSD Provision 22.310.070.B.2. All costs from the implementation of the CSD, permit processing, mitigation monitoring, compliance report research, review and verification, inspections, and administrative costs have been paid by the operator from this account. Review of the payment history since the adoption of the CSD shows no late payments or other issues with the legislative cost reimbursement outlined in this provision.

The condition is considered fully effective at this time and is administrative in its intent, and no further evaluation is recommended.

New Technology:
This provision of the CSD is a County administrative process and a discussion of new technology is not applicable.

Recommendations to Changes in Implementation:
This requirement has been implemented, the subject payments are made by the operator in a timely manner, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

6.2 B. DRAW-DOWN ACCOUNT

The operator shall maintain a draw-down account with the Department of Regional Planning from which actual costs will be billed and deducted for the purpose of defraying the expenses involved

in the county's review and verification of the information contained in any required reports and any other activities of the county, including but not limited to, enforcement, permitting, inspection, coordination of compliance monitoring, administrative support, technical studies, and the hiring of independent consultants. The initial amount to be deposited by the operator shall be $500,000. In the first year, if withdrawals from the account have reduced its balance to less than 50 percent of the amount of the initial deposit ($250,000), the operator shall deposit $50,000 in supplemental funds within 30 business days of notification. After the first year, if the balance in the draw-down account is reduced at any time to $50,000, the operator shall deposit $50,000 in supplemental funds on each occasion that the account is reduced to $50,000 or less within 30 business days of notification. There is no limit to the number of supplemental deposits that may be required. At the discretion of the operator, the amount of an initial or supplemental deposit may exceed the minimum amounts specified in this subsection. The director may, from time to time, increase the minimum $50,000 figure to account for inflation or the county's experience in obtaining funds from the account.

Summary of Complaints:
This requirement involves the payment method of CSD compliance and enforcement costs between the County and the operator; no complaints have been received by the County on this provision.

Summary of Issues Raised by the Public:
This provision details the accounting and payment method of CSD compliance and enforcement costs between the County and operator; no public issues have been raised on this requirement. The County received input from Culver City in the scoping comments for this report requesting that the draw down account be used for studies such as the Public Health, Ground Movement, and Air Quality Studies. The draw down account is used to pay the costs of review of the technical reports referenced in the Culver City comment. If review of the subject reports determines additional or expanded studies are necessary, the County can require such reports. The County has not made that determination for any of the studies completed pursuant to CSD requirements for this Periodic Review period.

It should be noted that The Public Health Study is administered and funded by the DPH as stipulated by the Settlement Agreement; the CSD does not fund these studies. The Air Quality study funding amount was determined in the Settlement Agreement at $250,000 as specified in Condition 8 of the agreement.

Analysis of Compliance and Effectiveness:
As noted in the discussion for CSD Provision 22.310.070.A, FM O&G and now SPR, have made timely payments on all CSD monitoring and enforcement costs. These payments have been made via the draw-down account as required by this provision. The draw-down account has been maintained at or above the $50,000 balance as required by this requirement since the adoption of the CSD. The account balance on December 31, 2018 was $50,332.61 and the County has not required an increase of the minimum balance of the draw-down account to date.

The condition is considered fully effective at this time and is administrative in its intent, and no further evaluation is recommended.

New Technology:
This condition is a financial agreement between the operator and the County, and a discussion on new technology is not applicable.

Recommendations to Changes in Implementation:
This requirement has been implemented the draw-down account is maintained by the operator as required; and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

6.3 C. INDEMNIFICATION

The operator shall enter into an agreement with the county to indemnify and hold harmless the county, its elected and appointed officials, agents, officers, and employees from any claim, action, or proceeding for damages arising from its oil operations, including water, air or soil contamination, health impacts, or loss of property value during the oil operations, well abandonment, and post-abandonment activities with terms approved by, and in a form acceptable to, the CEO.

Summary of Complaints:
This provision is administrative in its intent requiring an indemnification agreement; no complaints have been received by the County on this provision.

Summary of Issues Raised by the Public:
As noted above, this is an administrative requirement that is a standard County permit condition, and no public input has been received by the County on this provision.

Analysis of Compliance and Effectiveness:
This provision is administrative in its intent requiring an indemnification agreement. The required agreement was documented in a letter signed by the operator and the County dated November 12, 2009; the agreement is on file with the County. The County recently reviewed (August 2017) the indemnification documentation and determined the language is appropriate to protect the interests of the County.

The condition is considered fully effective at this time and is administrative in its intent, and no further evaluation is recommended.

New Technology:
This condition is an administrative requirement for an indemnification agreement, and a discussion on new technology is not applicable.

Recommendations to Changes in Implementation:
This requirement is a standard County administrative requirement and has been implemented, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

6.4 D. INSURANCE REQUIREMENTS

Within 90 days following the effective date of the ordinance creating this section or such later time as may be approved by the director for good cause shown, and without limiting the operator's indemnification of the county as required in the preceding subsection, the operator shall provide

evidence of insurance coverage that meets county requirements as required and approved by the CEO including identifying the county and its elected and appointed officers and employees as additional insureds. Such coverage shall be maintained so long as oil operations are conducted within the district and until such time as all abandonment requirements are met and certified by the appropriate local, State, and federal agencies. Such insurance coverage shall include but is not necessarily limited to the following: general liability, auto liability, professional liability, and environmental impairment liability coverage insuring clean-up costs and endorsing for 'Sudden and Accidental' contamination or pollution. Such coverage shall be in an amount sufficient to meet all applicable State and federal requirements, with no special limitations. At the operator's request and only with county approval by the CEO, the operator may self-insure all or any part of the above coverage obligations in lieu of purchasing commercial coverage. These insurance requirements shall be in addition to all other indemnification, insurance and performance security required by federal, State, and local regulations and permits.

Summary of Complaints:
This provision is administrative in its intent requiring an insurance policy for operation of the oil field; the County has not received any complaints from the public on the insurance requirement except as discussed below.

Summary of Issues Raised by the Public:
Input on both the insurance and the performance security bond required by CSD Provisions 22.310.070 D and E was received by the County in comments solicited for the Periodic Review. The comments can be summarized as requesting the CSD contain insurance and bonding requirements for disasters, abandonment and clean-up costs and that those requirements be reviewed for adequacy.

Analysis of Compliance and Effectiveness:
PXP, the operator at the time of CSD adoption, provided the County with an insurance policy meeting the liability and environmental impairment liability requirements of this provision on January 18, 2010. The current operator of the oil field, SPR, updated this insurance to reflect the change in operator from FM O&G to SPR in December 2016/January 2017. The updated insurance policy has been reviewed by the County and meets all applicable State and federal requirements. The County recently evaluated (August 2017) the amount of coverage currently provided by the Operator and has determined that given the nature of the operations at the oil field, the coverage amounts are adequate. Further, the CSD does not determine the amount of insurance required under Provision 22.0310.070.D or the performance bond amount required under Provision 22.0310.070.E; the financial and technical requirements of these provisions are determined by the County CEO. In addition, the County may conduct additional review at any time independent of the Periodic Review process.

The condition is administrative in its intent and is considered fully implemented, and no further evaluation is recommended.

New Technology:
This condition is an administrative requirement, and new technology is not applicable.

Recommendations to Changes in Implementation:
This requirement is an administrative requirement that has been implemented, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:

No changes to the CSD language are recommended.

6.5 E. PERFORMANCE SECURITY

The operator shall be subject to the following provisions:

1. Performance Bond. Prior to issuance of the first drilling or redrilling permit pursuant to this section, the operator shall provide to the department of regional planning a faithful performance bond or financial instrument in the sum to be determined by the CEO, payable to the county and executed by a corporate surety acceptable to the county and licensed to transact business as a surety in the State of California. Such bond shall be conditioned upon the faithful performance by the operator of duties related to well abandonment, site restoration, and environmental cleanup and shall be in a format and include terms approved by the CEO.

2. Change of Operator. The performance bond shall continue in force for one year following any sale, transfer, assignment, or other change of operator of the oil field, or of the current operator's termination of activities at the oil field. The county may release said bond prior to the end of the one-year period upon satisfaction by the operator of all its obligations. Notwithstanding the foregoing, the performance bond shall not be terminated or released upon the sale, transfer, assignment, or other change of operator until the new operator has delivered a replacement bond complying with the provisions of this Section 22.301.070.

3. Funding Options. At its sole option, the county may accept certificates of deposit, cash deposits, or U.S. government securities in lieu of commercial bonds to meet the above bonding requirements on terms approved by the CEO.

Summary of Complaints:
This provision is administrative in its intent requiring a bond regarding the abandonment, site restoration, and environmental cleanup of the oil field. The County has not received any complaints on the performance security required by this provision apart from the public input noted below and in the discussion for CSD Provision 22.0310.070.D.

Summary of Issues Raised by the Public:
As noted in the discussion for CSD Provision 22.0310.070.D, the County received comments for the scoping of this document. The comments requested that the amounts of insurance and bonding be reviewed for adequacy.

Analysis of Compliance and Effectiveness:
PXP, the operator at the time of CSD adoption, provided the County with a performance bond issued by an acceptable corporate surety licensed to transact business in the State of California on September 29, 2009. The bond has been updated by subsequent operators consistent with the requirements of this provision.

As noted in the discussion on Provision 22.0310.070.D above, the CSD does not determine the amount of insurance required or the performance bond amount required these administrative provisions; the financial and technical requirements of these provisions are determined by the County CEO. The County completed an analysis of the bond amount in January 2017 and determined the amount should be increased from $5,000,000 to $6,800,000 to be appropriate for the current levels of operations at the oil field. The current operator, SPR, has updated the bond to reflect the revised bond amount. Further, the County may conduct additional review at any

time independent of the Periodic Review process; therefore, the County has the ability, through this provision, to amend the amounts required if deemed necessary in the future.

The condition is administrative in its intent and is considered fully implemented, and no further evaluation is recommended.

New Technology:
This condition is an administrative requirement, and a discussion on new technology is not applicable.

Recommendations to Changes in Implementation:
This requirement is an administrative requirement that has been implemented; no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

6.6 F. OTHER OBLIGATIONS

The insurance, indemnification, and performance security requirements in subsections C, D and E, above, shall be in addition to all other indemnification, insurance, and performance security required by federal, State and local regulations, and permits.

Summary of Complaints:
This provision is administrative in its intent and references the requirements to the operation of oil field in addition to those outlined in the CSD; the County has not received complaints on this provision.

Summary of Issues Raised by the Public:
The County has not received input on the other agency requirements referenced by this condition. Any input received by these other agencies regarding those regulations is outside the scope of this Periodic Review.

Analysis of Compliance and Effectiveness:
The condition is administrative in its intent and is considered fully implemented, and no further evaluation is recommended.

New Technology:
This condition is an administrative requirement; a discussion on new technology is not applicable.

Recommendations to Changes in Implementation:
This requirement is an administrative requirement, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

6.7 G. PERIODIC REVIEW

The county shall conduct a comprehensive review of the provisions of this section at least every five years to determine if the provisions of this section are adequately protecting the health, safety, and general welfare. Such reviews shall, among other things, consider whether additional provisions should be added, appended, or removed. One of the main goals of the Periodic Review shall be to evaluate if proven technological advances that would further reduce impacts of oil operations on neighboring land uses should be incorporated into the provisions of this section.

1. Review Requirements. Each review shall include a report by a hearing officer designated by the director, which shall be prepared after public notice and an opportunity for public comment. The report shall include a comprehensive analysis of the effectiveness of this section, and shall review and consider enforcement activity, operational records, and any other issues relating to oil operations. The report, at the option of the county, may include a survey of residents near the oil field regarding noise, odors, vibrations, and other issues requested by the director of public health. A draft of the report shall be provided to the CAP and the operator for review and comment. All comments on the draft report from the CAP and the operator shall be submitted to the hearing officer in writing, and will be considered, if timely received, before the report is finalized. The final report by the hearing officer shall include a recommendation as to whether the director should prepare proposed amendment to this section for submission to the board of supervisors.

2. Early Reviews. At the discretion of the director, reviews of this section may be conducted more frequently than every five years. Without limiting such discretion, the director shall consider whether an early review should be undertaken if more than three material violations occur within any 12-month period.

3. Initial Review. The initial review shall occur no sooner than three years and no later than five years after the effective date of the ordinance establishing this section unless the director determines that such initial annual review shall occur at an earlier time pursuant to Subsection G.2, above.

Summary of Complaints:
No complaints to date have been received by the County on the Periodic Review. The first Periodic Review was completed with a final report dated September 2015.

Summary of Issues Raised by the Public:
The County solicited input on the CSD for this Periodic Review as required by this provision. Input from the public was obtained by comments provided by letter, email, and/or at the Community Advisory Panel (CAP) meetings. Comments have been received on a variety of CSD provisions and are acknowledged and discussed in the analysis of the relevant CSD condition of this report.

Analysis of Compliance and Effectiveness:
This report, prepared subject to this provision, documents compliance with the Periodic Review requirement. The review provides a comprehensive analysis of the effectiveness of the requirements of each CSD provision. Information sources and input for this review included:

- Compliance records, reports, plans, and training records.
- Monitoring data.
- Operational records.
- ECC site inspections.
- Annual EQAP audit reports.
- Enforcement actions.
- Interviews of SPR staff.

- Results of the electronic survey.
- CAP meeting comments.
- Written comments.
- Complaint records.

The draft report was circulated for review and comment to the CAP, members of the public, other agencies, and the operator. Comments on the draft report were considered in the preparation of the final draft. The report was prepared consistent with the five-year time frame requirement stipulated in subsection G.3.

This report was prepared pursuant to the CSD requirement, and therefore the condition is considered fully implemented; no further evaluation is recommended.

New Technology:
This Periodic Review of the CSD discusses new technology, as applicable, in the analysis of each condition of the CSD permit of the report.

Recommendations to Changes in Implementation:
This requirement has been implemented, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

6.8 H. MULTIPLE AGENCY COORDINATION COMMITTEE ("MACC")

A MACC shall be established to coordinate activities and communications between the various agencies with regulatory authority over the oil operations within the district. While each agency will continue to make its own decisions with regard to their respective areas of authority, the MACC will allow for collection and analysis of data and for discussion of both strategic evaluations and enforcement actions taken by the various agencies at the oil field.

1. MACC Members. The director shall establish a MACC that includes representatives from the following agencies: the county department of regional planning, the county fire department, the county department of public works, and the county department of public health. The SCAQMD, the Regional Water Quality Control Board, CalGEM, and Culver City fire department shall be invited to appoint a representative from their agency as a member of the MACC.

2. MACC Chair. The director or his designee shall chair the MACC meetings and shall coordinate all MACC activities including scheduling and keeping minutes of MACC meetings.

3. MACC Meetings. The MACC shall determine its meeting schedule.

4. Documents Provided to the MACC. Copies of all monitoring and compliance reports, plans, and other documents that are requirements of this section shall be submitted to the MACC.

Summary of Complaints:
The County has not received any complaints on the MACC.

Summary of Issues Raised by the Public:

The County received input during the scoping period of this document that the MACC meet with the CAP on an annual basis. As detailed in the provision, the MACC is composed of the regulatory agencies listed in subsection H.1 of the provision and is not a public meeting. The CSD provides for interaction with the public under Provision 22.310.100, Public Outreach which includes the CAP, community meetings, the community letter, the oil field web site, and the ombudsperson. Further, the CAP provides for staff from other regulatory agencies such as CalGEM and the SCAQMD to attend and present information to the public as demonstrated by past and recent CAP meetings.

Analysis of Compliance and Effectiveness:
The MACC held its first meeting on March 16, 2009. Subsequent meetings have been held on April 20, 2009, July 16, 2009, September 17, 2009, February 11, 2010, July 8, 2010, November 4, 2010, April 12, 2011, May 13, 2013, January 28, 2014, and March 29, 2016. MACC members include the following representative agencies:

- Culver City Fire Department (CCFD).
- County of Los Angeles
- Department of Regional Planning (DRP)
- Fire Department (LACoFD)
- Department of Public Works (DPW)
- Department of Public Health (DPH)
- State of California
- Department of Conservation, Division of Oil, Gas, and Geothermal Resources (CalGEM)
- Department of Justice, Office of the Attorney General
- California Environmental Protection Agency
- Regional Water Quality Control Board (RWQCB)
- South Coast Air Quality Management District (SCAQMD)

Minutes from these meetings are available on the County web site at:
www.planning.lacounty.gov/baldwinhills/macc.

Pursuant to this requirement, MACC meetings are facilitated by a meeting Chair, meetings are scheduled by the committee as deemed appropriate, MACC members are copied on all email oil field update correspondence, and any oil field documents requested by the MACC are submitted in a timely manner.

New Technology:
This provision is administrative in its intent outlining the requirements for the MACC, and a discussion of new technology is not applicable.

Recommendations to Changes in Implementation:
This requirement has been implemented, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

6.9 I. RELATED COUNTY CODE PROVISIONS

The county code contains a number of provisions related to oil wells and oil field operations. Where the regulations of this section differ from any other provisions in the county code, these regulations shall supersede unless the contrary provisions are mandated by State law.

Summary of Complaints:
This provision is standard administrative County language to clarify jurisdiction on similar county code requirements; there have been no complaints on this provision.

Summary of Issues Raised by the Public:
As noted above, this requirement is a standard administrative condition; no public issues have been noted on this provision.

Analysis of Compliance and Effectiveness:
The provision is a standard County requirement to clarify jurisdiction between similar codes and regulations. The CSD was developed to augment and strengthen the existing requirements codified in the County code for oil and gas operations. The requirements of the CSD supersede other provisions unless mandated by State law. There have been no conflicts between contrary code provisions requiring the County to invoke this provision to date.

This provision is standard County permit language and has not been activated to date, and no further analysis is recommended.

New Technology:
This provision is a standard County administrative requirement; a discussion of new technology is not applicable.

Recommendations to Changes in Implementation:
This requirement has not been activated to date; however, no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

7.0 Permitting (22.310.080)

This section of the CSD describes the requirements for additional permitting for activities not included in the CSD provisions.

A. Ministerial Site Plan Review required
The operator shall apply for and receive approval of a Ministerial Site Plan Review (Chapter 22.186) prior to any new drilling and redrilling. New drilling and redrilling approved through a director's review procedure shall be limited to no more than 53 wells per year, with the maximum number of newly drilled wells of that total, limited to 45 per year, except that during the first year following the effective date of the ordinance establishing this section, new drilling and redrilling shall be limited to no more than 24 wells. Approval through director's review for drilling new wells shall be limited to 600 wells over 20 years, beginning on the effective date of this ordinance. Drilling and redrilling shall be planned to avoid over concentration of such activities in one area in anyone year, if near developed areas. The director's review procedures shall also apply to emergency actions determined by the director as necessary to prevent an imminent hazard, or to other immediate measures required for the purposes of protecting health and safety. No new permits for drilling or redrilling shall be approved by the director unless the subject wells have been approved as part of an annual drilling Plan as described in Section 22.310.050.Z.3 (Annual Drilling, Redrilling, Well Abandonment, and Well Restoration Plan. Approval shall not be granted until copies of all related permits have been submitted to the director; other permits include, but are not limited to, the permits required by CalGEM, the county fire department, the county department of public works, the county sanitation district, RWQCB, SCAOMD, and other pertinent agencies identified by the director.

Summary of Complaints:
No complaints specific to this provision has been received by the County for the time period covered in this review.

Summary of Issues Raised by the Public:
In part since no drilling has occurred at the IOF since June 2014, no public input on the number of wells allowed at the oil field has been received for the time period covered in this review. The number of wells provided for in this provision has been revised based on past public input and the Settlement Agreement, a summary of which is provided below.

Analysis of Compliance and Effectiveness:
Provision 22.310.050.Z.3, *Drilling, Redrilling, and ReWorking Operations*, requires an annual submittal of a drilling Plan which identifies the number and other details of wells proposed to be drilled for a given year; however, it does not provide limits for the number of wells allowed on either an annual or total project basis. This provision provides the limits on wells to be drilled at the oil field on an annual basis and for the life of the CSD. These limits have been augmented by the requirements of the Settlement Agreement and the Annual Well Evaluation dated December 5, 2011. The maximum number of wells allowed per year under this provision is as follows:

- 53 new and re-drilled wells per year.
- New wells limited to 45 of the 53 well total.
- New and re-drilled wells limited to 24 for year 2009.
- 600 total wells for 20-year time frame starting at the adoption of the CSD.

The Settlement Agreement revised the annual well drilling limits and introduced the “Bonus Well” concept. The bonus wells program was developed to encourage moving well activities away from

developed areas by establishing the area within 800 feet of any developed area as a target zone for well abandonment as opposed to well drilling activities. For each well abandoned in this target zone, the Settlement Agreement allowed for two new wells to be drilled outside the target zone. These "bonus wells" did not count against the annual new well limit, thus allowing for additional wells above the annual new well limit to encourage abandonment of well activities near developed areas. The Settlement Agreement also identified two drilling periods for well limits. These time periods were defined as before and after the first 50 wells are drilled, referred to as "Time Period One" and the "Full Operational Period". In addition to reaching the 50-wells-drilled milestone, the Full Operational Period also required that the County determine that the CSD has been effective in protecting the health, safety, and general welfare of the public; this analysis, the *PXP Baldwin Hills Community Standards District Annual Well Increase Evaluation*, was completed in December 2011.

The *Annual Well Increase Evaluation* reviewed the following CSD compliance subject areas; noise, vibration, air emissions, odors, ground movement, visual/aesthetics, hazards/fire protection/emergency response, and ground water quality. The results of the review concluded that for these areas of review, the CSD has been effective in protecting the health, safety, and general welfare of the public. The 50 wells drilled milestone was reached in October 2011.

As discussed above, the oil field entered the Full Operational Period in December 2011; the revised well limits for the CSD are as follows:

- 35 new or re-drilled wells per year.
- 18 bonus wells per year.
- 53 total wells per year.
- 500 total wells through October 1, 2028 or during the remaining life of the CSD, whichever is later.

The actual number of wells drilled at the oil field through the end of 2018 is summarized in the table below.

Number of Wells Drilled Since the Adoption of the CSD			
Year	**Wells per Year**	**Bonus Wells Used**	**Cumulative Total**
2009	0	0	0
2010	19	0	19
2011	40	5	64
2012	20	0	84
2013	30	0	114
2014	18	0	132
2015	0	0	132
2016	0	0	132
2017	0	0	132
2018	0	0	132
Total (through 2018)	**127**	**5**	**132**

As shown in the above table, the number of wells drilled at the oil field was within the allowable limits of the CSD and the CSD as revised by the Settlement Agreement. The requirements for County and other agency approval of the drilling activities stipulated by this provision are met by the annual submittal, review, and approval of the *Annual Drilling, Redrilling, Well Abandonment and Well Restoration Plan* required under Provision 22.310.050.Z.3.

The condition is considered fully effective at this time, and no further evaluation is recommended.

New Technology:
New technologies in oil well drilling and associated activities are discussed in the *Annual Drilling, Redrilling, Well Abandonment and Well Restoration Plan* as submitted to the County for review and approval.

Recommendations to Changes in Implementation:
The condition is considered fully effective at this time, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
The language of this CSD provision has been augmented by the terms of the Settlement Agreement, and no additional changes to the CSD language are recommended.

7.1 B. CONDITIONAL USE PERMIT (CUP) REQUIRED

Provided a conditional use permit (Chapter 22.158) has first been obtained and while such permit is in full force and effect in conformity with the conditions of such permit, the following uses may be established:

1. Drilling or redrilling that exceeds the maximum number allowed pursuant to a Ministerial Site Plan Review (Chapter 22.186);

2. Steam drive plant; and

3. New tanks with a capacity of greater than 5,000 barrels.

Summary of Complaints:
This provision is administrative in its intent allowing for certain additional uses subject to a conditional use permit; no such permit has been obtained or applied for by the oil field operator to date. No complaints have been received by the County on the provision.

Summary of Issues Raised by the Public:
As noted above, this is an administrative requirement for a land use permit process that has not been implemented to date by the oil field operator; no input on this provision has been received by the County.

Analysis of Compliance and Effectiveness:
This provision is administrative in its intent and details specific uses allowed under a conditional use permit at the oil field. The operator has not obtained nor applied for such a permit to date. Drilling and redrilling activities at the oil field have been under the maximum number allowed by the CSD except for those wells allowed for under the Settlement Agreement dated July 15, 2011 and the Annual Well Evaluation dated December 5, 2011. A steam drive plant has not been built or proposed for the oil field and all new tanks constructed to date have been sized at 5,000 or less barrels capacity.

The condition is considered fully effective at this time, is administrative in its intent, and has not been activated to date; no further evaluation is recommended.

New Technology:
This condition is an administrative requirement and is linked to the conditional use permit process of the County. Any technological improvements the County deems appropriate to this provision may be implemented during the review and approval of the subject County permit.

Recommendations to Changes in Implementation:
This provision is administrative in its intent allowing for certain uses subject to a conditional use permit and has not been activated to date. No changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

7.2 C. CONDITIONAL USE PERMIT (CUP) REQUIREMENTS

For those uses requiring a conditional use permit, in addition to the requirements of Chapter 22.158, the applicant shall substantiate to the satisfaction of the hearing officer that:

1. The requested use is in compliance with the provisions of this section; and

2. All reasonable measures were taken to reduce and minimize potential impacts from the proposed operation.

Summary of Complaints:
This provision is administrative in its intent and has not been activated to date; no complaints have been received by the County on the provision.

Summary of Issues Raised by the Public:
As noted above, this is an administrative requirement for a land use permit process that has not been implemented to date by the oil field operator; no input on this provision has been received by the County.

Analysis of Compliance and Effectiveness:
This provision is administrative in its intent and details specific additional requirements applicable to the oil field regarding the approval of a conditional use permit (CUP). The operator has not applied for a CUP to date.

The condition is considered fully effective at this time, is administrative in its intent, and has not been activated to date; no further evaluation is recommended.

New Technology:
This condition is an administrative requirement and provides additional specific requirements to the conditional use permit process of the County applicable to the oil field. The provision requires that in addition to existing CUP requirements mandated by the County ordinance, any proposal for a new permit substantiate that "*All reasonable measures were taken to reduce and minimize potential impacts from the proposed operation.*" Therefore, new technologies developed to minimize impacts from operation of the oil field can be required pursuant to the review and approval of the subject County permit.

Recommendations to Changes in Implementation:

This provision is administrative in its intent and allows for additional mitigation measures be required for any new CUP at the oil field. The provision has not been activated to date, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
As noted above, the existing CSD language allows for the County to require all reasonable measures to minimize impacts from operations at the oil field when a new CUP is approved. Therefore, no changes to the CSD language are necessary or recommended.

7.3 D. APPLICATION WHERE VIOLATION EXISTS

No application required pursuant to this section shall be accepted for processing or approved where any existing use in the district is being maintained or operated by the operator or its agents in violation of any material provision of this Title 22.

Summary of Complaints:
This provision is administrative in its intent requiring the operator to resolve any violations prior to the application of any new permit at the oil field. No complaints on this provision have been received by the County.

Summary of Issues Raised by the Public:
This provision has not been implemented to date, and the County has not received any input on this provision.

Analysis of Compliance and Effectiveness:
This provision is administrative in its intent and has not been implemented to date. The condition requires the operator to resolve any land use violations prior to the application of any new permit application at the oil field. The requirement also states that no permit application may be approved if such a violation exists.

The condition is considered fully effective at this time, is administrative in its intent, and has not been activated to date, and no further evaluation is recommended.

New Technology:
This condition is an administrative requirement linked to the County permitting process requirements; a discussion of new technology is not applicable.

Recommendations to Changes in Implementation:
This requirement is a County administrative requirement that has not been activated to date and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

8.0 Enforcement (22.310.090)

This subsection of the CSD provides enforcement provisions that augment the enforcement procedures specified in Chapter 22.242 of the County Code. Section A details monetary amounts for violations and the procedures for payment and appeal of those violations and penalties.

Section B is the administrative requirement documenting that access to all records and facilities for enforcement of the CSD be made available to the County, and Section C provides for access to the oil field for inspections or as deemed necessary by the County.

Two enforcement actions were taken by the County through this Periodic Review period. The first involved a follow-up enforcement action on October 22, 2014 (14-006243/EF141385) to CSD Provision 22.310.050.Y Storage of Hazardous Materials. The action followed a County Fire Department inspection that uncovered a violation involving the storage of hazardous materials. The violation involved a discrepancy between the location of the storage of hazardous materials as annotated in the oil field facility Hazardous Materials Business Plan document and the actual location of the stored hazardous materials as found on site during the inspection. The issue was corrected within 30 days and signed off by County Fire. No monetary penalty was assessed.

The second enforcement action, a Notice of Violation (NOV) for missing meteorological data (CSD Condition 22.310.050 B.10) was issued on November 12, 2018 (RPCE2018006074). The missing meteorological data issue was due to a download issue with the station data logger and was subsequently corrected, no monetary penalty was assessed.

The condition is considered fully effective at this time. There have been no issues regarding access to compliance documentation or for access to the oil field; no further evaluation is recommended.

9.0 Public Outreach (22.310.100)

This section outlines the CSD requirements regarding communication with the public, community meetings and community relations.

9.1 A. COMMUNITY ADVISORY PANEL ("CAP")

A community advisory panel shall be established by the director to foster communication about ongoing operations at the oil field and to allow the community representatives to provide input to the county and the operator.

1. CAP Members. The CAP may include representatives of the county, the city of Los Angeles, the city of Culver City, West Los Angeles College, the operator, the landowners, and each of the major neighborhoods surrounding the oil field (including Ladera Heights, Windsor Hills, Oak Park, View Park, Culver Crest, Blair Hills, and Raintree). The operator and each of the governmental entities previously referred to may each designate a representative to the CAP. Each landowner and neighborhood organization of the surrounding communities may submit a nomination to the director for appointment to the CAP. Where there is no neighborhood organization, a community resident may make a request to the director to be appointed to the CAP. School districts with schools in the vicinity of the oil field and the lessors may make a request to the director to have a representative appointed to the CAP.

2. CAP Meetings. The CAP shall determine its meeting schedule.

3. Documents Provided to the CAP. A notice of availability of all monitoring and compliance reports and results, all plans, audits and studies, and any other available documents that are required by this section shall be submitted to the CAP promptly after they are prepared or otherwise available. Copies of these reports, documents, and other items shall be provided to CAP members upon request except to the extent information therein may not be legally disclosed. Prior to each CAP meeting, the county shall provide to the CAP a list of all violations of the provisions of this section that have occurred since the last CAP meeting.

Summary of Complaints:
CAP meetings have occurred approximately monthly since the first meeting on March 26, 2009. The County has received input on the CAP meetings as discussed below.

Summary of Issues Raised by the Public:
Input on the CAP process has been made during discussion at the CAP meetings and for comments solicited for the scoping of this Periodic Review. Several comments were made regarding CAP attendance, the need to update the CAP membership to allow new members and to have meeting guidelines. The County addressed the attendance and membership issue in 2014 whereby the Director of the DRP sent a letter out to CAP members reminding them of their obligations as a member of the CAP. Subsequently, several CAP members were removed allowing for potential new groups to submit applications for membership. As a result, the City of Los Angeles Office of Petroleum and Natural Gas Administration and Safety, Los Angeles Unified School District, and the Ladera Crest Homeowners Association recently joined the CAP. Guidelines for the CAP were created and approved by the CAP in June 2009.

Several comments involved moving the location of the CAP meetings and the use of a third-party facilitator. The location of the CAP meetings has been a topic at many recent meetings with the discussion of improving bicycle, pedestrian and mass transit access of the location of the meetings. The feasibility of several alternate locations has been debated, however during the July 25, 2019 CAP meeting, a vote to remain at the current location was passed. The CAP meetings are co-facilitated by members of the CAP, which are members of the public, consistent with the CAP bylaws. The bylaws allow for the CAP to elect a member to serve as facilitator or assistant facilitator at any time.

Comments were also received during the scoping of this document on information transparency, public notification, and public outreach. Section 22.310.100, *Public Outreach*, was specifically developed to provide information, notification, and outreach to the public on oil field operations. As noted in the discussion for 22.310.200.B, *Community Relations*, the oil field and DRP Baldwin Hills CSD websites contain over a hundred CSD compliance documents. Many of these documents are discussed at the monthly CAP meetings where public input is encouraged, and public comments are addressed by the operator or the County in a timely fashion. Further, pursuant to CSD 22.3120.050.Z.3, the County must consider comments made by the CAP on the *Annual Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plan* prior to approval of the plan.

Consistent with the CAP bylaws, the *"purpose and goal of the CAP is to foster communication about ongoing operations at the Inglewood Oil Field located in the Baldwin Hills, and to allow community representatives to provide input to the County and the operator of the oil field*.". Members of the public may contact the County or their CAP community representatives for information, attend CAP meetings or contact the oil field ombudsperson for information on oil field activities. Community outreach is also accomplished by the annual neighborhood meetings and newsletter required under CSD 22.310.200.B.

Analysis of Compliance and Effectiveness:
The CAP was established to foster communication and ensure continued community input for the County and for operator. Twenty-one panel seats were allocated to the categories specified in subsection 22.310.100.A.1 by the Director of Planning. Nominations were accepted on a first-come, first-serve basis and the introductory meeting was held March 26, 2009. CAP membership is currently filled based on a metric made by the Director and published on June 13, 2017. Panelists on the CAP serve in a representative capacity and all meetings are open to the public. As noted above, bylaws were created and approved by the CAP on June 25, 2009. Current CAP members are designated from the following entities:

- Governmental Entities
  - Department of Regional Planning
  - City of Culver City
  - West Los Angeles College
  - City of Los Angeles

- Oil Field Operator
  - SPR

- Landowners
  - Vickers Family Trust
  - Cone Fee Family Trust

- Neighborhood Organizations (Recognized Homeowners Association)
  - Ladera Heights Civic Association
  - Windsor Hills HOA
  - United HOA (View Park)
  - Culver Crest Neighborhood Association
  - Blair Hills HOA
  - Raintree Community HOA
  - Baldwin Hills Estates HOA
  - Ladera Crest HOA

- Neighborhood Organizations (No Recognized Homeowners Association)
  - Baldwin Vista Homeowner

- School Districts
  - Los Angeles Unified
  - Culver City Unified

- Other Organizations
  - Windsor Hills Block Club
  - Community Health Council
  - Baldwin Hills Conservancy

The meeting schedule for CAP meetings is determined during the monthly meetings. Monitoring reports, compliance reports, plans, audits, studies, and other documents required by the CSD are provided to the CAP as required by subsection 22.310.100.A.3. Documentation made available to the CAP is typically posted on the Inglewood Oil Field website with some materials distributed at CAP meetings in hardcopy format. Meeting minutes and informational handouts are available at the County DRP web site.

The CAP, along with the other public outreach requirements of the CSD, provide several robust methods for both the dissemination of information to the public and for public involvement in the compliance and requirements of the CSD. Membership in the CAP is an ongoing process and potential new members may contact the Director of DRP for consideration of CAP membership at any time. As noted above, the bylaws of the CAP allow for the election of a new facilitator or assistant facilitator at the discretion of the CAP. The CAP allows for direct communication between the public, the County, other regulatory agencies, and the operator on oil field activities and CSD compliance documentation. The condition is considered fully effective at this time, and no further evaluation is recommended.

Recommendations to Changes in Implementation:
This requirement has been implemented, is ongoing, and allows for both new membership and new meeting facilitators. No changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

9.2 B. COMMUNITY RELATIONS.

1. Community Meetings. The operator shall hold community meetings on an annual basis to provide updates on oil operations.

2. Newsletter. The Operator shall publish an informational newsletter annually, which shall contain updated information on oil operations including drilling, redrilling, maintenance, repair, and reworking activities and all recently granted conditional use permits or applications filed for conditional use permits for the oil field. The newsletter shall be mailed by the operator to all owners of property located within 1,000 feet of the outer boundary line; all owners of property within 1,000 feet of the perimeter of the district as shown in the records of the county assessor's office; to any person or entity who has filed a written request therefore with the director; and to neighboring cities. The operator shall also make these newsletters available on the oil field web site. The oil field web site address shall be publicized in each newsletter.

3. Oil Field Web Site. The operator shall maintain and update on a regular basis an oil field web site that shall include information on oil operations at the oil field, including drilling and production activities. All monitoring and compliance reports and results, plans, audits and studies, and any other available documents that are required by this section (except to the extent they contain information that may not legally be disclosed) shall be promptly posted on the Oil Field Web Site in pdf format.

Summary of Complaints:
The County did not receive any complaints on the community meeting, newsletter, or web site for the time period of this review.

Summary of Issues Raised by the Public:
Input on community relations has been provided by the public at both Community Advisory Panel (CAP) meetings and for comments solicited for the Periodic Review. Specific comments include requests for better communication between the oil field operator and the public and better communication between the County and the public. The public has also requested that documentation that is posted to the oil field web site should be made available sooner. Input was also received on the complaint process; see the discussion for Provision 22.310.060.G for more detail.

Public input was also received during several CAP meetings on three topics intended to improve the communication of oil field activities to the public:

- Post oil field incidents on the oil field website.
- Add a Frequently Asked Questions (FAQ) section to the oil field website.
- Add an oil and gas primer to the oil field website.

Analysis of Compliance and Effectiveness:
Community meetings have occurred annually since the adoption of the CSD with the first meeting occurring on May 26, 2009. Meetings for the years 2014 through 2018 occurred on November 18, 2014, November 10, 2015, November 15, 2016, November 8, 2017, and October 20, 2018. The 2018 meeting occurred at the oil field on a Saturday afternoon and included lunch and a new format. The new format provided oil field and County staff availability to answer questions or discuss topics as opposed to a formal presentation. The newsletters required by subsection B.2 have been prepared annually and are mailed out prior to the community meetings with noticing of

the forthcoming meeting date, time, and location. The newsletters are distributed to the public as required and are posted on the oil field web site.

The oil field web site, www.inglewoodoilfield.com, was launched on January 19, 2010. The web site includes information on the history and future of the oil field, oil field operations, operational plans, compliance plans, community and environmental sections, and information on the CSD. The web site contains over 100 documents related to operational and compliance information with the documentation posted in .pdf format as required by this provision. The web site provides contact information and includes an interactive email system to allow for direct input to the operator for questions and information.

Most of the input received on community relations involved the previous operator. The current operator has improved both the quantity and quality of information provided to the public, updated the web site and revised the approach to the annual community meeting.

The condition is considered fully effective at this time with the community meetings, newsletter and web site implemented and ongoing; and no further evaluation is recommended.

Recommendations to Changes in Implementation:
This requirement has been implemented, however, to improve the communication of oil field activities and the general understanding of the oil field to the public, it is recommended that the operator improve the oil field website as discussed above with the addition of oil field incident summaries, a FAQ section, and an oil and gas primer by the end of 2021.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

9.3 C. OMBUDSPERSON

The operator shall designate employees or authorized agents to serve as ombudspersons to respond to questions and concerns concerning the oil operations. Each ombudsperson shall be familiar with all the provisions of this section and all conditions of approval related to permits and approvals issued by the county or the State of California. It shall be the further responsibility of the ombudsperson to facilitate, to the extent feasible, the prompt resolution of any issues that may arise relating to the above-stated matters or the impacts of the oil operations. The name, title, email address, and telephone number of the ombudsperson shall be posted on the oil field web site, prominently displayed in the newsletter, distributed twice per year to the CAP and MACC, and provided to any other persons requesting such information. An ombudsperson shall be available at all times and shall respond within one hour after an initial call. An ombudsperson shall also meet at reasonable times with interested parties in an attempt to resolve issues related to oil operations. An ombudsperson shall have authority to initiate a response on behalf of the operator in all foreseeable matters. The operator shall be required to maintain a written log of all calls to the ombudspersons registering complaints or concerns regarding oil operations or other matters. The log shall include the complainant's name, date, time, phone number, nature of complaint, and the response or resolution offered. A copy of the log shall be provided to the director, the MACC, and the CAP on a quarterly basis.

Summary of Complaints:
No complaints on the ombudsperson provision have been received by the County.

Summary of Issues Raised by the Public:
As noted in the discussion for Provision J.2, *Community Relations*, comments on the interface between the operator and the public have been provided at both Community Advisory Panel (CAP) meetings and for comments solicited for the Periodic Review. The main issue raised by the public involved the ombudsperson from the previous operator regarding the information provided by the ombudsperson at the CAP meetings. The public requested that more information be provided and that more detail be provided on the information that is presented.

Analysis of Compliance and Effectiveness:
The ombudsperson system has been in place since the adoption of the CSD and serves as primary contact between the oil field operator and the community. The ombudsperson contact information is included in the annual newsletters and in the agendas for CAP meetings. In addition to the ombudsperson, the oil field maintains two staff members on an on-call basis to coordinate and respond to calls from the public or regulatory agencies regarding oil field operations. The current ombudsperson, Mr. Dan Taimuty, has a technical background and is therefore able to provide a much-improved level of information about oil field operations. As such, the information provided by the operator at CAP meetings has improved in both timeliness and technical accuracy from the previous operator. The ombudsperson contact information is:

Mr. Dan Taimuty
Email: dtaimuty@sentinelpeakresources.com
Phone: 1-800-766-4108

Sentinel Peak Resources
5640 S. Fairfax Ave.
Los Angeles, CA 90056

The County will remain vigilant to ensure that the Operator continues to provide information to the public through the ombudsperson as appropriate. The condition is considered fully effective at this time and no further evaluation is recommended.

Recommendations to Changes in Implementation:
This requirement has been implemented, and no changes to implementation are recommended.

Recommendations to Changes in CSD Language:
No changes to the CSD language are recommended.

10.0 Modifications to Development Standards (22.310.110)

This subsection of the CSD lists the requirements and permit processing procedures for a request for a modification to the development standards specified in subsection 22.310.050 of the CSD. The County may approve a modification to these standards if the oil field operator can provide documentation that satisfactorily meets the criteria specified in this provision. Subsections A through D require that a proposed modification be necessary for a substantial property right of the operator, that the modification will not create an adverse safety impact to the community or environment, the modification will not be contrary to the improvements from or purpose of the CSD, and that the proposed change be consistent with the County General Plan and permitting requirements.

Subsections A through D describe specific requirements for the application, noticing, permit processing procedure, notification of decision, and appeal procedures, respectively, for a modification of development standards proposal. No proposal or application for a modification of the development standards of CSD Section 22.310.050 has been applied for to date. The condition is considered fully effective at this time, is administrative in its intent, and has not been activated to date; no further evaluation is recommended.

11.0 Implementation Provisions (22.310.120)

This subsection of the CSD lists the various implementation plans and other stipulations required for initial compliance along with a submittal schedule for the subject compliance. The schedule requirements for the Plan and compliance submittals required under this provision range from 30 days to two years following the effective date of the CSD (October 28, 2008). All plans and initial requirements of this CSD subsection were completed; therefore, this requirement is no longer applicable and Periodic Review is not merited. A discussion of the ongoing implementation of the plans and conditions required by this provision is provided in the review and analysis of CSD Provisions 22.310.050, *Oil Field Development Standards*, 22.310.070 H, *Multiple Agency Coordination Committee*, and 22.310.100, *Public Outreach*. The table below provides a summary of the plans and initial compliance requirements of this CSD subsection along with the associated submittal date.

CSD Section 22.310.120 Compliance Summary		
CSD Section 22.310.120 Implementation Provision	Submittal Schedule Requirement (Days)	Submittal or Completion Date
A. Fire Protection and Emergency Response		
1. Fire Protection Audit	120	March 3, 2009
2. "CAN" System	120	March 2009
3. Spill Containment Response Training	90	February 4, 2009
B. Air Quality and Public Health		
1. Odor Minimization Plan	90	February 2009
2. Air Monitoring Plan	90	February 2009
3. Oil Tank Pressure Monitoring and Venting	180	May 26, 2009
4. Meteorological Station	120	March 26, 2009
5. Fugitive Dust Control Plan	120	March 2009
6. Well Amortization Report	120	March 2009
C. Safety and Risk of Upset		
1. Propane and Natural Gas Liquids Bullet Fireproofing	90	February 23, 2009
2. Gas Plant Audit	120	March 11, 2009
3. Oil Tank Secondary Containment	One Year	January 23, 2010
4. Retention Basins	120	January 23, 2010
5. Above Ground Piping	One Year	January 23, 2010
D. Geotechnical		
1. Accelerometer	180	May 26, 2009
2. Tank Seismic Assessment	180	May 26, 2009
3. Erosion Control Plan	180	May 26, 2009
4. Accumulated Ground Movement Study	90	May 26, 2009
5. Ground Movement Monitoring Plan	90	May 26, 2009
E. Noise Attenuation		

CSD Section 22.310.120 Compliance Summary		
CSD Section 22.310.120 Implementation Provision	Submittal Schedule Requirement (Days)	Submittal or Completion Date
1. Drilling Quiet Mode Plan	90	February 2009
2. New Gas Plant Flare	120	March 29, 2009
F. Biological Resources		
1. Special Status Species and Habitat Protection Plan	180	May 2009
2. Emergency Response Plan	180	February 17, 2010
G. Cultural/Historic Resources		
1. Worker Training	120	March 26, 2009
2. Construction Treatment Plan	180	May 2009
H. Landscaping, Visual Screening, and Irrigation		
I. Oil Field Waste Removal	180	May 2009
J. Signs		
1. Perimeter Identification Signs	60	May 18, 2009
2. Oil Field Entrance Sign	30	May 18, 2009
3. Other Required Signs	60	May 18, 2009
4. Well Identification Signs	180	May 18, 2009
5. No Littering Signs	120	May 18, 2009
K. Painting	Two Years	November 12, 2012
L. Water Management Plan	180	May 2009
M. Groundwater Monitoring	One Year	August 2009
N. Oil Field Cleanup and Maintenance	180	May 18, 2009
O. Storage of Hazardous Materials	30	December 22, 2008
P. Drilling, Redrilling, Well Abandonment, and Well Restoration Plan	60	January 2009
Q. Processing Operations		
1. Pipelines	180	May 26, 2009
2. Active Pipeline Plot Plan	One Year	December 26, 2009
R. Tanks	180	May 26, 2009
S. Monitoring and Compliance		
1. Environmental Quality Assurance Program (EQAP)	90	February 25, 2009
2. Safety, Inspection, Maintenance, and Quality Assurance Program (SIMQAP)	180	May 26, 2009
T. Administrative Items (MACC)	60	March 16, 2009
U. Public Outreach		
1. Community Advisory Panel (CAP)	60	March 26, 2009
2. Oil Field Web Site	90	January 1, 2009
3. Community Meeting	180	May 26, 2009

Appendix A

Public Draft Comments

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Appendix B

Public Scoping Comments

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Appendix C

Settlement Agreement and Mutual Release, July 15, 2011

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Appendix D

Annual Well Increase Evaluation