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VIA EMAIL

Department of Regional Planning  
Attn: Robert Glaser  
320 W. Temple Street  
Los Angeles, CA 90012

## **COMMENTS ON FREEPORT-McMoRan 2015 DRILLING, RE-DRILLING, WELL ABANDONMENT, AND WELL PAD RESTORATION PLAN FOR THE INGLEWOOD OIL FILE DATED SEPTEMBER, 2014**

Dear Mr. Glaser:

The City of Culver City has reviewed the 2015 Drilling, Redrilling, Well Abandonment, and Well Pad Restoration Plan ("Drilling Plan") submitted by Freeport-McMoRan Oil & Gas in September, 2014 and submits the following comments:

### Section 2.2.x - A Discussion of the Latest Equipment and Techniques that are Proposed for Use as Part of the Drilling and Re-drilling Program to Reduce Environmental Impacts

- On Page 32, No. 3 discusses the use of Tier II or better engines and heavy duty diesel catalysts to help reduce hydrocarbons and particulate matter and implies use of catalysts on all engine levels. The engine technology discussion should be clarified to specify which engine tier will be used with the heavy duty diesel catalysts. We feel that it is unlikely that "add-on" heavy duty diesel catalysts would likely be used with interim Tier IV engines.
- There is no detail on the assumption/calculations that went into the drill rig emission estimates and the requirements for the installation of the air monitoring equipment. There should be a reference to what approved plan will be used for determining conformance. (e.g., Air Monitoring Plan with date reference).

- The drill rig technology discussion notes a daily emissions estimate that seems low for a 3,200 hp rig (Page 34), even if two of the engines are interim Tier IV. They should confirm the noted daily emissions estimate with additional information/calculations, which include a total listing of engine hp and associated tier level for each for the assumed drill rigs.
- The engine technology discussion has at least some discussion of why many lower emitting technologies would not be feasible, but more detail should be provided. The discussion primarily focuses on air quality and does not address other environmental impacts such as noise from drilling and re-drilling at an equal level of detail. Section 6, Clean Technology Assessment, of the Settlement Agreement does not limit the environmental impacts to just reducing air quality impacts. Additionally, even regarding the air quality impacts, the discussion is not complete as there is no reason stated on why higher Tier diesel rigs, specifically rigs with more interim Tier IV engines which are technically feasible now, are not used. There should be a discussion on the availability of diesel rigs with interim or full Tier IV engines.
- The Clean Technology Assessment provided appears to be primarily an analysis of drill rig engines and thus, does not fulfill the broader requirements noted in the Settlement Agreement. Section 6, Clean Technology Assessment, of the Settlement Agreement does not limit the environmental impacts to just reducing air quality impacts. That section states "...include a discussion of the latest equipment and techniques that are proposed for use as part of its drilling and re-drilling program to reduce environmental impacts". While the use of Tier III with Level 3 CARB certified diesel catalysts for the well pad construction equipment is reasonable, based on current technology availability, it should be further explored to determine if there is more advanced technology that could be used to reduce impacts. As discussed above, this discussion should be broadened to fulfill the requirements of Section 6 of the Settlement Agreement, which is not limited to the drill rig or limited to air quality impacts. An evaluation of alternative off-road equipment technologies, including higher tier engines for the off-road equipment should also be included in the Plan. An evaluation should be done to determine if there are other aspects of the equipment and techniques that warrant discussion for impact reduction (for noise, visual, etc.).
- There is no substantiation of the many statements made regarding the availability of various technically feasible drill rig technologies (such as Natural Gas or Electric Rigs).

### Additional Comments

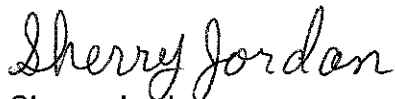
- On Page 12 it states that the drilling schedule is based on the use of 2 drilling rigs concurrently. On Page 32 (No 3.) it states that "...The drilling rig FM O&G anticipates using in the 2015 Drilling Plan execution has 2 of the 7 rig engines upgraded to Interim Tier IV, which are considered best available." If there are indeed two wells to be drilled concurrently, then additional data about the other expected drill rig, Drill Rig #2 from Page 12, to be used should also be presented within Page 32 (No. 3).
- With regard to the two wells being drilled concurrently, the plan should provide information on whether the two concurrently drilled wells would be located as far away from each other as possible to avoid cumulative impacts to the nearest receptors.
- The plan should also include information on whether the well drilling activities include well stimulation and completion events such as low volume hydraulic fracturing, gravel packing, acidizing, etc.. This information could be added to Table 2.
- The City disagrees with the statement made on Page 14 that "In the field the Vickers-Rindge production zone ranges in depth from approximately 1,000 to 4,800 feet, and is considered a shallow depth zone for the purposes of the Settlement Agreement." Term 1.b. of the Settlement Agreement relating to Mid-Zone Wells, provides depth and the type/name of the zones that were "presently identified" as being drilled into at the time of the Settlement Agreement. Contrary to the Drilling Plan, the Settlement Agreement does not characterize whether a well is considered a Shallow, Mid-Zone, or Deep Zone well based solely on which production zone it is located. For any proposed well where the Bottom Hole (i.e., the underground location at which drilling terminates) is between 3,500 and 7,999 feet, irrespective of the production zone, and the Top Hole (i.e., the surface location from where drilling is commenced) is closer than 800 feet to a Sensitive Development Area, a Mid-Zone Supplement is required to be prepared for that well pursuant to the Settlement Agreement. The well identified as TVIC 3243 in Table 2 has an estimated total vertical depth of 3,700 feet and is within 800 feet of a Sensitive Developed Area. Per the Settlement Agreement, a Mid-Zone Supplement is required and the

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operator must use commercially reasonable efforts to locate the well and well pad away from Sensitive Development Areas in order to further mitigate impacts to such Areas.

Thank you for your review and consideration of our comments.

Sincerely,

A handwritten signature in black ink that reads "Sherry Jordan". The signature is written in a cursive, flowing style.

Sherry Jordan  
Project Manager