

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5200
FAX (415) 904-5400
TDD (415) 597-5885



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original staff report](#)

Tu15b

October 2, 2015

To: Coastal Commissioners and Interested Parties

From: Alison Dettmer, Deputy Director
Cassidy Teufel, Senior Environmental Scientist

Subject: **Addendum to E-85-010-A3 – Freeport McMoRan Oil & Gas**

This addendum provides proposed revisions to the staff report. The proposed modifications to the staff report do not change staff's recommendation that the Commission **approve** CDP Amendment No. E-85-010-A3, as conditioned.

Revisions to the Staff Report

Recommended revisions to the staff report include substantive changes to **Special Conditions 1 and 3**, the use of revised sea level rise projections using 2051 (rather than 2047) as the project timeframe, as well as a number of minor clarifications and corrections. Additions to the staff report are shown below in underline and deletions in ~~striketrough~~.

Page 1, paragraph 1:

...Freeport is proposing this project as an ~~interim~~ measure to bypass the affected pipeline segment and continue to transport oil and natural gas from Platform Irene to shore while it develops and receives authorization long-term plan for addressing the area of potential external corrosion identified on the 20-inch diameter oil pipeline... The current practice of transporting produced water to Platform Irene for subsurface injection would be discontinued, ~~at least until the 20-inch pipeline is repaired and returned to service.~~

Page 14, first full paragraph:

In addition to slightly increasing the diameter of the eight-inch diameter pipelines at the three proposed repair sites through the installation of the repair clamps, Freeport also proposes to excavate two approximately 130-foot long sections of all three pipelines in order to carry out the repairs. Currently buried, these pipelines would therefore become exposed on the seafloor and could potentially pose a risk of entangling fishing gear or other marine debris over time, thereby posing a

threat to marine wildlife included marine mammals, fish, and mobile invertebrates. While the pipelines would be expected to naturally re-bury over time, the depth of the excavation sites in waters of over 100-feet likely means that current activity on the seafloor is may be limited and complete re-burial may not occur for many years could take quite some time.

Page 15, final paragraph:

In addition to the proposed pipeline repairs, Freeport also proposes to change existing pipeline operations by discontinuing the transport of some materials and moving other materials between existing lines. Specifically, the transport of produced water from the Lompoc Oil and Gas Plant to Platform Irene in an existing 8-inch diameter line would be discontinued; oil emulsion would be transferred from an existing 20-inch diameter line to an existing 8-inch diameter line...

Page 16, second, third, and fourth full paragraphs:

...This volume is expected to be a substantial overestimate for a variety of reasons, including the following: (1) the onshore section of the line has 10 intermediate valve stations that can be closed in the event of a spill (including six equipped with motor operated valves that would be triggered remotely and one that would be triggered automatically if a leak is detected) to isolate the affected pipeline section from the rest of the line and thereby minimize its volume...

A more reasonable worst case volume would include only the 10.1 mile pipeline length between the platform and the first ~~automatic~~ shutoff valve (onshore at Surf Beach) and assume that oil in the pipeline makes up only 75% of its full capacity...

...In several ways, the modified operations would actually reduce spill risk by: (1) discontinuing use of the 20-inch diameter line that is known to have an area of potential external corrosion and may be in a compromised condition; (2) discontinuing the pipeline transport of produced water from the Lompoc Oil and Gas Plant to Platform Irene and thereby eliminating one potential spill source...

Page 19, paragraph 1:

However, because project activities are also proposed outside of the marine protected area, and because the safety zone for the work in the marine protected area may affect areas outside the MPA, short term access restrictions for fishing vessels (for approximately 10~~eight~~ days) could nevertheless occur as part of the proposed project.

Throughout report:

[Change approximate length of pipeline excavations from 130 to 150 feet]

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FAX (415) 904-5400



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Filed: August 7, 2015
180th Day: January 9, 2015
Staff: C. Teufel-SF
Staff Report: September 18, 2015
Hearing Date: October 6, 2015

REGULAR CALENDAR: PERMIT AMENDMENT

Application No.: E-85-010-A3

Applicant: Freeport McMoRan Oil & Gas

Location: State waters offshore of Surf Beach, Vandenberg Air Force Base, Santa Barbara County.

Project Description: Install three pipeline repair clamps on offshore pipeline segments, change an existing 11 mile section of 8 in. gas line to oil service, and change an existing 11 mile section of 8 in. water line to gas service.

Staff Recommendation: Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

During a recent pipeline inspection, Freeport McMoRan Oil & Gas (Freeport) detected an area of potential external corrosion on a segment of the approximately eleven mile long, 20-inch diameter oil pipeline that runs between Platform Irene offshore and its onshore pipeline Valve Site Two. The area of potential corrosion is located in a portion of the oil pipeline that transitions through the high-energy nearshore surf-zone, which requires significant planning, permitting, and technical preparations to investigate and address. Freeport is proposing this project as an interim measure to bypass the affected pipeline segment and continue to transport oil and natural gas from Platform Irene to shore while it develops and receives authorization for a

long-term plan for addressing the area of potential external corrosion identified on the 20-inch diameter oil pipeline. In this project, Freeport proposes to transfer oil from the existing 20-inch pipeline to an adjacent existing 8-inch diameter pipeline that is currently used for natural gas transport, and to transfer natural gas into a second adjacent 8-inch diameter pipeline that is currently used for transporting produced water to Platform Irene. The current practice of transporting produced water to Platform Irene for subsurface injection would be discontinued, at least until the 20-inch pipeline is repaired and returned to service.

To support this transfer of materials between existing pipelines (referred to as a “change of service”), Freeport also proposes to carry out pipeline repairs on three separate segments of the 8-inch diameter pipelines within state waters, to enhance the safety rating of the lines and prepare them for the proposed changed use. The repair work involves excavating buried pipelines and encapsulating dented pipeline areas with external clamps, thus ensuring that any potential future rupture at these sites would be preventatively contained. The repair work would require approximately eight total days to complete, weather and ocean conditions permitting.

Commission staff believes that implementation of the impact avoidance measures proposed by Freeport, in combination with the implementation of new **Special Conditions 1** through **5**, will avoid and reduce potential impacts to coastal resources consistent with the policies of the Coastal Act addressing the fill of open coastal waters, the protection of marine resources, water quality, and commercial fishing, and the prevention and effective containment of oil spills. **Special Condition 1** would require the Applicant to develop and implement a marine wildlife protection plan to avoid and minimize potential impacts to marine wildlife during its offshore repair work. In addition, to better prevent potential impacts to marine wildlife from entanglement with derelict fishing gear, **Special Condition 4** would require reburial of the pipeline segments that are excavated as part of the repair work. **Special Condition 5** would require the Applicant to submit an anchoring plan that would demonstrate that the specific proposed anchor installation locations would be at least 250-feet from the Platform Irene pipeline corridor. **Special Condition 2** would require the Applicant to develop and submit a project-specific oil spill prevention and response plan and to update its overall spill prevention and response plan to include enhanced leak detection and response protocols. Potential impacts to fishing would be addressed by **Special Condition 3** which would require Freeport to provide a Notice to Mariners of the established project schedule.

Commission staff therefore recommends that the Commission **APPROVE** coastal development permit amendment application E-85-010-A3, as conditioned.

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APPENDICES

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EXHIBITS

[Exhibit 1 – Project Location](#)

I. MOTION AND RESOLUTION

Motion:

I move that the Commission approve Coastal Development Permit Amendment E-85-010-A3 subject to conditions set forth in the staff recommendation specified below.

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion will result in approval of the permit amendment as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of Commissioners present.

Resolution:

The Commission hereby approves the Coastal Development Permit Amendment for the proposed project and adopts the findings set forth below on grounds that the development as amended and conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit amendment complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the amended development on the environment.

II. SPECIAL CONDITIONS

All terms and conditions of Coastal Development Permit E-85-10, as amended, shall remain in full force and effect, and the following Special Conditions shall be added:

- 1. Marine Wildlife Protection Plan.** PRIOR TO THE INITIATION OF OFFSHORE PROJECT ACTIVITIES, Freeport McMoRan Oil & Gas (Freeport) shall provide for review and approval by the Executive Director of the California Coastal Commission (Executive Director) a Marine Wildlife Protection Plan (Plan). Freeport shall implement the Plan during all in-water project activities. The Plan shall include the following elements, and shall be implemented consistent with vessel and worker safety:
 - Prior to the start of offshore activities Freeport shall provide awareness training to all offshore Project-related personnel and vessel crew, including viewing of an applicable wildlife and fisheries training video, on the most common types of marine wildlife likely to be encountered in the Project area and the types of activities that have the most potential for adversely affecting the animals.
 - At least one National Marine Fisheries Service (NMFS)-qualified marine mammal observer shall be located on the main project vessel to conduct observations during specific project activities that pose a harassment, entanglement, or injury risk to

marine mammals and reptiles, including vessel transit, anchoring or anchor repositioning, installation of equipment in the water column or seafloor, or any other activity that has the potential to harm marine mammals or sea turtles. The Plan shall identify the appropriate number and placement of observers to ensure adequate coverage during each affected activity, additional activities not listed above that require an observer, and justification for any project activities that do not warrant an observer due to no potential for adverse impacts.

- Shipboard observers shall maintain a daily sighting report that shall be of sufficient detail to determine whether observable effects to marine mammals are occurring.
- The observers shall have the appropriate safety and monitoring equipment adequate to conduct their activities (including night-vision equipment if work outside of daylight hours occurs).
- The observers shall have the authority to stop or delay any activity that could result in harm to a marine mammal or sea turtle. For monitoring purposes, the observers shall establish a 1,640 foot (500 meter) radius avoidance zone around the Project vessels for the protection of large marine mammals (i.e., whales) and a 500-foot (152-meter) radius avoidance zone for the protection of smaller marine mammals (i.e., dolphins, sea lions, seals, etc.) or sea turtles. Initiation of project activities that involve the placement of lines or materials in the water column from surface vessels shall not occur if large marine mammals are observed in the larger radius avoidance zone or small marine mammals are observed in the smaller radius avoidance zone. If such activities are underway when a marine mammal enters the appropriate zone, the observer shall determine if their continuance poses a risk to marine wildlife and the activities shall cease if such a determination is made.
- During transit to and from the project site: (1) If a vessel is travelling parallel to a whale, the vessel shall operate at a constant speed that is not faster than the whale; (2) Vessel operators shall coordinate with the observer to make every effort to ensure that female whales are not separated from their calves; (3) Vessel operators shall not try to influence a whale's swim pattern; (4) If a whale engages in defensive action, support vessels will drop back until the animal moves out of the area; (5) Vessel speeds shall be limited to 10 knots or less to minimize the likelihood and consequences of collisions with marine mammals and sea turtles; (6) In the event that any project activities result in a collision or any take involving harassment or harm to a marine mammal, the observer shall immediately notify the Executive Director, NMFS, CDFW and any other required regulatory agency; (7) Propeller noise and other underwater noises associated with project activities shall be reduced or minimized to the extent feasible; (8) A final report summarizing the results of monitoring activities shall be submitted to the Executive Director and other appropriate agencies no more than 90 days following completion of offshore project activities.

2. Spill Prevention and Response. PRIOR TO PERMIT ISSUANCE, Freeport shall:

- Develop and provide for Executive Director review and approval, a project specific Oil Spill Prevention and Response Plan (Project Plan) adapted from Freeport's Core Oil Spill Response Plan for Operations in the Point Arguello and Point Pedernales Field, Onshore Facilities, and Associated Pipelines (Core Plan). The Project Plan shall include the measures, sections, and provisions of the Core Plan that are most relevant and applicable to project activities. The approved Project Plan shall be followed during all project activities; and
 - Provide evidence to the Executive Director that the following leak detection and response protocols have been added to the appropriate sections of its Core Plan and pipeline operating manuals: *Leak Detection - In the event of an unintended low pressure shutdown of an oil emulsion pipeline from Platform Irene, no fluids shall be reintroduced into the pipeline until all the following occur: (i) The cause of the low pressure shutdown is determined. If the cause cannot be positively determined, the surface of the ocean above the pipeline and the surface of the ground above the pipeline shall be inspected for evidence of a leak; (ii) The platform Foreman or acting Foreman shall be consulted prior to restart, and (iii) The Production Superintendent or acting Production Superintendent shall be consulted prior to restart.*
- 3. Notification to Mariners.** NO LESS THAN 15 DAYS PRIOR TO THE START OF OFFSHORE PROJECT ACTIVITIES, Freeport shall submit to (a) the Executive Director, (b) the U.S. Coast Guard (for publication in a Notice to Mariners), (c) the Vandenberg Air Force Base, and (d) the harbor masters of Port San Luis, Morro Bay, and Santa Barbara (for posting in their offices), notices containing the anticipated project start date, the anticipated schedule, and the coordinates of the proposed repair sites. During offshore project activities, Freeport shall also make radio broadcast announcements on the local fishers' emergency radio frequency that provide the location of the repair site and a toll-free number that can be called for additional information.
- 4. Pipeline Burial.** To prevent entanglement of fishing gear or marine debris on the project pipelines, all offshore pipeline segments excavated as part of the project shall be re-buried once repairs have been completed.
- 5. Anchoring Plan.** PRIOR TO THE INITIATION OF OFFSHORE PROJECT ACTIVITIES, Freeport shall provide for review and approval by the Executive Director a project anchoring plan. This plan shall indicate the number, type, and size of proposed anchors to be used for each project vessel and provide information demonstrating that the holding capacity of these anchors is sufficient to prevent them from dragging away from their installation location. The anchoring plan shall also indicate the proposed installation location for each anchor within areas of soft substrate and demonstrate that none of these anchors would be located within 250-feet of the Platform Irene pipeline corridor or any other known pipeline.

III. FINDINGS AND DECLARATIONS

A. PERMIT HISTORY, BACKGROUND AND PROJECT DESCRIPTION

On August 30, 1985, the Commission approved Coastal Development Permit No. E-85-010 allowing Union Oil Company to install oil, natural gas and produced water pipelines through the coastal zone from the offshore Platform Irene production facility to the onshore Lompoc Oil and Gas Plant – a total of approximately 22 miles. In 2013, the applicant, Freeport McMoRan Oil & Gas (Freeport), purchased and assumed legal ownership of Platform Irene and its associated pipelines, infrastructure and operating authorizations (including CDP No. E-85-10).

In 1997, while Platform Irene and its associated pipelines were owned and operated by Torch Operating Company, a flange on the 20-inch oil emulsion pipeline that connects Platform Irene to the onshore Lompoc Oil and Gas Plant ruptured in state waters and released roughly 160 barrels of oil. The spill affected approximately 20 miles of coastline in northern Santa Barbara County. The spill was worsened when the automatic shutdown of the line that occurred upon detection of the pressure drop was overridden by the operator and additional oil was allowed to enter the line and be released. The operator override and resulting spill was determined to be a violation of Torch Operating Company's coastal development permit because it was out of compliance with the Oil Spill Prevention and Response Plan that was required to be implemented as a special condition of CDP No. E-85-10. Torch Operating Company settled this violation with the Commission in 2000 through a combination of fines and operational improvements – including the implementation of the enhanced leak detection and response protocols discussed above in the second part of **Special Condition 2**.

In 2007, the Commission approved CDP No. E-06-015, authorizing proposed and after-the-fact development consisting of the excavation and repair of onshore sections of Platform Irene's produced water and oil emulsion pipelines near Wall Beach on Vandenberg Air Force Base.

In 2010, the Commission approved an immaterial amendment to CDP No. E-85-10, authorizing in E-85-010-A1, the excavation, inspection and repair of two approximately 40-foot long onshore segments of the existing 20-inch Platform Irene oil pipeline. Both pipeline segments are located approximately one-mile from the shoreline on Vandenberg Air Force Base and adjacent to the onshore Valve Site Two.

In September 2015, the Commission approved a second immaterial amendment to CDP No. E-85-10, authorizing in E-85-010-A2, the installation of pipeline inspection support infrastructure, pipeline connections, and the flushing, purging and capping of the 20-inch diameter oil pipeline within the 60-foot by 60-foot fenced, gravel lined Valve Site Two. This onshore work will be carried out to facilitate the pipeline change in service proposed as an element of the current permit amendment application.

The current proposed project includes two elements, (1) the repair of three offshore pipeline sections; and (2) the transfer of oil from an existing 20-inch pipeline to an adjacent existing 8-inch diameter pipeline that is currently used for natural gas transport, and the transfer of natural gas into a second adjacent 8-inch diameter pipeline that is currently used for transporting produced water. Although the proposed development includes the repair of pipeline sections,

such development does not constitute repair or maintenance exempt from Coastal Act permit requirements because the pipelines will be slightly expanded through the placement of fill.

This project is proposed in response to recent pipeline inspection results for the 20-inch oil line that indicate a potential area of external corrosion located in the nearshore environment where the pipeline transitions from offshore to onshore. In order to continue oil transport from Platform Irene while this corrosion is investigated and any necessary repairs are planned and permitted, Freeport proposes to bypass the affected segment by instead transporting oil through the existing adjacent natural gas line between the offshore platform and onshore Valve Site Two. The displaced natural gas would be moved into the existing adjacent produced water line and produced water transport would be discontinued. Once at Valve Site Two, the contents of the lines would be transferred back into their original pipelines – the oil would be transferred back into the 20-inch diameter oil line and the natural gas would be transferred back into the 8-inch diameter natural gas line for the remaining 10 miles of pipelines between Valve Site Two and the Lompoc Oil and Gas Plant. The infrastructure needed to carry out this transfer at Valve Site Two would be installed as authorized by Santa Barbara County in Land Use Permit No. 15LUP-00000-00253 and by the Commission in CDP Amendment No. E-85-010-A2.

Freeport also proposes to carry out pipeline repairs on three separate offshore pipeline segments within state waters. Internal inspection of these lines has revealed the presence of physical anomalies or deformities that may affect their structural integrity. In response, Freeport proposes to encapsulate each deformed area with an external clamp, thus strengthening the sites of the pipeline deformities. Each repair clamp weighs approximately 1500 pounds, is several feet in length, and would be lowered to the pipeline from a surface vessel and bolted onto the target pipeline segments by divers.

The three pipeline segments to be repaired would be located within two work areas, one in water depths of approximately 106-feet and one in water depths of approximately 130-feet. Within the shallower work area, Freeport would use divers and support vessels to install external repair clamps on both the existing eight-inch diameter water and natural gas lines. The deeper work site would be for the installation of an additional external repair clamp on the existing eight-inch diameter water line. Work would occur sequentially at the two sites and would require approximately eight total days to complete.

Freeport anticipates that all pipeline segments to be repaired are buried approximately three feet in soft-sandy substrate and would need to be excavated prior to repair. Each of the proposed excavations would be approximately 130-feet long and six-feet deep and would be made through the use of a diver-operated handheld water jet. These trenches would facilitate identification of the target pipeline segments and aid in separating them from the other two pipelines within their shared pipeline corridor. Sandbags would be used to support the pipeline sections during repair work and would be comprised on natural materials that would quickly degrade in the marine environment.

B. OTHER AGENCY APPROVALS

California State Lands Commission

The subject pipelines cross through state waters and are within a lease of state submerged lands issued by the California State Lands Commission (CSLC). CSLC staff has been carrying out a coordinated review of the proposed project among its Mineral Resources Management Division, Environmental Planning and Management Division, and Land Management Division. Based on its review, CSLC staff determined that a lease amendment would not be necessary for the proposed project because it would be carried out consistent with the operations and maintenance provisions of the existing lease. However, CSLC staff are carrying out an engineering analysis of the repair proposal and project execution plan. Assuming Freeport's timely responses to information requests made as part of this review, CSLC staff expects that it will be completed in October 2015.

Bureau of Safety and Environmental Enforcement

The federal Bureau of Safety and Environmental Enforcement (BSEE) is currently coordinating with the California State Lands Commission on an engineering review of the proposed offshore pipeline repairs and change of service. Because the pipeline repair sites are located on state submerged lands, the CSLC has the primary role in this review process.

California Department of Fish and Wildlife

The shallower of the two proposed offshore repair sites, the one at a depth of approximately 106-feet, is located within the Vandenberg State Marine Reserve. This reserve is part of the state's network of marine protected areas (MPAs) managed by the California Department of Fish and Game (CDFW). Because the proposed work at this site has the potential to adversely affect MPA resources, Commission staff and Freeport have been coordinating with CDFW staff to ensure that all proposed activities within the reserve are appropriately authorized by CDFW and are carried out in a manner that minimizes risks to MPA resources. Based on CDFW staff's initial review, it appears that the project would not be inconsistent with the relevant existing MPA regulations. CDFW staff expect to make a final determination on this by October 2015.

County of Santa Barbara

On August 25, 2015, the County issued Land Use Permit No. 15LUP-00000-00253 to Freeport for the installation of pipeline inspection support infrastructure and pipeline connections at the onshore Valve Site Two. This work was also authorized by the Commission in CDP Amendment No. E-85-010-A2.

C. FILL OF OPEN COASTAL WATERS

Section 30233(a) of the Coastal Act states:

The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

- (1) *New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*

- (2) *Maintaining existing, or restoring previously dredged depths on existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
- (3) *In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*
- (4) *Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*
- (5) *Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*
- (6) *Restoration purposes.*
- (7) *Nature study, aquaculture, or similar resource dependent activities.*

The proposed excavation of material, and placement of the three 18-inch long repair clamp devices on offshore pipeline segments constitute dredging and “fill” as defined by Section 30108.2 of the Coastal Act, which states:

“Fill” means earth or any other substance or material, including pilings placed for the purpose of erecting structures thereon, placed in a submerged area.

Coastal Act Section 30233(a) permits fill in coastal waters if three tests are met: (1) the fill constitutes an allowable use under 30233(a); (2) there is no feasible less environmentally damaging alternative; and (3) feasible mitigation measures have been provided to minimize any adverse effects.

Allowable use

Freeport proposes to excavate material covering the pipelines, and to place fill in coastal waters for the purpose of improving the safety rating and increasing the useful life of two existing pipelines that service the Platform Irene oil and natural gas production facility. The fill would take the form of three proposed pipeline repair clamps – each of which would measure 18” long, weigh approximately 1500 pounds, and expand the size and footprint of the pipelines by several cubic feet.

Section 30107 of the Coastal Act defines “Energy Facility” as “any public or private processing, producing, generating, storing, transmitting, or recovering facility for electricity, natural gas, petroleum, coal, or other source of energy.” Because the target pipelines are used for transmitting or transporting natural gas and petroleum materials, they meet the definition of an “energy facility” in the Coastal Act. Further, because these facilities would be physically reinforced and slightly expanded through the proposed placement of fill, the placement of this fill would be for an “expanded energy facility” and thus qualify as an “allowable use” under 30233(a)(1). The project is therefore consistent with the first test of Section 30233(a).

Alternatives

In order to determine that “no feasible less environmentally damaging alternative” to the proposed project exists, the Commission investigated several project alternatives that would reduce or eliminate the need for dredging and filling. These alternatives included not carrying out the proposed repairs and replacing instead of repairing the affected pipeline sections. Because the proposed repairs are intended to increase the safety rating of the target pipelines and thus reduce the risk of their failure or rupture, the project itself would provide an environmental benefit. The first alternative considered – elimination of the repairs - was therefore rejected because it would not be less environmentally damaging. The second alternative - replacing instead of repairing the affected pipeline sections – was similarly rejected due to the significant increases it would cause in the complexity and duration of the work as well as its potential to result in adverse resource impacts. The underwater locations of the pipeline segments and their depths at over 100-feet below the surface severely limit available work windows and the type of work that can be carried out. The proposal to install repair clamps – which would be bolted over the affected pipeline segments as external sleeves – was developed in part due to its simplicity and ability to be completed quickly in a challenging underwater work environment. Cutting and replacing the dented pipeline segments with appropriate spill containment procedures in place would be a much more difficult and complex task and has a higher potential to result in environmental damage when compared to the proposed project.

The Commission therefore finds that “no feasible less environmentally damaging alternative” to the proposed project exists and the proposed project is therefore consistent with the second test of Section 30233(a).

Mitigation Measures

The final test of Coastal Act Section 30233(a) requires that feasible mitigation measures have been provided to minimize any adverse effects of the dredging and filling. As discussed in the Marine Resources section below under the heading *Temporary Loss of Habitat*, the temporary excavation of sandy sediments within the repair corridors would cause temporary disturbance of benthic habitat and the mortality and loss of associated organisms. However, as described in more detail in the following section, given the small size of the repair corridor footprints and associated disturbance areas relative to the abundance of similar benthic habitat in the project area, adverse impacts associated with the installation of the repair clamps will be insignificant. Further, the Commission is requiring in **Special Condition 4** that the pipeline be re-buried upon completion of the repair work to eliminate the possibility of active or derelict fishing gear from entangling it and posing a risk to wildlife. The Commission therefore finds that additional measures to further mitigate or minimize the adverse environmental impacts associated with the project’s use of fill are not necessary and finds that the third and final test of Coastal Act Section 30233(a) has been met.

Conclusion

Because the three tests have been met, the Commission finds the amended development as conditioned, is consistent with Section 30233(a) of the Coastal Act.

D. MARINE RESOURCES

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The proposed pipeline change of service and installation of three underwater pipeline repair devices has the potential to adversely affect marine resources and the biological productivity of coastal waters in the project area by potentially causing adverse impacts to marine wildlife and benthic habitats.

Benthic Habitat

The proposed installation of the pipeline repair clamps would involve the temporary daily placement of vessel anchors around the two proposed offshore work sites, as well as the excavation of two approximately three-foot wide by 130-foot long trenches in the seafloor. Considering that material from the excavations would be sidecast and likely dispersed across several feet adjacent to the trenches, the total area of benthic habitat that would be affected or disturbed as part of the proposed project is roughly 1,000 square feet.

Based on seafloor mapping data and information collected during remotely-operated vehicle surveys of the pipeline route in recent years, benthic habitat at the proposed project sites is comprised of fine to coarse sands and silts. Within the depth range of the project – 100 to 140 feet – the types of soft substrates observed at the project sites have been shown to support a variety of species including fish, rays, anemones, polychaete worms, mollusks, and crustaceans. No known areas of rocky substrate are within the vicinity of the proposed project sites, and both of the proposed work sites are well below the depth ranges for eelgrass and canopy forming kelp. Nevertheless, prior to the initiation of project activities, Freeport would carry out additional video surveys of the work sites and anchoring locations to ensure that no hard substrate habitat or sensitive seafloor features are located within these areas.

Potential adverse impacts to benthic habitat from excavation and reburial of the pipelines, installation of the clamps, and vessel anchoring would primarily be limited to the temporary loss of habitat due to the short-term placement of vessel anchors and excavation of the trenches.

Temporary Loss of Habitat

Due to their small sizes and proposed installation sites on the eight-inch diameter subsurface pipelines, the placement of the proposed repair clamps would not result in the loss or displacement of any significant amount of benthic habitat. The impacts of the proposed project would therefore be limited to short-term effects of excavating the work trenches and anchoring the project vessels. Estimating the size of the trenches as three-feet wide, six-feet deep, and 130-feet long, and assuming that several feet on either side of each trench would be affected by sediment deposition during the water-jet excavation of the trenches, the total area of affected benthic habitat would be roughly 1,000-feet. This area would be spread across the two larger work trenches and several smaller anchoring locations and would only be temporarily affected during the approximately eight-day project period.

Mobile organisms such as fish, rays, and crabs are expected to be able to relocate to adjacent habitat areas when anchors are installed and the trenches are excavated, but other types of benthic invertebrates such as polychaete worms, anemones, and molluscs may be smothered and killed during these activities or displaced from their burrows and sediment habitat and exposed to predation. However, in the context of the larger project area, the loss of these 1000-square feet of benthic habitat and mortality of a small number of fast growing benthic organisms due to anchor placement, sediment excavation, and disturbance would be minor and would not adversely affect the biological productivity of coastal waters or substantially reduce populations of marine organisms.

Seafloor mapping efforts in the project area carried out as part of the Marine Life Protection Act Implementation process, have shown that benthic habitat comprised of coarse to fine sand and silt sediment similar to the habitat present at the project site is dominant throughout the area (covering thousands of acres) and that given the similarity of environmental conditions, many of these areas are expected to support similar communities of benthic invertebrates. Therefore, given the small size of the project footprint and disturbance areas relative to the abundance of similar benthic habitat in surrounding areas, adverse impacts associated with the pipeline excavation and temporary placement of vessel anchors will be temporary and insignificant. The narrow configuration of the project footprint and abundance of undisturbed habitat in adjacent areas is also expected to facilitate the expedited recovery and repopulation of the project footprint at the completion of project activities.

Entanglement of Fishing Gear

Fishermen may snag gear or nets on pipelines or other structures on the seafloor. When this occurs, fishermen generally abandon their gear or nets (creating “ghost nets”), thereby putting marine mammals and other types of marine wildlife at risk of becoming entangled in this abandoned gear. While one of the proposed pipeline repair sites would be within an area where all fishing activities are prohibited (the Vandenberg State Marine Reserve), the site is near the border of this restricted fishing area and may therefore experience some unintentional fishing

activity due to navigational errors or the drift of fishing gear or vessels. In addition, the other repair site is outside of the marine reserve and located in an area in which fishing may occur.

In addition to slightly increasing the diameter of the eight-inch diameter pipelines at the three proposed repair sites through the installation of the repair clamps, Freeport also proposes to excavate two 130-foot long sections of all three pipelines in order to carry out the repairs. Currently buried, these pipelines would therefore become exposed on the seafloor and could potentially pose a risk of entangling fishing gear or other marine debris over time, thereby posing a threat to marine wildlife included marine mammals, fish, and mobile invertebrates. While the pipelines would be expected to naturally re-bury over time, the depth of the excavation sites in waters of over 100-feet likely means that current activity on the seafloor is limited and re-burial may not occur for many years.

In order to expedite this re-burial and eliminate the risk of the excavated pipelines entangling fishing gear, the Commission is requiring in **Special Condition 4** that all pipeline sections exposed as part of the repair project be re-buried at the completion of repair activities.

In addition, the Commission includes **Special Condition 3** to reduce the risk of accidental entanglement of fishing gear with the project pipelines by memorializing and clarifying Freeport's commitments to provide advance notice of installation activities, schedules, and routes, to the fishing community and vessel operators.

Ship Strikes and Marine Wildlife Entanglement

The proposed project would involve the use of several transport and support vessels and the temporary placement of lines and cables through the water column in open ocean areas known to support diverse populations of whales, dolphins, and other marine mammals as well as ocean foraging seabirds and sea turtles. As such, the project may result in other potential impacts to marine mammals and to sea turtles through collision with project vessels ("ship strikes") during marine operations associated with the proposed project or entanglement in deployed cables and lines. To minimize this risk, Freeport included as part of its project a Marine Wildlife Contingency Plan that includes the use of marine observers and establishes protocols for vessel use around marine mammals. To clarify the procedures identified in this plan and assure it contains measures equivalent to previous contingency plans the Commission has approved for similar types of projects in the open ocean, the Commission is requiring in **Special Condition 1** that Freeport submit a revised Marine Wildlife Contingency Plan for Executive Director review and approval.

Impacts to Marine Protected Areas

On April 13, 2007, the Fish and Game Commission voted unanimously to adopt 29 marine protected areas (MPAs) covering many of those areas identified as particularly important through the Marine Life Protection Act Initiative process in California's central coast region. One of the proposed pipeline repair work areas would be within one of these 29 MPAs, the Vandenberg State Marine Reserve. Because the proposed work at this site has the potential to adversely affect MPA resources, Freeport has been coordinating with Commission staff and staff of the California Department of Fish and Wildlife (CDFW) to ensure that all proposed activities within

the reserve are appropriately authorized by CDFW and are carried out in a manner that minimizes risks to MPA resources.

Conclusion

Although the Commission finds that the proposed project has the potential to result in impacts to marine resources, these impacts will be temporary and insignificant. Moreover, with implementation of **Special Condition Nos. 1 through 4**, the project would be carried out in a manner in which marine resources are maintained, species of special biological significance would be given special protection, the biological productivity of coastal waters would be sustained, and healthy populations of all species of marine organisms would be maintained. The Commission therefore concludes that the amended development, as conditioned, is consistent with the marine resource policies (Sections 30230 and 30231) of the Coastal Act.

E. OIL SPILLS

Section 30232 of the Coastal Act states:

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Potential Spill Sources and Worst Case Spill Risks

The proposed project includes two elements that have the potential to result in the release of oil, gas, petroleum products, or hazardous substances: (1) work and support vessels and associated equipment; and (2) pipeline operations.

Vessels and Equipment

The proposed offshore repair operations would involve the use of two vessels – an approximately 155-foot work boat and support boat. Sources of oil and hazardous materials on these vessels include fuel tanks, oil tanks, engines, oil and fuel lines, and hydraulic oil lines and reservoirs. A leak or rupture of one or more of these tanks or lines could occur as a result of a vessel collision, accident, or equipment failure or malfunction, thereby resulting in the potential release of fuel, oil, hydraulic fluid, or other hazardous liquids (such as coolants or lubricants) into the marine environment. Based on the estimated size and class of vessels proposed to be used during offshore project operations and a worst case scenario in which fuel and oil tanks and reservoirs fail catastrophically, the maximum volume of released material would be approximately 50,000 gallons of fuel and oil.

Pipelines

In addition to the proposed pipeline repairs, Freeport also proposes to change existing pipeline operations by discontinuing the transport of some materials and moving other materials between existing lines. Specifically, the transport of produced water in an existing 8-inch diameter line would be discontinued; oil emulsion would be transferred from an existing 20-inch diameter line to an existing 8-inch diameter line; and natural gas would be transferred from an existing 8-inch diameter line to another existing 8-inch diameter line. As a result of these changes in pipeline operations, the two potential spill sources resulting from the project would be the 8-inch

diameter oil emulsion pipeline and 8-inch diameter natural gas pipeline. Both of these lines would transport material from the offshore Platform Irene to the onshore Valve Site Two where the material would be transferred back into their original lines.

In addition to the spill risks associated with failure or rupture of these lines during normal operations, some activities related to the proposed repair work would also carry a spill risk. In particular, the anchoring of project vessels at the proposed work sites has the potential to cause a leak in the pipelines if one or more anchors is installed on or dragged onto the pipelines. Although this risk is small because the lines are expected to be buried, the exact burial depth is not certain and they could be at a depth that would be affected by the anchors.

In terms of worst case spill risk, Commission staff calculated spill volumes associated with several spill scenarios. Under the maximum worst case scenario – the complete rupture of the oil emulsion pipeline and discharge of the entire volume of material that could be contained within its 22.2 mile span – approximately 234,000 gallons would be released. This volume is expected to be a substantial overestimate for a variety of reasons, including the following: (1) the onshore section of the line has 10 intermediate valve stations that can be closed in the event of a spill (including six equipped with motor operated valves that would be triggered remotely and automatically if a leak is detected) to isolate the affected pipeline section from the rest of the line and thereby minimize its volume; (2) the pipeline does not normally operate at full capacity; and (3) to facilitate its movement along the line, only 25% to 75% of the material in the oil line is oil (the remainder is typically water). Although this volume is an overestimate, it nevertheless provides a useful upper limit to consider when evaluating potential worst case spill risks and volumes.

A more reasonable worst case volume would include only the 10.1 mile pipeline length between the platform and the first automatic shutoff valve (onshore at Surf Beach) and assume that oil in the pipeline makes up only 75% of its full capacity. Assuming that a catastrophic total failure of the line occurred in this scenario, roughly 80,000 gallons would be released. Although this represents a more reasonable worst case scenario compared to the maximum discussed above, this volume is also likely to be an overestimate because, among other reasons, under most spill situations, the entire volume of material in a pipeline would not be expected to drain out. For example, during the 1997 spill on the Platform Irene 20-inch diameter oil pipeline – which in some ways also represents a worst case scenario due to the operator override of the pipeline's automatic shutdown system – the total spill volume was roughly 5,000 gallons.

When considering spill risks, it is important to note that the modified pipeline operations that are proposed (transferring oil from the 20-inch diameter line into the 8-inch diameter line) would not result in an increased risk of spill beyond what the Commission considered when it originally authorized their installation and use in CDP No. E-85-10. In several ways, the modified operations would actually reduce spill risk by: (1) discontinuing use of the 20-inch diameter line that is known to have an area of potential external corrosion and may be in a compromised condition; (2) discontinuing the pipeline transport of produced water and thereby eliminating one potential spill source (although produced water is not oil, because it is brought up from the hydrocarbon bearing formation strata during the extraction of oil and gas, it can contain some hydrocarbon material); and (3) reducing the volume of material within the oil transport pipeline

at any one time (due to the fact that the size of the oil transport line would be reduced from 20-inches in diameter to 8-inches in diameter).

Spill Prevention

The first test of Coastal Act Section 30232 requires an applicant to “protect against the spillage of crude oil, gas, petroleum products, or hazardous substances...” In this case, Freeport has incorporated into its project a number of measures that reduce the risk of an oil spill during repair operations, including the commitment to develop a project-specific oil spill response plan. To memorialize this commitment, the first part of **Special Condition 2** provides that Freeport will submit, for Executive Director review and approval, a project-specific Spill Prevention and Response Plan that includes measures to minimize the likelihood of a hazardous material spill. Such measures would include only using equipment and machinery for the offshore work that has been inspected prior to use and found to be in good working condition and free of leaks, and a prohibition on at-sea vessel or equipment fueling/refueling activities. In addition, to further protect against spills during offshore repair operations and address the risk of pipeline damage occurring during the installation of vessel anchors during repair work, **Special Condition 5** provides that Freeport will submit, for Executive Director review and approval, an anchoring plan that would demonstrate that the specific proposed anchor installation locations would be at least 250-feet from the Platform Irene pipeline corridor.

Protection against spills associated with the modified pipeline operations would be provided by the second part of **Special Condition 2**. This section would require Freeport to provide evidence that it has updated its Core Oil Spill Response Plan for Operations in the Point Arguello and Point Pedernales Field, Onshore Facilities, and Associated Pipelines (Core Plan) to include specific leak detection and response protocols for reinitiating pipeline operations if an automatic shutdown is triggered by an unintended low pressure situation in Platform Irene’s oil transport pipeline. These protocols were developed as a result of lessons learned from an oil spill originating on Platform Irene’s oil pipeline in 1997 when it was owned and operated by Freeport’s predecessor. These protocols direct that no fluids shall be reintroduced into the pipeline until all the following occur:

- (i) the cause of the low pressure shutdown is determined. If the cause cannot be positively determined, the surface of the ocean above the pipeline and the surface of the ground above the pipeline shall be inspected for evidence of a leak;
- (ii) the platform Foreman or acting Foreman shall be consulted prior to restart; and
- (iii) the Production Superintendent or acting Production Superintendent shall be consulted prior to restart.

Inclusion of these procedures in Freeport’s Core Plan and their implementation following an automatic shutdown triggered by an unintended low pressure situation in Platform Irene’s oil transport pipeline would reduce the potential for premature reintroduction of material into a ruptured line, as occurred in 1997, and therefore protect against the spillage of crude oil.

With the implementation of **Conditions 2 and 6**, the Commission finds that Freeport would be undertaking appropriate measures to prevent a spill from occurring and, therefore, that the amended development, as conditioned, is consistent with the first test of Coastal Act Section 30232.

Spill Response

Notwithstanding implementation of the above-described prevention measures, accidental spills can and do occur and both the offshore repair work and the change in pipeline service involve spill risks. The second test of Section 30232 requires that effective containment and cleanup facilities and procedures be provided for accidental spills that do occur. To meet this test the Commission typically requires an applicant to submit an oil spill contingency plan that demonstrates that the applicant has sufficient oil spill response equipment and trained personnel to contain and recover a reasonable worst case oil spill, and to restore the coastal and marine resources at risk from a potential oil spill.

The project-specific spill avoidance and response plan required in **Special Condition 2** would facilitate effective containment and provide for cleanup facilities and procedures for accidental spills that do occur by: (1) including identification of potential spill sources and quantity estimates of a project specific reasonable worst case spill; (2) identifying prevention and response equipment and measures/procedures that will be taken to prevent potential spills and to protect marine and shoreline resources in the event of a spill; (3) providing spill prevention and response equipment onboard project vessels at all times; and (4) establishing emergency response and notification procedures, including a list of contacts to call in the event of a spill.

The repair activities proposed in this amendment would not increase the risk of offshore oil spills, but would rather reduce such risks. The Commission therefore concludes that, as conditioned to further minimize risks, the amended development include sufficient assurances to enable a finding of consistency with Section 30232 because protection against accidental spills associated with the repair activities will be provided and if occurring, will be effectively contained and cleaned up.

F. COMMERCIAL AND RECREATIONAL FISHING

In addition to the protection afforded commercial fishing in Section 30230 stated above, Coastal Act Section 30234.5 states:

The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.

Potential adverse impacts to commercial and recreational fishing could result from: (1) the temporary preclusion of fishing vessels from the project area during the proposed pipeline repair activities; and (2) the potential loss of fishing gear that snags on the pipeline or repair clamps after completion of the project.

For health and safety reasons, commercial and recreational fishing would be precluded from each of the proposed offshore work sites and adjacent waters during the pipeline excavation and

installation of the repair clamps. While the duration of these activities may vary slightly, in-water activities are not expected to take more than four days at each site. Based on the area of the proposed work sites, Commission staff estimates that less than one percent of the available fishing area within the project area would be affected by the project. Further, one of the two proposed repair sites is within the Vandenberg State Marine Reserve – and area in which all fishing activities are prohibited – and would therefore not affect commercial or recreational fishing. However, because project activities are also proposed outside of the marine protected area, and because the safety zone for the work in the marine protected area may affect areas outside the MPA, short term access restrictions for fishing vessels (for approximately eight days) could nevertheless occur as part of the proposed project.

To reduce the potential for this access restriction to adversely affect fishing, Freeport has committed to provide a Notice to Mariners in advance of the start of offshore project activities. **Special Condition 3** has been included to memorialize these commitments and to increase the effectiveness of this notice by requiring that it be provided no less than 15-days prior to the start of offshore work, that it be provided to the harbor masters of Port San Luis, Morro Bay, and Santa Barbara (for posting in their offices), and that it be repeated over ship radio during the course of project activities. By providing the fishing community with advance notice of the location, duration, and size of the project work areas, adverse impacts to fishing would be avoided and minimized by allowing fishers to temporarily relocate and plan around the restricted access areas.

Potential adverse impacts to commercial and recreational fishing could also occur due to entanglement of fishing gear with the exposed pipeline or repair clamps. However, as discussed in the marine resources section above, **Special Condition 4** requires reburial of the excavated pipeline segments and repair clamps, thus eliminating this entanglement risk.

Given the project’s potential to reduce oil spill risks, which would benefit commercial and recreational fishing, and with implementation of all the above-described measures to minimize effects on the location of fishing activities, the Commission finds that the economic and commercial and recreational importance of fishing activities would be protected and that the amended development, as conditioned, is consistent with Coastal Act Sections 30230 and 30234.5.

G. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the Commission’s administrative regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (“CEQA”). Section 21080.5(d)(2)(A) of CEQA prohibits approval of a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant impacts that the activity may have on the environment.

The proposed development has been conditioned in order to be found consistent with the Chapter 3 policies of the Coastal Act. The Commission incorporates its findings on Coastal Act consistency into this CEQA finding as if set forth in full. Mitigation measures, including

conditions addressing marine resources, water quality, fill of coastal waters, oil spills and recreational and commercial fishing will minimize all adverse environmental impacts. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the amended development as conditioned is consistent with the requirements of the Coastal Act to conform to CEQA.

Appendix A: Substantive File Documents

Coastal Development Permits and Application Materials:

Coastal Development Permit No. E-85-10

Coastal Development Permit Amendments No. E-85-010-A1 and E-85-010-A2

Consistency Certification No. CC-36-84

Coastal Development Permit No. E-06-015

Coastal Development Permit Application No. E-85-010-A3 and associated file documents

Other Materials and Resources:

County of Santa Barbara, Draft Environmental Impact Report for the Tranquillon Ridge Project
(County EIR No. 06EIR-00000-00005)

County of Santa Barbara Land Use Permit No. 15LUP-00000-00253

Exhibit 1 – Project Location

