

## CHAPTER 6.0 PROJECT ALTERNATIVES

The California Environmental Quality Act (CEQA) requires that EIRs review a range of alternatives that might reduce or avoid the significant impacts of a proposed project. This chapter reviews the range of alternatives that were considered in developing this EIR. Some alternatives were rejected from analysis because they did not reduce environmental effects, were infeasible, or did not meet the project goals.

Alternatives are considered in an EIR to assist the public and decision-makers in considering the environmental consequences of a proposed project. The purpose of the alternatives analysis is to consider reasonable feasible options to reduce or avoid the significant impact of a proposed project. The range of alternatives to the proposed project is governed by the rule of reason. CEQA Guidelines, Section 15126.6(a) states: "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." Further, Section 15126.6(b) states: "...the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The CEQA Guidelines Section 15126.6(c) states that "The range of potential alternatives to the project shall include those that could feasibly accomplish most of the basic objectives of the proposed project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination." Factors to be used to discard alternatives are "(i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.

The "feasibility" of an alternative is evaluated by taking into account various factors, such as site suitability, economic viability, availability of infrastructure, consistency with government-approved plans and regulatory limitations, jurisdictional boundaries, and by assessing whether the alternative, if it is at another location, is on land that can be reasonably acquired. The range of alternatives that must be studied in detail in an EIR includes a reasonable range of options that are both "feasible" and result in less adverse environmental impacts than the proposed project.

### 6.1 ALTERNATIVES DELETED FROM FURTHER CONSIDERATION

Eight water-disposal options (hereinafter, referred to as alternatives) were evaluated as part of the proposed project, but were deleted from further consideration because they were not considered feasible, as they would not substantially reduce project impacts to attain most of the alternatives to fully meet the project objectives either in the short-term or long-term. The discussion of the eliminated alternatives is derived from the *Supplemental Information to Land Use Application* (Entrix, 2006), and the *Reasonable Potential Analysis and Options Analysis* (Entrix, 2007). These are summarized briefly below:

### **6.1.1 Onsite Injection**

PXP evaluated numerous potential areas to inject the produced water into the subsurface without adversely impacting the steam drive oil production enhancement program. Several areas were evaluated and found to be infeasible due to DOGGR requirements, potential adverse effect on the steam drive due to connectivity to the producing zones, and the prohibitive cost of acquiring land in the Oak Park area (southeast of the oil field), which is undergoing residential development. The design calls for injection of the reject water produced by the treatment process into the producing zones. Further injection of water other than the reject water would reduce the efficiency of the steam drive and reduce oil production.

### **6.1.2 Surface Discharge**

An evaluation of surface discharge by Entrix onto the oilfield itself concluded that any water that could be percolated would quickly encounter shallow bedrock and reemerge as surface flow into Pismo Creek. The area is also subject to landslide, and further loading by infiltration could increase incidence of landsliding; therefore, the amount of reclaimed water that could be accommodated would be small and have the potential for adverse impacts. Furthermore, this alternative could only be applied in the dry season, as during the wet season the soils are already at the infiltration capacity.

Surface water discharge, which would eventually flow to Arroyo Grande Creek, was also analyzed as an option by Entrix and eliminated owing to insufficient land available for percolation of the required amount of water. Furthermore, additional infrastructure for a delivery system would increase the amount of adverse environmental affects.

### **6.1.3 Irrigation of Edible Crops**

PXP communicated with wineries in the Edna Valley and with growers in the area regarding use of the reclaimed water for irrigation of edible crops. Due to potential public health issues, the California Department of Health Services places limitations on the use of reclaimed water on edible crops, including additional treatment by oxidation, chlorination, coagulation, clarification, and filtration. Furthermore, boron levels in the water are relatively high and may adversely affect the crops. No potential users were willing to undertake the additional treatment of the water, and there was no further negotiation.

### **6.1.4 Irrigation of Non-Edible Crops (No Disposal to Pismo Creek)**

This option would involve limiting discharge of treated water to only nearby non-edible crop agricultural water users. There would be no discharge of water to Pismo Creek. Due to constraints related to lack of re-use agreements with neighboring properties, and the limited amount of water that would be released for re-use, production at the oil field would be very limited. Additionally, water needs would not be consistent throughout the year and would not be able to accommodate the amount of water which would be released for re-use. Thus, this alternative has been eliminated as it would not achieve project objectives.

### **6.1.5 Onsite Disposal via Evaporation/Percolation Ponds**

This option would consist of disposing the treated water into on-site ponds, which would evaporate and percolate. As percolation tests indicate that infiltration capacity would result in very low percentages of percolation, very large areas would be required for evaporation. Potential biological impacts due to the large areas of disturbed land would result (i.e., oak

woodland, Pismo clarkia, chaparral, etc.); therefore, this alternative would be environmentally inferior.

### **6.1.6 City of Pismo Beach Wastewater Reclamation Facility and Ocean Outfall**

With this alternative, a new pipeline would need to be constructed to connect to the City of Pismo Beach's wastewater reclamation facility (WWTF). This option would be infeasible for the following reasons: 1) there are currently capacity constraints at the existing WWTF, and 2) City of Pismo Beach policy currently prohibits accepting wastewater from outside the city limits. The latter would require a City Council approval in change of policy. By themselves, these two reasons represent a significant constraint on this option, rendering it infeasible. In addition, the NPDES permit for the ocean outfall would require revision to accept additional water.

### **6.1.7 Displacement of Existing Groundwater Use at the Oil Field**

Currently, groundwater is used in landscaping, non-potable water use, and in rare cases as makeup water for steam production. This re-use option involves reducing or eliminating uses of groundwater on the oil field, and replacing the groundwater with the produced treated water. Although this option was considered to be a viable beneficial re-use of the water, it was determined that the amount of water replaced would be very small, and therefore would not meet project objectives. Furthermore, this replacement of water would be limited to the dry season when landscaping irrigation is needed.

### **6.1.4 Landfill Dust Control**

This option would entail construction of a new pipeline and delivery of water to Cold Canyon Landfill for use as a dust suppressant during the summer; however, the landfill has limited needs for water (approximately 100,000 gallons per day). As such, this alternative would represent a "reduced project" option. Although a reduced project with limited produced water release is feasible, it is possible that the level of reduction in water release may not be able to achieve project objectives in the long-term. Additionally, the Landfill would only be able to use the water during the dry season, and thus would require an alternate disposal method during the wet season. Furthermore, the construction of a new pipeline to the Landfill would most likely create additional environmental impacts. Therefore, while implementation of this alternative is feasible, the drawbacks previously noted represent a significant constraint, such that project objectives would not be met.

## **6.2 ALTERNATIVES ANALYZED**

Three alternatives were analyzed in lieu of the proposed project. These include: (1) No Project Alternative, (2) Reduced Project Alternative, and a (3) Fully-Mitigated Alternative. Table 6-1 provides a qualitative comparison of the three alternatives with respect to each issue area analyzed in Chapter 5.0.

### **6.2.1 Alternative 1 – No Project Alternative**

The No Project alternative would not involve any new construction, nor introduce any new significant environmental effects. It would allow the existing operations of the Phase IV project to continue as it is currently configured but would not allow any expansion of the Arroyo Grande Field to include a water treatment facility. It would avoid all of the impacts of the proposed project; however, the No Project alternative would not achieve the project objectives.

#### **6.2.1.1 Land Use**

Under this alternative, there would be no introduction of water treatment facilities for produced water. Current operations are consistent with the San Luis Obispo General Plan, San Luis Obispo Land Use Ordinance, and the San Luis Obispo Energy Element. There would be fewer impacts to several resources, including the aesthetics, air quality, biological, cultural, and paleontological associated with this alternative. As such, this alternative would be more consistent with existing plan and policies.

#### **6.2.1.3 Aesthetics**

Aspects of current operations are visible to some degree to motorists traveling along Price Canyon Road. This includes partial views to the existing steam generators, well pumper units, and ancillary facilities, such as flowlines. Under the No Project alternative, there would be no construction of new water treatment facilities (e.g. air-stripper towers). As such, the impacts to aesthetics would be less under this alternative.

#### **6.2.1.4. Air Quality**

There would be no new impacts to air quality under this alternative, since there would be no new facilities or changes in operation of facilities.

#### **6.2.1.5 Biological Resources**

Under this alternative, there would be no introduction of treated produced water into Pismo Creek. It would allow the existing Phase IV project to continue as proposed. Because this alternative would result in no additional development, impacts on existing biological resources would be less under this alternative.

#### **6.2.1.6 Cultural Resources**

Under this alternative, there would be no new construction activities or installation of new facilities, thus impacts on existing cultural resources would be less under this alternative.

#### **6.2.1.7 Geology and Soils**

Impacts to geology and soils under this alternative would be less than the proposed project, since there would no construction activities. There would be fewer long-term impacts associated with exposed soils, since there would no removal of coast live oak woodland habitat and manzanita. As discussed in the *Supplemental Information to Land Use Application* prepared by PXP by Entrix (2006), onsite geology primarily consists of formations not capable of accepting additional re-injected water; therefore, the No Project alternative would not achieve the intended objectives of the Phase IV EIR.

**Table 6-1. Qualitative Comparison of Project Alternatives**

Alternative	Issue Area										
	Land Use	Traffic & Circulation	Aesthetics	Air Quality	Biological Resources	Cultural Resources	Geology & Soils	Hydrology & Water Quality	Paleo Resources	Noise	Hazards
Proposed Project	2	2	2	1	1	2	2	1	2	2	1
1 – No Project	6	6	6	6	6	6	6	6	6	6	6
2 – Reduced Project	4	4	4	3	3	4	4	3	4	4	3
3- Fully Mitigated	5	5	5	5	5	5	5	5	5	5	5

**Note:** Impacts quantified on a scale of 1 through 5 with 1 = Greatest Impact and 5 = Lowest Impact. No impacts were given a value of 6.

### **6.2.1.8 Hydrology and Water Quality**

Under this alternative, there would be no introduction of treated produced water into Pismo Creek. It would allow the existing Phase IV project to continue as proposed. Because this alternative would result in no additional development, no new impacts to hydrology and water quality would occur.

### **6.2.1.9 Paleontological Resources**

Under this alternative, there would be no new impacts to paleontological resources.

### **6.2.1.10 Noise**

As there would be no new construction, there would be no additional noise impacts.

### **6.2.1.11 Hazards/Risk of Upset**

Because there would be no new construction under this alternative, there would be no added potential for hazards/risk of upset impacts to workers, the public, or wildlife.

## **6.2.3 Alternative 2 - Reduced Project Alternative**

Alternative 2 consists of a reduced project alternative by proposing construction of a 10,000 barrel per day (1.25 acre feet per day or 420,000 gallons per day) water reclamation facility rather than 20,000 barrel per day facility as in the proposed project. For the purposes of this section, Alternative 2 can also be defined as a “reduced project” in terms of total output of treated water into Pismo Creek and overall area of disturbance. More simply, it is the proposed project as intended for implementation, but reduced in overall size and scope with the intention of reducing project-related impacts. In a conceptual sense, this alternative would minimize the footprint of disturbance and the overall daily output of treated water to Pismo Creek by 50 percent (i.e., 0.65 cfs).

### **6.2.2.1 Land Use**

Because there would be less treated water output and overall land disturbance associated with this alternative, it could have less of an impact on the aesthetic value of the project area than the proposed project. For example, the air stripper towers would be reduced in number and lowered to accommodate less water. Furthermore, the water tanks would be reduced in size, and thereby have a smaller footprint and subsequent area of disturbance. Thus, this alternative would be more compatible with the County’s Rural Lands land use category and with County plans and policies that protect scenic resources than the proposed project. By reducing the overall project area disturbance with this alternative, it would be possible to avoid any additional visual impacts from Price Canyon Road.

### **6.2.2.2 Traffic and Circulation**

#### **Short-term**

This alternative would generate somewhat less traffic during the construction phase, since less construction personnel and construction material deliveries would be required. In addition, trip generation during the construction phase would be of shorter duration since the overall size of the facility would be reduced and only one 10,000-gallon tank would be constructed.

### **Long-term**

As with the proposed project, this alternative would likely require an additional six or seven full-time workers at the water reclamation facility as operations would essentially be the same. As such, trip generation associated with on-going operations under this alternative would not be appreciably less than for the proposed project.

### **Mitigation Measures**

Measures to mitigate the impacts of this alternative would be the same as for the proposed project. Residual impacts would be less than the proposed project.

#### **6.2.2.3 Aesthetics**

### **Short-term**

There would be one less storage tank and fewer (or shorter) air stripping towers associated with this alternative, thus, it could have less of an impact on the aesthetic quality of the project area than would the proposed project. Further, the construction of the facility would not be as intensive as the proposed project, thus, there would be less short-term impacts to visual resources.

### **Long-term**

There would be less of a visual impact related to the air strippers associated with this alternative due to the reduced amount of treated water output which would potentially allow for fewer as well as shorter towers, thus reducing the level of visibility to motorists traveling along Price Canyon Road.

### **Mitigation Measures**

Although it is highly unlikely there would be any potentially significant impact to the visual quality of the area as a result of the air strippers, Mitigation AES-1 would still be applied as part of standard practice. Residual impacts would be less than the proposed project.

#### **6.2.2.4 Air Quality**

### **Short-term**

With the reduced alternative, the overall project footprint and expected duration of construction activities would be reduced, therefore, project implementation would be expected to result in slightly less emissions than the proposed project. However, construction emissions would still be expected to exceed the APCD's thresholds for NO<sub>x</sub>, although potentially to a lesser degree, and would be considered a significant short-term impact to regional air quality.

### **Long-term**

Long-term air quality impacts would be associated with emissions of ROG<sub>s</sub> and ammonia from the air strippers. Although the size or number of the air strippers would be reduced in combination with the production of less water, it is anticipated that emissions would still need to be controlled through mitigation provided to ensure less than significant impacts.

### **6.2.2.5 Biological Resources**

#### **Short-term**

The reduced project footprint and amount of water produced under this alternative could potentially reduce significant impacts to biological resources associated with the construction of the water reclamation facility. As with the proposed project, this alternative would result in impacts to special-status plant and animal species and require mitigation (as discussed in detail in Section 5.3). The specific locations of building pads and other construction activity would be no different than the proposed project; however, it is expected that with a smaller footprint, there would be fewer impacts to sensitive plant communities and special-status animal species (e.g., Pismo's clarkia, Well's manzanita, California horned lizard, etc.), and nesting birds. Further, the outfall structure to Pismo Creek could be reduced in size. Thus, short-term impacts to biological resources throughout the site would still be likely, but are expected to be reduced overall.

#### **Long-term**

Because the overall area of additional disturbance would be reduced, the potential long-term impacts to biological resources are also expected to be less under this alternative. Specifically, there would only be one 10,000-gallon tank and presumably less air strippers, etc. under this alternative. Thus, the permanent loss of existing habitat (e.g., oak woodland, coyote brush scrub, etc.) would be less than under the proposed project. Moreover, the extent of habitat fragmentation and long-term impacts to special-status species associated with these habitats would be reduced. Additionally, as discharge levels to the creek would be reduced by 50%, potential impacts to steelhead due to "stranding" in Pismo Creek would be reduced as less produced water would be introduced into the watershed. As such, the potential impact to biological resources would be substantially reduced with this alternative.

However, this alternative has the potential to prolong operations at the oil field, since a reduced water reclamation facility would result in a lower oil production rate than the proposed project. This in turn, would extend the duration of impacts to biological resources caused by operations at the oil field.

#### **Mitigation Measures**

The majority of the recommended measures included in the proposed project would apply to this alternative and would be recommended for inclusion. However, the need for a Steelhead Stranding Plan to assure potential impacts to steelhead when flows to the Pismo Creek are intentionally shut-down for maintenance or to divert to adjacent landowners would presumably not be required for this alternative. This is due to the lack of sustainable flows in the channel during periods of drought which would provide beneficial habitat to steelhead. Residual impacts would be less than the proposed project.

### **6.2.2.6 Cultural Resources**

There would be no difference in impacts to cultural resources under this alternative as long as recorded archaeological sites (discussed in Section 5.1) would be avoided and

no work (i.e. construction and maintenance) is conducted within the 150-foot buffer zones. Mitigation measures applicable to the proposed project would also be applicable to this alternative.

#### **6.2.2.7 Geology and Soils**

Under Alternative 3, short-term and long-term impacts would be the same as for the proposed project, as project components would not be significantly different between the two alternatives. Mitigation Measure GEO-2 would also be applicable to the reduced project alternative.

#### **6.2.2.8 Hydrology and Water Quality**

##### **Short-term**

The reduced project footprint and amount of water produced under this alternative could potentially reduce significant impacts to hydrology and water quality associated with the construction phase of the water reclamation facility. As with the proposed project, this alternative would result in short-term construction impacts to site hydrology and water quality due to sedimentation and erosion. The specific locations of building pads and other construction activity would be no different than the proposed project; however, it is expected that with a smaller footprint, there would be fewer water quality impacts due to the overall reduced scope. Further, the outfall structure to Pismo Creek could be reduced in size thereby further reducing the footprint of disturbance along Pismo Creek and potential for secondary impacts to water quality due to erosion and sedimentation. Thus, short-term impacts to hydrology and water quality throughout the site would still be likely, but are expected to be reduced overall.

##### **Long-term**

As discharge levels to the creek would be reduced by 50%, potential impacts to water quality in Pismo Creek would be reduced as less produced water would be introduced into the watershed. As such, the potential impacts to water quality would be reduced with this alternative, however mitigation would still be required as per the proposed project with emphasis on HYD-4 and HYDS-5 to ensure that appropriate water quality standards are being met and that the facility is designed with adequate secondary containment to ensure that untreated water is not released to Pismo Creek.

However, this alternative has the potential to prolong operations at the oil field, since a reduced water reclamation facility would result in a lower oil production rate than the proposed project. This in turn, would extend the duration of potential impacts to water quality criteria exceedances caused by overall operations at the oil field.

##### **Mitigation Measures**

The majority of the recommended measures included in the proposed project would apply to this alternative and would be recommended for inclusion. Residual impacts would be less than the proposed project.

#### **6.2.2.9 Paleontological Resources**

Under the reduced project alternative, short-term and long-term impacts would be the same as for the proposed project, as project components would not be substantially

different between the two alternatives. Mitigation Measure PAL-1 would also be applicable to the reduced project alternative.

#### **6.2.2.10 Noise**

Under the reduced project alternative, short-term and long-term impacts would be the same as for the proposed project, as project components would not be substantially different between the two alternatives. Mitigation Measure NOI-1 would also be applicable this alternative.

#### **6.2.2.11 Hazards/Risk of Upset**

Under the reduced project alternative, short-term and long-term impacts would be the same as for the proposed project, as project components would not be substantially different. Mitigation Measures HAZ-2 and HAZ-3 would also be applicable to the reduced project alternative.

### **6.2.2 Alternative 3 – Fully-Mitigated Alternative**

The Fully Mitigated Project is an alternative whereby the mitigation measures identified in Chapter 5.0 to reduce significant or potentially significant impacts to less-than-significant levels are factored into the project. With the mitigation measures included in the project as proposed, the project becomes an entity that is defined differently than originally proposed.

#### **6.2.2.1 Land Use**

This alternative would have fewer impacts to resources, including water quality, air quality, biological, noise, and traffic through the inclusion of mitigation measures. It would also have less of an impact on the visual quality of the project area than the proposed project. This alternative would be more compatible with the County's land use category Rural Lands and with County plans and policies that protect scenic resources than the proposed project.

#### **Mitigation Measures**

This alternative would include all measures to mitigate impacts. Residual impacts would be less than the proposed project.

#### **6.2.2.2 Traffic and Circulation**

##### **Short-term**

Impacts to traffic and circulation resulting from construction trips under this alternative would not significantly affect the Level of Service (LOS) on area roadways as this alternative would include mitigation measures to minimize degradation of traffic safety resulting from entering and exiting trucks on Price Canyon Road during construction activities. As such, impacts to traffic would be less than the proposed project.

##### **Long-term**

Trip generation associated with on-going operations of the water reclamation facility would not be substantially more than current trips associated with the Phase IV project. Long-term trips would generally be isolated to facility roadways and be limited to maintenance/repair trips.

### **Mitigation Measures**

This alternative would include all measures to mitigate impacts.

#### **6.2.2.3 Aesthetics**

##### **Short-term**

Construction-related visual impacts to motorists traveling along Price Canyon Road, nearby residences, and passengers on Amtrak passenger trains traveling along the Union Pacific Railroad would be essentially the same under this alternative as the proposed project.

##### **Long-term**

Impacts associated with the air strippers would be the less than under the proposed project due to implementation of the painting requirement to blend in with existing slopes and oak woodland vegetation. Additionally, potential long-term impacts to aesthetics associated with removal of trees would be less under this alternative, since protective measures to avoid and/or minimize impacts to oak trees would be incorporated into the project.

### **Mitigation Measures**

This alternative would include all measures to mitigate impacts.

#### **6.2.2.4 Air Quality**

##### **Short-term**

Short-term construction equipment emissions would be less than the proposed project through incorporation of equipment emission control measures, such as installation of a NO<sub>x</sub> reducing catalyst/catalyzed diesel particulate filter system. Fugitive dust resulting from construction would also be less through the incorporation of dust control measures, such as use of water trucks or sprinkler systems during construction. Impacts would be further reduced through incorporation of measures to offset impacts by contributing to an off-site mitigation fund.

##### **Long-term**

Over the long-term, operation of the proposed water treatment facility would result in less emissions of ROG<sub>s</sub>, ammonia, and other TAC<sub>s</sub> from the air strippers than the proposed project due implementation of the applicable APCD rules and regulations, and proposed mitigation measures to satisfy APCD permit requirements. This would include the use of scrubbers as necessary to remove additional constituents. It should be noted that these measures are required as part of permitting by the APCD and may not be considered optional or recommended mitigation.

### **Mitigation Measures**

This alternative would include all measures to mitigate impacts.

### **6.2.2.5 Biological Resources**

#### **Short Term**

Short-term impacts to biological resources would be less under this alternative through the inclusion of several mitigation measures designed to reduce impacts. Such measures will avoid and/or minimize impacts to nesting migratory birds, special-status plant and animal species, and special-status species occurring within Pismo Creek and associated tributaries.

#### **Long-term Impacts**

Long-term impacts to biological resources would be less under this alternative through the inclusion of several mitigation measures designed to reduce impacts. These include protective measures to avoid and/or minimize impacts to oak trees designated for long-term preservation, measure to compensate for the permanent loss of vegetation resulting from project implementation and potential long-term degradation of adjacent habitat areas from projected long-term utilization of the site, and measures to address impacts associated with disposal of treated water to Pismo Creek including development of a Steelhead Stranding Plan.

#### **Mitigation Measures**

This alternative would include all measures to mitigate impacts.

### **6.2.2.6 Cultural Resources**

#### **Short-term**

Through the inclusion of measures to avoid existing cultural resource sites SLO-353, SLO-652, and SLO-1266, there would be no new impacts to cultural resources. Such measures also require that in the event that unknown cultural remains are encountered anywhere within the project area during construction, activities shall be redirected to another area until a qualified archaeologist can be retained to evaluate the potential significance of the finds in a Phase 2 archaeological significance investigation.

#### **Long-term**

There would be no long-term impacts to cultural resources associated with this alternative.

#### **Mitigation Measures**

This alternative would include all measures to mitigate impacts.

### **6.2.2.7 Geology and Soils**

#### **Short-term**

There would be less short-term increases in erosion and sedimentation, through inclusion of mitigation measures requiring the applicant to prepare and implement a Sediment and Erosion Control Plan (SECP) and a grading plan for the proposed project.

### **Long-term**

Potential long-term impacts associated with this alternative including construction of newly graded pads and the proposed detention pond modifications, which could result in unstable slopes prone to failure during a seismic event, would be less than the proposed project due to mitigation measures including a geotechnical report for submittal to the County and implementation of all recommendations contained therein.

### **Mitigation Measures**

This alternative would include all measures to mitigate impacts. Residual impacts would be less than the proposed project.

#### **6.2.2.8 Hydrology and Water Quality**

### **Short-term**

As discussed under 6.2.2.7 Geology and Soils above, there would be less short-term increases in erosion and sedimentation, through inclusion of mitigation measures requiring the applicant to prepare and implement a Sediment and Erosion Control Plan (SECP) with this alternative. This would reduce the potential for short-term impacts to surface water quality as a result of construction activities at the site. Further, inclusion of measure BIO-4D, which would include PXP to prepare and implement a Spill Contingency Plan would greatly reduce the potential for water quality impacts to Pismo Creek to occur during construction operations.

### **Long-term Impacts**

The fully-mitigated alternative would include provisions that PXP shall obtain an NPDES permit from the RWQCB (Mitigation Measure HYD-4). The permit requirements would be fully implemented including waste discharge limitations, and monitoring and reporting requirements. Further this alternative would include construction of a facility with sufficient holding capacity to contain water that fails to meet water quality per the NPDES permit or other agency permit conditions so that water not meeting specifications is not released to Pismo Creek (Mitigation Measure HYD-5). These combined measures would result in a substantial reduction in potential long-term impacts to water quality compared to the proposed project.

### **Mitigation Measures**

This alternative would include all measures to mitigate impacts.

#### **6.2.2.9 Paleontological Resources**

### **Short-term**

Impacts to paleontological resources would be reduced under this alternative through the inclusion of a mitigation measure requiring the applicant to implement the provisions of the paleontological mitigation monitoring plan to minimize impacts to paleontological resources.

### **Long-term**

The proposed project will not entail excavation of land during operations. Consequently, no impacts to paleontological resources are anticipated as long as maintenance

activities do not involve surface disturbance. If such disturbance were to occur, then mitigation measure PAL-1 would apply.

### **Mitigation Measures**

This alternative would include all measures to mitigate impacts.

#### **6.2.2.10 Noise**

##### **Short-term**

Noise impacts associated with construction would be less under this alternative through incorporation of mitigation measures, including restricting the use of heavy equipment or heavy-duty trucks from 7 a.m. to 7 p.m. drilling activities.

##### **Long-term**

Long-term noise impacts would be similar as the proposed project, because no mitigation is required for long-term operations of the project.

### **Mitigation Measures**

This alternative would include an additional measure to mitigate noise impacts. Residual impacts would be less than the proposed project.

#### **6.2.2.11 Hazards/Risk of Upset**

##### **Short-term**

Under this alternative, petroleum hydrocarbon-containing soil may be encountered during project construction activities as with the proposed project. However, this alternative includes completion of an environmental site assessment and procedures to appropriately handle and dispose of contaminated soils during construction activities to reduce the potential risk to workers (Mitigation Measure HAZ-2). Therefore, this alternative would result in less than significant impacts due to risk of upset than the proposed project.

##### **Long-term**

Long-term impacts would be limited to risks associated with high fire hazards for the project area. With inclusion of Mitigation Measure HAZ-3, this alternative would implement a Fire Hydrant Plan and vegetation management plan and would incorporate the water treatment facility into existing PXP safety plans. As such, long-term impacts associated with fire hazards would be less than the proposed project.

### **Mitigation Measures**

This alternative would include all measures to mitigate impacts. Residual impacts would be less than the proposed project.

## **6.3 Environmentally Superior Alternative**

CEQA Guidelines (Section 15126.6(a) and (e)(2)) require that an EIR's analysis of alternatives identify the "environmentally superior alternative" among all of those considered. In addition, if the No Project Alternative is identified as environmentally superior, then the EIR also must identify the environmentally superior alternative among the other alternatives.

Under CEQA, the goal of identifying the Environmentally Superior Alternative is to assist decision-makers in considering project approval. CEQA does not, however, require an agency to select the environmentally superior alternative (CEQA Guidelines Sections 15042-15043).

In the comparison presented in Table 6-1, it is apparent that Alternative 2 - Reduced Project Alternative and Alternative 3 – Fully-Mitigated Alternative would each reduce impacts from the proposed project and neither of them would have greater impacts on any resource than the proposed project. However, it should be noted that the same County air quality significant thresholds that would be exceeded by the proposed project would also be exceeded (albeit somewhat less) with Alternative 2. More importantly, Alternative 2 has the potential to benefit biological, paleontological, land use, and visual resources if, with a reduced construction footprint and fewer facilities (i.e., air stripping towers), it would be easier to avoid impacts to environmentally sensitive habitats and/or special-status species, as well as the view shed from travelers on Price Canyon Road. Further, the Reduced Project Alternative has the potential to further minimize impacts to Pismo Creek by potentially reducing the overall size of the outfall structure as well as decreasing the output from 1.3 cfs to 0.65 cfs, respectively. The decreased output would have less of a potential to support steelhead during low flow periods and in turn would reduce the potential for steelhead stranding during maintenance, emergency shut-downs, or water transfers to adjacent landowners. In summary, Alternative 2 represents only a marginal improvement by further avoiding and/or minimizing impacts to resources of the project area.

Alternative 3 – Fully-Mitigated Alternative is identified as the Environmentally Superior Alternative because it would better meet County policies than Alternative 2, meet all of the project objectives consistent with the Master Plan for the Arroyo Grande oil field, and minimize the majority of the project impacts. Although Alternative 1 - No Project Alternative would have less impacts than the Alternative 3, it would not meet any of the objectives of the project and is not consistent with the Master Plan for the oil field. As such, the EIR found that the Alternative 3 – Fully Mitigated Project that includes all mitigation measures factored into the project as the Environmentally Superior Alternative.

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