CHAPTER 10
Draft EIR Revisions

This section contains revisions to the Draft EIR based upon (1) clarifications required to prepare a response to a specific comment and/or (2) typographical errors. The provision of these additional mitigation measures does not alter any impact significance conclusions as disclosed in the Draft EIR. Changes made to the Draft EIR are identified here in ~~strikeout text~~ to indicate deletions and in double-underlined text to signify additions.

10.1 Draft EIR Text Revisions

The following text has been revised in response to comments received on the Draft EIR.

10.1.1 Executive Summary

Page ES-12, Section ES.6.3, Land Conveyances, 2nd paragraph, is revised as follows:

Additionally, the Applicant would convey in fee, by metes and bounds description (general boundary), approximately ~~1.42~~1.28 acres containing the relocated office building on the Synergy Oil Field site and public access improvements (Studebaker Trail and Outlook Terrace) and the northern 76.52-acre restoration area to the LCWA.

Pages ES-12 to ES-31, Table ES-5, Summary of Environmental Effects and Mitigation Measures/Project Requirements, cells shown below, is revised as follows:

Table ES-5 Summary of Environmental Effects and Mitigation Measures/Project Requirements

Impacts	Mitigation Measures and/or Project Requirements	Level of Significance after Mitigation
3.1 Aesthetics		
…		
Impact AES-4: The project would not create a new source of substantial light or glare that would adversely affect day or night views in the area or that would substantially impact other people or properties.	**Mitigation Measure AES-2: Lighting Plan.** Prior to issuance of a grading permit for each site, a Lighting Plan for the site shall be developed and ~~implemented~~ submitted to the City of Long Beach Planning and Development Services Department that requires all exterior lighting to be directed downward and focused away from adjacent sensitive uses and habitats to encourage wayfinding and provide security and safety for individuals walking to and from parking areas and working at the oil facilities on the Pumpkin Patch and the LCWA sites. Compliance with the approved Lighting Plan shall be implemented through the City's development review and building plan check process.	Less than Significant
…		
3.2 Air Quality		
…		
Impact AQ-2a: The project would violate the air quality standard and contribute substantially to an existing or projected air quality violation for construction-related VOC and NO_X emissions.	**Mitigation Measure AQ-1: Construction-Period Use of Low-VOC Paints.** The Applicant for the proposed project shall be responsible for the use of SCAQMD Rule 1113–compliant paints with a VOC content of ~~75~~50 grams per liter or less. **Mitigation Measure AQ-2: Construction NO_X Reduction Measures.** The Applicant for the proposed project shall be responsible for the implementation of the following construction-related NO_X reduction measures: ● Require all off-road diesel-powered construction equipment greater than 50 hp (e.g., excavators, graders, dozers, scrappers, tractors, loaders, etc.) to comply with EPA-Certified Tier IV emission controls where commercially available. Documentation of all off-road diesel equipment used for this project, including Tier IV certification, or lack of commercial availability if applicable, shall be maintained and made available by the contractor to the City for inspection upon request. In addition, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB such as certified Level 3 Diesel Particulate Filter or equivalent. A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment. If Tier IV construction equipment is not available, the City shall require the contractor to implement other feasible alternative measures, such as reducing the number and/or hp rating of construction equipment, and/or limiting the number of individual construction phases occurring simultaneously. The determination of commercial availability of Tier IV construction equipment shall be made by the City prior to issuance of grading or building permits based on applicant-provided evidence of the availability or unavailability of Tier IV equipment and/or evidence obtained by the City from expert sources such as construction contractors in the region. ● Eliminate the use of all portable generators. Require the use of electricity from power poles rather than temporary diesel or gasoline power generators.	Significant and Unavoidable

Table ES-5 Summary of Environmental Effects and Mitigation Measures/Project Requirements

Impacts	Mitigation Measures and/or Project Requirements	Level of Significance after Mitigation
	• Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow, including during the transportation of oversized equipment and vehicles. • Provide dedicated turn lanes for movement of construction trucks and equipment on and off site. The location of these dedicated lanes shall be addressed in the Construction Trip Management Plan. • Reroute construction trucks away from congested streets or sensitive receptor areas. • Prohibit the idling of on-road trucks and off-road equipment in excess of 5 continuous minutes, except for trucks and equipment where idling is a necessary function of the activity, such as concrete pour trucks. The Applicant or construction contractor(s) shall post signs at the entry/exit gate(s), storage/lay down areas, and at highly visible areas throughout the active portions of the construction site of the idling limit. • On-road heavy-duty diesel haul trucks with a gross vehicle weight rating of 19,500 pounds or greater used to transport construction materials and soil to and from the project site shall be engine model year 2010 or later or shall comply with the USEPA 2007 on-road emissions standards.	
…		
3.4 Cultural Resources		
Impact CUL-1: The project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	…	Less than Significant

Mitigation Measure CUL-2: Retention of the Bixby No. 2 Discovery Well. Prior to the issuance of a grading permit for the Synergy Oil Field site by the City of Long Beach, a plan shall be implemented by the Applicant for the retention and preservation of t~~T~~he Bixby No. 2 Discovery Well and sign ~~shall be retained and preserved~~ along with a 5-foot buffer around the furthest point from the concrete pad. ~~Necessary~~ The plan shall define the necessary maintenance to the sign that shall be performed~~,~~ (see National Park Service Preservation Brief 25, "The Preservation of Historic Signs," by Michael J. Auer). The plan shall describe a~~A~~ path for pedestrian traffic from the visitors center to the Discovery Well that shall be developed and installed. At the Discovery Well site, a wayside sign shall be installed interpreting the Seal Beach Oil Field and the importance of the Bixby No. 2 Discovery Well. The interpretation of the Bixby No. 2 Discovery Well shall be overseen and prepared by a qualified architectural historian or historic preservation professional. The ongoing maintenance of the Bixby No. 2 Discovery Well site shall be the responsibility of the owner of this area of the Synergy Oil Field site.

Mitigation Measure CUL-3: Historic Preservation Consultation, Preparation of a Relocation and Rehabilitation Plan, and Construction Monitoring. Prior to the issuance of a grading permit for the Synergy Oil Field site by the City of Long Beach, a Relocation and Rehabilitation Plan and plans for Construction Monitoring shall be submitted by the Applicant for review and approval. The project design for Bixby Ranch Field Office is presently conceptual and detailed architectural drawings showing the proposed rehabilitation have not been prepared. A qualified architectural historian shall provide input to the project architect to revise the design in accordance with the Standards to retain the character-defining features of the exterior and interior of the Bixby Ranch Field Office. Once the design has been finalized, the architectural historian shall prepare a Standards plan review for submittal to the City of Long Beach Planning for a Certificate of Appropriateness.

Following the approval of the Bixby Ranch Field Office project plans, a Relocation and Rehabilitation Plan (Plan) shall be developed by a qualified historic preservation consultant. The Plan shall include relocation and rehabilitation methodology recommended by the National Park Service (NPS), which are outlined in the booklet entitled "Moving Historic Buildings," by John Obed Curtis (1979). The Plan shall include an assessment of the building condition by a qualified engineer, and a shoring plan for relocation and storage, and guidelines for relocation to the final site. If temporary storage is required, the storage conditions should

Table ES-5 Summary of Environmental Effects and Mitigation Measures/Project Requirements

Impacts	Mitigation Measures and/or Project Requirements	Level of Significance after Mitigation
	closely follow the recommendations of NPS Preservation Brief 31: Mothballing Historic Buildings with regard to recommendations for structural stabilization, pest control, protection against vandalism, fire, and moisture, adequate ventilation which should be applied to the building at the temporary storage location to ensure the safety of the building during storage. A periodic maintenance and monitoring plan shall also be included in the Plan and implemented during the storage period in accordance with the guidance outlined in NPS Preservation Brief 31. The Plan shall be reviewed and approved by the City prior to issuance by the City of permits to relocate the Bixby Ranch Field Office. Upon relocation of the Bixby Ranch Field Office, any maintenance, repair, stabilization, rehabilitation, preservation, conservation, or reconstruction work performed in conjunction with the relocation of the building shall be undertaken in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Properties. The relocation and rehabilitation process shall be monitored by a qualified historic preservation consultant at key intervals to ensure conformance with the Standards and NPS guidelines. The preservation consultant shall also be available to provide technical expertise to reduce potential impacts to historical resources from unforeseen circumstances. Lastly, a permanent metal plaque shall be affixed to the primary elevation or a marker shall be imbedded in the pavement in front of the primary elevation of the relocated Bixby Ranch Field Office, which will briefly explain where the building was originally located (original and second location) and that the building was relocated to a third location. A qualified architectural historian or historic preservation professional shall provide oversight to the design and fabrication of an interpretive plaque/marker. … **Mitigation Measure CUL-5: Retention of Qualified Archaeologist and Worker Training.** Prior to the issuance of a grading permit for ~~project implementation~~ each of the four individual sites and any off-site improvements by the City of Long Beach, evidence shall be provided to the City that a qualified archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Secretary of the Interior 2008) has been retained by the City to conduct any required training, evaluation, or treatment of archaeological resources that might be encountered during implementation of the project. As part of this, prior to the start of grading, the qualified archaeologist shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel must be informed of the types of archaeological resources that may be encountered (both prehistoric and historical), and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. The ~~City~~ Applicant must ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance. This documentation shall be made available to the City upon request. **Mitigation Measure CUL-6: Native American Monitoring.** A Native American monitor from the Gabrieleño Band of Mission Indians—Kizh Nation, a consulting party for the project under AB 52, shall be present during all earth-moving construction activities. The Native American monitor shall be given the opportunity to participate in the cultural resources sensitivity training described in Mitigation Measure CUL-5. At least 30 days prior to issuance of grading permits by the City of Long Beach for each of the four individual sites and any off-site improvements, a Native American Monitoring Agreement (Monitoring Agreement) shall be developed between the City and the Gabrieleño Band of Mission Indians—Kizh Nation. The ~~agreement~~ Monitoring Agreement shall pertain to prehistoric archaeological resources and Tribal cultural resources, respectively, and shall identify any monitoring requirements and treatment of cultural resources to meet both the requirements of CEQA and those of the Tribal representative. The Monitoring Agreement shall also address communication protocols in the event of an unanticipated discovery of cultural materials, and the roles, responsibilities, and authorities of the Native American Monitor. The Monitoring Agreement shall also detail the protocols for	

Table ES-5 Summary of Environmental Effects and Mitigation Measures/Project Requirements

Impacts	Mitigation Measures and/or Project Requirements	Level of Significance after Mitigation
	treatment and final disposition of any Native American cultural resources, sacred sites, and human remains discovered on the site that the Native American Monitor shall implement in consultation and coordination with the Native American Most Likely Descendant, as identified by the NAHC. In accordance with Mitigation Measure CUL-9, discussed below, discovery and treatment of human remains shall comply with State Health and Safety Code Section 7050.5 and PRC Section 5097.98. **Mitigation Measure CUL-7: Archaeological Resource and/or Tribal Cultural Resource Discovery and Treatment.** In the event of the unanticipated discovery of archaeological or other cultural resources, whether discovered through Native American monitoring or not, all work activities in the area (within approximately 100 feet of the discovery) shall be halted or redirected until the discovery can be evaluated by a qualified archaeologist. Construction shall not resume until a qualified archaeologist has conferred with the City and, in the case of prehistoric archaeological resources and tribal cultural resources, the Native American monitor, on the significance of the resource. If it is determined that the discovered archaeological resource and/or tribal cultural resource is significant under CEQA, avoidance and preservation in place shall be the preferred manner of mitigation, pursuant to PRC Section 21083.2(b) and Section 21084.3. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, a Treatment Plan shall be prepared and implemented by a qualified archaeologist, in consultation with the City, that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource or cultural information in the event of a tribal cultural resource. The City shall also consult with appropriate Native American representatives in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resources, beyond those that are scientifically important, are considered. Any evaluation and treatment shall be supervised by an individual or individuals that meet the Secretary of the Interior's Professional Qualification Standards.	
Impact CUL-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to *CEQA Guidelines* Section 15064.5.	Mitigation Measures CUL-5 through CUL-7 would apply.	Less than Significant

Table ES-5 Summary of Environmental Effects and Mitigation Measures/Project Requirements

Impacts	Mitigation Measures and/or Project Requirements	Level of Significance after Mitigation
Impact CUL-3: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**Mitigation Measure CUL-8: Paleontological Monitoring.** Prior to commencement of any grading or excavation activity on site, the ~~City~~ Applicant shall retain a qualified paleontologist, defined as a paleontologist meeting the guidelines of the Society of Vertebrate Paleontology (SVP) (2010) and approved by the City of Long Beach. The qualified paleontologist, or a designated paleontological monitor working under the guidance of the qualified paleontologist, shall attend and participate in any preconstruction meetings and worker training (as discussed in Mitigation Measure CUL-5), and shall be on site during all excavation and other significant ground-disturbing activities that reach a depth of 15 feet or greater below the modern ground surface. This is the minimum depth at which Young Alluvial Fan and ~~Channel~~ Valley Deposits, Undivided may be encountered. These deposits are considered to have low paleontological sensitivity near the top of the geologic unit (which may not necessarily correspond with the modern ground surface), and a high paleontological sensitivity greater than 15 feet below the top of the unit. In the event that paleontological resources (e.g., fossils) are unearthed during ground-disturbing activity, the paleontological monitor shall have the authority to temporarily halt or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the monitor shall allow grading to recommence in the area of the find. Daily field logs shall be prepared during the course of the monitoring, and upon completion of monitoring a final report shall be prepared for submittal to the City of Long Beach.	Less than Significant
…		
3.5 Geology and Soils		
…		
Impact GEO-2: The project would not expose people or structures to potential substantial adverse effects as a result of strong seismic ground shaking.	**Mitigation Measure GEO-1: Implement Geotechnical Recommendations.** ~~The Applicant shall prepare final geotechnical investigations for the following project components~~ As recommended in the geotechnical studies prepared for project implementation on each project site, at such time the details for the following site specific improvements and their locations are finalized, a design-level geotechnical investigation shall be prepared to develop final site- and development-specific recommendations based upon the potential geologic conditions that are described and evaluated in the geotechnical studies and this EIR. Design-level geotechnical investigation shall be prepared for the following project components and shall be submitted to the City of Long Beach, Building Department and Planning Department: ● Visitors center on the Synergy Oil Field site; ● Office b~~B~~uilding and warehouse on the Pumpkin Patch site; ● All well cellars on the Pumpkin Patch and LCWA sites; and ● All tank battery and containment areas on the Pumpkin Patch and LCWA sites. The design-level geotechnical investigations shall provide recommendations as necessary to address ~~relevant~~ the geotechnical issues that were identified for each site in the EIR ~~such as active faults, seismic shaking, seismic-related ground failure including liquefaction, and other soil stability issues including expansive soils, as needed. These types of issues are addressed through compliance with the CBC, which requires geotechnical investigations to identify geotechnical hazards along with recommendations to reduce the identified risks~~. In addition to compliance with the CBC, design-level measures shall be provided for the following specific geotechnical issues: ● Risks from seismic shaking of structures such as the building to be constructed on the Pumpkin Patch site shall be reduced by designing the structures to withstand the anticipated maximum level of seismic ground	Less than Significant

Table ES-5 Summary of Environmental Effects and Mitigation Measures/Project Requirements

Impacts	Mitigation Measures and/or Project Requirements	Level of Significance after Mitigation
	shaking, and incorporating bracing and anchoring techniques to withstand a~~. The preliminary geotechnical investigation for the Pumpkin Patch site estimates the~~ Maximum Credible Earthquake of 7.0 magnitude ~~would result in a PGA of 0.604 g (KCG 2016a). Damage from seismic shaking of structures is reduced by designing buildings capable of withstanding or accommodating strong ground motion by using various bracing and anchoring techniques. Damage from soils~~ ● For those project sites that have been identified as susceptible to liquefaction~~ can be addressed by~~, the design-level geotechnical investigations shall identify the specific measures recommended to address liquefaction potential, which could include driving piles through susceptible materials; conditioning the soils by deep soil mixing, jet or pressure grouting, or dynamic compaction techniques; or by removing the susceptible soils. ● ~~Damage from placing structures on unstable materials (e.g.,~~ If the landfill ~~materials~~ on the Pumpkin Patch site~~) can be addressed~~ is not removed, any structures proposed to be placed on top of the landfill shall be stabilized by one of two measures: by driving piles through unstable materials into underlying stable units or by removing the susceptible soils and replacing the materials with properly compacted imported fill. ~~Damage from~~ ● For those sites on which structures may be placed in areas of expansive soils~~ can be addressed by removing and replacing expansive soils~~, the design-level geotechnical study shall identify whether the expansive soils should be removed and replaced with imported non-expansive fill, or with proper mixing and grading of site materials. ● The Applicant shall provide the design-level geotechnical investigations along with the plans, specifications, grading plans, and building plans to the City for review as a condition of approval to acquire the necessary grading and building permits.~~ Upon approval by the City,~~ ● I~~i~~mplementation by the Applicant of the recommendations in the geotechnical investigations will mitigate geotechnical hazards to a level of less than significant.	
…		

10.1.2 Chapter 2, Project Description

Page 2-41, "Studebaker Trail and Overlook Terrace" section, 1st paragraph, is revised as follows:

As shown in Figure 2-18, a 10-foot-wide, pedestrian-only trail (Studebaker Trail) of decomposed granite would be constructed beginning at the relocated visitors center parking lot and traveling north parallel to Studebaker Road along the eastern perimeter of the restored wetlands area (Studebaker Trail). The trail would travel approximately 169 feet north of the proposed parking lot to the overlook terrace that would contain green areas and picnic facilities. There is no turf in picnic area but would comprise a mix of gravel and native vegetation. The overlook terrace would be constructed in the area formerly occupied by the Bixby Ranch Field Office building. The trail would then continue west on an existing oil field road to Studebaker Road, where it would turn north and travel parallel to Studebaker Road to the Los Cerritos Channel.

Page 2-50, "Demolition and Remediation" section, 1st paragraph, 1st sentence, is revised as follows:

Up to 95 percent of oil production infrastructure would be removed, including the aboveground pipelines and ~~tanks, removal of~~ all instrumentational appurtenances associated with the tank farms located in the eastern-most 2- acres of the Pumpkin Patch site. …

Page 2-73, 4th bullet from the bottom, is revised as follows:

- ~~Local Coastal Development Permit for LCWA site and Pumpkin Patch site~~

10.1.3 Section 3.1, Aesthetics

Page 3.1-7, "State, State Scenic Highways" section, 1st paragraph, 4th sentence, is revised as follows:

… There are two adopted scenic highways in Los Angeles County, both of which are more than 40 miles northeast of the ~~Ballona Reserve~~ Los Cerritos Wetlands on the project site.

Page 3.1-28, "Pumpkin Patch Site" section, 1st paragraph, is revised as follows:

Construction on the Pumpkin Patch site would include (1) site clearing and grading, including grading of approximately 5 acres; (2) construction of the office building, warehouse, 48-space parking lot, and 18-foot-high perimeter wall along PCH, Studebaker Road, and the San Gabriel River; (3) construction of three oil well cellars on the center portion of the site ~~and drilling of 50 wells with a 160-foot-high drilling rig~~; (4) installation of approximately 2,500 feet of pipeline to connect to the LCWA site; and (5) construction of oil facility infrastructure including two tanks, gas compression systems, utility systems, off-spec systems, and water treatment systems. While the Pumpkin Patch site is not within the Los Cerritos Wetlands complex, it is adjacent to the San Gabriel River and, thus, is within the viewshed of a scenic vista.

Page 3.1-29, "LCWA Site" section, 1st paragraph, is revised as follows:

Construction on the LCWA site would include (1) site clearing and grading, (2) construction of the process area, (3) construction of three oil well cellars, (4) construction of three gas turbines for power generation ~~and drilling of new wells (up to a maximum of 70) with a 160-foot-high drilling rig~~, (5) construction of two tanks, and

(6) construction of an 18-foot-high perimeter wall. The LCWA site is not within the Los Cerritos Wetlands complex or located within the viewsheds of the Los Cerritos Channel or the San Gabriel River and is, therefore, not considered a scenic vista; however, distant views of the San Gabriel Mountains can be viewed from the roadways surrounding the project site, including Westminster Avenue (2nd Street) and Studebaker Road.

Page 3.1-30, "Pumpkin Patch Site" section, 1st paragraph, is revised as follows:

During operation, the Pumpkin Patch site would have a fully operational oil production facility and wells in the below-ground well cellars with a 160-foot-high drilling rig. In order to minimize noise and visual impacts during drilling, the drill rig would be enclosed in a camouflaged sound-abatement shell; an example is provided in Figure 2-25, Example of Enclosed Drill Rig. In addition, periodic well maintenance would occur with a 120-foot-high workover rig. An 18-foot-high screen wall would surround the site along Studebaker Road, PCH, and the San Gabriel River. In addition, a 10-foot-high wall would be installed along the eastern boundary of the site along the 100-foot buffer separating the oil operations area from the wetland habitat area. Landscaping would buffer the screen wall from the street and an entry monument would be installed at the corner of the site at PCH to enhance the entry into Long Beach. The screen wall would abut the new office building and warehouse. As described above, views looking toward the Pumpkin Patch site from the San Gabriel River Bike Trail would include views of the San Gabriel River in the foreground and the site in the middleground. Views of the San Gabriel River, which is considered a scenic vista, would not be obstructed from the San Gabriel River Bike Trail, as shown in Figure 3.1-12. Views from PCH looking east and southeast towards the Pumpkin Patch site are currently obstructed by a chain-link fence with matting to block views of the site, as shown in Figure 3.1-11. Thus, there is no view of the San Gabriel River beyond the site. As viewed from PCH, the proposed project would have views of the landscaping in the foreground, the office building in the middleground, and the 18-foot-high screen wall in the background. ~~A~~ The 160-foot-high drilling rig would be on site for the first approximately 10 years while the wells are being drilled; however, the drilling rig would move from well location to well location and would not be a permanent fixture. ~~A~~ The collapsible 120-foot-high workover rig would ~~be brought on site on a temporary basis in the future~~ also move from well to well when workover of ~~the~~ an oil ~~wells~~ well is required; however, as described above, the elevation of the San Gabriel River is below that of the Pumpkin Patch site and, as such, views of the scenic vista are permanently obstructed from this location under existing conditions. Given the already obstructed views of San Gabriel River, operational activities would not have an adverse effect on a scenic vista. Therefore, impacts on scenic vistas on the Pumpkin Patch site during operation would be less than significant.

Page 3.1-31, "LCWA Site" section, 1st paragraph, is revised as follows:

During operation, the LCWA site would have a fully operational oil production facility. A 160-foot-high drilling rig, with a camouflaged sound-absorbent shell as described above for the Pumpkin Patch site, would be on site for the first approximately 10 years while the wells are being drilled; however, the drilling rig would move from well location to well location and would not be a permanent fixture. A collapsible 120-foot-high workover rig would ~~be brought on site on a temporary basis in the future~~ also move from well to well when workover of ~~the~~ an oil ~~wells~~ well is required. A 10-foot-high screen wall would surround the site and landscaping would buffer the screen wall from the street. As described above, the LCWA site is not within the Los Cerritos Wetlands complex or located within the viewsheds of the Los Cerritos Channel or the San Gabriel River and is, therefore, not considered a scenic vista; however, distant views of the San Gabriel Mountains can be viewed from the roadways surrounding the project site, including Westminster Avenue (2nd

Street) and Studebaker Road. As viewed from the surrounding roadways, the facilities on the LCWA site would be in the foreground and middleground and, thus, would not block background views of the San Gabriel Mountains. Therefore, operational activities on this site would not have an adverse effect on a scenic vista, and impacts would be less than significant.

Page 3.1-32, "Pumpkin Patch Site" section, is revised as follows:

As described above, construction on the Pumpkin Patch site would include the construction of three below-ground well cellars, oil production facilities including tanks, an office and warehouse, and associated infrastructure. ~~In addition, a 160-foot-high drill rig would be located on site for well drilling. In order to minimize noise and visual impacts during drilling, the drilling rig would be enclosed in a camouflaged sound-abatement shell; an example is provided in Figure 2-25, Example of Encased Drill Rig.~~ While construction activities would temporarily alter the visual character of the site, Mitigation Measure AES-1 would be implemented on the Pumpkin Patch site to relieve the visual distractions typically associated with construction activities ~~and~~ commonly encountered in developed areas. …

Page 3.1-33, "LCWA Site" section, is revised as follows:

As described above, construction on the LCWA site would include the construction of three well cellars, three gas turbines for power generation, oil production facilities ~~and~~ including tanks, associated infrastructure, and ~~the construction of~~ a micro-grid energy system. ~~Similar to the Pumpkin Patch site, a 160-foot drill rig would be located on site for well drilling. After the drilling is completed, the drill rig would be removed from the site.~~ In order to minimize noise and visual impacts during drilling, the drilling rig would be enclosed in a camouflaged sound-abatement shell; an example is provided in Figure 2-25. While construction activities would temporarily alter the visual character of the site, Mitigation Measure AES-1 would be implemented on the LCWA site to relieve the visual distractions typically associated with construction activities ~~and~~ commonly encountered in developed areas. …

Page 3.1-35, "View 5: View from Studebaker Road Looking East toward the LCWA Site" section, is revised as follows:

As shown in Figure 3.1-8, the existing view from Studebaker Road facing east towards the LCWA site would include views of the road in the foreground, earthen berm with trees in the middleground, and non-native invasive palms in the background. Within 2 years of project implementation, the proposed project would introduce streetscape and landscape features, including the introduction of a pedestrian sidewalk around the site, streetscape planting, and a new block wall around the perimeter of the LCWA site. The streetscape planting would consist of a variety of trees and shrubs that would be planted between the public sidewalk and new block wall. During this time, a 160-foot-high drill rig would be on the site to drill wells within the below-ground well cellar, with drilling concluding in Year 14 or 15. Within 20 and 40 years of project implementation, this viewshed would experience continued growth of the streetscape plantings, which would provide a natural buffer and obscure views of the block wall. As illustrated in this view, the proposed streetscape improvements would be the prominent focal point and would be visible to travelers on Studebaker Road. The motorists' exposure to a viewshed is limited in duration. Since these motorists are transient, the sensitivity to change in the viewshed is considered low to moderate. Currently, motorists see assorted ornamental vegetation and an earthen berm on the LCWA site. Compared to existing conditions, project implementation would enhance the visual quality of the LCWA site from viewers traveling along Studebaker

Road. Occasionally, a 120-foot workover rig may be utilized on site as required for well maintenance. The collapsible workover rig would be stored on site and would only be visible to the public when in use. When visible, the view of the drill rig or the workover rig would not substantially degrade the overall aesthetic character or quality of this viewshed. Given the overall project improvements, and the intermittent visibility of on-site maintenance equipment, impacts to the visual character of the LCWA site as seen from View 5 would be less than significant.

Page 3.1-36, 1st partial paragraph, 5th full sentence, is revised as follows:

… As discussed above, a 160-foot-high drill rig would be on site, and, o~~O~~ccasionally, a 120-foot-high workover rig may be utilized on site as required for well maintenance. …

Page 3.1-37, 1st partial paragraph, 3rd to last sentence, is revised as follows:

… Similar to the LCWA site, a 160-foot-high drill rig would be on the site to drill wells in the below-ground well cellar with drilling concluding in Year 11. In addition, a 120-foot-high workover rig ~~may~~ would be utilized as required for well maintenance. The collapsible workover rig would be stored on site and would only be visible to the public when in use. Given the overall visual character consistency with the nearby uses, and intermittent visibility of on-site maintenance equipment, impacts to the visual character on the Pumpkin Patch site as seen from View 9 would be less than significant.

Page 3.1-37, "View 10: View from Pacific Coast Highway Looking North toward the Pumpkin Patch Site" section, 1st paragraph, 3rd to last sentence, is revised as follows:

… Similar to the LCWA site, a 160-foot-high drill rig would be on the site to drill wells in the below-ground well cellar with drilling concluding in Year 11. In addition, a 120-foot workover rig ~~may~~ would be utilized as required for well maintenance. The collapsible workover rig would be stored on site and would only be visible to the public when in use. Given the overall visual character consistency with the nearby uses, impacts to the visual character on the Pumpkin Patch site as seen from View 10 would be less than significant.

Page 3.1-38, 1st partial paragraph, last sentence, is revised as follows:

… Given the overall post-construction improvement in visual character across the four individual sites that comprise the project site, the proposed project would not degrade the existing visual character or quality of the project site or its surrounding, and impacts would be less than significant with implementation of Mitigation Measure AES-1.

Page 3.1-38, "Construction" section, is revised as follows:

Construction and restoration activities associated with the proposed project would create new sources of light or glare, as lighting would be used during early morning and evening work activities. Construction activities on the project site would occur ~~during daylight hours, generally~~ between 7:00 a.m. and 7:00 p.m., in compliance with LBMC Section 8.8.202, Construction Noise Regulations. Pursuant to LBMC Section 8.8.202, no construction related activity shall be conducted outside of the hours of 7:00 a.m. and 7:00 p.m. on weekdays and federal holidays, and outside of the hours of 9:00 a.m. and 6:00 p.m. on Saturdays. No construction activities shall be permitted on Sundays. Thus, construction lighting would be limited to a few hours a day, with most lighting use occurring during hours when the project site is partially lighted by natural

dawn or dusk conditions. A minimal amount of glare could result from reflection of sunlight off windows of trucks, but this would be negligible and would not affect daytime views in the area given that there are no light-sensitive uses near the project site. Construction lighting would be aimed toward the activity and would be mostly contained within the area where work would be occurring; however, construction lighting still could result in substantial light and glare during the evening on areas with direct views of the site if lighting is not controlled and directed appropriately.

Security lighting would be provided after hours on all construction sites, but this lighting would be minimal, restricted to the project site, and would not exceed the level of existing night lighting levels in urban areas. Mitigation Measures AES-2 would ~~also ensure~~ require that security lighting does not pose undue light and/or glare. With implementation of Mitigation Measure AES-2, the proposed project's construction activities would not create a new source of substantial light or glare that would adversely affect day or night views in the area and impacts would be less than significant.

Page 3.1-39, "Operation" section, 1st paragraph, 3rd sentence, is revised as follows:

… While the proposed project would introduce new sources of light, it should be noted that the four individual sites that comprise the project site are located in an urban environment adjacent to a business park and the Plains All American Pipeline property which have nighttime lighting. …

Page 3.1-39, Mitigation Measure AES-2, is revised as follows:

> **Mitigation Measure AES-2: Lighting Plan.** Prior to issuance of a grading permit for each site, a Lighting Plan for the site shall be developed and ~~implemented~~ submitted to the City of Long Beach Planning and Development Services Department that requires all exterior lighting to be directed downward and focused away from adjacent sensitive uses and habitats to encourage wayfinding and provide security and safety for individuals walking to and from parking areas and working at the oil facilities on the Pumpkin Patch and the LCWA sites. Compliance with the approved Lighting Plan shall be implemented through the City's development review and building plan check process.

Page 3.1-40, "Light and Glare" section, is revised as follows:

While the proposed project would create new sources of light and glare during construction activities, it would be required to comply with LBMC Section 8.8.202, Construction Noise Regulations, which would limit the hours of construction to primarily daytime hours. In addition, implementation of Mitigation Measure AES-2 would reduce light and glare impacts to less than significant. Thus, light and glare impacts from the proposed project during construction would be less than significant. No projects have been identified adjacent to the project site that would cumulatively combine to result in lighting impacts during construction activities. Thus, light and glare cumulative impacts during construction would be less than significant.

Page 3.1-41, "Light and Glare" section, is revised as follows:

While the proposed project would introduce new sources of light associated with security, safety, and wayfinding, it should be noted that the four individual sites that comprise the project site are located in an urban environment. Thus, lighting is not unusual in the project vicinity. In addition, the proposed project would be required to comply with SEADIP (PD-1), which requires all lighting to be directed downward and designed not to project off site or onto adjacent uses;~~, and~~ LBMC Section 21.41.259, which requires that all

parking area lighting be directed and shielded to prevent light spillover to adjacent properties; and Mitigation Measure AES-2. Compliance with these standards and implementation of Mitigation Measure AES-2 would ensure that impacts from light and glare are reduced to a less-than-significant level. No projects have been identified adjacent to the project site that would cumulatively combine to result in lighting impacts during operation. Thus, the proposed project would not cumulatively combine to result in light and glare impacts and would be less than significant.

10.1.4 Section 3.2, Air Quality

Page 3.2-4, 1st partial paragraph, last sentence, is revised as follows:

… Long-term exposure may lead to scarring of lung tissue and may lower ~~the~~ lung efficiency (CARB 2015).

Page 3.2-4, "Volatile Organic Compounds" section, 3rd sentence, is revised as follows:

… Internal combustion associated with motor vehicle usage is the major source of hydrocarbons, along with emissions from architectural coatings. …

Page 3.2-8, 1st paragraph, is revised as follows:

Because data on all pollutants is not available at the nearest air quality monitoring station, this analysis has utilized data from the three air monitoring stations closest to the project site. Pollutant data from 2012 through 2016 for PM_{10}, $PM_{2.5}$, and lead have been obtained from t~~T~~he Long Beach – South station, which is the nearest monitoring station, located ~~closest to the project site (located~~ approximately 4 miles to the northwest of the project site~~); therefore, ambient air quality monitoring data from this station were reported in Table 3.2-2 for the available pollutants (i.e., 2012 through 2016 for PM_{10}, $PM_{2.5}$, and lead)~~. Pollutant data from 2012 and 2013 for O_3, NO_2, CO, and SO_2 have been obtained from t~~T~~he Long Beach – North station, which is ~~the next closest to the project site (~~located approximately 6 miles to the northwest of the project site~~); therefore, ambient air quality monitoring data from this station were reported in Table 3.2-2 for the pollutants not covered by the Long Beach – South station (i.e., 2012 and 2013 for O_3, NO_2, CO, and SO_2)~~. ~~Ambient air quality monitoring data from~~ Pollutant data from 2014, 2015, and 2016 for O_3, NO_2, CO, and SO_2 have been obtained from t~~T~~he Long Beach – Hudson station, which is ~~(~~located approximately 7 miles to the northwest of the project site~~) were used in Table 3.2-2 for pollutants not covered by either the Long Beach – South or Long Beach – North stations (i.e., 2014, 2015, and 2016 for O_3, NO_2, CO, and SO_2.)~~. The pollutant data obtained from these air quality monitoring stations is provided in Table 3.2-2.

Page 3.2-24, Mitigation Measure AQ-1, is revised as follows:

> **Mitigation Measure AQ-1: Construction-Period Use of Low-VOC Paints.** The Applicant for the proposed project shall be responsible for the use of SCAQMD Rule 1113–compliant paints with a VOC content of ~~75~~50 grams per liter or less.

Page 3.2-24, "Mitigation Measures" section, 4th paragraph, is revised as follows:

Mitigation Measure AQ-1 would reduce the VOC emissions to less than ~~21.9~~24.4 pounds per day during the construction of the office/warehouse ~~construction phase,~~ (on the Pumpkin Patch Site) and less than 7.7 pounds per day for the tank construction ~~phase~~. ~~This would also ensure that even w~~When combined with other

construction phases, the emissions would be below the 75 pounds per day ~~threshold for VOC~~ (the SCAQMD regional significance threshold for VOC). The total VOC emissions for all construction phases would be ~~a maximum of~~ reduced to less than 71.3 pounds per day, conservatively assuming that construction phases would overlap. In reality, all phases would likely not overlap and the maximum daily mitigated VOC emissions would be less than 71.3 pounds per day. Therefore, with implementation of ~~this m~~Mitigation ~~m~~Measure AQ-1, the short-term regional emissions of VOC with construction of the proposed project would be reduced to a level of less than significant.

Page 3.2-24, "Mitigation Measures" section, 5th paragraph, is moved to page 3.2-25 following Mitigation Measure AQ-2 and revised as follows:

Mitigation Measure AQ-2 would ~~be aimed at reducing~~ reduce NO_X emissions. Mitigation Measure AQ-2 requires the use of construction equipment that meet the most stringent emissions standards for off-road equipment~~;~~. ~~h~~However, ~~even~~ with implementation of this measure, the NO_X emissions for construction would still exceed the ~~construction~~ SCAQMD significance thresholds for regional NO_X ~~threshold~~ construction emissions. This analysis assumes that construction phases would overlap. In reality, all phases would likely not overlap and the maximum daily mitigated NO_X emissions would be lower than shown below. Nonetheless, conservatively assuming overlapping construction phases, with implementation of Mitigation Measure AQ-2, the short-term regional NO_X emissions ~~for~~ with construction of the proposed project would be significant and unavoidable.

Page 3.2-25, Mitigation Measure AQ-2, is revised as follows:

Mitigation Measure AQ-2: Construction NO_X Reduction Measures. The Applicant for the proposed project shall be responsible for the implementation of the following construction-related NO_X reduction measures:

- Require all off-road diesel-powered construction equipment greater than 50 hp (e.g., excavators, graders, dozers, scrappers, tractors, loaders, etc.) to comply with EPA-Certified Tier IV emission controls where commercially available. Documentation of all off-road diesel equipment used for this project, including Tier IV certification, or lack of commercial availability if applicable, shall be maintained and made available by the contractor to the City for inspection upon request. In addition, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB such as certified Level 3 Diesel Particulate Filter or equivalent. A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment. If Tier IV construction equipment is not available, the City shall require the contractor to implement other feasible alternative measures, such as reducing the number and/or hp rating of construction equipment, and/or limiting the number of individual construction phases occurring simultaneously. The determination of commercial availability of Tier IV construction equipment shall be made by the City prior to issuance of grading or building permits based on applicant-provided evidence of the availability or unavailability of Tier IV equipment and/or evidence obtained by the City from expert sources such as construction contractors in the region.
- Eliminate the use of all portable generators. Require the use of electricity from power poles rather than temporary diesel or gasoline power generators.

- Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow, including during the transportation of oversized equipment and vehicles.
- Provide dedicated turn lanes for movement of construction trucks and equipment on and off site. The location of these dedicated lanes shall be addressed in the Construction Trip Management Plan.
- Reroute construction trucks away from congested streets or sensitive receptor areas.
- Prohibit the idling of on-road trucks and off-road equipment in excess of 5 continuous minutes, except for trucks and equipment where idling is a necessary function of the activity, such as concrete pour trucks. The Applicant or construction contractor(s) shall post signs at the entry/exit gate(s), storage/lay down areas, and at highly visible areas throughout the active portions of the construction site of the idling limit.
- On-road heavy-duty diesel haul trucks with a gross vehicle weight rating of 19,500 pounds or greater used to transport construction materials and soil to and from the project site shall be engine model year 2010 or later or shall comply with the USEPA 2007 on-road emissions standards.

Page 3.2-25, Table 3.2-7, Mitigated Regional Construction VOC Emissions, is revised as follows:

Table 3.2-7 Mitigated Regional Construction VOC Emissions

Construction Phase	VOC (pounds per day)[a]	Percent Reduction from Unmitigated Emissions
1. Demolition/Site Prep	3.5	47%
2. Well Cellars	4.9	32%
3. Process Equipment	5.5	29%
4. Tank Construction	7.7	71%
5. Off-Site Construction	7.7	0%
6. Office/Warehouse	24.4	67%
7. Wetlands Restoration	1.6	82%
8. Turbine Commissioning	12.3	0%
Phases 1–8 Combined	**67.6**	**55%**
Landfill Excavation	3.7	18%
Phases 1–9 Combined	**71.3**	**54%**
SCAQMD Threshold	*75*	
Exceeds Threshold?	No	

SOURCE: Greve & Associates, 2017.

a. The VOC estimates provided in this table assumed a VOC content factor of 75 grams per liter for paints. Mitigation Measure AQ-1 has been revised to require paints with a VOC content of 50 grams per liter. Therefore, the mitigated VOC emissions would be less than the values shown in this table.

Page 3.2-26, "Operation" section, 1st paragraph, is revised as follows:

Operational air pollutant emissions were estimated using CalEEMod Version 2016.3.1. The operational emissions calculations are provided in the *Air Quality Assessment for the Los Cerritos Wetlands Oil Consolidation and Restoration Project* (2017), prepared by Greve & Associates and provided in Appendix B1

of this EIR. As discussed in Appendix B1, c~~E~~missions from operational activities would occur at various ~~sites~~ locations on the project site and during various operational phases of the proposed project. The Pumpkin Patch site would generate emissions ~~primarily~~ from vehicle travel~~,~~ and natural gas for space heating~~, and a diesel-powered drilling rig~~ of the office/warehouse building. The LCWA site would generate emissions from vehicle travel and electrical generation for the proposed project. Most of the ~~site's~~ proposed project's electricity would be generated by the turbines located at the LCWA site. One drilling rig would be operated at both the LCWA and Pumpkin Patch sites, but would be electrically powered. Additionally, both the Pumpkin Patch and LCWA sites would have diesel-powered workover drilling rigs that would operate during the daytime hours for approximately 50 hours per week.

Page 3.2-28, 1st paragraph, is revised as follows:

The data for operational emissions in Table 3.2-9 though Table 3.2-11 show that the ~~change in~~ project emissions for the first 20 years, 20 to 40 years, and after 40 years would be below the SCAQMD significance thresholds for operational regional emissions all pollutants except ~~regional operational~~ NO_X emissions. The primary emission source for this pollutant would be the turbines located on the LCWA site that would supply most of the proposed project's electricity. The diesel drilling rigs at the Pumpkin Patch and LCWA sites would be secondary contributors. Implementation of Mitigation Measure AQ-3 would ~~be recommended to~~ reduce ~~the NOX. With the implementation of operational mitigation measures,~~ the operational NO_X emissions ~~would be reduced~~ to below the SCAQMD significance threshold. Therefore, operational impacts would be mitigated to a less-than-significant level.

Page 3.2-30, Impact AQ-3a analysis, 2nd paragraph, is revised as follows:

The proposed project would exceed ~~regional~~ the SCAQMD significance thresholds for regional construction-related VOC and NO_X emissions. Implementation of Mitigation Measure AQ-1 would reduce construction-related VOC emissions to a less-than-significant level. Although Mitigation Measure AQ-2 would reduce construction-related NO_X emissions~~; however~~, the project's NO_X emissions would still exceed the threshold. ~~Since~~ With implementation of Mitigation Measure AQ-2 ~~requires the use of construction equipment that meet the most stringent emissions standards, there are no feasible measures to reduce the construction NO_X emissions to less than the threshold. Therefore~~, the short-term construction NO_X emissions would ~~result in~~ still exceed the SCAQMD regional significance threshold and contribute to a cumulatively considerable net increase in NO_X for which the SCAB is nonattainment. Therefore, the proposed project would contribute to a cumulative ~~and impacts~~ impact that would be significant and unavoidable.

Page 3.2-30, "Operation" section, 2nd paragraph, is revised as follows:

The proposed project would exceed ~~regional~~ the SCAQMD significance thresholds for regional operational-related NO_X emissions. Implementation of Mitigation Measure AQ-3 would reduce operational-related NO_X emissions to below the threshold. Therefore, the proposed project's contribution to a cumulative impact from long-term operational NO_X emissions would be mitigated to a less-than-significant level.

Page 3.2-32, "Operation" section, 1st paragraph, 3rd sentence, is revised as follows:

… Electrical operation of the facilities would be constantly producing energy to power the on-site facilities and ~~the increase in energy usage~~ emissions would increase greatly on site with the proposed project from the existing condition. …

Page 3.2-35, "Off-Road Equipment and On-Road Mobile Sources" section, 1st paragraph, last sentence, is revised as follows:

… Therefore, DPM emissions from project operations were estimated using the values of exhaust $PM_{2.5}$ found in the CalEEMod output files provided in the Air Quality Assessment for the Los Cerritos Wetlands Oil Consolidation and Restoration Project (2017), prepared by Greve & Associates and provided in Appendix B1 of this EIR.

Page 3.2-35, "Air Dispersion Modeling" section, 2nd paragraph, next to last sentence, is revised as follows:

… The upper-air data came from the Miramar Marine Corps Air Station (KNKX), which is approximately 152 kilometers (94 miles) from the project site. There are only approximately 100 upper air stations in North America, so this distance is typical.

Page 2.2-37, "Health Risk for Unmitigated Future Emissions" section, 1st paragraph, 3rd sentence, is revised as follows:

… Furthermore, the cancer burden was calculated because, according to SCAQMD guidelines, the maximum individual cancer risk (MICR) is greater than one 1 in one million. …

Page 3.2-42, "Operation" section, 4th paragraph, last sentence, is revised as follows:

… As discussed above, operation of the project would not conflict with or obstruct implementation of the 2012 AQMP~~,~~ and ~~is~~ would also be affirmatively consistent with the AQMP, as the project has incorporated into its design appropriate control strategies set forth in the AQMP for achieving its emission reduction goals and the project is consistent with the demographic and economic assumptions upon which the plan AQMP is based.

Page 3.2-43, 3rd full paragraph, 2nd sentence, is revised as follows:

… With the implementation of Mitigation Measures AQ-2 and AQ-3, the project would be mitigated ~~t~~to a less-than-significant level. …

10.1.5 Section 3.3, Biological Resources

Page 3.3-59, 2nd full paragraph, is revised as follows:

The westernmost portion of Steamshovel Slough has been identified as potential habitat for the Pacific green sea turtle. ~~There is no potential for project activities to impact this species since there would be no impacts to Steamshovel Slough. Therefore, no impacts on the green sea turtle or its habitat would occur~~ Berm removal would immediately increase the area of flooded tidal marsh habitat that is available to Pacific green sea turtle, fish, and other aquatic species, and would enhance available habitat and food chain for these species. Short-

term water quality impacts (i.e., temporary increase in sedimentation) would occur both during and following site restoration while the marsh equilibrates, but the volume of sediment would be small and expected to spread out over a period of several years. Potential impacts to the green sea turtle or its habitat would be less than significant.

Page 3.3-76, the following paragraph is added following the 1st full paragraph:

As discussed in Section 3.8 Hydrology and Water Quality, Impact HY-1, berm removal and reconnecting Steamshovel Slough with the marshplain to the south could result in increased erosion and sedimentation of the slough channel and adjacent areas. Although some erosion of the slough channel is expected initially, as the channel dimensions adapt and then equilibrate to the increased flow of water at the site. This could temporarily increase turbidity in Steamshovel Slough and Los Cerritos Channel, but the volume of sediment would be small and would be spread out over a period of several years as the channel erodes. Further, the improved function of the salt marsh habitat would serve to capture, filter, and naturally degrade pollutants and would potentially be a beneficial impact.

10.1.6 Section 3.4, Cultural Resources

Page 3.4-8, before last paragraph, is revised as follows:

Public Comments During NOP Public Review Period

A final potential historical-period resource was brought to the attention of the City through the public scoping process for the project, in an email from a local resident dated November 8, 2016. …

Page 3.4-19, 1st three paragraphs, is revised as follows:

Because the Synergy Oil Field was recommended ineligible for listing on the California Register and local register, the Synergy Oil Field does not qualify as a historical resource under CEQA. Therefore, the proposed project would have no impacts to the Synergy Oil Field as a ~~cultural~~ historical resource on the project site.

The Bixby Ranch Field Office is recommended individually eligible for listing in the California Register and local register under Criteria 1/A and 3/C. The existing proposed preliminary Relocation and Rehabilitation Plan would not conform to the Secretary of the Interior's Standards for Rehabilitation (Standards). More specifically, under this Plan, the Bixby Ranch Field Office would be moved from its current location and rotated 180 degrees altering its relationship with its views, spatial relationships and setting within the oil field. The proposed landscaping and addition of a tree at the southwest corner of the building interferes with the historic visual relationships of the building with the oil field. The proposed Los Cerritos Visitors Center sign and ADA ramp also detracts from the south elevation, views of which were clear and unobstructed in the circa 1928 historical photograph of the building. The Plan to rehabilitate the primary (west) elevation and south elevation in a manner consistent with the 1928 historic photograph includes the addition of a ramp, railings, and deck that are not differentiated from the historic materials of the Bixby Ranch Field Office, as the baluster guardrails would match the existing non-contributing porch railings (altered as part of the last renovation). In addition, the building's one-story massing is a character-defining feature; raising the building to protect it from sea level rise would alter the scale of the building and detract from its architectural character and design. ~~Furthermore, without~~ Because the proposed project does not include a relocation and rehabilitation plan for the

Bixby Ranch Field Office consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties, the building could be damaged during relocation and/or rehabilitation~~; a relocation and rehabilitation plan would protect the building from potential adverse impacts during relocation and provide guidelines for rehabilitation in conformance with the Standards~~.

~~Because t~~The proposed project's plans to relocate and rehabilitate the Bixby Ranch Field Office would not conform to the~~ Standards~~ Secretary of the Interior's Standards for Treatment of Historic Properties; therefore, the project would result in a significant impact to~~ the~~ this historical resource. After project completion and once all the oil facilities are removed (over a 40-year period), the Bixby Ranch Field Office would no longer retain its historical associations with the themes of the~~mes of~~ Los Angeles Basin Oil Industry (1892–1945), Long Beach Oil Industry (1921–1945), and the Petroleum Property Type and property types of Petroleum Property Type and Field Office Property Type since the character-defining features of the Synergy Oil Field would be removed. Furthermore, the Bixby Ranch Field Office would lose its existing important spatial and visual relationships with the existing Synergy Oil Field, and the orientation and scale of the Bixby Ranch Field Office would be altered. Implementation of Mitigation Measures CUL-1, CUL-2, CUL-3, and CUL-4 would reduce impacts to the resource identified as the Bixby Ranch Field Office to a level of less than a significant. These measures ensure that the building is properly documented in compliance with federal guidelines, and that relocation and re-use plans conform to the methodology recommended by the National Park Service (NPS) and Secretary of the Interior's Standards for Treatment of Historic Properties and other federal guidelines.

Page 3.4-20, 2nd full paragraph, is revised as follows:

In addition to the historic-period archaeological trash scatter (LSA-LYC1501-S-1) discussed above as part of the Synergy Oil Field, a second historic-period archaeological resource~~ was also identified. This is the now~~, the buried City Dump and Salvage Landfill #2 (LSA-LYC1501-S-2), was identified. Based on the ubiquitous nature of the contents of the landfill, and a lack of clear context and association, LSA-LYC1501-S-2 was ~~also~~ recommended as not eligible for individual listing in the California Register (Fulton and Fulton 2017). Therefore, the project would have no impact on this historic-period resource on the project site.

Page 3.4-20, 3rd full paragraph, last 2 sentences, is revised as follows:

… If previously undocumented cultural resources are encountered during construction activities, those resources could be found eligible for listing in the California Register~~ and could,~~; therefore, have the potential to be impacted by the project. Implementation of Mitigation Measures CUL-5 through CUL-7 would ~~ensure that~~ reduce impacts to historical resources as defined in *CEQA Guidelines* Section 15064.5 ~~would be~~ to a level of less than significant.

Page 3.4-20, "Operation" section, is revised as follows:

Once construction is complete, operation of the project is not expected to impact any archaeological resources or built environment resources that could qualify as historical resources; however, if archaeological resources that qualify as historical resources are identified during the course of operations, implementation of Mitigation Measures CUL-5 and CUL-7 would ~~ensure that~~ reduce the impacts to archaeological and/or historical resources as defined in *CEQA Guidelines* Section 15064.5 ~~would be~~ to a level of less than significant.

Page 3.4-21, Mitigation Measure CUL-2, is revised as follows:

Mitigation Measure CUL-2: Retention of the Bixby No. 2 Discovery Well. Prior to the issuance of a grading permit for the Synergy Oil Field site by the City of Long Beach, a plan shall be implemented by the Applicant for the retention and preservation of t~~T~~he Bixby No. 2 Discovery Well and sign ~~shall be retained and preserved~~ along with a 5-foot buffer around the furthest point from the concrete pad. ~~Necessary~~ The plan shall define the necessary maintenance to the sign that shall be performed~~,~~ (see National Park Service Preservation Brief 25, "The Preservation of Historic Signs," by Michael J. Auer). The plan shall describe a~~A~~ path for pedestrian traffic from the visitors center to the Discovery Well that shall be developed and installed. At the Discovery Well site, a wayside sign shall be installed interpreting the Seal Beach Oil Field and the importance of the Bixby No. 2 Discovery Well. The interpretation of the Bixby No. 2 Discovery Well shall be overseen and prepared by a qualified architectural historian or historic preservation professional. The ongoing maintenance of the Bixby No. 2 Discovery Well site shall be the responsibility of the owner of this area of the Synergy Oil Field site.

Page 3.4-21, Mitigation Measure CUL-3, 1st paragraph, is revised as follows:

Mitigation Measure CUL-3: Historic Preservation Consultation, Preparation of a Relocation and Rehabilitation Plan, and Construction Monitoring. Prior to the issuance of a grading permit for the Synergy Oil Field site by the City of Long Beach, a Relocation and Rehabilitation Plan and plans for Construction Monitoring shall be submitted by the Applicant for review and approval. The project design for Bixby Ranch Field Office is presently conceptual and detailed architectural drawings showing the proposed rehabilitation have not been prepared. A qualified architectural historian shall provide input to the project architect to revise the design in accordance with the Standards to retain the character-defining features of the exterior and interior of the Bixby Ranch Field Office. Once the design has been finalized, the architectural historian shall prepare a Standards plan review for submittal to the City of Long Beach Planning for a Certificate of Appropriateness.

Page 3.4-22, Mitigation Measure CUL-5, is revised as follows:

Mitigation Measure CUL-5: Retention of Qualified Archaeologist and Worker Training. Prior to the issuance of a grading permit for ~~project implementation~~ each of the four individual sites and any off-site improvements by the City of Long Beach, evidence shall be provided to the City that a qualified archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Secretary of the Interior 2008) has been retained by the City to conduct any required training, evaluation, or treatment of archaeological resources that might be encountered during implementation of the project. As part of this, prior to the start of grading, the qualified archaeologist shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel must be informed of the types of archaeological resources that may be encountered (both prehistoric and historical), and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. The ~~City~~ Applicant must ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance. This documentation shall be made available to the City upon request.

Page 3.4-22, Mitigation Measure CUL-6, is revised as follows:

Mitigation Measure CUL-6: Native American Monitoring. A Native American monitor from the Gabrieleño Band of Mission Indians—Kizh Nation, a consulting party for the project under AB 52, shall be present during all earth-moving construction activities. The Native American monitor shall be given the opportunity to participate in the cultural resources sensitivity training described in Mitigation Measure CUL-5. At least 30 days prior to issuance of grading permits by the City of Long

Beach for each of the four individual sites and any off-site improvements, a Native American Monitoring Agreement (Monitoring Agreement) shall be developed between the City and the Gabrieleño Band of Mission Indians—Kizh Nation. The ~~agreement~~ Monitoring Agreement shall pertain to prehistoric archaeological resources and Tribal cultural resources, respectively, and shall identify any monitoring requirements and treatment of cultural resources to meet both the requirements of CEQA and those of the Tribal representative. The Monitoring Agreement shall also address communication protocols in the event of an unanticipated discovery of cultural materials, and the roles, responsibilities, and authorities of the Native American Monitor. The Monitoring Agreement shall also detail the protocols for treatment and final disposition of any Native American cultural resources, sacred sites, and human remains discovered on the site that the Native American Monitor shall implement in consultation and coordination with the Native American Most Likely Descendant, as identified by the NAHC. In accordance with Mitigation Measure CUL-9, discussed below, discovery and treatment of human remains shall comply with State Health and Safety Code Section 7050.5 and PRC Section 5097.98.

Page 3.4-23, Mitigation Measure CUL-7, is revised as follows:

Mitigation Measure CUL-7: Archaeological Resource and/or Tribal Cultural Resource Discovery and Treatment. In the event of the unanticipated discovery of archaeological or other cultural resources, whether discovered through Native American monitoring or not, all work activities in the area (within approximately 100 feet of the discovery) shall be halted or redirected until the discovery can be evaluated by a qualified archaeologist. Construction shall not resume until a qualified archaeologist has conferred with the City and, in the case of prehistoric archaeological resources and tribal cultural resources, the Native American monitor, on the significance of the resource. If it is determined that the discovered archaeological resource and/or tribal cultural resource is significant under CEQA, avoidance and preservation in place shall be the preferred manner of mitigation, pursuant to PRC Section 21083.2(b) and Section 21084.3. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, a Treatment Plan shall be prepared and implemented by a qualified archaeologist, in consultation with the City, that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource or cultural information in the event of a tribal cultural resource. The City shall also consult with appropriate Native American representatives in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resources, beyond those that are scientifically important, are considered. Any evaluation and treatment shall be supervised by an individual or individuals that meet the Secretary of the Interior's Professional Qualification Standards.

Page 3.4-23, Impact CUL-2, is revised as follows:

Impact CUL-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to *CEQA Guidelines* Section 15064.5. (Less than Significant with Mitigation)

Page 3.4-23, "Construction" section, last sentence, is revised as follows:

… Implementation of Mitigation Measures CUL-5 through CUL-7 during construction activities would ~~ensure than~~ reduce impacts to archaeological resources as defined ~~at~~ in *CEQA Guidelines* Section 15064.5 ~~would be~~ to a level of less than significant.

Page 3.4-23, "Operation" section, is revised as follows:

Once construction is complete, operation of the project is not expected to impact archaeological resources; however, if archaeological resources were identified during the course of operations, implementation of Mitigation Measures CUL-5 through CUL-7 would ~~ensure that~~ reduce impacts to archaeological resources as defined ~~at~~ in *CEQA Guidelines* Section 15064.5 ~~would be~~ to a level of less than significant.

Page 3.4-24, "Construction" section, is revised as follows:

The results of the fossil locality search and field survey conducted ~~during preparation of this report~~ indicate that no paleontological resources have been found within or immediately adjacent to the project site. The project site contains Artificial Fill overlying Young Alluvial Fan and ~~Channel~~ Valley Deposits, Undivided. Artificial Fill reaches a maximum depth of approximately 33 feet in the eastern half of the Pumpkin Patch site; however, the depth of Artificial Fill elsewhere in the project site is unknown. While Artificial Fill has no paleontological sensitivity, the underlying Young Alluvial Fan and ~~Channel~~ Valley Deposits, Undivided have low paleontological sensitivity to a depth of 15 feet and high paleontological sensitivity below that ~~mark~~ depth. Given the sensitivity of the underlying geological deposits, there is a possibility that excavation for the well cellars and for other site improvements could encounter significant paleontological resources. Disturbance of such resources would constitute a significant impact on the environment. Implementation of Mitigation Measure CUL-8 would ensure that impacts to paleontological resources are less than significant.

Page 3.4-24, Mitigation Measure CUL-8, is revised as follows:

> **Mitigation Measure CUL-8: Paleontological Monitoring.** Prior to commencement of any grading or excavation activity on site, the ~~City~~ Applicant shall retain a qualified paleontologist, defined as a paleontologist meeting the guidelines of the Society of Vertebrate Paleontology (SVP) (2010) and approved by the City of Long Beach. The qualified paleontologist, or a designated paleontological monitor working under the guidance of the qualified paleontologist, shall attend and participate in any preconstruction meetings and worker training (as discussed in Mitigation Measure CUL-5), and shall be on site during all excavation and other significant ground-disturbing activities that reach a depth of 15 feet or greater below the modern ground surface. This is the minimum depth at which Young Alluvial Fan and ~~Channel~~ Valley Deposits, Undivided may be encountered. These deposits are considered to have low paleontological sensitivity near the top of the geologic unit (which may not necessarily correspond with the modern ground surface), and a high paleontological sensitivity greater than 15 feet below the top of the unit. In the event that paleontological resources (e.g., fossils) are unearthed during ground-disturbing activity, the paleontological monitor shall have the authority to temporarily halt or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the monitor shall allow grading to recommence in the area of the find. Daily field logs shall be prepared during the course of the monitoring, and upon completion of monitoring a final report shall be prepared for submittal to the City of Long Beach.

10.1.7 Section 3.5, Geology, Seismicity, and Soils

Page 3.5-12, "Subsidence" section, 1st paragraph, last two sentences, is revised as follows:

… The subsidence can result in damage to infrastructure such as buildings, tanks, or ~~pipelines, or~~ underground utilities and pipelines as well as walls, paved parking areas, and roadways. It can also result in a decrease in

the volume of available aquifer storage. This is the reason the produced water, which is pumped from the subsurface along with the oil ~~production~~ and gas, is processed, and purposely injected back into the same depth interval to prevent subsidence.

Page 3.5-14, "Liquefaction and Lateral Spreading" section, 3rd paragraph, 1st sentence, is revised as follows:

Figure 3.5-5, Liquefaction Potential in Project Area, displays the relative liquefaction hazard potential in the vicinity of the proposed project~~;~~. As indicated in Figure 3.5-5, the entire area encompassing all four individual sites that comprise ~~that proposed~~ the project site is entirely within a liquefaction zone (CGS 1998). …

Page 3.5-27, "General" section, 2nd paragraph, is revised as follows:

For purposes of this analysis, construction activities would include ~~the~~ habitat restoration, excavation of soils, and previously landfilled materials; removal of some existing oil production facilities (wells, piping, and associated infrastructure); construction of aboveground structures including the office building and warehouse, oil production facilities, oil pipelines, trail, parking lots, and driveway improvements~~, and restored habitat~~; below-grade well cellars and infrastructure; and the relocation of the Synergy office building, ~~and~~ placement on a new foundation, and remodel as the visitors center. These construction activities would occur at various times ~~spread out over time~~ across the entire project site. Operation~~s~~al activities would include the operation~~al phases~~ and use of the office buildings~~, oil production facilities, trail~~ and warehouse, the visitors center, trails, parking lots, driveways, and restored habitat area~~, but do not include soil excavation~~. Related to the oil production, operational activities would include oil well drilling, operation of the oil production facilities, and ongoing maintenance of the wells and production facilities. In addition, the operations activities include the post-treatment monitoring activities conducted to verify that remedial objectives have been achieved.

Page 3.5-29, "Construction" section, 1st paragraph, is revised as follows:

Proposed ~~Synergy Oil Field site~~ construction activities on the Synergy Oil Field site within the fault zone would include the relocation of the existing office building (to be repurposed as a visitors center) to the southwest corner of the ~~Synergy Oil Field~~ site outside of the fault zone, as shown in Figure 2-22, Pumpkin Patch Site Habitat Buffer Area. This relocation would reduce the risk of fault rupture damaging the building or injuring people by relocating the structure outside of the fault zone by approximately 1,000 feet to the southwest. As described in Chapter 2, 95 percent of aboveground pipelines and all storage tanks, would be removed from the Synergy Oil Field site during the first phase of the project, with the remaining infrastructure removed later as wells are removed. Oil wells and associated infrastructure would be removed if the oil production in each well decreases to less than one full barrel of oil per day for a period of 18 consecutive months or within 40 years from the New Occupancy Date (described in Chapter 2, *Project Description*, as completion and occupancy of the oil production facilities on the Pumpkin Patch and LCWA sites, and the office facility on the Pumpkin Patch site). The habitat restoration construction activities would include soil excavation, berm and trail construction, and ecosystem restoration. These construction activities would not alter the seismic environment or increase the risk of fault rupture. The relocation of the office building and upgrading to current building standards and the removal of existing oil production wells and ~~relocation of~~ various oil-related structures and infrastructures would reduce the risk of exposure to fault rupture on the Synergy Oil Field site. Therefore, impacts related to fault rupture on the Synergy Oil Field site would be less than significant.

Page 3.5-29, "Construction" section, 2nd paragraph, last three sentences, is revised as follows:

… The likelihood of a fault rupture occurring during construction would be relatively low with minimal risk of injury or property damage because the pipeline would be constructed over a relatively short period of time and does not include habitable structures (workers would not be on site for extended time periods and within or near tall structures that could collapse or shed debris during a seismic event). Construction activities would be conducted in compliance with the federal, state, and local regulatory requirements related to oil pipeline construction and worker safety. The risks to the pipelines and utilities that would have the potential to occur during the operations phase when the pipelines are carrying oil and utilities are operational~~, as~~ are discussed below. Impacts related to fault rupture on the City Property site during construction would be less than significant.

Page 3.5-30, 1st paragraph, 2nd and 3rd sentences, are revised as follows:

… Therefore, although fault rupture is possible along new or unknown fault traces, the likelihood of a fault rupture occurring during construction would be relatively low with minimal risk of injury or property damage because construction would occur over a relatively short period of time and the buildings would not be occupied until after construction is complete. Construction would be conducted in compliance with the federal, state, and local regulatory requirements for building and infrastructure construction and worker safety. The more likely potential risk to buildings, wells, oil well drilling, well cellars, and associated infrastructure would occur during the operations phase after construction and more in response to seismic shaking and seismic-related ground failures, as discussed further below.

Page 3.5-31, "Impacts Related to the Future Structures on Pumpkin Patch and LCWA sites" section, heading and 1st paragraph, 3rd sentence, is revised as follows:

Impacts Related to the Future Structures on Pumpkin Patch and LCWA ~~s~~Sites

… The larger potential risk to buildings, wells, well cellars, and associated infrastructure would occur more in response to seismic shaking and seismic-related ground failures, as discussed further below. …

Page 3.5-32, "Construction" section, 2nd paragraph, is revised as follows:

More importantly, the structural elements of the proposed project (i.e., the structures on the Pumpkin Patch and LCWA sites, and the oil pipeline and utilities from the LCWA site through the City Property site to the Pumpkin Patch site) would be required to undergo appropriate design-level geotechnical evaluations prior to final design and construction. ~~Implementing~~ Incorporation of the regulatory requirements of DOGGR, ~~in~~ the CBC, and local ~~ordinances, and ensuring~~ regulations would ensure that all buildings and structures are ~~constructed~~ designed in compliance with the law ~~is the responsibility of~~ by the project engineers and reviewed by building officials. As described in Section 3.5.3, the CBC describes required standards for the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California. The standards include earthquake design requirements that determine the seismic design category and then describe the structural design requirements. The geotechnical engineer, as a registered professional with the State of California, is required to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care for the particular region in California, which, in the case of the proposed project, is the City. The California Professional Engineers Act (Building and Professions Code Sections 6700–

6799), and the Codes of Professional Conduct, as administered by the California Board of Professional Engineers and Land Surveyors, provides the basis for regulating and enforcing engineering practice in California. The local building officials are typically with the local jurisdiction (i.e., the City) and are responsible for inspections and ensuring CBC and local code compliance prior to approval of the building permit. In addition ~~and~~, as described in Section 3.5.3, the construction of the oil wells, storage facilities, and pipeline system and utility corridor would be under the permitting, design specifications, and inspection jurisdiction of DOGGR, as summarized in the DOGGR Publication No. PRC10, *California Statutes and Regulations for Conservation of Oil, Gas, & Geothermal Resources.* Similar to the CBC, the registered professionals designing and constructing the wells, pipelines, and associated infrastructure are required to comply with DOGGR regulations. Finally, as described in Section 2.5.1.3, Pumpkin Patch Site, the proposed project would either remove the landfilled materials at the Pumpkin Patch site and replace those materials with imported fill appropriately placed and compacted to support the proposed structures, or drive piles through the landfill materials ~~that is~~ to the depth required to reach underlying stable units to support the building foundation. As discussed above, the site-specific geotechnical investigations required by the CBC would include recommendations to address geotechnical issues, including the design of buildings and infrastructure to address seismic ground shaking. ~~With~~ Upon compliance with the regulatory requirements and the implementation of geotechnical design recommendations as required by Mitigation Measure GEO-1, Implement Geotechnical Recommendations, impacts ~~relative to~~ from seismic ground shaking would be reduced to a less-than-significant level ~~with mitigation~~ for all components of the proposed project.

Page 3.5-33, "Non-Oil Production Structures" section, is revised as follows:

As previously discussed, the project structures (e.g., buildings and associated infrastructure) ~~to be~~ constructed at the Pumpkin Patch and LCWA sites would be designed to withstand seismic ground shaking during their operation in compliance with the CBC and local building code regulations, and recommendations from site-specific geotechnical investigations, thereby reducing the potential for structural damage ~~and~~ such that risks would occur to the public ~~safety~~ or property. The parking lot, berms, trail, and restored ecosystem areas would not contain structures that could become irreparably damaged and harmful to persons in the event of strong ground shaking. Finally, although the existing Synergy building to be relocated and repurposed as a visitors center ~~and the building~~ would not be structurally changed, the existing building would be placed on a new foundation constructed using present-day CBC standards that would improve its ability to withstand seismic shaking. Impacts relative to non-oil production structures ~~regarding~~ from seismic ground shaking ~~from seismic events~~ during operation of the project would be less than significant.

Page 3.5-33, Mitigation Measure GEO-1, is revised as follows:

Mitigation Measure GEO-1: Implement Geotechnical Recommendations. ~~The Applicant shall prepare final geotechnical investigations for the following project components~~ As recommended in the geotechnical studies prepared for project implementation on each project site, at such time the details for the following site specific improvements and their locations are finalized, a design-level geotechnical investigation shall be prepared to develop final site- and development-specific recommendations based upon the potential geologic conditions that are described and evaluated in the geotechnical studies and this EIR. Design-level geotechnical investigation shall be prepared for the following project components and shall be submitted to the City of Long Beach, Building Department and Planning Department:

- Visitors center on the Synergy Oil Field site;

- Office b~~B~~uilding and warehouse on the Pumpkin Patch site;
- All well cellars on the Pumpkin Patch and LCWA sites; and
- All tank battery and containment areas on the Pumpkin Patch and LCWA sites.

The design-level geotechnical investigations shall provide recommendations as necessary to address ~~relevant~~ the geotechnical issues that were identified for each site in the EIR~~ such as active faults, seismic shaking, seismic-related ground failure including liquefaction, and other soil stability issues including expansive soils, as needed. These types of issues are addressed through compliance with the CBC, which requires geotechnical investigations to identify geotechnical hazards along with recommendations to reduce the identified risks~~. In addition to compliance with the CBC, design-level measures shall be provided for the following specific geotechnical issues:

- Risks from seismic shaking of structures such as the building to be constructed on the Pumpkin Patch site shall be reduced by designing the structures to withstand the anticipated maximum level of seismic ground shaking, and incorporating bracing and anchoring techniques to withstand a~~. The preliminary geotechnical investigation for the Pumpkin Patch site estimates the~~ Maximum Credible Earthquake of 7.0 magnitude~~ would result in a PGA of 0.604 g (KCG 2016a). Damage from seismic shaking of structures is reduced by designing buildings capable of withstanding or accommodating strong ground motion by using various bracing and anchoring techniques. Damage from soils~~
- For those project sites that have been identified as susceptible to liquefaction~~ can be addressed by~~, the design-level geotechnical investigations shall identify the specific measures recommended to address liquefaction potential, which could include driving piles through susceptible materials; conditioning the soils by deep soil mixing, jet or pressure grouting, or dynamic compaction techniques; or by removing the susceptible soils.
- ~~Damage from placing structures on unstable materials (e.g.,~~ If the landfill ~~materials~~ on the Pumpkin Patch site~~) can be addressed~~ is not removed, any structures proposed to be placed on top of the landfill shall be stabilized by one of two measures: by driving piles through unstable materials into underlying stable units or by removing the susceptible soils and replacing the materials with properly compacted imported fill.~~ Damage from~~
- For those sites on which structures may be placed in areas of expansive soils~~ can be addressed by removing and replacing expansive soils~~, the design-level geotechnical study shall identify whether the expansive soils should be removed and replaced with imported non-expansive fill, or with proper mixing and grading of site materials.
- The Applicant shall provide the design-level geotechnical investigations along with the plans, specifications, grading plans, and building plans to the City for review as a condition of approval to acquire the necessary grading and building permits.~~ Upon approval by the City,~~
- I~~i~~mplementation by the Applicant of the recommendations in the geotechnical investigations will mitigate geotechnical hazards to a level of less than significant.

Page 3.5-34, Impact GEO-3 analysis, last two sentences, is revised as follows:

… Without appropriate design measures, the placement of structures on such soils could place the public at risk of injury and/or structures and other structural slabs at risk of damage. The impact from induced seismic activity caused by oil production was analyzed above in Impact GEO-1~~, which is~~ and would be less than significant.

Page 3.5-34, "Construction and Operation" section, 2nd sentence, is revised as follows:

… This would include ~~the new foundation that~~ placing the existing Synergy office building ~~would be placed on and~~ on a new foundation set back from the Newport-Inglewood Fault Zone since it would be repurposed as a visitors center. The required geotechnical investigations (see Section 3.5.3, CBC and DOGGR regulations) would provide design recommendations to reduce the risk of damage from seismic-induced liquefaction in accordance with these standards and regulations. …

Page 3.5-37, "Construction and Operation" section, 2nd paragraph, last two sentences, is revised as follows:

… This is the reason that oil production operations re-inject the ~~groundwater~~ produced water from oil production (after it is processed) back into the production zone to prevent subsidence. The proposed project would continue the current practice of returning the ~~groundwater~~ produced water to the depth levels from which it was extracted, reducing the potential for subsidence (BOMP 2017c).

Page 3.5-37, "Construction and Operation" section, 3rd paragraph, 1st sentence, is revised as follows:

The geotechnical and environmental studies for the sites concluded that the Pumpkin Patch and LCWA sites would have the potential for significant collapse or subsidence due to the uncertain nature of the landfilled materials buried at these sites.~~; however, a~~As discussed above …

Page 3.5-38, "Construction" section, 1st sentence, is revised as follows:

The structures and infrastructure proposed ~~under~~ for the project ~~could~~ have the potential to be located on soils with a moderate potential for soil expansion; however, until the structures are complete, the potential for damage from expansive soils during construction would be minimal, if any, largely due to the amount of time required for expansive soils to exhibit damage. …

Page 3.5-38, "Operation" section, 1st paragraph, 4th sentence, is revised as follows:

… The structures could be located on soils with up to a moderate potential for soil expansion~~, which~~ that could damage structures and any other structural slabs as well as result in risks to people~~ or structures if not designed appropriately~~; however, as discussed above for Impact GEO-2, the design of structures would be required to undergo appropriate design-level geotechnical evaluations prior to final design and construction, which would include providing recommendations to address expansive soils, if present. …

Page 3.5-39, "Cumulative Impacts during Project Operations" section, 1st paragraph, 1st sentence, is revised as follows:

Impacts from seismic events (e.g., fault rupture, seismic shaking, seismically induced ground failures such as liquefaction, lateral spreading, or landslides) or non-seismically induced ground failures (e.g., landslides, lateral spreading, subsidence, liquefaction, collapse, or expansive soil) tend to be confined to each given site due to varying conditions and distances to the epicenter of the seismic event. …

10.1.8 Section 3.6, Greenhouse Gas Emissions

Page 3.6-5, "California Greenhouse Gas Reduction Targets" section, 1st paragraph, 1st sentence, is revised as follows:

~~The g~~Governor Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets:

Page 3.6-5, "California Greenhouse Gas Reduction Targets" section, 4th paragraph, is revised as follows:

CARB subsequently expressed its intention to initiate the second update to the Climate Change Scoping Plan update during 2015 and 2016 with adoption scheduled thereafter. ~~California Health and Safety Code, Division 25.5, California Global Warming Solutions Act of 2006.~~

Page 3.6-7, "Transportation Sector" section, 3rd paragraph, 1st sentence, is revised as follows:

In January 2007, Governor Brown enacted Executive Order S-01-07, which mandates the following: (1) establish a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 and (2) adopt an ~~(~~LCFS~~)~~ for transportation fuels in California. …

Page 3.6-8, "Cap-and-Trade Program" section, 1st paragraph, 2nd sentence, is revised as follows:

The Climate Change Scoping Plan identifies a Cap-and-Trade Program as one of the key strategies California will employ to reduce GHG emissions. CARB asserts that this program ~~would~~ already has helped ~~put~~ (and would continue to help) California ~~on the path to~~ meet its goal of reducing GHG emissions to 1990 levels by the year 2020, and would ultimately help California achieve~~ing~~ an 80 percent reduction from 1990 levels by 2050 (CARB 2016). …

Page 3.6-9, 3rd full paragraph, 2nd sentence, is revised as follows:

… Covered entities are allocated free allowances in whole or part (if eligible) and can obtain allowances and offsets from other facilities as required. …

Page 3.6-20, 1st partial paragraph, is revised as follows:

the ~~assumed~~ estimated baseline oil operations would be reduced by 75 percent once building permits are obtained for the office building on the Pumpkin Patch site. Over the next 20 years, half of the existing 53 wells on the project site would be plugged and abandoned. This represents an 87.5 percent reduction from the ~~assumed~~ estimated baseline emission levels. By year 40, all wells would be plugged and abandoned, which represents a 100 percent reduction of the estimated baseline emissions.

Page 3.6-21, 1st partial paragraph, 1st partial sentence, is revised as follows:

would be generated by the turbines in the first year. …

Page 3.6-21, 1st full paragraph, is revised as follows:

Under CEQA, the GHG emission impact of a project is based on the incremental or net change in emissions compared to the existing physical conditions in the affected area as they exist at the time the ~~n~~Notice of ~~p~~Preparation is published (refer to *CEQA Guidelines* Section 15126.2). As shown in Table 3.6-4, the net total project GHG emissions, inclusive of the GHG emissions from the turbines and the reduction of the existing GHG emissions from the plugging and abandonment of the existing wells (i.e., 75 percent of the existing wells once building permits are obtained for the office building on the Pumpkin Patch site, 87.5 percent of the wells over the next 20 years, and 100 percent of the existing wells by Year 40) would exceed 10,000 $MTCO_2e$/year. As a result, the impacts from the generation of the net increase in GHG emissions would be considered significant.

Page 3.6-23, 2nd full paragraph, is revised as follows:

As discussed above, the project would include cogeneration and comply with BACT standards for the turbines, comply with applicable SCAQMD rules and regulations (refer to Section 3.2, *Air Quality*, for a list of SCAQMD rules and regulations applicable to the project), and include microgrid system and solar photovoltaic modules to provide efficient energy for the facilities including drilling rigs and supporting equipment, pumps, two electric vehicle charging stations, and other equipment. Therefore, the project would not conflict with applicable SCAQMD rules and regulations to reduce GHG emissions.

Page 3.6-23, "Construction and Mobile Source Emissions" section, last sentence, is revised as follows:

… Therefore, the project would not conflict with applicable regulations to reduce GHG emissions from construction and mobile source emissions.

Page 3.6-24, 1st full paragraph, is revised as follows:

Given that the project would generate GHG emissions consistent with applicable reduction plans, ~~and~~ policies, and regulations with implementation of Mitigation Measure GHG-1~~,~~ and ~~given~~ that GHG emission impacts are cumulative in nature, the project's incremental contribution to significant GHG emissions would be less than cumulatively considerable with ~~mitigation, and~~ Mitigation Measure GHG-1. Therefore, the proposed project's impacts would be less than significant with mitigation.

10.1.9 Section 3.7, Hazards and Hazardous Materials

Page 3.7-3, "Oil Production and Associated Infrastructure" section, 2nd paragraph, 4th sentence, is revised as follows:

… There is the potential for concentrations of dissolved NORM constituents ~~may~~ to result in scale in the pipes and storage tanks ~~that handle~~. …

Page 3.7-4, "Closed On-Site Landfill" section, 1st paragraph, 1st sentence, is revised as follows:

~~This~~ The closed landfill, located along the west side of Studebaker Road north of 2nd Street, is identified as the Studebaker/Loynes Disposal Site or City Dump and Salvage #4~~, and has a closed operational status~~. …

Page 3.7-4, "Closed On-Site Landfill" section, 2nd paragraph, 2nd sentence, is revised as follows:

… The records are unclear as to the precise location and extent. …

Page 3.7-6, "2016 and 2017 Soil Investigations" section, 1st paragraph, 2nd sentence, is revised as follows:

Based on the results of the Phase I ESA, additional soil testing was conducted in December 2016, February 2017, and April 2017 (AEC 2017b, see Appendix F5). Additional soil testing was conducted during the summer of 2017 (AEC 2017f, refer to Appendix F5). The sample locations are shown in **Figure 3.7-2a, Sample Locations—Synergy Oil Field and City Property Sites**. Note that some of the sample locations have multiple sample locations clustered around an initial sample location. The clustered sample locations are step out locations, selected because the initial sample results detected chemicals at concentrations above screening levels (see Regulatory Framework for discussion of screening levels). As shown in Figure 3.7-2a, of the 16 sample locations, …

Page 3.7-6, "2016 and 2017 Soil Investigations" section, 2nd paragraph, 7th and 8th sentences, is revised as follows:

… Based on the analytical results, AEC has recommended that the affected soil in the areas around sample locations HA-3 and HA-5 be excavated and disposed at a landfill permitted to accept the soil. The lateral limits of the excavation ~~and the volume of soil to be removed would depend on the results of additional sampling proposed to define the extent of the affected area~~ for all areas with known contamination exceeding screening levels are shown on Figure 3.7-2b**,** Areas to be Excavated – Synergy Oil Field and City Property Sites. …

Page 3.7-8, "Oil Production and Associated Infrastructure" section, last sentence, is revised as follows:

… As previously discussed for the Synergy Oil Field site, it is assumed that some of the wells may have backfilled mud pits adjacent to the wells.

Page 3.7-8, "PCB Removal" section, 1st sentence, is revised as follows:

Investigations and cleanups for the release of PCBs at transformer locations on the City Property site are discussed above (see page 3.7-4, Synergy Oil Field site information above). …

Page 3.7-8, "2016 and 2017 Soil Investigations" section, 1st paragraph, is revised as follows:

As a part of the previously discussed 2016 and 2017 soil investigations conducted on the Synergy Oil Field site, one soil sample was collected at the northeast corner of the City Property site (HA-16 shown in Figure 3.7-2a) (AEC 2017b). The sample was tested for TPH in the gasoline, diesel, and oil range; lead; and arsenic. The testing results were either below detection levels (TPH-gasoline) or at low concentrations below screening levels (all other chemicals) (see Appendix F5). Similar to the other testing results, arsenic was detected above screening levels but below regional background levels.

Additional testing ~~has been proposed~~ was conducted for the area around the two storage tanks in the southern part of the City Property site at the HA-17 location (see Figure 3.7-2a) (AEC 2017f~~d~~). The results indicated that a small area needs to be excavated and disposed of at a disposal facility permitted to accept the material.

Page 3.7-10, after 2nd full paragraph, is revised as follows:

The landfill continues to be monitored under the requirements of General Order No. R4-2002-022 for post closure maintenance of closed, inactive, or abandoned landfills (LARWQCB 2002).

A soil vapor survey was conducted on the Pumpkin Patch site on July 6, 2017 (ALS 2017; Optimal Technology 2017). The detected chemicals included methane, various sulfur compounds, fuel compounds (gasoline, benzene, toluene, ethylbenzene and xylenes), chlorinated compounds (tetrachloroethene [PCE], trichloroethene [TCE], and dichlorodifluoromethane), cyclohexane, 4-methyl-2-pentanone, and 2-butanone (also known as methyl ethyl ketone [MEK]). The presence of these compounds indicate further action will be needed. The potential actions would be either to remove or cap the landfill. If removed, an Excavation Management Plan would be prepared and implemented, which would remove the contaminants and eliminate the potential for vapor intrusion into buildings. If capped, a cap would need to be designed with a vapor intrusion study to verify vapor would not enter buildings above air quality standards.

Page 3.7-25, Section 3.7.4.2, Methodology, 1st paragraph, 2nd sentence, is revised as follows:

… Hazards and hazardous materials information for the project area was derived from various sources and compiled in this chapter to develop a comprehensive understanding of the potential constraints and hazards associated with project construction and operations. Information sources include site-specific Phase I ESAs (Rincon 2015a, 2015b; AEC 2016a, 2016b), additional soil testing (AEC 2016c, 2017a, 2017b, 2017c, 2017d, 2017e, 2017f, ALS 2017, Optimal Technology 2017), …

Page 3.7-25, Section 3.7.4.2, Methodology, 3rd paragraph, last sentence, is revised as follows:

… Operations activities would include the operational phases of the office ~~buildings, oil production facilities,~~ building and warehouse, trail, visitors center, parking lot, and restored habitat as well as oil production facilities and drilling and maintenance of the oil wells.

Page 3.7-27, "Petroleum Hydrocarbon Affected Soil" section, 2nd paragraph, is revised as follows:

For remediation of the affected areas around the tank farm locations on the Synergy Oil Field site, an excavator would remove impacted soils from the surface to a depth of approximately 6 to 7 feet bgs. The soil would be loaded into semi-end dump trucks and hauled to a disposal facility designed to accept such waste, likely the Simi Landfill in Simi Valley, California (see Section 3.17, *Utilities and Service Systems*, for landfill descriptions). It is estimated that approximately 24,000 tons of soil would be excavated from the combination of the HA-3 and HA-5 locations (AEC 2017b, AEC 2017f). ~~Because the lateral limits of the petroleum hydrocarbon contamination have not been adequately defined, the volume of soil may be larger than currently estimated; however, the proposed manner of remediation would not change and if required would expand in volume and extent as needed.~~

Page 3.7-27, "Petroleum Hydrocarbon Affected Soil" section, 4th paragraph, is revised as follows:

Additional sampling ~~is proposed for~~ conducted on the City Property site ~~to identify~~ further identified the extent of areas where chemical concentrations exceed screening levels (AEC 2017d, AEC 2017f)~~; however, the nature of the hydrocarbon-impacted soils on the City Property site is assumed to be consistent with the contamination identified above in areas around the three sites for which remediation is recommended on the~~

~~Synergy Oil Field site~~. The volume of soil to be excavated is shown on Figure 3.7-2b and is included in the 24,000 tons that would be removed from the Synergy Oil Field site, as previously discussed. Similarly, remediation would involve excavating the hydrocarbon-impacted soils from the surface to a depth of approximately 6 to 7 feet bgs, direct loading of the soil into semi-end dump trucks and hauling to a facility designed to accept such waste (either the Simi Landfill for non-hazardous or designated waste, or the Waste Management Kettleman Hills Landfill for hazardous waste). The soil would be excavated to the lateral extent of contamination above screening levels described in Section 3.7.3, Regulatory Framework. With compliance with existing regulations, the impacts would be reduced to a less-than-significant level.

Page 3.7-34, "Landfill Materials" section, 1st paragraph, 3rd sentence, is revised as follows:

… Depending on the results of the ~~ongoing testing for contaminants~~ final design, the landfill materials may need to be removed. …

Page 3.7-39, Section 3.7.5, References, the following references are added:

———. 2017e. *Sampling and Analytical Results, SB7 and SB8 Locations, Approximate 5-acre LCWA Site, Westminster and Studebaker, Long Beach, California*, June 8.

AEC. 2017f. *Synergy Oil Field Continuing Sample Report Tank Battery Locations HA-3, HA-5 and HA-17, East 2nd Street and Pacific Coast Highway, Long Beach, California*, October 10.

…

ALS. 2017. *Laboratory Report, Pumpkin Patch*, July 21.

…

Optimal Technology. 2017. *Pumpkin Patch Soil Vapor Investigation Letter Report*, July 7.

10.1.10 Section 3.8, Hydrology and Water Quality

Page 3.8-18, 1st full paragraph, is revised as follows:

For purposes of this analysis, construction activities would include the habitat restoration, excavation of soils and previously landfilled materials, should landfill removal be necessary; removal of some existing oil production facilities (wells, piping, and associated infrastructure); construction of aboveground structures including the office building and warehouse, oil production facilities, trail, parking lots, and driveway improvements~~, and restored habitat~~; below-grade structures including well cellars; and the relocation of the Synergy office and placement on a new foundation. These construction activities would occur at various times ~~spread out over time~~ across the entire project site. Operations activities would include the operational phases of the office ~~buildings~~ and warehouse, well drilling, oil production facilities, trail, visitors center, parking lots, driveways, and restored habitat~~, but do not include soil excavation~~. In addition, the operations activities include the post-treatment monitoring activities conducted to verify that remedial objectives have been achieved as well as well maintenance activities.

Page 3.8-20, "Construction of Oil Wells" heading, is revised as follows:

~~Construction~~ Drilling of Oil Wells

Page 3.8-20, "Construction over the Location of Wells" section, 1st paragraph, 2nd sentence, is revised as follows:

… Injection wells for returning produced water to production zones may also no longer be used and ~~are~~ would be plugged and abandoned using the same procedures. …

Page 3.8-22, "Operation" section, is revised as follows:

Operation of the proposed project facilities would include the extraction of oil, natural gas, and produced water, ~~at~~ and the reinjection of processed water into the production zone on the Pumpkin Patch and LCWA sites. In addition, oil production, processing, and distribution via pipeline and oil trucks would occur. Operational activities would also occur at ~~the Pumpkin Patch and LCWA sites (oil production, processing, and distribution) and~~ the visitors center on the Synergy Oil Field site. In addition, maintenance activities would occur on the restored habitat on the northern portion of the Synergy Oil Field site. The oil well drilling, the production of oil and produced water, and well maintenance activities could adversely impact water quality if not properly managed and/or the oil or produced water is discharged to surrounding surface water bodies. The new office buildings, landscaping, and parking areas could adversely affect surface water quality with sediment or other pollutants if surface water runoff is not properly managed. The restored northern portion of the Synergy Oil Field site would change the existing habitat and could adversely impact surface water quality via erosion if not properly maintained. These potential operation-related impacts are discussed below.

Page 3.8-22, "Oil Production at LCWA and Pumpkin Patch Sites" section, last three sentences, are revised as follows:

… The wells, pipelines, and storage ~~talks~~ tanks are required to have established emergency procedures in the event of a release or spill. The produced water that would be pumped out along with the oil is typically brackish to saline, but would be entirely injected back into the production zone from ~~whence it came~~ where the oil was removed. Therefore, with the proposed project's compliance with existing regulations, impacts related to water quality from the operation of the wells would be less than significant.

Page 3.8-26, "All Other Non-Oil Wells Structures" section, 1st and last sentences, is revised as follows:

Operation of the proposed project would require water supply for various other uses, including irrigation of the landscape and the restoration areas on the Synergy Oil Field site and operation of the office building/warehouse on the Pumpkin Patch site and visitors center on the Synergy Oil Field site. … Therefore, the impacts to groundwater supplies from the operation of the non-oil well buildings and irrigation would be less than significant.

Page 3.8-26, "Impervious Surfaces" section, 5th sentence, is revised as follows:

… More importantly, the drainage for the area of the relocated structure would be conveyed to seven proposed bioretention basins designed for the 85th percentile 24-hour storm volume and located around the visitors center. …

Page 3.8-27, 4th full paragraph, is revised as follows:

Based on the above-described water management actions, the impact on groundwater supplies relative to recharge would be less than significant.

10.1.11 Section 3.9, Land Use and Planning

Page 3.9-3, "Federal Coastal Zone Management of 1972" section, 3rd sentence, is revised as follows:

… The CZMA emphasizes the primacy of state decision-making regarding the coastal zone. CZMA Section 307 (16 USC Section 1456), called the federal consistency provision, is a major incentive for states to join the ~~national coastal management program~~ National Coastal Management Program and is a tool that states use to manage coastal uses and resources and to facilitate cooperation and coordination with federal agencies. …

Page 3.9-13, 1st full paragraph, 3rd sentence, is revised as follows:

… The wall on the Pumpkin Patch site would be 18 feet high along the north, west, and south, and 10 feet high along the eastern border. …

Page 3.9-14, "Synergy Oil Field and City Property Site" section, 2nd paragraph, last sentence, is revised as follows:

… The General Plan description notes the ~~existing~~ existence of active oil operations in the SEADIP area located on the Synergy Oil Field and City Property sites (City of Long Beach 1989, 169).

Page 3.9-14, "Pumpkin Patch Site" section, last sentence, is revised as follows:

… Therefore, industrial development on this site would not conflict with the Long Beach General Plan and impacts would be less than significant.

Page 3.9-16, 1st partial paragraph, is revised as follows:

on the southern portion of the site. As such, all uses proposed on the Synergy Oil Field site would be consistent with the land use designations in the proposed SEASP. Impacts would be less than significant.

Page 3.9-16, "Pumpkin Patch Site" section, 2nd paragraph, last sentence, is revised as follows:

… Given the industrial uses proposed as part of the project, those uses would be consistent with the zoning in the proposed SEASP. Impacts would be less than significant.

Page 3.9-17, 1st full paragraph, last sentence, is revised as follows:

… Given the industrial uses proposed as part of the project, those uses would be consistent with the zoning in the proposed SEASP. Impacts would be less than significant.

Page 3.9-23, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "Section 30210" row, "Consistency Analysis" column, last sentence, is revised as follows:

… There would be no public access to the remaining sites. Therefore, the project would be consistent with this policy.

Page 3.9-23, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "Section 30212" row, "Consistency Analysis" column, last sentence, is revised as follows:

While the City Property, Pumpkin Patch, and LCWA sites do not provide access to a shoreline or coast, it would be inconsistent to provide public access due to safety issues. Therefore, the project would be consistent with this policy.

Page 3.9-27, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "Section 30262" row, "Consistency Analysis" column, 1st numbered item, is revised as follows:

1) The development would ~~be~~ address~~es~~ geologic conditions of the property and be designed to avoid flooding and fire hazards;

Page 3.9-28, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "Policy 6" row, "Consistency Analysis" column, is revised as follows:

… on the Synergy Oil Field site would be compliant with City standards. The project would be consistent with this policy.

Page 3.9-30, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "Policy 15" row, "Consistency Analysis" column, is revised as follows:

… would be placed underground. The project would be consistent with this policy.

Page 3.9-30, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "Policy 16" row, "Consistency Analysis" column, is revised as follows:

… (new office and warehouse) to the sanitary sewer system would be provided. The project would be consistent with this policy.

Page 3.9-30, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "Policy 17" row, "Consistency Analysis" column, is revised as follows:

… Studebaker Road, Westminster Avenue, PCH, and the San Gabriel trail is proposed. The project would be consistent with this policy.

Page 3.9-31, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "Policy 18" row, "Consistency Analysis" column, is revised as follows:

… trail, visitors center, and parking area would be dedicated to the LCWA. The project would be consistent with this policy.

Page 3.9-31, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "Policy 19" row, "Consistency Analysis" column, is revised as follows:

The project would have no common areas. The Applicant shall maintain ~~the maintain~~ the parking lot/landscape areas of the Pumpkin Patch site and also the visitor's center/trails on Synergy Oil Field site, until conveyed to the LCWA. The project would be consistent with this policy.

Page 3.9-32, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "Policy 3" row, "Consistency Analysis" column, 2nd sentence, is revised as follows:

… In addition, if any wetlands would be impacted by new development, they would be mitigated pursuant to regulatory agencies' requirements. …

Page 3.9-33, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "Policy 3" row, "Consistency Analysis" column, is revised as follows:

This project would not contain residential development but would include urban development. The property owner would have the responsibility to maintain buffer areas, if any, in perpetuity. The project would be consistent with this policy.

Page 3.9-33, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "Specific Development Standards: Subarea 33 (Synergy Oil Field Site)" section, "Consistency Analysis" column, is revised as follows:

The northernmost 76.52 acres of the Synergy Oil Field site would be restored as wetlands pursuant ~~a plan~~ to the Restoration Plan approved by the Interagency Review Team (IRT). Pursuant to Section 3.3, *Biological Resources*, although the least tern has been observed foraging within Steamshovel Slough, there are no potential breeding areas on the Synergy Oil Field site. The southern area would be revegetated as oil facilities are removed. The project would be consistent with this policy.

Page 3.9-34, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "Specific Development Standards: Subarea 25 (City Property and Pumpkin Patch Sites)" section, "Consistency Analysis" column, 1st and 3rd paragraphs, is revised as follows:

Activities in Subarea 25 would include removal of existing wells and oil infrastructure~~;~~.

~~t~~The project would develop the utility corridor and a warehouse building and office building would be constructed on the Pumpkin Patch site. The proposed office building fronts PCH consistent with Policy 25.g. The uses and total floor area would be consistent with the square footage limits consistent with this policy.

…

Landscaping would be provided for the office building frontage on the Pumpkin Patch site.

…

A new warehouse would be constructed on the Pumpkin Patch site. The warehouse site would be surrounded by ~~a~~ walls~~, which~~ that would be 18 feet high on the north, west, and south and 10 feet high on the east. The LCWA site would contain a wall that would be 10 feet high. These walls would screen the industrial uses.

Page 3.9-35, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "RTP/SCS G2" row, "Consistency Analysis" column, is revised as follows:

The proposed project would include pedestrian access and bikeway improvements on the streets all four individual site frontages. Implementation of these improvements would expand and enhance the existing bikeway network, encourage active transportation in the project vicinity, and improve public safety. Therefore, the project would be consistent with this policy.

Page 3.9-36, Table 3.9-1, Consistency Analysis with Local Land Use Plans, "RTP/SCS G6" row, "Consistency Analysis" column, is revised as follows:

The proposed project would include pedestrian access and bikeway ~~lane~~ improvements on all four individual site frontages. Implementation of these improvements would expand and enhance the existing bikeway ~~lane~~ network, encourage active transportation in the project vicinity, and improve public safety.

The project also proposes to reduce existing baseline oil production by 75 percent upon issuance of building permits, which would further reduce air emissions in the project vicinity. Additionally, the state-of-the-art microgrid technology, as well as the rooftop photovoltaic system, would reduce dependency on the SCE electrical grid and would reduce air emissions in the project area. Moreover, the electric car charging stations~~,~~ and the bike-share station would also encourage use of non-fuel~~-~~-dependent vehicles. Therefore, the project would be consistent with this ~~policy~~ goal.

10.1.12 Section 3.11, Noise

Page 3.11-23, 2nd paragraph, 1st sentence, is revised as follows:

In the northern 76.52 acres of the site, restoration activities would include grading to clear some berms and establish other berms, and a sheet pile wall approximately ~~4,730~~4,744 feet long would be constructed. …

Page 3.11-23, 4th paragraph, 1st sentence, is revised as follows:

In addition to site restoration, sheet pile driving would occur as close as approximately 621 feet from the mobile home park over approximately 2 to 6 months to install the ~~4,730~~4,744-foot barrier. …

10.1.13 Section 3.12, Population and Employment

Page 3.12-1, Section 3.12.2.1, Population, last paragraph, 3rd sentence, is revised as follows:

… According to the 2016–2040 RTP/SCS Growth Forecast, the population in Long Beach is projected ~~will~~ to be approximately 484,500 persons by the year 2040. …

10.1.14 Section 3.14, Recreation

Page 3.14-9, 1st full paragraph, 1st sentence, is revised as follows:

Additionally, the proposed project would introduce approximately ~~4~~ 1.28 acres of ~~publically~~ publicly accessible parkland on site, with the development of a 2,084-linear-foot public access trail, overlook terrace with picnic facilities, visitors center, and associated parking on the Synergy Oil Field site. The Synergy Oil Field site would be open to public access from ~~dusk until~~ dawn until dusk,7 days a week. …

10.1.15 Section 3.15, Transportation and Traffic

Page 3.15-11, 1st partial paragraph, is revised as follows:

… of the CTMP. ~~The City is proposing the following Conditions of Approval as part of its Conditional Use Permit procedures:~~

10.1.16 Section 3.16, Tribal Cultural Resources

Page 3.16-2, Ethnographic Setting, the following paragraph is added following 2nd full paragraph:

The project area and the surrounding Los Cerritos wetlands was an important place for the Gabrielino, and remains so today. The area would have served as an important source of fish, game, waterfowl, plants and other resources. Because the area was largely inundated prior to land reclamation and stream channelization in historic and recent times, much of the wetlands would not have been suitable for permanent habitation. However, the wetlands would have been used for hunting, fishing, and resource gathering.

10.1.17 Section 3.17, Utilities and Service Systems

Page 3.17-2, Section 3.17.2.2, Wastewater, 1st paragraph, last sentence, is revised as follows:

… LACSD is a public agency created under State law to manage wastewater and solid waste on a regional scale and consists of 24 independent special districts serving approximately ~~5.5~~5.6 million people in Los Angeles County, including the City. …

Page 3.17-2, Section 3.17.2.2, Wastewater, 2nd paragraph, 5th sentence, is revised as follows:

… The LBWRP is expected to reach full capacity sometime during the next 25 years (at least by ~~2040~~2050) …

Page 3.17-5, "Sustainable Groundwater Management Act of 2014" section, 1st paragraph, 2nd sentence, is revised as follows:

… Relative to Utilities and Public Services, ~~preventing~~ undesirable results would include a significant and unreasonable depletion of water supply. …

Page 3.17-6, 3"Los Angeles County Sanitation District" section, 2nd paragraph, last sentence, is revised as follows:

… Most of the City, including the project area, is in District 3 of the LACSD (LACSD 2017a). In determining the impact to the Sewerage System and applicable connection fees, the Districts' Chief Engineer and General Manager will determine the use category (e.g., condominium, single-family home, etc.) that best represents the actual or anticipated use of the parcel or facilities on the parcel.

Page 3.17-12, 1st paragraph, sentences three through five, is revised as follows:

… The Pumpkin Patch site would connect a water supply pipeline for the office building and warehouse, landscaping, and oil processing and production facilities to the existing water supply pipeline in the Pacific Coast Highway near the western corner of the site. The LCWA would use water for oil processing associated with the new oil wells and production facilities. For the LCWA site, the proposed project would connect a water supply pipeline to the existing water supply pipeline in Studebaker Road on the west side of the site. The operations water use estimate includes oil extraction process~~ing~~ and site irrigation. …

Page 3.17-12, "Construction" section, 1st paragraph, is revised as follows:

~~Drilling wells for the proposed project would require the use of water for mixing the drilling mud; however, upon completion, the drilling mud would be sent off site for disposal to a landfill permitted to accept drilling mud. The mud would not be sent to a wastewater treatment facility.~~

Page 3.17-12, "Operation" section, following heading, is revised as follows:

Operation

Drilling wells for the proposed project would require the use of water for mixing the drilling mud. Upon completion, the drilling mud would be sent off site for disposal to a landfill permitted to accept drilling mud. The mud would not be sent to a wastewater treatment facility.

Page 3.17-13, 1st full paragraph, last two sentences, is revised as follows:

… Stormwater that accumulates within the curbed containment areas around the oil processing equipment would be held within the curbed area until it can be visually inspected before being drained to the well cellars via a drain system, processed through the water treatment system, and then injected into the oil production zones. Similarly, stormwater that accumulates within the containment walls around the storage tanks would be held ~~until it can be~~, visually inspected, pumped to the water treatment system, and then injected into the oil production zones.

Page 3.17-13, 2nd full paragraph, 3rd sentence, is revised as follows:

… In addition, the LBWRP ~~treatment capacity~~ is not ~~yet~~ using its full treatment capacity of 25 mgd, although it is expected to reach capacity in the year 2040. …

Page 3.17-13, Impact UT-3 analysis, 1st paragraph, last sentence, is revised as follows:

… ~~Per~~ Based on the recommendations of the project LID Plan, water quality BMPs would be implemented on ~~all individual~~ the Synergy Oil Field, Pumpkin Patch, and LCWA sites ~~except the~~. T~~t~~he City Property site would not be addressed in the project LID Plan because, with the exception of the surface oil conveyance pipeline, no structures or other improvements would be made to the City Property site.

Page 3.17-15, "Operation" section, 1st paragraph, is revised as follows:

As discussed above in Impact UT-2b, the majority of currently generated wastewater is produced water from oil extraction operations. The project would install injection wells that would return this produced water to the oil production zones, thus eliminating this wastewater source. Any water not suitable for reinjection would be trucked off-site for disposal at the appropriate facility. This would reduce the volume of wastewater produced by the site from the existing condition by approximately 0.5 mgd or 566 AFY. Wastewater from facilities safety showers, wash down connections, and facility operations would be also sent to the injection wells. Wastewater generated from on-site employees and recreational visitors to the visitors center would be nominal compared to the 425 mgd capacity of the combined JWPCP and LBRP treatment facilities and no new or expanded facilities would be needed. Therefore, because the proposed project would result in an overall decrease in the volume of wastewater, the~~re would be no~~ impact to the operational capacity of the LACSD wastewater treatment facilities would be less than significant.

Page 3.17-16, 1st paragraph, is revised as follows:

As discussed above, the five Los Angeles County landfills that can serve the project have a combined remaining capacity of 504,756,250 tons and a combined daily maximum acceptance rate of 50,250 tons (see Table 3.17-3, Landfills in Project Region). These five landfills are projected to remain open until about 2030, 2053, 2045, 2052, and 2037, respectively. Based on the available capacity, these landfills would have the capacity to accept all of the solid waste. Therefore, construction and demolition activities of the proposed project would not result in the need to expand the existing landfill facilities or construct a new landfill facility. Contaminated soil would be segregated and disposed of at the Kettleman Landfill in Kern County, which is permitted to accept hazardous waste. The Kettleman Landfill is in the process of expanding its hazardous waste unit capacity by an additional 4.9 million cubic yards, which is anticipated to provide an additional 8 to 9 years based on the typical rate of hazardous waste disposal (DTSC 2014). ~~As a result,~~ Based on the available landfill capacity for solid waste and hazardous waste, construction activities would result in less-than-significant impacts related to landfill facilities during construction.

Page 3.17-16, "Operation" section, 1st paragraph, last two sentences, is revised as follows:

… The proposed project ~~facilities~~ would also generate solid waste ~~from~~ and other waste products during well drilling and oil and gas production operations~~,~~ including primarily solids brought up from production wells during the extraction process. This material would be transported off site for further processing, likely to a

petroleum processing facility. In addition, soiled rags, clothing, gloves, and other materials used by oil drilling and production employees on the project site would be generated on the project site. These materials would be stored on site and disposed of by certified haulers at the appropriate hazardous waste facility.

Page 3.17-17, "Operation" section, 1st paragraph, last sentence, is revised as follows:

… Therefore, the project ~~impacts related to potential noncompliance~~ would comply with solid waste statutes and regulations during operations, and impacts would be less than significant.

Page 3.17-18, "Wastewater Treatment Regulations" section, 2nd paragraph, last sentence, is revised as follows:

… The project would result in a less than cumulatively considerable impact to wastewater treatment requirements of the LARWQCB and, therefore, would be less than significant.

Page 3.18-3, Section 3.18.2.2, Electricity, last paragraph, 4th sentence, is revised as follows:

… The new wells that would be constructed on the Pumpkin Patch and LCWA sites would be electric powered, with the majority of the electricity being produced on the LCWA site over the long term by means of combusting natural gas in dedicated turbines (see discussion below in Section 3.18.2.3, Natural Gas). …

Page 3.18-4, Section 3.18.2.3, Natural Gas, 2nd paragraph, last sentence, is revised as follows:

… The project would purchase a limited amount of power from SCE to provide electricity to the visitors center and, when needed, to supplement turbine-supplied electricity~~,~~ at the Pumpkin Patch and LCWA sites. …

Page 3.18-6, "Title 24, Building Standards Code and California Green Building Standards (CALGreen) Code" section, 2nd paragraph, 2nd to last sentence, is revised as follows:

… The 2016 CALGreen Code ~~was most recently updated in 2016 to include~~ update took effect on January 1, 2017, and included new mandatory measures for residential as well as nonresidential ~~uses; the new measures took effect on January 1, 2017~~ including industrial projects. Although the CALGreen Code was adopted as part of the State's efforts to reduce GHG emissions, the standards have co-benefits of reducing energy consumption from residential and nonresidential buildings subject to the standard.

Page 3.18-10, 1st full paragraph, is revised as follows:

In addition to the diesel-powered workover ~~drilling~~ rigs, electric drill~~ing~~ rigs would be in operation at both the Pumpkin Patch and LCWA sites ~~on a regular basis but would be electrically-powered with~~ 24 hours per day until the well are complete. The electricity ~~provided by~~ for the drill rigs would be purchased from SCE until the turbines on the project site come online. The LCWA site would contain four 4.5 MW gas turbine generator sets ~~to~~ that would convert natural gas from the wells to electricity and would serve as the primary source of energy for operational- and maintenance-related equipment. The project would also include renewable solar PV with generation potential of 158 kW. The project would also purchase a limited amount of power from SCE to provide electricity to the visitors center ~~and, when needed to supplement turbine electricity, the Pumpkin Patch and LCWA sites~~. The amount of energy that would be purchased from SCE is estimated based on energy factors in CalEEMod. Refer to the CalEEMod modeling files provided in Section 3.6, *Greenhouse Gas Emissions*.

Page 3.18-13, 2nd paragraph, 2nd through 4th sentences, is revised as follows:

… The turbines would provide electricity for the electric drilling rigs at the Pumpkin Patch and LCWA sites~~,~~ in addition to lighting, pumps and other operational equipment, and electric vehicle charging stations. The cogeneration process would use waste heat from the turbine exhaust to heat oil and water, and cool gas as part of the oil production/separation process. The water reclaimed from this process would be injected back into the oil production formation~~, and the~~. The natural gas from the wells not used by the on-site turbines and the oil from the wells would be ~~sold for use and~~ transported off site for further processing and sale. …

Page 3.18-14, Impact EN-2 analysis, 1st paragraph, 1st sentence, is revised as follows:

Construction and operation of the project would require energy primarily for the use of off-road equipment, on-road trucks and vehicles, ~~and~~ workover rigs for well maintenance, the operation~~s~~ of the visitors center ~~and~~ on the Synergy Oil Field Site, the operation of the new office building and warehouse, and oil drilling and the operation of the oil production facilities on the Pumpkin Patch and LCWA sites. …

Page 3.18-14, Impact EN-2 analysis, 1st paragraph, 4th sentence, is revised as follows:

… The limited amount of power not generated by the turbines once they are online would be supplied by SCE. Based on SCE's emissions intensity factors, the maximum amount of energy the project would draw from the grid would be approximately 3.18 million kWh per year. …

Page 3.18-15, Impact EN-3 analysis, 2nd paragraph, is revised as follows:

The four turbines (4.5 MW each; 18 MW total) would adhere to SCAQMD's BACT standards and stationary source permitting regulations established by the SCAQMD. Additionally, the office building on the Pumpkin Patch site would be subject to applicable regulations outlined by the Title 24 Building Standards Code and the CALGreen Code. The CALGreen Code includes resource, water, and design measures aimed at increasing building energy and water efficiency and decreasing waste. ~~Implementation of such measures~~ Compliance with Title 24 and the CALGreen Code would increase energy efficiency at the office building and ensure ~~consistent~~ consistency with building regulations.

Page 4-1, Section 4.2.1, Air Quality, 1st paragraph, is revised as follows:

As discussed in Section 3.2, *Air Quality*, the proposed project would result in significant and unavoidable air quality impacts with regards to the violation of the quality standards for criteria pollutants during construction. The likely worst-case scenario with respect to the generation of nitrogen oxides (NO_X) emissions during construction of the proposed project would occur when five construction phases are underway simultaneously~~;~~. ~~s~~Specifically, during construction of well cellars, process equipment construction, tank construction, off-site construction, and office/warehouse construction. The NO_X emissions during this time period would total 224.5 pounds per day, which would violate the South Coast Air Quality Management District's (SCAQMD) NO_X significance threshold of 100 pounds per day. Mitigation Measures AQ-2 and AQ-3 would reduce NO_X emissions by requiring the use of construction equipment that meets the most stringent emissions standards for off-road equipment~~;~~. ~~h~~However, even with implementation of these ~~measure~~ mitigation measures, the NO_X emissions during construction would still exceed the ~~construction~~ regional construction NO_X significance threshold. Therefore, regional NO_X emissions for construction of the proposed project would be significant and unavoidable.

10.2 Draft EIR Figure Revisions

The following figures have been revised in response to comments received on the Draft EIR:

- **Figure 2-18, Visitors Center**, on Draft EIR p. 2-40, has been revised to show a more accurate depiction of this proposed project component, and the landscaping palette revised to focus on native vegetation. The green area that is in the artist's rendering is not intended to be turf but would be a mix of gravel (decomposed granite) and native vegetation when implemented.
- **Figure 2-20, Aboveground Pipeline Corridor and Utility Corridor**, on Draft EIR p. 2-45, has been revised to clearly identify the expansion loops.
- **Figure 3.1-5, View 2b: View from 2nd Street Looking North toward the Synergy Oil Field Site (After)**, on Draft EIR p. 3.1-13, has been revised to indicate the date for the "After" condition described in View 2b.
- **Figure 3.1-12, View 8: View from the San Gabriel River Bike Trail Looking Northwest toward the Pumpkin Patch Site (After)**, on Draft EIR p. 3.1-20, has been revised to indicate the date for the "After" condition described in View 2b.
- **Figure 3.1-14, View 9: View from Pacific Coast Highway Looking East toward the Pumpkin Patch Site (After)**, on Draft EIR p. 3.1-22, has been revised to indicate the date for the "After" condition described in View 9.
- **Figure 3.1-16, View 10: View from Pacific Coast Highway Looking North toward the Pumpkin Patch Site (After)**, on Draft EIR p. 3.1-24, has been revised to indicate the date for the "After" condition described in View 10.
- **Figure 3.3-2b, City Property Site—Special-Status Plan Map**, on Draft EIR p. 3.3-22, has been updated to include the extent of southern tarplant in 2017 as well as the pipeline alignments for the proposed project, Alternative 5, and the Perimeter Alignment.
- **Figure 3.7-2, Sample Locations—Synergy Oil Field and City Property Sites**, on Draft EIR p. 3.7-7, has been updated and split into two figures:
    - New **Figure 3.7-2a, Sample Locations—Synergy Oil Field and City Property Sites**, shows the 2016 and 2017 sample locations used to identify locations that need cleanup; and
    - New **Figure 3.7-2b, Areas to Be Excavated—Synergy Oil Field and City Property Sites**, shows the areas that would be excavated prior to the implementation of the proposed project.

The revised figures are provided on the following pages.

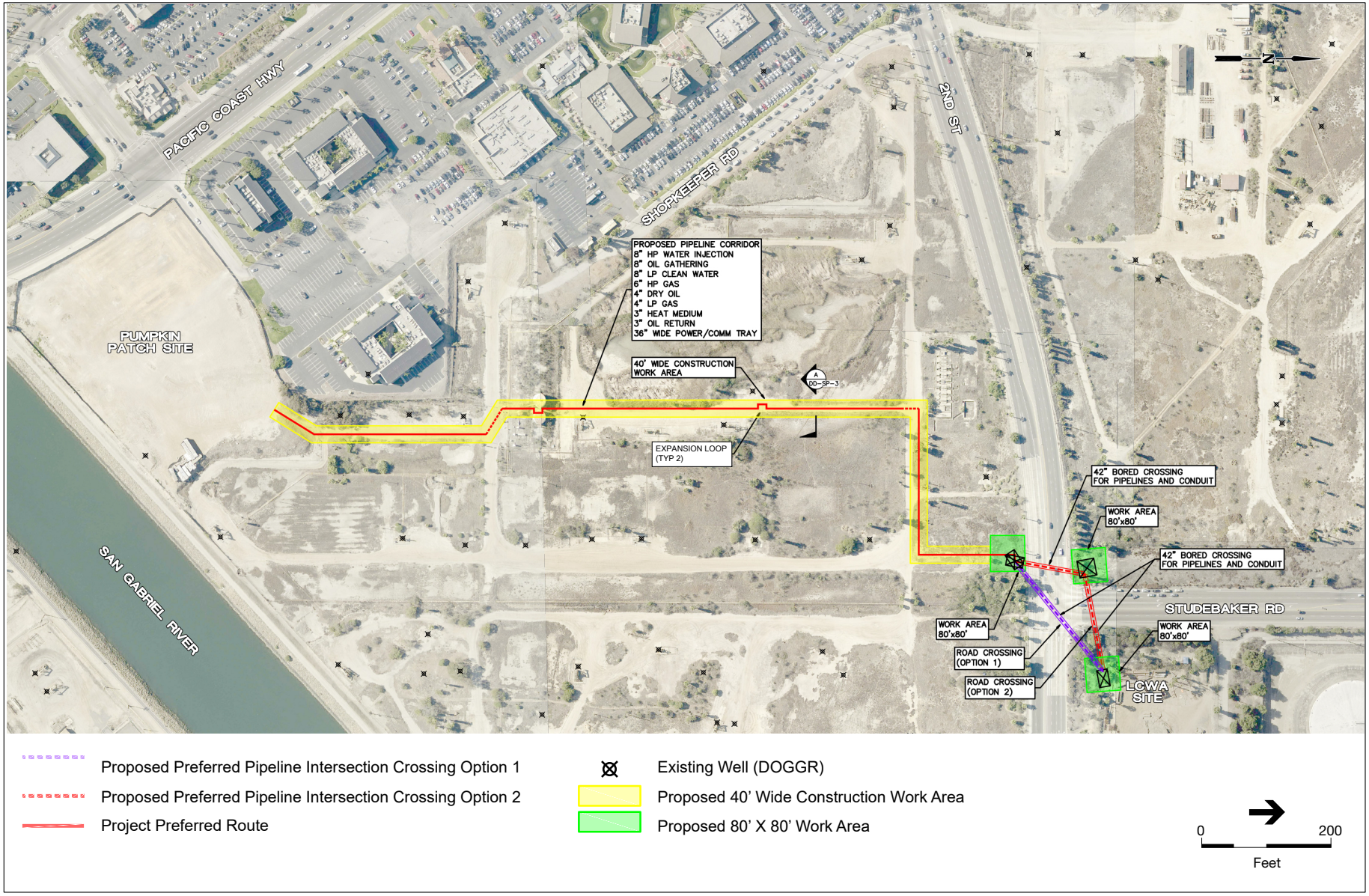
0 80
Feet

SOURCE: Urban Arena

Long Beach Cerritos Wetland . 150712

Figure 2-18

Visitors Center [Revised]



SOURCE: Los Cerrito Wetlands Oil Consolidation & Restoration Project

Long Beach Cerritos Wetland . 150712

Figure 2-20

Aboveground Pipeline Corridor and Utility Corridor [Revised]

Project Site Boundary
City Property Site Boundary
LCWA Site Boundary
Pumpkin Patch Site Boundary
Synergy Oil Field Site Boundary
Viewpoint Location

AFTER 4 YEARS

REMOVAL OF EXISTING OIL WELLS, TANKS, POWERLINES, & PIPES; RELOCATED BIXBY BUILDING/VISITOR CENTER; RESTORING WETLAND HABITAT.

SOURCE: Urban Arena, 2016

Long Beach Cerritos Wetland . 150712

Figure 3.1-5

View 2b: View from 2nd Street
Looking North toward the Synergy Oil Field Site (After) [Revised]

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Lor

- Project Site Boundary
- City Property Site Boundary
- LCWA Site Boundary
- Pumpkin Patch Site Boundary
- Synergy Oil Field Site Boundary
- Viewpoint Location

AFTER 4 YEARS

DEVELOPMENT OF PUMPKIN PATCH SITE; REMOVAL OF EXISTING NON-NATIVE/INVASIVE PALMS AND OIL WELLS FROM CITY SITE

SOURCE: Urban Arena, 2016

Long Beach Cerritos Wetland . 150712

Figure 3.1-12

View 8: View from the San Gabriel River Bike Trail
Looking Northwest toward the Pumpkin Patch Site (After) [Revised]

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Project Site Boundary
City Property Site Boundary
LCWA Site Boundary
Pumpkin Patch Site Boundary
Synergy Oil Field Site Boundary
Viewpoint Location

AFTER 3 YEARS

SOURCE: Urban Arena, 2016

Long Beach Cerritos Wetland . 150712

Figure 3.1-14

View 9: View from Pacific Coast Highway
Looking East toward the Pumpkin Patch Site (After) [Revised]

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- Project Site Boundary
- City Property Site Boundary
- LCWA Site Boundary
- Pumpkin Patch Site Boundary
- Synergy Oil Field Site Boundary
- Viewpoint Location

AFTER 3 YEARS

SOURCE: Urban Arena, 2016

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Figure 3.1-16

View 10: View from Pacific Coast Highway
Looking North toward the Pumpkin Patch Site (After) [Revised]

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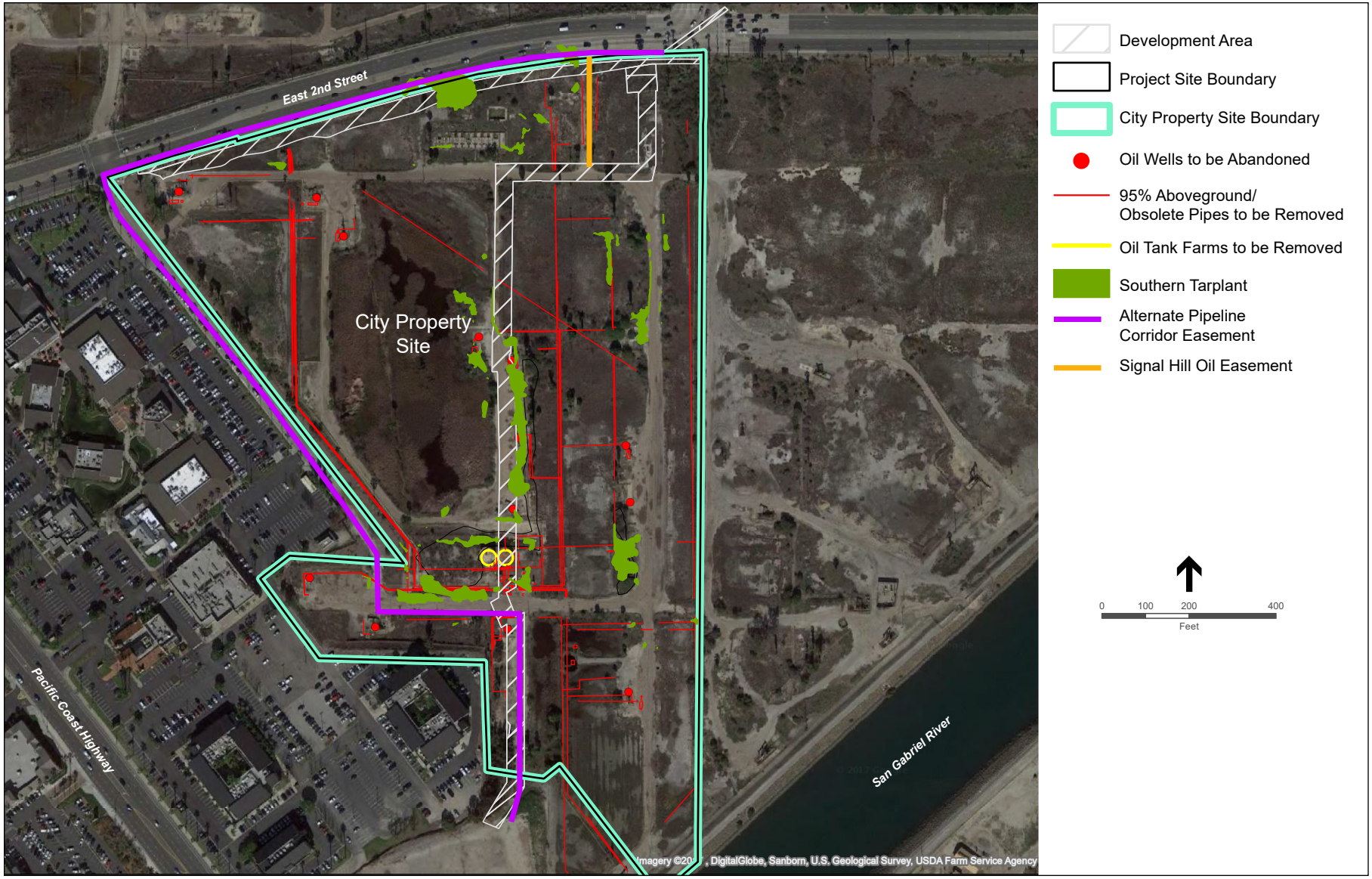

SOURCE: Glenn Lukos Associates

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Figure 3.3-2b

City Property Site – Special-Status Plants Map [Revised]

SOURCE: AEC, 2017b; ESA; Google Earth

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Figure 3.7-2a

Sample Locations – Synergy Oil Field and City Property Sites [New]

SOURCE: AEC, 2017b; ESA; Google Earth

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Figure 3.7-2b

Areas to be Excavated – Synergy Oil Field and City Property Sites [New]

10.3 Draft EIR Appendix Revisions

The following appendices have been revised or added in response to comments received on the Draft EIR. The revised and new appendices are provided on a CD inside the back cover of this Final EIR.

10.3.1 Appendix A3, Initial Study

Page 65, last paragraph, was revised as follows:

> **Potentially Significant Impact.** Wastewater service is provided by the Long Beach Water Department, which operates and maintains approximately 765 miles of sanitary sewer lines and delivers over 40 million gallons per day the Los Angeles County Sanitation Districts facilities. Wastewater generated by the proposed project would be delivered to the Joint Water Pollution Control Plan (JWPCP) of the Los Angeles County Sanitation District ~~or to the Long Beach Water Reclamation Plan of the Los Angeles County Sanitation Districts (LBWRP)~~ (City of Long Beach, 2016).

10.3.2 Appendix B1, Air Quality Assessment

Following last page, the appendix to Appendix B1 was revised as follows:

Appendix B1 has been updated to include clarifying information for the "Year 3 Construction Plus Operational Activity" scenario, based on information previously disclosed in the Draft EIR in Table 5 and Table 9 of Appendix B1.

10.3.3 Appendix B2a, Health Risk Assessment Response to Comments Memorandum

New Appendix B2a was added as follows:

Appendix B2 has been updated by the new Appendix B2a to include information that addresses comments from the South Coast Air Quality Management District (SCAQMD) on the Draft EIR regarding the health risk assessment.

10.3.4 Appendix B4, Greenhouse Gas Mitigation White Paper

Page 1, third line, is revised as follows:

~~May 30~~October 11, 2017

Page 7, Section a, California Energy Supply Loading Order – Displacement of Higher Polluting Energy, second paragraph, last sentence, is revised as follows:

… California Energy Commission staff describe this benefit in part in a December 2016 analysis of GHG emissions and mitigation for a proposed power plant, per the following two quotes~~-~~:

Page 8, second paragraph, is revised as follows:

Another way California-sourced oil/gas reduces GHG emissions is via California's GHG (AB 32 and SB 32) regulations which include control of oil and gas production facilities. As an example, in March 2017 CARB approved the most comprehensive regulation worldwide for oil and gas production-related methane.

Page 9, following bulleted list, is revised as follows:

- On January 1, 2020, achieve 1990 levels of GHG emissions.
- On December 31, 2030, achieve 40% reduction from 1990 levels of GHG emissions (SB 32 amendment).

In 2017 AB 398 was signed into law, extending California's Cap and Trade program through 2030, beyond the initial expiration date of 2020. The law was approved by the Legislature with a two-thirds majority vote that strengthens its legal basis. Specific to the Cap-and-Trade program, new regulations will go into effect for the period 2021 to 2031, including the following:

- Specified price ceilings and containment points for Cap-and-Trade allowances
- Updated industry assistance factors for allowance allocation
- Offset credit compliance limits
- Develop approaches to increase offset projects in the state

Page 9, last paragraph, is revised as follows:

Cap-and-Trade is designed to reduce the emissions from a substantial percentage of GHG sources (about 80% of GHG emissions will come under the program) within California through a market trading system. The system would reduce GHG emissions by reducing the available GHG "allowances" over time up until the year ~~2020~~2030. The program beyond the year 2020 has not been designed yet, but ~~the program is intended to extend beyond~~ related direction from AB 398 (see bullet points in Section VI.a. above) will guide that ~~timeframe~~ design. Facilities are required to obtain an "allowance", either through purchasing at auction or through freely allocated "industry assistance" allowances from CARB, for each MTCO2e of GHG they emit. CARB issues the "industry assistance" allocations for free for a number of industries. These are based, in part, on a pre-defined "benchmark" of GHG emissions per unit of production.

Page 10, first paragraph, is revised as follows:

For the oil recovery production sector, allowances are provided as a function of the amount of crude oil produced, thereby establishing, in effect, a level of efficiency in regard to GHG emissions for that sector. Other sectors are also allocated allowances based on their own respective activities. If an operation within the sector operates less efficiently than the specified "benchmark", thereby receiving an insufficient number of "free" allowances to cover their emissions, they would ~~be required~~ need to implement efficiency improvements or purchase additional allowances from the CARB auction. Some availability of "offsets" is also included in the program which can be obtained from specific, allowable offset programs, such as GHG reduction projects related to forestry, livestock, dairy digestery, rice farming and ozone depleting chemicals. Offsets outside of these ~~three~~ five options are not allowed at this time. The first group of sectors began trading in allowances in 2012. That group includes the oil and gas sector as well as most stationary sources. A second

group began the program in 2015, which ~~would~~ included the transportation fuels sector. ~~CARB auctioned about 23 million allowances in November 2012 to be used for the 2013 year.~~