NEWPORT BANNING RANCH

March 5, 2015

Mr. Karl Schwing
Ms. Amber Dobson
California Coastal Commission
200 Oceangate, Suite 1000
Long Beach, CA 90802-4302

Re: Coastal Development Permit Application 5-13-032 ("Application")
Newport Banning Ranch ("Project")

Dear Mr. Schwing and Ms. Dobson:

This letter responds to your November 26, 2014 Notice of Incomplete Application (NOIA). Based on review of the NOIA, included in this response are the following:

- Project Description (revised)
- Proposed Remedial Action Plan
- Archeological Resource Assessment
- Storm Water Pollution Prevention Plan
- Floorplans for commercial areas, mixed use areas, and the resort (Urban Colony and South Village)

The Newport Banning Ranch LLC (NBR) appreciates the numerous working meetings, discussions, and subsequent communications that have occurred with Rewdy Holstein and Marice White (NBR) and Coastal Planning Staff (CCC) in preparation of this response. NBR believes this response fully and finally addresses all of CCC Staff's requests for information and additional data.

NBR believes the upcoming March 12, 2015 CCC approval of the executed Settlement Agreement, affecting previously identified Threshold Issues and resolving the alleged enforcement issues related to oil operations, effectively resolves CCC's previously stated concerns regarding deeming CDP Application 5-13-032 complete absent the ability to conduct an accurate analysis of the resources on site for permitting purposes. We respectfully request your confirmation of completeness of the Application, and look forward to working with you to move this Application forward to the Commission for consideration.

Sincerely,

Michael A. Mohler
Senior Project Manager

ATTACHMENTS/EXHIBITS

Project Description (revised)

Proposed Remedial Action Plan

Attachment 5	2001 Cleanup Level Reference
Attachment 6	US EPA Citizens Guide to Bioremediation
Attachment 7	WNOC SPCC Plan
Attachment 8	Nabors SPCC Plan
Exhibit 3A	Oil Field Operations
Exhibit 7A	Abandonment and Remediation Areas Sensitive Vegetation Impacts
Exhibit 7B	Abandonment and Remediation Areas and Full Field Sensitive Vegetation
Exhibit 15	Abandonment and Remediation Areas and Special Status Species

Archeological Resource Assessment

Storm Water Pollution Prevention Plan

Floorplans

Oil Field Abandonment, Infrastructure Removal and Remediation Activities

1. *Although NBR's latest submittal includes information about the proposed abandonment, infrastructure removal, and remediation of 384 acres of the oil field operation, it did not include a revision to the CDP application project description to include these activities. Please revise the Newport Banning Ranch Revised Project Description to include this work. This description may take the form of a summary of proposed activities that includes a reference to the more specific descriptions included in the document titled, Newport Banning Ranch Oil Field Abandonment Plan ("Abandonment Plan"). As we discussed previously, by amending CDP application 5-13-032 to cover the entirety of the proposed project by including the proposed oil field abandonment, removal, and remediation activities it will allow the Commission's CDP to satisfy NBR's federal consistency obligations. Thus, if amended to include all of these activities, this would obviate the need for additional and separate federal consistency review of these activities by the Coastal Commission.*

   Response:
   Please see revised Project Description included with this submittal.

2. *The Abandonment Plan refers to the development of a site-specific Final Remedial Action Plan ("RAP") for this project. Please submit NBR's proposed Final RAP.*

   Response:
   Attached is the proposed Remedial Action Plan, Newport Banning Ranch Oil Field Abandonment, Orange County, California, February, 2015 (Attachment 4). This document has been submitted to the Orange County Health Care Agency (OCHCA) and Regional Water Quality Control Board (RWQCB) for review, as both agencies have oversight responsibilities for the abandonment and remediation of industrial facilities.

3. *The scope of the Abandonment Plan covers well abandonment, infrastructure and facility removal and remediation of contaminated soil over 384 acres. For the wells to be abandoned, please provide the name, status, and location of the wells. Demolition and removal activities will cover oil field features such as pipelines, power poles, electrical conduits, roads, pads, pumping units, tanks, vessels, motors, buildings, sumps, other fluid containment areas, etc. For each feature, please provide detailed information on numbers, location, size, and composition. For pipelines, please provide (a) the location and amount of pipeline segments that are buried and those that are located within heavily vegetated areas or sensitive resources, and (b) the locations of proposed pipeline tap and drain activities.*

   Response:
   <u>Wells:</u>

The wells to be abandoned are listed on pages 18, 19 and 20 and Exhibit 3 of the Abandonment Plan (Submitted October 30, 2014 as Attachment A1) along with the status of each well and its location coordinates. Attached is an updated exhibit, Exhibit 3A, which incorporates all features noted in the table below.

Features:

Features	Numbers or Length	Size	Composition	Location
Pipelines	Approx. 230,000 ft	2"-4"	Steel	Displayed on Exhibit 3A
Power Poles	306	Avg 35-40'	Wood	Displayed on Exhibit 3A
Roads/Well Pads	Approx. 14 miles	1 – 2 ' depth	Asphalt, ALM, gravels,	Displayed on Exhibit 13
Tanks / Vessels	10	various	Steel	Displayed on Exhibit 3A
Concrete debris piles	5	2.35 ac	Concrete	Displayed on Exhibit 3A
Buildings/Structures	13	various	Wood & Metal Construction	Displayed on Exhibit 3A
Historic Sumps	48	Avg 25'x25'x10'	Crude Oil Impacted Soils	Displayed on Exhibit 3A

It is expected that most pumping units, motors and mobile equipment will remain the property of the oil operator, WNOC, and may be used in continuing oil operations.

Pipelines:
Most pipelines on the property are located above ground with the exception those in road crossings and active facility work areas. Exhibit 3A shows the locations of all known pipelines onsite. These lines are generally 2" to 4" in size and are not tapped the way larger lines are. Prior to the start of the abandonment program, the oil operator will flush the lines with water from the outermost points (the wells) to the tank farm to recover any remaining oil volumes. Next, all existing valves will be closed and locked out. Depending upon ground conditions (vegetation, slope, etc.) and the condition of the pipe, pipes will be cut every 10 to 30 feet, starting from the farthest sections (nearest the wells). These short sections are more manageable and require less area (therefore less disturbance) to handle.

4. *For each feature to be removed, describe how they will be removed. For example, describe the excavation method that would be used to remove buried pipelines. (e.g., what would be the size of excavation trenches? Would excavated soil be side-cast and backfilled or removed? How would excavations in heavy vegetation or sensitive areas be accomplished?).*

   Response:
   As discussed in #3 above, the only known buried pipelines are in the road crossings, facility and open work areas. These will be removed using a backhoe with a 12" or 24" bucket to excavate the trench. The soils would be side cast in non-vegetated areas as needed along the trench to accommodate review by the onsite environmental consultant and subsequent backfilling. Removal of surface laid pipe in heavily vegetated or sensitive areas is described in Section 3.5.1.2 of the Abandonment Plan. These procedures include isolating and draining those sections by the existing valves, then cutting small and manageable sections that can be pulled out of the vegetated area. Portable catch basins and sorbent materials will be used at every cut section to contain potential drips from the pipe.

   Removal methods and the equipment used for the remaining features are described in Section 3.5 of the Abandonment Plan. With the exception of a small number of the pipelines and some limited areas of roads and well pads surfaces (which may change after the ground truthing effort), the oil field features to be removed are largely located in open, non-vegetated areas thus will have no direct vegetation impact. Additionally, these other features are located in currently active oil field areas with ongoing heavy equipment, truck and equipment movement activities.

5. *Please identify the number of truck trips to dispose of oil field debris, equipment, etc. offsite.*

   Response:
   Currently, the bulk of the oil field facilities and equipment is located within the oil remainder areas. Most of the reusable equipment located outside these areas will be moved to suitable locations within the consolidation/oil remainder areas. The majority of impacted soils, asphaltic materials and concrete debris will be incorporated into onsite remediation and placement areas.

   The only significant offsite trucking will involve the following categories which includes mainly recyclable materials and construction type debris. While transportation needs for odd sized materials, debris and equipment can vary, the following are the estimated outgoing loaded truck trips for the abandonment and remediation work (for traffic and emission considerations these amounts would be doubled for round trips).

Material Type	Truck Trips (Est.)
Oil field pipe for recycle	40
Steel: tank/vessels/structures	40
Structure construction debris	20
Power Poles	15
Electrical items	10

6. *Please clarify if DOGGR is requiring that any previously abandoned wells be "re-abandoned" to meet current standards. If such requirements have been established by DOGGR, please indicate the number and location of these wells as well as the activities that would be carried out to effectuate this "re-abandonment."*

Response:
The DOGGR does not require the re-abandonment of wells unless their condition poses a risk to human health or the environment. As the oil field is closed to the public, there are no such conditions on the NBR property.

However, as the abandonment and remediation work will not be done unless the greater NBR Development Plan is approved, there will be a development condition to review previously abandoned wells that are located within the areas planned for habitable structures (generally within 25' of habitable structures). The review determines if previously abandoned wells meet the current abandonment standards, which were established in the 1970's, and requires re-abandonment if they do not.

NBR has initiated the oil well file and history research for this effort with an expected completion in 3Q 2015. This will review in detail the methods used in existing previously abandoned wells focusing first on all wells abandoned prior to the mid 1970's.

If any re-abandonments are found to be necessary, the proposed procedures are reviewed and approved by the DOGGR with a reabandonment job permit issued for each well. This activity is essentially the same as the well abandonment procedures and equipment that were described in Section 3.4.1 Well Plugging and Abandonment Scope of Work, with an addition of an initial step to drill out the existing abandonment cement within the oil well casing. This procedure will utilize the same rig and support equipment described in the Abandonment Plan. Review previously abandoned wells and ensuring current DOGGR abandonment standards within the immediate development areas are typically conditions to obtaining future local building permits.

7. *Commission staff understands that significant biological assessment work has been carried out throughout the project site. However, the primary focus of many of these assessments that have been provided to Commission staff has been on the proposed residential and. commercial development project. We now need to understand the biological resource• implications and potential impacts associated with solely the proposed abandonment and remediation activity. Rather than requiring new or additional biological surveys or studies, providing this site-specific biological information on the abandonment, removal and remediation phases of the overall project to Commission staff will likely entail a refinement of the data collected through the studies and surveys that have already been carried out. A key issue here is that implementation of the Abandonment Plan will likely result in significant biological impacts to habitat and wildlife caused by wetland and upland ESHA habitat disturbance and loss, noise, spills, etc. Please therefore provide a biological assessment that addresses the potential impacts of all proposed oil field abandonment, removal and remediation activities. The assessment should assume a "worst-case" footprint and include an accounting and description of the amount and type of each species of plant and animal known to be present within and adjacent to each work site (including each well site, pipeline, soil or material stockpile area, soil borrow site, etc.). Please also provide a detailed description of the assumptions and methodology used to develop this "worst case" project footprint (for example, how were disturbance limits delineated? What activities were considered in developing this disturbance footprint? What, if any, buffers were used?). Please also include all measures proposed by NBR to avoid biological impacts and mitigate those impacts that cannot be avoided.*

Response:
Potential impacts of all proposed oil field abandonment and remediation activities are described and quantified, where possible, below. The assessment includes a comprehensive analysis of potential impacts based on a worst-case footprint, which was determined as described in Section 3.1 of the Abandonment Plan.

The potential impact analysis combines the footprint for all abandonment and remediation work sites, and logistic areas, to provide a comprehensive assessment of potential worst-case biological impacts. As there are no defined boundaries between well sites, work areas, roads and other infrastructure, a single footprint is analyzed. Please refer to response to comment 22 for additional description and detail of potential biological impacts associated with the proposed Logistics Areas.

As the abandonment and remediation of the oil field will not be commenced unless the NBR Development project is approved, proposed mitigation measures are described at the end of the assessment and include mitigations for both the A&R work and the subsequent development impacts.

Vegetation Impacts and Mitigation
<u>Native Scrub Vegetation</u>

Abandonment and remediation activities would result in impacts to 6.23 acres of scrub vegetation and 11.86 acres of disturbed scrub vegetation (totaling 18.09 acres of native scrub vegetation impacts) as shown in Table 1.

Table 1
Abandonment & Remediation Impacts to Native Scrub

Impact Type	Impact *(Acres)*
Permanent Scrub Habitat	
Abandonment/Remediation - Development Plan	2.0
Temporary Scrub Habitat	
Abandonment/Remediation - Open Space/Restoration	4.23
Subtotal Scrub	***6.23***
Permanent Disturbed Scrub Habitat	
Abandonment/Remediation - Development Plan	6.33
Temporary Disturbed Scrub Habitat	
Abandonment/Remediation– Open Space/Restoration	5.53
Subtotal Disturbed Scrub	***11.86***
Total Scrub	**18.09**

Grasslands

Grasslands on the site have largely been subject to historic vegetation maintenance activities. Abandonment and remediation activities would result in impacts to 18.61 acres of grassland vegetation (15.17 acres non-native and 3.44 acres native grasslands) as shown in Table 2. Of this, 1.15 acres would be temporary.

Table 2
Abandonment & Remediation Impacts to Grasslands

Impact Type	Impact *(Acres)*
Permanent Purple Needlegrass Grassland Habitat	
Abandonment/Remediation - Development Plan	3.09
Temporary Purple Needlegrass Grassland Habitat	
Abandonment/Remediation - Open Space/Restoration	0.35
Subtotal Purple Needlegrass Grassland	***3.44***
Permanent Undisturbed Non-Native Grassland Habitat	
Abandonment/Remediation - Development Plan	14.35
Temporary Undisturbed Non-Native Grassland Habitat	
Abandonment/Remediation - Open Space/Restoration	0.71
Subtotal Undisturbed Non-Native Grassland	***15.06***
Permanent Disturbed Non-Native Grassland Habitat	
Abandonment/Remediation - Development Plan	0.02
Temporary Disturbed Non-Native Grassland Habitat	
Abandonment/Remediation - Open Space/Restoration	0.09
Subtotal Disturbed Non-Native Grassland	***0.11***
Total Grassland	**18.61**

Vernal Pool and Seasonal Feature Impacts and Mitigation

Abandonment and remediation activities would result in temporary impacts to 0.324 acre of vernal pool habitat that supports San Diego Fairy Shrimp as shown in Table 3A. In addition, abandonment and remediation activities would result in impacts to 0.498 acre of seasonal features, of which 0.162 are temporary, as shown in Table 3B.

Table 3A
Abandonment & Remediation Temporary Impacts to Vernal Pools (3 Parameters)

Feature Name	Area (Acres)	Temporary Abandonment/Remediation Open Space/Restoration Impacts (Acres)
VP1	0.304	0.304
VP2	0.021	0.021
Total	**0.324**	**0.324**

Table 3B
Abandonment & Remediation Impacts to Seasonal Features (1 Parameter)

Feature Name	Area (Acres)	Permanent Abandonment/Remediation and Development Plan Impacts (Acres)	Temporary Abandonment/Remediation Open Space/Restoration Impacts (Acres)
San Diego Fairy Shrimp Occupied			
VP3	0.006	—	0.006
E	0.049	0.049	—
G	0.003	—	0.003
H	0.021	—	0.021
I	0.028	—	0.028
J	0.087	—	0.087
Subtotal	*0.194*	*0.049*	*0.145*
Not San Diego Fairy Shrimp Occupied			
B	0.030	0.030	—
C	0.001	0.001	—
D	0.002	0.002	—
F	0.030	0.030	—
K	0.014	—	0.014
L	0.003	—	0.003
M	0.014	0.014	—
N	0.029	0.029	—
P	0.009	0.009	—
Q	0.004	0.004	—
R	0.006	0.006	—
S	0.003	0.003	—

T	0.004	0.004	—
V[1]	0.090	0.090	—
X[1]	0.007	0.007	—
Y[1]	0.001	0.001	—
Z	0.007	0.007	—
BB	0.002	0.002	—
CC	0.003	0.003	—
DD	0.003	0.003	—
EE	0.003	0.003	—
FF	0.005	0.005	—
GG	0.003	0.003	—
HH[1]	0.007	0.007	—
KK[1 2]	0.017	0.001	—
LL[2]	0.001	0.0002	—
MM[2]	0.004	0.002	—
OO[1]	0.001	0.001	—
PP	0.001	0.001	—
Subtotal	*0.304*	*0.268*	*0.017*
Combined Total	**0.498**	**0.317**	**0.162**

[1] Feature impacts from abandonment and remediation only (no subsequent development plan impacts); remediated area to be included in natural open space area.
[2] A portion impacted by development plan footprint only.

Streambed/Riparian and Wetlands Impacts and Mitigation

Abandonment and remediation activities would result in impacts to 0.99 acre of streambed/riparian habitat, of which 0.88 acres are temporary, and 22.2 acres of wetland habitat, of which the majority or 21.48 acres are temporary, as shown in Table 4.

Table 4

Abandonment & Remediation Impacts to Streambed/Riparian and Wetlands

Impact Type	Impact *(Acres)*
Permanent Streambed/Riparian Impacts	
Abandonment/Remediation - Development Plan	0.11
Temporary Streambed/Riparian Impacts	
Abandonment/Remediation - Open Space/Restoration	0.88
Total Streambed/Riparian	**0.99**
Permanent Wetland Communities Impacts	
Abandonment/Remediation - Development Plan	0.77
Temporary Wetland Communities Impacts	
Abandonment/Remediation - Open Space/Restoration	21.48
Total Wetlands	**22.2**

Impacts and Mitigation tied to the Approval of the NBR Development Project Plan

Below is a brief description of the measures proposed to mitigate for biological resource impacts, which are discussed in more detail in the Habitat Conservation and Conceptual Mitigation Plan for the Newport Banning Ranch Property (HCCMP) and Project EIR. The HCCMP presents a comprehensive program of on-site compensatory mitigation that is designed to mitigate all biological impacts of the proposed abandonment and remediation work and the proposed NBR development plan, to enhance on-site biological communities in a way that improves the overall ecological function of the site. The HCCMP targets habitat enhancement for a number of special-status species, including least bell's vireo, Belding's savannah sparrow, San Diego fairy shrimp, and California gnatcatcher. Vegetation communities to be mitigated include coastal sage scrub, coastal bluff scrub, non-native grasslands, native bunchgrass grasslands, riparian wetlands, and seasonal features/vernal pools. The proposed mitigation treatment areas are embedded within a larger open space conservation area that will be permanently protected and managed as a single preserve area once the interim management period for the mitigation sites concludes and final resource agency sign-off is granted. In addition, the HCCMP identifies additional mitigation opportunities for tidal marsh and/or alkali meadow that may be implemented in the future by third parties.

Native Scrub Vegetation: Abandonment and remediation activities would result in impacts to 6.23 acres of scrub vegetation and 11.86 acres of disturbed scrub vegetation (totaling 18.09 acres of native scrub vegetation impacts) as shown in Table 1. Abandonment and remediation activities would result in impacts to 18.09 acres, 9.76 acres being temporary, of native scrub vegetation as shown in Table 1. When combined with the proposed NBR development plan, approximately 21.61 acres of scrub vegetation would be impacted, which would be mitigated by establishing, enhancing, and restoring 29.40 acres of scrub habitat onsite.

Grasslands: Grasslands on the site have largely been subject to historic vegetation maintenance activities. Abandonment and remediation activities would result in impacts to 18.61 acres of grassland vegetation (15.17 acres non-native and 3.44 acres native grasslands) as shown in Table 2. Of this, 1.15 acres would be temporary. When combined with the proposed NBR development plan, approximately 44.17 acres of grasslands would be impacted, which would be mitigated by establishing, enhancing, and restoring 26.49 acres of a combination of purple needle grass, salt tolerant grassland and annual grassland habitat.

Streambed/Riparian and Wetlands: Abandonment and remediation activities would result in impacts to 0.99 acre of streambed/riparian habitat, of which 0.88 acres are temporary, and 22.2 acres of wetland habitat, of which the majority or 21.48 acres are temporary, as shown in Table 4. When combined with the proposed NBR development plan, approximately 1.26 acres of streambed/riparian habitat and 22.48 acres of wetland habitat would be impacted (21.48 temporary), which would be mitigated by establishing, enhancing, and restoring 18.83 acres of

streambed/riparian habitat, and by establishing and restoring 12.19 acres of wetland habitat. Additional third-party wetland habitat conservation, establishment, restoration and/or enhancement opportunities have been identified in a 29.9 acre lowland area that is located contiguous with the ACOE-restored salt marsh basin along the Santa Ana River.

Vernal Pool and Seasonal Features: To mitigate for Project impacts to vernal pools and seasonal features, a vernal pool complex on the eastern portion of the Project site will be created and preserved through the enhancement of an existing vernal pool by removal of non-native species and native plants (that are not characteristic vernal pool species) and through the establishment of 6 to 8 additional vernal pools. An additional vernal pool complex will be constructed to the southwest, in an area which currently supports two seasonal features (Features A and II) that will be preserved in place. At the request of Permitting Agencies, an additional seasonal feature (Feature W) located on the southeast portion of the site will be protected within the Natural Open Space Preserve. When combined with the proposed NBR development plan, approximately 0.81 acre of vernal pools and seasonal features would be impacted, which would be mitigated by establishing, enhancing, and restoring 1.61 acres of vernal pool habitat.

Special Status Species Impacts and Mitigation

The proposed Project will result in impacts to wetlands, riparian habitat, grassland habitat, areas of upland scrub, and seasonal features as enumerated above. Therefore, the project includes restoration and mitigation to address potential impacts to special-status species observed or potentially occurring within the identified impact areas.

San Diego Fairy Shrimp
As noted, to mitigate for impacts to San Diego Fairy Shrimp habitat, a vernal pool complex on the eastern portion of the Project site will be created and preserved through the enhancement of an existing vernal pool by removal of non-native species and native plants, and through the establishment of 6 to 8 additional vernal pools. An additional vernal pool complex will be constructed to the southwest, in an area which currently supports two seasonal features (Features A and II) that will be preserved in place, and one additional seasonal feature (Feature W), located on the southeast portion of the site, will be protected within the Natural Open Space Preserve. The vernal pool complexes and preserved seasonal features will include surrounding grasslands buffers. Vernal pools will be established to support vernal pool plant indicator species, and function as viable, self-sustaining vernal pool basins that could potentially create a hydrologically connected complex of vernal pools. The establishment of vernal pools in each of the vernal pool complexes could potentially increase hydrological input to the existing vernal pools and seasonal features, which will promote longer-term ponding for San Diego fairy shrimp to complete its life cycle.

California Gnatcatcher, Cactus Wren
Proposed scrub mitigation areas aim to provide suitable habitat for a variety of avian species such as California towhee (*Pipilo crissalis*), Bewick's wren (*Thryomanes bewickii*), coastal California gnatcatcher, coastal cactus wren (*Campylorhynchus brunneicapillus*), bushtit (*Psaltriparus minimus*), black phoebe (*Sayornis nigricans*), white-crowned sparrow (*Zonotrichia leucophrys*), wren tit (*Chamaea fasciata*), and yellow-rumped warbler (*Dendroica coronata*). In particular, the plant palette for scrub mitigation areas was designed to provide an appropriate mix of native scrub species with a specific focus on increasing California sagebrush to provide improved habitat for the California gnatcatcher. In the scrub mitigation areas, which consist of the establishment, enhancement, and temporary impact restoration areas, native cover interim performance standards are aimed at achieving 80% cover of native scrub species by the fifth year for use by CAGN . This is a high level of cover is expected to be successful as the adjacent areas selected for scrub mitigation already support scrub species. In addition, annual grassland surrounding the southwestern vernal pool establishment and water quality basin areas on the mesa will provide a continuous corridor of open space preserved areas, and provide foraging habitat for additional target wildlife species, such as the California gnatcatcher.

Burrowing Owl, Raptors
Grassland and scrub area establishment and restoration efforts aim to increase biological productivity within the Natural Open Space Preserve, and provide enhanced wildlife habitat in areas on site that are currently ruderal, developed, historically maintained, or disturbed habitats. Areas supporting special-status plant species were not considered suitable for grassland or scrub mitigation in order to avoid direct and indirect impacts to these resources.

Impacts to purple needlegrass vegetation will be mitigated through the establishment of purple needlegrass grassland (PNGG) in the eastern vernal pool complex area, acting as a buffer to the established, enhanced, restored, and existing Pools, and intermixed throughout existing and establishment/enhancement scrub areas on the mesa. To mitigate for impacts to non-native and annual grassland impacts on site, restoration in ruderal, disturbed or developed habitats (some of which occur in areas that will be temporarily impacted through oil remediation activities) will occur. Two types of restoration are proposed: salt-tolerant transitional grassland establishment in the lowlands, and annual grassland buffer establishment around existing and established vernal pools and water quality basins in the mesa area.

The improved mesa grassland habitat will provide wildlife habitat for a variety of small mammal species that will in turn provide forage for a variety of potential raptors, such as white-tailed kite (*Elanus leucurus*), Cooper's hawk, red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus*), Loggerhead shrike (*Lanius ludovicianus*), long-eared owl (*Asio otus*), American kestrel (*Falco sparverius*), ferruginous hawk (*Buteo regalis*), American peregrine falcon (*Falco peregrinus*

anatum), and merlin (*Falco columbarius*). In addition, portions of the upland grassland will provide wintering habitat for burrowing owl (*Athene cunicularia*). The lowland areas were chosen for grassland mitigation to broaden the foraging habitat for raptors and avian species with the intent of creating a comprehensive restored watershed area. In addition, the lowland salt tolerant grasslands will provide nesting and foraging habitat for short-eared owl (*Asio flammeus*). Suitable habitat for short-eared owl has become rare in Orange County, therefore, the proposed grassland establishment in the lowlands represents a significantly important mitigation measure.

Least Bell's Vireo, Belding's Savannah Sparrow, Yellow Breasted Chat and Yellow Warbler

Riparian habitats within the site's drainages are proposed for enhancement due to the potential improvements to habitat connectivity to existing riparian resources and adjacent transitional upland habitats. All three drainages support mature coastal sage scrub habitat. Some of this scrub habitat is also proposed for enhancement for mitigation for scrub impacts. The northern drainages (Drainages A and B) are ideal for enhancement because they exist well outside of the proposed development plan area (adjacent to the lowlands) and will therefore be less affected by adjacent Project activities. Performing enhancement in Drainages A and B will improve the overall habitat connectivity which will serve to improve the functions and services that the drainages currently provide to wildlife species, particularly several special-status avian bird species, such as the least Bell's vireo, Belding's savannah sparrow, yellow warbler (*Dendroica petechia*) and yellow-breasted chat (*Icteria virens*), which are known to forage on site and in adjacent lowland areas. In addition, the proposed riparian habitat enhancements will provide improved habitat for a variety of common riparian-dependent avian species such as the red winged black bird (*Agelaius phoeniceus*) and the common yellow throat (*Geothlypis trichas*), and will also provide additional nesting habitat for raptors such as Cooper's hawk (*Accipiter cooperi*), which have often been observed nesting in riparian habitat in the lowlands.

Southern Tarplant

The Project EIR requires mitigation to ensure potential impacts to special status plants are incorporated into restoration plans for the site:

> *MM 4.6-7 Special Status Plant Species. The Applicant shall be required to plan, implement, monitor, and maintain a southern tarplant restoration program for the Project consistent with the most current technical standards/knowledge regarding southern tarplant restoration. Prior to the first action and/or permit that would allow for site disturbance (e.g., a grading permit), a qualified Biologist shall prepare a detailed southern tarplant restoration program that would focus on (1) avoiding impacts to the southern tarplant to the extent possible through Project planning; (2) minimizing impacts; (3) rectifying impacts through the repair, rehabilitation, or restoration of the impacted environment; (4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the Project; and*

(5) compensating for impacts by replacing or providing substitute resources or environments. The program shall be reviewed and approved by the City of Newport Beach (City) prior to site disturbance.

Impacts on southern tarplant shall be mitigated by seed collection and re-establishment. The seeds shall be collected and then placed into a suitable mitigation area in the undeveloped or restored portion of the Project site or at an approved adjacent off-site location. The southern tarplant restoration program shall have the requirements listed below.

1. *Seed ripeness shall be monitored every two weeks by a qualified Biologist and/or a qualified Seed Collector at the existing southern tarplant locations to determine when the seeds are ready for collection. A qualified Seed Collector shall collect all the seeds from the plants to be impacted when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or institution with appropriate storage facilities.*
2. *The mitigation site shall be located in dedicated open space on the Project site or at an adjacent off-site mitigation site. The mitigation site shall be prepared for seeding as described in a conceptual restoration plan.*
3. *The topsoil shall be collected from areas with limited amounts of weeds from the impacted population and re-spread in the selected location, as approved by the qualified Biologist. Approximately 60 to 80 percent of the collected seeds shall be spread in the fall following soil preparation and seed preparation. The remainder of the seeds shall be kept in storage for subsequent seeding, if necessary.*
4. *The qualified Biologist shall have the full authority to suspend any operation at the site which is, in the qualified Biologist's opinion, not consistent with the restoration program. Any disputes regarding consistency with the restoration program shall be resolved by the Applicant, the qualified Biologist, and the City.*

Additional Impact Avoidance Measures

Abandonment and Remediation Methodology

As described in Section 3.1 of the Abandonment Plan, potential biological resource impacts from abandonment and remediation activities are based on a worst-case footprint, thus ensuring all potential impacts to sensitive resources are adequately analyzed and mitigated. Section 3.1 of the Abandonment Plan details the ground-truthing process by which an additional detailed, onsite review of the impact areas will be conducted to determine locations in which the actual impact may be avoided or reduced. Upon completion of the ground-truthing process, the results will be documented onto area maps showing the original assumed worst-case impacts and the observed actual edges of any infrastructure that requires removal, and the findings will be compiled into a report to document any changes to the original assumptions and to plan for more detailed surgical removals. Accordingly, the proposed abandonment work will be implemented in a manner to ensure impacts

are avoided and reduced to the maximum extent feasible, while still providing for complete abandonment and remediation.

In addition to the ground-truthing and impact refinement process, the Abandonment Plan would establish logistic areas in locations that are either developed or heavily disturbed by oil field facilities and operations to minimize resource impacts. Please refer to response to comment 22 for a detail assessment of potential biological impacts associated with proposed logistics areas.

Buffers

As it relates to potential impacts associated with removal of existing oil field facilities, the scope and extent of impacts from these activities are dictated by the existing location of the facilities themselves, and therefore, resource buffers were not considered when determining the worst-case impact footprint for removal. However, identifying developed and disturbed areas of the oil field for purposes of establishing logistic areas was a primary consideration to ensure existing natural resource buffers from existing oil field activities and operations are maintained, to the extent possible, through the abandonment and remediation process. For example, although the lowland staging/stockpile areas would be located within 100 ft. of adjacent wetlands, these logistic areas would encompass developed areas, or areas heavily vegetated with invasive species, and would contribute to completing abandonment, remediation and restoration of the lowland area, which would ultimately support improved habitat and new public access and recreation opportunities on the site. Similarly, logistic areas in the Upland portion of the site would be established in areas historically and/or currently supporting oil field operations, and which are thereby developed, disturbed or vegetated primarily with non-native plant species. The Upland logistic areas are also located to be setback from the site's most sensitive seasonal features, which are proposed to be incorporated into the HCCMP, and the site's primary drainages to ensure that existing buffers are maintained from riparian resources and those areas supporting contiguous scrub habitat.

Development Construction Mitigation

Additional construction-related impact avoidance and mitigation measures required by the Project EIR include the following:

> *MM 4.6-6 Migratory Bird Treaty Act. No vegetation removal shall occur between February 15 and September 15 unless a qualified Biologist, approved by the City of Newport Beach (City), surveys the Project's impact area prior to disturbance to confirm the absence of active nests. If an active nest is discovered, disturbance within a particular buffer shall be prohibited until nesting is complete; the buffer distance shall be determined by the Biologist in consultation with applicable resource agencies and in consideration of species sensitivity and existing nest site conditions. Limits of avoidance shall be demarcated with flagging or fencing. The Biologist shall record the results of the recommended protective measures described above and shall submit a memo summarizing any nest avoidance measures to the City to document*

compliance with applicable State and federal laws pertaining to the protection of native birds.

MM 4.6-8 Light-footed Clapper Rail, Western Snowy Plover, Belding's Savannah Sparrow. Due to temporary impacts to marsh habitat in the lowland by oilfield remediation activities, a focused survey shall be conducted for light-footed clapper rail, western snowy plover, and Belding's savannah sparrow in the spring prior to the proposed impact to determine if these species nest on or immediately adjacent to the Project site. If any of these species are observed, the Applicant shall obtain approvals from the resource agencies (i.e., the U.S. Fish and Wildlife Service [USFWS], the California Department of Fish and Game [CDFG], and the California Coastal Commission) prior to the initiation of grading or any activity that involves the removal/disturbance of marsh habitat, including clearing, grubbing, mowing, disking, trenching, grading, or any other construction-related activity on the Project site. If any of these species would be impacted, mitigation for impacts on these species shall include replacement of marsh habitat as described in MM 4.6-4. In addition, the measures listed below shall be implemented.

1. *Marsh vegetation shall be removed after September 15 and before March 1st.*
2. *If marsh vegetation is proposed for removal prior to September 15, a series of pre-construction surveys shall be conducted to ensure that no light-footed clapper rail, western snowy plover, or Belding's savannah sparrows are in the area of impact. If any of these species are observed within 100 feet of the impact areas, the resource agencies shall be contacted to determine if additional consultation and/or minimization measures are required.*
3. *A Biological Monitor familiar with light-footed clapper rail, western snowy plover, and Belding's savannah sparrow shall be present during all activities involving marsh vegetation removal to ensure that impacts to marsh habitats do not extend beyond the limits of grading and to minimize the likelihood of inadvertent impacts to marsh habitat. In addition, the Biological Monitor shall monitor construction activities in or adjacent to marsh habitat during the light-footed clapper rail, western snowy plover, and Belding's savannah sparrow breeding season (March 1 to September 15).*
4. *The limits of disturbance during oilfield cleanup shall be clearly marked, and temporary fencing or other appropriate markers shall be placed around any sensitive habitat adjacent to work areas prior to the commencement of any ground-disturbing activity or native vegetation removal. No construction access, parking, or storage of equipment or materials shall be permitted within the marked areas.*

MM 4.6-9 California Gnatcatcher. Prior to initiation of grading or any activity that involves the removal/disturbance of coastal sage scrub habitat, including clearing, grubbing, mowing, disking, trenching, grading or any other construction-related activity on the Project site, the Applicant shall obtain a Biological Opinion from the U.S. Fish and Wildlife Service to authorize incidental take. Mitigation for impacts on the California gnatcatcher shall include restoration and preservation of 82.91 acres of coastal sage scrub habitat and implementation of the Construction Minimization Measures listed in MM 4.6-1.

MM 4.6-10 Coastal Cactus Wren. Impacts on southern cactus scrub, southern cactus scrub/Encelia scrub, disturbed southern cactus scrub, and disturbed southern cactus scrub/Encelia scrub shall be avoided to the maximum extent practicable. If it is determined by the City of Newport Beach (City) during the final grading plan check that impacts on cactus habitat cannot be avoided, the coastal sage scrub mitigation plan shall incorporate cactus into the planting palette at no less than a 1:1 ratio for impacted cactus areas. The Applicant shall submit the coastal sage scrub mitigation plan to the City to verify that an appropriate amount of cactus has been incorporated into the plan. Mitigation for impacts on the coastal cactus wren shall include replacement of coastal sage scrub habitat and implementation of the Construction Minimization Measures described in MM 4.6-1.

MM 4.6-11 Least Bell's Vireo. Prior to initiation of grading or any activity that involves the removal/disturbance of riparian habitat, including clearing, grubbing, mowing, disking, trenching, grading or any other construction-related activity on the Project site, the Applicant shall obtain approvals from the resource agencies (i.e., the U.S. Fish and Wildlife Service [USFWS], the California Department of Fish and Game [CDFG], and the California Coastal Commission). Mitigation for impacts on the least Bell's vireo shall include (1) replacement of riparian and upland scrub and riparian forest habitat and the Construction Minimization Measures described in MM 4.6-5; (2) protection of nests and nesting birds as described in MM 4.6-6; and (3) any additional provisions imposed by the permitting agencies.

MM 4.6-12 Burrowing Owl. Impacts on known burrowing owl burrows and surrounding non-native grasslands shall be avoided to the maximum extent practicable, as determined by a qualified Biologist in coordination with the City of Newport Beach (City). If impacts on grassland habitat occupied by burrowing owl cannot be avoided, mitigation for impacts on the burrowing owl shall include restoration of native grassland habitat, as described in MM 4.6-2.

Within 30 days prior to any ground-disturbing activity to suitable burrowing owl habitat, a focused pre-construction survey shall be conducted to determine the presence or absence of the burrowing owl on the Project site. If the species is

not observed, no further mitigation shall be necessary. Results of the survey shall be provided to the California Department of Fish and Game (CDFG).

If an active burrow is observed during the non-nesting season, a qualified Biologist shall monitor the nest site; when the owl is away from the nest, the Biologist shall exclude the owl from the burrow and then remove the burrow so the owl cannot return.

If an active burrowing owl burrow is observed during the nesting season, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Peak nesting activity for burrowing owl normally occurs from April to July. To protect the active burrow, the following restrictions to construction activities shall be required until the burrow is no longer active (as determined by a qualified Biologist): (1) clearing limits shall be established within a 300-foot buffer around any active burrow, unless otherwise determined by a qualified Biologist and (2) access and surveying shall be prohibited within 200 feet of any active burrow, unless otherwise determined by a qualified Biologist. Any encroachment into the buffer area around the active burrow shall only be allowed if the Biologist determines that the proposed activity shall not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest burrow.

MM 4.6-13 Raptor Nesting. To the maximum extent practicable, habitats that provide potential nest sites for raptors shall be removed from July 1 through January 31. If Project construction activities are initiated during the raptor nesting season (February 1 to June 30), a qualified Biologist shall conduct a nesting raptor survey. Seven days prior to the onset of construction activities, a qualified Biologist shall survey within the limits of the Project disturbance area for the presence of any active raptor nests (common or special status). Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required, and survey results shall be provided to the California Department of Fish and Game (CDFG).

If nesting activity is present, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. To protect any nest site, the following restrictions on construction are required between February 1 and June 30 (or until nests are no longer active, as determined by a qualified Biologist): (1) clearing limits shall be established a minimum of 300 feet in any direction from any occupied nest and (2) access and surveying shall be prohibited within 200 feet of any occupied nest. Any encroachment into the 300- and/or 200-foot buffer area(s) around the known nest shall only be allowed if a qualified Biologist determines that the proposed activity shall not disturb the nest occupants. During the non-nesting

season, proposed work activities can occur only if a qualified Biologist has determined that fledglings have left the nest.

MM 4.6-14 Invasive Exotic Plant Species. A qualified Biologist shall monitor any oilfield remediation activities that involve disturbance of native habitat but that would not include removal of the habitat in its entirety. During vegetation removal for remediation activities, the Biological Monitor shall direct the construction crew to remove invasive plant species, including but not limited to pampas grass and giant reed. The Biologist shall also direct the crew on any additional measures that may be needed to eradicate these species, such as removal of roots, painting cut stems with Round-up or other approved herbicide, or follow-up applications of herbicide.

The Applicant shall submit Landscape Plans to the City of Newport Beach (City) for review and approval by a qualified Biologist. The review shall ensure that no invasive, exotic plant species are used in landscaping adjacent to any open space and that suitable substitutes are provided. When the process is complete, the qualified Biologist shall submit a memo approving the Landscape Plans to the City.

Water Quality

Section 6.2 of the Abandonment Plan describes the process that will be implemented to ensure no significant operating or pressured amounts of fluids or oil will remain in the facilities during abandonment, and notes that project specific Spill Prevention procedures will be implemented before and during demolition activities to prevent small residual amounts of fluid or oil that may remain in the facilities from leaking to the ground. Spill prevention measures to capture any residual fluids during pipeline cutting may include the use of small containment pools to catch drips and the use of response materials (e.g., oleophilic sorbent pads) under or in cut sections.

In addition, in accordance with General Construction Permit criteria, BMPs would be implemented prior to, during, and after implementation of the final RAP. During demolition, the site perimeter would be bermed with silt fencing (See EIR Section 4.4, Construction BMP SE-1 on Table 4.4-6) or gravel bag berms (EIR Section 4.4, Construction BMP SE-6) to contain the area and limit erosion and runoff. Upstream runoff would be directed around the limits of work with the use of sediment and erosion control measures including berming and gravel bags (EIR Section 4.4, Construction BMP SE-6). Removed materials would be stockpiled in specified areas of the site and bermed and/or covered in accordance with stockpile management procedures (EIR Section 4.4, Construction BMP WM-3) until properly disposed of off-site or treated on-site in accordance with the final RAP. Additional construction BMPs would also be implemented in accordance with the Project SWPPP, including but not limited to: good housekeeping practices to contain potential construction materials (EIR Section 4.4, Construction BMP WM-1), leaks and maintenance activities for large equipment used on site (EIR Section 4.4, Construction BMP WM-4, NS-10), stabilized construction entrances, exits and roadways (EIR Section 4.4,

Construction BMP TR-1, TR-2), and additional measures for management of contaminated soils (EIR Section 4.4, Construction BMP WM-7). Implementation of these BMPs would provide for the protection of surface water quality and associated biological resources by avoiding and/or minimizing pollutant runoff into surface waters and provide for protection of groundwater quality by minimizing the introduction of pollutants into the groundwater table. Therefore, proposed Project's impacts to groundwater and surface water associated with removal of oil facilities would be less than significant.

Noise

Noise associated with abandonment and remediation activities would be similar to that of the active oilfield operations that currently occur throughout the site. Potential noise impacts would be more localized to active work areas when compared to existing conditions, and would be removed from large portions of the site altogether upon completion of the abandonment and remediation process.

The Project EIR identifies specific mitigation requirements to address potential noise impacts to least Bell's vireo; Mitigation Measures MM 4.6-5 *Jurisdictional Resources/Riparian Habitat Preservation and Restoration* requires, in part:

> *The Applicant is seeking a Take Authorization through Section 7 of the Federal Endangered Species Act for impacts to habitat for the least Bell's vireo. Prior to issuance of the first action and/or permit that would allow for site disturbance (e.g., grading permit), the Applicant shall provide to the City of Newport Beach a Biological Opinion issued from the U.S. Fish and Wildlife Service (USFWS) authorizing the removal of jurisdictional resources (i.e., potential least Bell's vireo habitat). It is anticipated that the USFWS Biological Opinion would contain conservation recommendations to avoid or reduce the Project's impact. Although additional conservation measures identified by the USFWS shall be enforced, at a minimum, the Construction Minimization Measures listed below shall be followed.*
>
> 3. *The use of any large construction equipment during site grading shall be prohibited within 500 feet of an active least Bell's vireo nest during the breeding season of this species (March 15 to September 15), unless otherwise directed by the USFWS and the CDFG. Construction may be allowed within 500 feet of an active nest if appropriate noise measures are implemented, as approved by the resource agencies.*
> 4. *Appropriate noise-abatement measures (e.g., sound walls) shall be implemented to ensure that noise levels are less than 60 A-weighted decibels (dBA) at specified monitoring locations near active nest(s), as determined by the Biological Monitor. This shall be verified by weekly noise monitoring conducted by a qualified Acoustical Engineer during the breeding season (March 15 to September 15) or as otherwise determined by a qualified Biological Monitor based on vireo nesting activity.*

If construction occurs during the breeding season, a summary of construction monitoring activities and noise monitoring results shall be provided to the USFWS and the CDFG following completion of construction.

8. *Please provide an analysis of sound levels within 100 feet of the different construction equipment proposed to be used onsite. Please provide sources and models you used to develop those figures. We also recommend you identify mitigation measures to reduce sound levels.*

Response:
Section 4 of the EIR document analyzed noise impacts associated with the development of the NBR project, and identifies applicable mitigation measures (cited, in part above). The analyses included both short term construction noise (abandonment, remediation and grading) and longer term residential development noise impacts. For perspective, a study of existing ambient noise levels was conducted on the Project site which showed a broad range of existing noise levels dominated by existing traffic surrounding the property. Table 4.12-6 in the EIR document, shown below, outlines the existing ambient noise levels:

TABLE
SHORT-TERM[a] AMBIENT NOISE LEVEL MEASUREMENTS SUMMARY

Measurement Number[a]	Location (Date and Time)	Noise Levels (dBA)				Primary Noise Source
		L_{eq}	L_{max}	L_{min}	CNEL	
1	Southeastern portion of the site, approximately 300 ft west of the Newport Crest Condominiums.	47.6	63.7	41.0	50.4	Traffic on West Coast Hwy and aircraft overflights.
2	Southeastern portion of the site, approximately 300 ft north of the Newport Crest Condominiums.	44.7	53.8	39.8	47.6	Aircraft overflights.
3	Eastern portion of the site, approximately 100 ft from the Carden Hall School building.	47.1	60.9	36.8	50.0	Stationary noise from industrial uses and vehicle movements.
4	Curb of Whittier Ave, adjacent to the existing Island View Mobile Home Park.	47.8	59.7	40.3	51.5	Traffic on Monrovia Ave
5	Northeastern portion of the Project site, approximately 50 ft from the existing residences' backyards.	44.5	51.6	41.1	47.3	Aircraft overflights.
6	Northern portion of the Project site at the boundary of the ecological reserve.	43.2	50.6	39.6	46.0	Aircraft overflights.
7	Eastern portion of the Newport Shores residential area adjacent to the Community Center and single-family residences.	48.4	63.0	40.7	53.1	Traffic on West Coast Hwy and aircraft overflights.
8	Southern portion of the site,	50.8	56.4	47.7	55.7	Traffic on West Coast

Measurement Number[a]	Location (Date and Time)	Noise Levels (dBA)				Primary Noise Source
		L_{eq}	L_{max}	L_{min}	CNEL	
	approximately 200 ft from the edge of the mesa.					Hwy and aircraft overflights.
9	Curb of 19th St, adjacent to existing condominiums on Latitude Ct.	54.8	71.1	39.1	57.6	Traffic on 19th St.
10	Adjacent to existing offices where 15th St is proposed to be extended on to Project site.	47.0	65.6	41.7	49.9	Aircraft overflights and existing industrial uses.
11	Adjacent to condominiums' patios on 18th St, west of Monrovia Ave approximately 25 feet from the Street curb.	58.9	72.4	45.5	61.7	Traffic on 18th St.
12	Adjacent to residences' backyard walls on Brookhurst St approximately 60 ft from the road centerline.	66.9	78.8	50.6	69.7	Traffic on Brookhurst St.
13	Adjacent to residences' backyard walls on Hamilton Ave, approximately 50 ft from the road centerline	67.9	82.0	45.4	70.7	Traffic on Hamilton Ave.
14	By residences' front yards at 15 ft behind the 10-ft-high sound wall along West Coast Hwy.	56.7	71.9	47.1	59.5	Traffic on West Coast Hwy.

dBA: A-weighted decibels; Leq: equivalent noise level; Lmax: maximum noise level; Lmin: minimum noise level.
[a] Approximately 15 minutes.
[b] See Exhibits 4.12-1 and 4.12-2 for measurement locations
Source: BonTerra Consulting 2010.

Short-term construction noise would be related primarily to the use of heavy equipment during the abandonment and remediation phase (2-3 years) and the remaining grading and construction phase (5-6 years) until final occupancy. Table 4.12-8 listed typical maximum construction equipment noise levels for this phase. It should be noted that actual noise impacts to surrounding locations will be occasional and inconsistent during these time periods as work activities move throughout the property. None of these conservative noise levels would actually occur in one place for the full 3 or 6 year time periods. An abridged copy of that table is shown below limited to equipment that might be expected to be used during the abandonment and remediation work phases.

TABLE
TYPICAL MAXIMUM CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	Noise Level (dBA) at 50 ft	Typical Duty Cycle
Backhoe	80	40%
Chain Saw	85	20%
Compactor (ground)	80	20%
Compressor (air)	80	40%
Concrete Saw	90	20%
Crane (mobile or stationary)	85	20%
Dozer	85	40%
Dump Truck	84	40%
Excavator	85	40%
Front End Loader	80	40%
Grader	85	40%
Hydra Break Ram	90	10%
Jackhammer	85	20%
Mounted Impact Hammer (hoe ram)	90	20%
Pneumatic Tools	85	50%
Pumps	77	50%
Rock Drill	85	20%
Scraper	85	40%
Tractor	84	40%
Vacuum Excavator (vac-truck)	85	40%
KVA = kilovolt amps Source: BonTerra Consulting 2010.		

Construction noise would be perceptible at residences located approximately 200 feet south of West Coast Highway. These residences are located behind an existing seven-foot-high noise barrier. While construction noise would be generally overshadowed by traffic on West Coast Highway, it is expected that some activities would be sporadically heard during periods of low traffic activity on West Coast Highway.

Construction noise would result in temporary more substantial noise increases at the Carden Hall School and the following residential communities: Newport Crest; California Seabreeze; Parkview Circle; Newport Shores; Lido Sands; the mobile homes on the southwestern corner of Whittier Avenue and 17th Street; and the mobile homes on the northeastern corner of Monrovia Avenue and 15th Street. Though closest to the project work, the Carden Hall School and the Newport Crest community would be shielded from much of the noise by the clean soil borrow site flip soil stockpiles. Again, it should be noted that these construction type noises are not consistent in nature and activity will actually move throughout the property and will not continuously impact these locations.

A typical remediation excavation operation would have an excavator, a loader, and a dump truck working concurrently. The combined noise level from this equipment, using the data from Table 4.12-8, would be approximately 89 dBA Lmax and 85 dBA Leq at a distance of 50 feet. At a distance of 150 feet, the noise levels would be less than 80 dBA Lmax and less 76 dBA Leq; at a distance of 300 feet, the noise levels would be less than 74 dBA Lmax and less 70 dBA Leq. On average the intermittent abandonment and remediation work will be well over 1000 feet distant from the resources noted above.

9. *Please indicate the specific activities proposed for each of the areas displayed on Exhibits 7 through 11 of the Abandonment Plan (for example, excavation, vegetation clearance, access routes, staging areas, etc.).*

Response:
As there are no defined boundaries between the numerous well pads, work areas and roads throughout the site some of the abandonment and remediation activity areas will overlap. Exhibit 12 of the Abandonment Plan shows the detailed locations of the A&R work logistics, stockpiling and staging areas and the main access routes for each area. The activities planned within each area is highlighted.

Exhibit 11 of the Abandonment Plan highlights in pink the locations where estimated deeper remedial excavations will be carried out. The new Exhibit 3A, attached, highlights the specific removal activities for power poles, tanks/vessels, structures, pipelines, sumps and concrete piles. It also indicates the wells which have yet to be abandoned and will be the subject of additional rig work as outlined in Section 3.4 of the Abandonment Plan. All the well and well pad locations shown will have some level of remedial excavations conducted in order to remove hydrocarbon impacted soils. All the remaining areas, previously explained as the worst case oil field use areas will have the surface well pad, work area and road materials scraped and removed. These activities will be adjusted according to the results of the ground-truthing effort described in the Abandonment Plan Section 3.1.

10. *Please (a) identify the amount of soil to be removed from each of the clean soil borrow areas, (b) clarify why clean soil would be excavated and replaced with concrete debris, (c) evaluate the potential biological impacts associated with this proposed method of disposal for concrete debris, and (d) specify the number, size, and location of the existing concrete debris stockpile locations as well as the amount of concrete stored at these sites.*

Response:
(a). Approximate soil volumes to be removed from the three soil borrow areas are (north to south): 75,000 cyds, 270,000 cyds, and 115,000 cyds.

(b). as described in Section 3.0 Abandonment Process, the goal was to design a "greener" remediation project that would minimize impacts to resources both onsite

and to the surrounding urban community. This includes keeping as much activity onsite as possible minimizing what is disposed of in offsite landfills, which in turn minimizes traffic impacts, energy usage and emissions from high volumes of truck hauling traffic. The strategy includes recycling and reusing as much equipment and material as possible, including cleaning and recycling the impacted soils and compactable materials such as the concrete, into onsite structural fills. To this end and to maximize the future beneficial reuse of the property for either development or restoration these recycled materials would be placed at least 10 feet below grade (15 feet for concrete) and capped with clean soil. That displaced clean soil would also be used to backfill the surface areas where impacted materials were removed.

(c). the clean soil borrow pits are located in current oil field operations areas so much of the area is presently disturbed. The sensitive vegetation impacts for the borrow pits are now more clearly shown on new Exhibit 7B and the incremental vegetation and biological impacts, beyond the impacts from the oil field infrastructure removal is discussed further in response to question #22.

(d). the existing concrete debris piles are highlighted on the new Exhibit 3A. The five areas shown cover an approximate 2.35 acres and contain an estimated 15,000 cubic yards of concrete debris.

11. *Please clarify if the wetland areas to be avoided have been delineated per U.S. Army Corps of Engineers standards or Commission standards. Please provide the survey reports and field data sheets supporting the delineations shown in Exhibit 8.*

Response:
All wetland areas have been delineated per U.S. Army Corps of Engineers standards or Commission standards. Please refer to the following reports, with relative data sheets, which were previously submitted as part of the original permit application. For convenience, these reports are included again in this submittal, on the attached data CD:

- Jurisdictional Determination of Seasonal Features for the Newport Banning Ranch. Dudek, May 2013.
- Final Biotechnical Technical Report, Newport Banning Ranch, BonTerra Consulting, September 2, 2011. See EIR Appendix E, Biological Resources. The Final Biotechnical Technical Report contains Appendix H, Draft Jurisdictional Delineation Report, Newport Banning Ranch. BonTerra, August 23, 2011.
- Jurisdictional Determination for the Newport Banning Ranch Property, City of Newport Beach and Unincorporated Orange County, Orange County, California. GLA, August 29, 2008.

12. Please provide an analysis of air impacts, including greenhouse gas emissions. Is a SCAQMD permit required for this work? If so, please provide the status of that application and provide information regarding mitigation measures or offsets proposed by NBR or required by the SCAQMD.

Response:
Air impacts were addressed in Air Quality Section 4.1 of the Draft EIR. This section analyzed construction emissions for the Project, with construction including both the Abandonment and Remediation work and the subsequent development grading and build out.

The proposed A&R and Project work would be constructed over a period of approximately two to three years for the oil field abandonment and remediation, and five to six years for the build out of the development. The schedule of construction activities used for calculating construction emissions was developed from the Conceptual Phasing Plan. The oilfield remediation work would overlap with site development and construction of the first two building phases. During the construction period, air pollutants would be emitted by off-road and on-road construction equipment and worker vehicles, and fugitive dust would be generated during earth-moving and grading on site. While the analysis included the A&R work in the initial years the discussion focuses on the more intensive Project grading and construction work.

Construction emissions were calculated using URBEMIS Version 9.2.4, as described in the Methodology section, and based on the scenario described above and information provided in Section 3.0, Project Description. Separate URBEMIS calculations were made for the remediation/mass grading effort and building construction elements; emissions were added together for periods of concurrent activities.

Mass Emissions Thresholds
The results of the URBEMIS calculations for Project construction are shown in Table 4.10-7, which shows the estimated maximum daily emissions for each construction year. Appendix G of the EIR includes eight tables for eight representative construction years; Table 4.10-7 summarizes the findings. The data are compared with the SCAQMD mass daily thresholds.

Table
Estimated Maximum Daily Construction Emissions[a]

Year	VOC	NOx	CO	SOx	PM10	PM2.5
1	11	85	47	<0.5	50	13
2	15	88	89	<0.5	46	13
3	15	80	86	<0.5	38	11
4	18	88	125	<0.5	39	11

5	16	42	60	<0.5	29	7
6	18	51	96	<0.5	30	8
7	10	24	73	<0.5	2	1
8-10	7	11	29	<0.5	1	1
SQAQMD Thresholds (Table 4.10-6)	75	100	550	150	150	55
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

VOC: volatile organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: particulate matter 10 microns or less in diameter; PM2.5: particulate matter 2.5 microns or less in diameter.
Notes: Detailed data in Appendix G.
[a] In pounds per day

Table 4.10-7 shows that the estimated maximum daily construction emissions for all criteria pollutants would not exceed the SCAQMD CEQA significance thresholds.

Ambient Air Quality – Local Significance Thresholds

Local pollutant concentrations are initially addressed using the SCAQMD LST look-up table methodology previously described in Section 4.10-3. The closest sensitive receptors to the Project site are the Newport Crest residences adjacent to the southeastern boundary of the site in the City of Newport Beach; the Carden Hall School, adjacent to the site on the east at 16th Street in the City of Newport Beach; and the California Seabreeze community, located generally between 19th Street and 18th Street contiguous to the Project site in the City of Costa Mesa. Each of these receptors is within 25 meters (82 feet)[1] of a part of the Project site that would have construction activity at some point in time.

Table 4.10-8 identifies the emissions thresholds for local pollutants with receptors at a distance of 25 meters for 1-, 2-, and 5-acre sites. The table shows that emissions thresholds increase with the size of the site. Therefore, thresholds for sites larger than 5 acres are greater than the 5-acre SCAQMD threshold. Table 4.10-8 also shows the maximum daily on-site emissions for the Project's construction activities. The emissions of NOx and CO would be less than the thresholds shown in Table 4.10-8, and would therefore be less than the thresholds for larger sites. Therefore, the local pollutant NOx and CO impacts from on-site construction over the Project site would be less than significant.

[1] Metric units are used in this discussion to be consistent with SCAQMD methodology.

Table
Local Significance Threshold Construction Emissions
for Receptors at 25 Meters

	NOx	CO	PM10	PM2.5
	Emissions (lbs/day)			
LST Thresholds – 1-acre site	92	639	4	3
LST Thresholds – 2-acre site	131	945	7	5
LST Thresholds – 5-acre site	197	1,711	14	9
Project Maximum daily on-site emissions	80	56	50	13
Exceed 5-acre threshold?	**No**	**No**	**Yes**	**Yes**

lbs – pounds
Thresholds are for SCAQMD Source Receptor Area 18 – North Coastal Orange County.
Source: BonTerra Consulting 2010.

As shown on the table, PM10 and PM2.5 emissions would exceed the LST 5-acre thresholds. Therefore, a dispersion model analysis was conducted for PM10. The model assumes grading activities would occur concurrently on Phase I and Phase II development sites. The model results indicate that the SCAQMD CEQA significance threshold of 10.4 micrograms per cubic meter (µg/m^3) (Table 4.10-6) would be exceeded at the southern and eastern property boundaries; please refer to Exhibit 4.10-3. The highest 24-hour PM10 concentration, 23.0 µg/m^3, would occur at the northwestern corner of the Newport Crest Condominium development. This value is less than the State ambient air quality standard of 50 µg/m^3. The PM10 concentration would diminish to less than the CEQA significance threshold at a distance of approximately 52 feet from the point of highest concentration and at lesser distances from all other points on the property line. Therefore, during periods of maximum development grading activity, there is a potential for exceedance of the SCAQMD CEQA threshold at residences and other sensitive receptor land uses immediately adjacent to the Project site. This would be considered a significant impact.

The principal source of the PM10 emissions would be fugitive dust from development grading activities.

The Project EIR requires mitigation to address potential air quality impacts and to minimize emissions during construction:

MM 4.10-1 *Construction Site Design and Operation.* Prior to issuance of a development grading permit, the Landowner/Master Developer shall demonstrate to the City of Newport Beach that construction documents require the construction contractors to implement the following measures or provide information and data that demonstrates that implementation would not be feasible:

a. Electricity shall come from power poles rather than diesel- or gasoline-fueled generators, compressors, or similar equipment;
b. Construction parking shall be configured to minimize traffic interference;

c. Construction trucks shall be routed away from congested streets and sensitive receptors;
d. Construction activities that affect traffic flow on the arterial system shall be scheduled to off-peak hours to the extent practicable;
e. Temporary traffic controls, such as a flag person(s), shall be provided where necessary to maintain smooth traffic flow; and
f. Dedicated turn lanes for movement of construction equipment on- and off-site and signal synchronization shall be provided as necessary to maintain smooth traffic flow.

MM 4.10-2 *Construction Equipment Operation.* Prior to issuance of a development grading permit, the Landowner/Master Developer shall demonstrate to the City of Newport Beach that construction documents require the construction contractors to implement the following measures:

a. All construction equipment shall be tuned and maintained in accordance with the manufacturer's specifications;
b. Diesel truck idling time shall be five minutes or less, both on- and off-site; and
c. Work crews shall shut off diesel equipment when not in use.

MM 4.10-3 *Construction Ridesharing and Transit Incentives.* Prior to issuance of a development grading permit, the Landowner/Master Developer shall provide copies of construction documents to the City of Newport Beach showing that these documents include a statement that the construction contractors shall support and encourage ridesharing and transit incentives for the construction crews.

MM 4.10-4 *Fugitive Dust – Supplementary Measures.* Prior to issuance of each development grading permit, the Landowner/Master Developer shall demonstrate to the City of Newport Beach that construction documents and grading plans include the following:

a. The contractor shall suspend grading operations when wind gusts exceed 15 miles per hour;
b. The contractor shall take measures (such as additional watering or the application of chemical suppressants) to stabilize disturbed areas and stockpiles prior to non-work days if windy conditions are forecasted for a weekend, holiday, or other day when site work is not planned.
c. The contractor shall re-apply water as necessary during grading and earth-moving to ensure that visible emissions do not extend to residences or schools.

MM 4.10-6 Fugitive Dust – Street Sweeping. Prior to issuance of a development grading permit, the Landowner/Master Developer shall demonstrate to the City of Newport Beach that construction documents require the construction contractors to sweep paved roads within and adjacent to the Project site if visible soil materials are carried to the streets. Street sweepers or roadway washing trucks shall comply with SCAQMD Rule 1186 and shall use reclaimed water, if available.

SCAQMD
While a SCAQMD pre-work permit is not required for the A&R work, all field operations must abide by the SCAQMD rules on nuisance and fugitive dust (Rule 402/403) and on VOC Contaminated soils (Rule 1166). While the field assessments did not indicate that VOC soils exceeding the SCAQMD limits will be encountered, monitoring will be conducted by the onsite environmental consultant during all excavation activities. The field RAP document describes these rules and field measures in Section 5.7 Remediation Project Controls:

Dust and Emissions Control
Dust and emissions controls will be required as part of the remediation project to satisfy SCAQMD regulations and address potential off-site impacts to the community. Any required air monitoring conducted for worker health and safety will be addressed in the HASP (Section 5.7.2).

Construction contractors will be required to comply with SCAQMD Rules 402 and 403 in order to minimize short-term emissions of dust and particulates. SCAQMD Rule 402 requires that air pollutant emissions not be a nuisance off site. SCAQMD Rule 403 requires that fugitive dust be controlled with Best Available Control Measures (BACMs) so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. This requirement shall be included as notes on the contractor specifications. Table 1 of Rule 403 lists potential dust source activities, BACMs, and guidance; applicable requirements may include, but not be limited to:

- Clearing and grubbing, demolition – apply water in sufficient quantity to prevent dust plumes.
- Crushing – pre-water material prior to loading into crusher; monitor crusher emissions opacity; apply water to crushed material to prevent dust plumes.
- Earth-moving activities – limit vehicular traffic and disturbances on soil areas where possible; pre-apply water to depth of proposed cuts; re-apply water as necessary to maintain soil in a damp condition and to reduce visible emissions; stabilize soil once earth-moving activities are complete.
- Stockpiles/bulk material handling – stabilize stockpiled materials; maintain required stockpile heights; allow water truck access; apply water in sufficient quantity to prevent dust plumes.
- Backfilling – mix backfill soil with water prior to moving; dedicate water truck to backfilling equipment; empty loader buckets slowly and minimize drop heights.
- Loading materials – stabilize material while loading to reduce fugitive dust emissions; maintain freeboard on haul vehicles; use tarps on haul trucks; address and mitigate vehicle track-out; apply water in sufficient quantity to prevent dust plumes.

Excavation of impacted soils will be conducted and managed in accordance with SCAQMD Rule 1166, Volatile Organic Compound Emissions from Decontamination

of Soil. Although VOC emissions from soil to be managed at the Site are not anticipated to exceed the criteria listed in SCAQMD Rule 1166, the contractor will prepare a Site-specific Rule 1166 Contaminated Soil Mitigation Plan for the excavation work should it be required. The plan will set notification, monitoring, and enforcement requirements on the work to include, but not be limited to, the following:

- Definition of VOC-contaminated soil and SCAQMD-notification requirements for pre-excavation and initial detections of VOCs.
- Description of required field monitoring equipment (i.e., PID) including calibration specifications, monitoring procedures, frequencies, and daily inspections.
- Description of required handling and storage procedures including excavation work face controls, stockpile controls, and use of odor suppressants (e.g., water, approved commercial vapor suppressants, plastic sheeting).
- Description of soil removal and disposal requirements, including timelines, treatment facilities, and loading procedures.

Description of requirements to maintain written records of monitoring and calibrations data in a format approved by the SCAQMD, and submission of a written summary report upon completion of the work.

13. *Please provide an evaluation of a range of alternative infrastructure removal strategies, including partial removal options that include abandonment in place of materials in sensitive resource areas and other methods of minimizing the disturbance footprint and potential resource impacts associated with removal activities.*

Response:
While there have historically been some examples of "abandonment in place" strategies utilized for oil field infrastructure facilities, the practice is no longer considered acceptable and is not a generally accepted practice in oil field abandonments. This is the result of instances where leaving facilities, pipelines, equipment or materials in place has resulted in environmental problems and issues at a later time. It has also been found that not conducting full infrastructure removal programs often left unknown environmental impacts that could also surface later.

Full abandonment and removal methods are the most comprehensive and verifiable way to ensure that the full extent of any impacts, contamination and materials are also identified and removed. Additionally, current day liability concerns require that any such items knowingly left in place must be acknowledged and accepted by regulatory agencies and/or another party. This can inhibit any sale or transfer of a property and may also prohibit any public use or access.

The NBRLLC Abandonment Plan outlines a complete and final abandonment of the oil field infrastructure and the following concepts and methods to minimize the disturbance footprint in more sensitive areas:

- Ground truthing effort to minimize unnecessary impacts during removal operations
- Use of contractor personnel for manual abandonment activities in vegetated areas
- Minimal use of heavy equipment in and near vegetated areas
- Use of slings and other methods for long reach equipment to drag or pick up pipeline sections and other items from vegetated areas
- Environmental and biological monitors used to guide work near sensitive resources

14. *Please submit a copy of the 2010 Archaeological Resources Assessment for the site.*

Response:
The *2010 Archaeological Resources Assessment* is included.

15. *Please provide additional information regarding the amount of excavation (size and depth of burial pits) that would be required to effectuate the proposed onsite burial of concrete and asphalt debris. Please also evaluate additional alternatives to this disposal method, including partial onsite re-use and partial offsite disposal options. Please indicate the nearest offsite disposal location, the proposed route to this site, and the number of miles for this route. Please also evaluate offsite re-use options for the concrete and asphalt materials, such as use as roadbed or construction fill material.*

Response:
As stated in the response to Question #10 the approximate soil volumes to be removed from the three soil borrow/placement areas are (north to south): 75,000 cyds, 270,000 cyds, and 115,000 cyds. These sites are comprised of surface areas of approximately 4.8 acres, 8.5 acres and 4.2 acres respectively and each would be excavated to a depth of approximately 10', 20' and 20' respectively below the present ground level.

The locations of the three proposed borrow/placement pits were chosen both for their geographical location amongst the oil operations to be abandoned and for their more optimal location to minimize impacts to sensitive vegetation. The central site sits at a low elevation point on the upland property which is ideal as a work and fill placement site.

Because the abandonment and cleanup of the oil field will not occur without the NBR Development project also being approved, these sites were initially identified in a

development geotechnical study that indicated the soils were comprised of less compacted alluvium fill materials that would be less difficult to excavate. This would make them more amenable to use as a soil borrow and placement location. Because these sites would also require cleanout and re-compaction in the development grading, their use earlier in the A&R work would avoid duplicative efforts resulting in not only reduced A&R truck hauling impacts to transport materials offsite but will have the added benefit of reducing overall NBR Project equipment use, energy consumption and resulting emissions.

Alternatives:
As approval of the oil field A&R work is dependent on approval of the NBR Development Project, the A&R field work would be immediately followed by the development project grading. Because the sites chosen for soil borrow and placement also require excavation and re-compaction for the development project, there would be no incremental impact to placing the full volumes of concrete and asphaltic materials in these locations.

An alternative for partial offsite disposal of concrete and asphalt would entail additional offsite truck traffic and emissions. An offsite disposal alternative for all excavated materials is discussed in Section 3.6.3 of the Abandonment Plan. This discussion focused on an estimated 271,000 cubic yards of total material which included soils, concrete and asphaltic like road materials. Our updated high side contingency range of these materials reaches up to 362,000 cubic yards, which included up to 180,000 cubic yards of concrete and asphalt materials.

Using the same analysis as in Section 3.6.3, trucking this 180,000 cubic yards offsite would entail 36,000 truck trips through the community, or a duration of approximately 3 years if limited to one truck trip through the community per 10 minutes. An alternative which envisions partial offsite disposal would simply be a sliding scale of these same traffic, time and emission impacts.

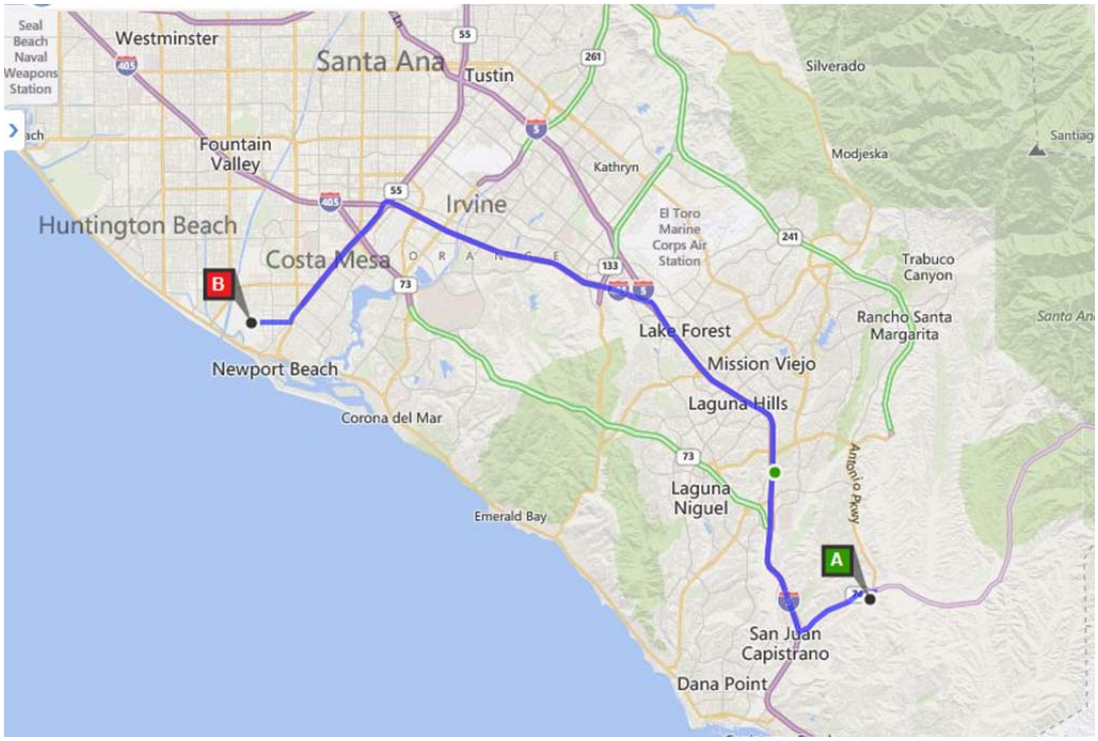
Offsite Disposal Location Options: The concrete and asphalt materials could be disposed of in an approved municipal Class III landfill if approved by the specific site. Each of the three nearest landfills in Orange County have daily capacity limits and may refuse or divert large volumes of debris. These landfills may accept these construction and demolition type debris but usually will not accept hydrocarbon impacted soils. The three nearest to the NBR property are:

Frank R. Bowerman Landfill
11002 Bee Canyon Access Road, Irvine, CA 92602
(17 miles) – Least likely to accept as this landfill experiences the most capacity diversions of the three

Prima Deshecha Landfill
32250 La Pata Avenue, San Juan Capistrano, CA 92675
(27 miles)

Olinda Landfill
1942 North Valencia Avenue, Brea, CA 92823
(27 miles)

Each of these landfills has daily maximums and may not be able to take large amounts of debris, or may not allow large amounts of asphalt debris. The potential route shown below is for the Prima Deshecha Landfill in San Juan Capistrano:



Offsite Reuse Options:
Concrete and asphalt debris can sometimes be used for recycled road base or for construction fill if approved by the oversight agency, usually Caltrans in the case of public roads. However, as there are limited occasions for these type of uses, the potential for opportunities can only be determined near the time of actual material availability.

16. *Please provide the 2001 site clean-up levels referred to in Section 3.6 as well as a description of the circumstances surrounding the application of these levels to the project site and the status of consultations with resource agencies regarding the applicability of these levels to the proposed project.*

Response:
While not referenced directly, the 2001 cleanup levels were included in Attachment 3 of the Abandonment Plan which contained the August 2009 Draft Remedial Action Plan. Within that document, Table 5 contained a summary of historic cleanup levels including the 2001 RWQCB cleanup levels. That reference is shown below:

TABLE 5
SUMMARY OF HISTORIC CLEANUP LEVELS
NEWPORT BANNING RANCH
ORANGE COUNTY, CALIFORNIA

LAND USE	DEPTH FROM FINAL GRADE (below ground surface)	CHEMICAL CONSTITUENT AND EPA METHOD USED TO VERIFY CONCENTRATION*	ALLOWABLE CONCENTRATION (mg/kg)
2001 RWQCB-SA			
Residential (Impacted & Remediated Soil)	0 – 15 feet	TRPH (EPA 418.1) TPH (EPA 8015M w/ carbon chain identification from C13-C23 inclusive) BTEX (EPA 8021b)** VFH (EPA 8015M)	100 (screening tool only) 100/1,000*** B=ND, T=0.1, E=0.68, X=1.75 ND
	> 15 feet	TRPH (EPA 418.1) TPH (EPA 8015M w/ carbon chain identification from C13-C23 inclusive) BTEX (EPA 8021b)** VFH (EPA 8015M)	5,000 5,000 B=0.10, T=10, E=68, X=175 100
Non – Residential (Impacted & Remediated Soil)	0 – 15 feet	TRPH (EPA 418.1) TPH (EPA 8015M w/ carbon chain identification from C13-C23 inclusive) BTEX (EPA 8021b)** VFH (EPA 8015M)	1,000 (screening tool only) 1,000 B=ND, T=0.1, E=0.68, X=1.75 100
	> 15 feet	TRPH (EPA 418.1) TPH (EPA 8015M w/ carbon chain identification from C13-C23 inclusive) BTEX (EPA 8021b)** VFH (EPA 8015M)	15,000 5,000 EPA Residential PRGs B=0.65, T=520, E=230, X=210 500

LAND USE	DEPTH FROM FINAL GRADE (below ground surface)	CHEMICAL CONSTITUENT AND EPA METHOD USED TO VERIFY CONCENTRATION*	ALLOWABLE CONCENTRATION (mg/kg)

Notes: * Based on the type of hydrocarbon impact encountered one or more of these analyses may be required
** Positive results confirmed with EPA Method 8260)
*** 1,000 mg/kg allowed if the soil has no apparent hydrocarbon odor or stain; if odor or staining is apparent, 100 mg/kg will be used
TRPH = Total Recoverable Petroleum Hydrocarbons
TPH = Total Petroleum Hydrocarbons
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
VFH = Volatile Fuel Hydrocarbons
mg/kg = milligrams per kilogram
ND = Non-detect
PRG = Preliminary Remediation Goal (EPA Region IX)
C13-C23 = Carbon Chain length (numbers indicative of number of carbon atoms in the hydrocarbon chain)
Asphaltic Fill Materials and Remediated Soil will be placed at least 15 feet below Final Grade
Greater than 25 feet below Final Grade – concentrations shall meet EPA Residential PRGs, TRPH/TPH up to on-site concentrations, VFH not to exceed 500 mg/kg

These cleanup levels were applied to the property by the RWQCB in a 2001 Cleanup and Abatement Order (CAO No. 01-77), issued to the oil field operator, West Newport Oil Company, and the landowners. The CAO was for alleged violations of Clean Water Act Section 404 for improper discharges and filling of wetlands in the Lowlands by the oil operator, with concrete debris materials from earlier well abandonment operations.

The CAO included recommended clean-up and re-use criteria for the NBR oil field that had previously been established for the Aera Energy Yorba Linda Oil Field Abandonment and Remediation project in 2001 and earlier by OCHCA in 1998. The original 2001 CAO cleanup level references are included in Attachment 5. Though the criteria were referenced in follow-up discussions, the application of these action levels to the entire Site were not clearly defined in the CAO. Therefore Section 5 of the Remedial Action Plan provides the remediation action levels to be used during implementation of A&R activities.

17. *Please provide the footprint area of ongoing oil operations within each of the proposed soil stockpile, treatment, testing, and placement areas.*

Response:
This can be seen in Exhibit 11 Abandonment Areas Map. This exhibit shows the footprint of the ongoing oil operations which, as explained in the response to Question #7, is the worst case impacted areas which will be remediated. Exhibit 11 also shows the outlines of the Logistics Areas in both AB-1 and AB-2.

The following is a breakdown of the oil operations footprint areas within each of the Logistic Areas. In each of these totals the Borrow/Placement area and the Clean Soil Stockpile Areas have been combined:

AB-1 South of the Arroyo

Bioremediation/Staging Area:	7.9 acres
Oil Operations Area:	2.5 acres
Borrow/Placement & Clean Soil Area:	8.7 acres
Oil Operations Area:	1.4 acres

AB-2 North of the Arroyo

Bioremediation/Staging Area:	11.4 acres
Oil Operations Area:	8.8 acres
Central Borrow/Placement & Clean Soil Area:	16.9 acres
Oil Operations Area:	6.9 acres
North Borrow/Placement & Clean Soil Area:	4.9 acres
Oil Operations Area:	2.3 acres
Concrete Processing Area:	3.3 acres
Oil Operations Area:	2.7 acres

18. *Please describe and quantify the potential adverse impacts associated with moving materials across the arroyo.*

Response:
Movement of material across the arroyo will occur along an existing access road that is currently used for the existing oil operations. Increased use of the road has the potential to impact gnatcatcher and cactus wren use of scrub areas adjacent to the road. However, the proposed placement of AB1 Logistic Areas on the southern portion of the site would minimize the need to haul materials across the arroyo during the abandonment phase. The southern AB1 Logistic Areas eliminate the need to transport abandoned materials and soil from the southern portion of the site to the AB2 Logistic Areas a north of arroyo, and similarly eliminate the need to transport clean soil from the AB2 Logistic Areas to areas south of the arroyo for placement.

19. *Please quantify the heavily disturbed area within Abandonment Area 2 that currently supports oil infrastructure and a prior remediation soil stockpile. Please also quantify the proposed total and per week water use needed to carry out the proposed soil remediation.*

Response:
Four of the five large concrete debris stockpiles, as shown on new Exhibit 3A, are currently located within the bioremediation and stockpile area of Logistics Area AB-2. These areas total approximately 2 acres. The area also contains an approximate 1 acre lined soil stockpile from earlier lowland remediation activities associated with the 2001 CAO. The northern 3 acre concrete processing area currently contains the old compressor yard and facility that is now used predominantly as an equipment storage area.

During abandonment and remediation work, water trucks are used as needed to keep dust levels to a minimum on dirt roads, soil stockpiles and also to maintain moisture levels within the bioremediation cells. At NBR there are many roads that currently are paved with asphalt, ALM or gravel materials which will minimize the use of water for dust control. The removal of these road materials will be some of the last activities conducted so that they may be available for the majority of site A&R work. Water trucks will be used for dust control on the remaining dirt roads and work areas, on soil stockpiles, as needed during soil loading and unloading activities, and for bioremediation operations.

The need for the water trucks is predominantly in the dry months which can be up to eight months of the year. Accounting for the amount of road materials at NBR, it is expected that a water truck with a 3,000 gallon load would be used two to three times a day on active days during the five day work week. This could use between 30,000 to 45,000 gallons of water a week or between 2.9 and 4.4 acre/feet of water per year. For the estimated average time of 2.5 years the project could use between 7.25 and 11.0 acre feet of water. For comparison a typical Southern California golf course uses between 300 and 400 acre feet of water each year.

20. *Please provide any studies, reports, and documentation supporting the anticipated success of the proposed onsite soil bioremediation program.*

Response:
Attachment 6 is the US EPA Citizens Guide to Bioremediation fact sheet that discusses bioremediation as a successful option for the remediation of various impacts. The proposed onsite bioremediation at the NBR property has several optimal conditions that ensure success and have contributed to the successful use of the method at other locations in this region. The moderate local climate allows the indigenous bacteria to remain active and be sufficient for the process thus avoiding the need to augment. The drier climate ensures that the process is not overwhelmed by too much moisture (rain) requiring only occasional additions of water. Also, the mid to heavy carbon range of the crude oil in the impacted soils avoids the concern of evaporation of light ends that might occur with a more volatile contaminant.

The NBR owners have experience managing two previous Orange County remediation programs that successfully utilized onsite soil bioremediation as part of

the remedial program. The Yorba Linda Oil Field abandonment and remediation project, which became the Vista del Verde residential and golf course development project, and the Bolsa Chica Wetlands Restoration Project within the Huntington Beach Oil Field.

The Yorba Linda project was also a full oil field abandonment and remediation project that utilized both clean capped deep placement and onsite bioremediation. The RWQCB used this successful project as the reference to recommend cleanup levels for the NBR property in 2001. These cleanup levels are summarized in the response to Question #16 with the original RWQCB references included in Attachment 5.

The Bolsa Chica Wetlands Restoration Project was a smaller area oil field remediation program within a continuing oil field operation. That project predominantly utilized onsite bioremediation.

21. *Please provide an exhibit that shows the sensitive habitat and wildlife use areas that would be impacted by implementation of the proposed Abandonment Plan (essentially a map depicting the on-site sensitive wildlife and vegetation species with an overlay of proposed construction/disturbance areas). Please also provide access to related GIS files.*

Response:
The Abandonment Plan Exhibit 7 shows the worst case vegetation impacts from the Abandonment and Remediation work (A&R). This includes impacts from all the abandonment and remediation areas and from the proposed Abandonment Logistics areas. Please see new Exhibits 7A and 7B (included with this submittal), and Exhibits 8 and 9 of the Abandonment Plan, which illustrate the disturbance footprint of all abandonment and remediation activities in relation to sensitive vegetation, wetland and riparian features, and seasonal features. In addition, please see Exhibit 15, which illustrates the disturbance footprint of all abandonment and remediation activities in relation to special-status species. Resource mapping files were previously transmitted to the Commission Enforcement/GIS unit; please contact Rewdy Holstein to coordinate transmittal of additional GIS files, as necessary.

22. *Given what we know now about the location of sensitive habitat areas and wildlife use on the overall site, it appears that the proposed location of stockpiling, concrete crushing areas, etc. are to be located within areas of sensitive habitat and wildlife use. Please evaluate alternatives to using these areas.*

Response:
The locations of the proposed Abandonment Logistics Areas are within the heavily disturbed upland oil field operations areas. Much of these areas are currently covered by oil field facilities including roads, well pads and work areas. Vegetated

areas fill the edges and the remaining areas. The Logistics areas also showed two lowland soil handling areas, however these are located in already cleared work areas so there would be minimal vegetation impacts.

Exhibit 7 that was included in the Abandonment Plan showed vegetation impacted by the Abandonment and Remediation work and by the Abandonment Logistics Areas. Since it left off all other vegetation outside these areas it may have given an impression that the Logistics Areas were actually placed solely within sensitive areas. Attached are two additional exhibits to give a broader perspective. Exhibit 7A shows the same extent of impacts as Exhibit 7 but limited only to sensitive vegetation impacts. Although not considered sensitive, non-native grasslands are included on the original exhibit as the proposed HCCMP includes mitigation for these impacts. Exhibit 7B shows all the sensitive vegetation across the entire property and the outlines of the Abandonment Logistics Areas. This map gives a clearer depiction of how most of the Logistics Areas were actually placed in areas of the least impact to sensitive vegetation.

Below is an analysis of potential impact reductions to vegetation communities and sensitive wildlife species that could result from alternatives or modifications to the proposed Abandonment Logistic Areas. Please note, as it relates to sensitive vegetation impacts, the following alternatives analysis first identifies potential impacts associated with removal of existing facilities within the logistics areas, as those impacts are dictated by the existing facility location, and therefore there are no alternatives that would avoid or minimize such impacts if the facilities area to be removed. The alternatives analysis then identifies "remaining" impacts within the logistic areas to clearly identify impacts resulting exclusively from establishing and utilizing the logistic areas as identified, and therefore the specific impacts that could possibly be avoided/reduced by modifying the proposed logistic areas.

Abandonment Area 1 (AB-1) - Southern Logistics Areas (See Exhibit 12)

Vegetation
Abandonment Area 1 (AB-1) encompasses 16.65 acres, 12.69 of which consists of developed, non-native disturbed and non-native grassland areas. AB1 consists of 3 southern logistic areas, which include a 7.91 acre bioremediation and stockpile area and an 8.74 acre combined soil borrow/placement and clean soil stockpile site, located south of the southern arroyo in the Uplands portion of the site.

As indicated in the following table, the southern bioremediation/stockpile area would impact 1.42 acres of native vegetation (0.34 acre of purple needlegrass and 1.08 acre of salt grass flats) following removal of existing oil field facilities within the limits of the bioremediation area.

The southern soil borrow/placement areas would impact 1.65 acres of native vegetation (1.15 acre of purple needlegrass and 0.50 acre of salt grass flats) and 0.45 acre of disturbed native vegetation (0.42 acre of disturbed California brittle brush

scrub and 0.03 acre disturbed coastal prickly pear) following removal of existing oil field facilities within the limits of the soil placement and clean soil stockpile site.

In total, 3.07 acres of native grass and scrub vegetation and 0.45 acre of disturbed native scrub vegetation would be impacted by implementation of the southern logistics areas.

Vegetation Abbreviation	Vegetation Community	Acres
AB1 Bioremediation Area		
Abandonment & Removal Impacts		
ABG	Annual Brome Grassland	0.88
D	Disturbed	0.22
DVLP	Developed	0.93
IPM	Ice Plant Mats	0.18
PNGG	Purple Needle Grass Grassland	0.03
SGF	Salt Grass Flats	0.26
	Subtotal	*2.50*
Remaining Logistic Area Impacts		
ABG	Annual Brome Grassland	3.60
CBBS	California Brittle Bush Scrub	0.00
D	Disturbed	0.03
D-CBBS	Disturbed California Brittle Bush Scrub	0.00
DVLP	Developed	0.03
IPM	Ice Plant Mats	0.32
MYP	Myoporum Grove	0.01
PNGG	Purple Needle Grass Grassland	0.34
SGF	Salt Grass Flats	1.08
	Subtotal	*5.41*
	Total AB1 Bioremediation Area	***7.91***
AB1 Southern Soil Stockpile/Placement Areas		
Abandonment & Removal		
ABG	Annual Brome Grassland	0.71
D	Disturbed	0.01
D-CBBS	Disturbed California Brittle Bush Scrub	0.10
D-CPPS	Disturbed Coastal Prickly Pear Scrub	0.01
DVLP	Developed	0.24
IPM	Ice Plant Mats	0.14
PNGG	Purple Needle Grass Grassland	0.00
SGF	Salt Grass Flats	0.04
UM	Upland Mustard	0.14

Vegetation Abbreviation	Vegetation Community	Acres
	Subtotal	*1.4*
Remaining Logistic Areas		
ABG	Annual Brome Grassland	1.14
CBBS	California Brittle Bush Scrub	0.00
D	Disturbed	0.01
D-CBBS	Disturbed California Brittle Bush Scrub	0.42
D-CPPS	Disturbed Coastal Prickly Pear Scrub	0.03
DVLP	Developed	0.01
IPM	Ice Plant Mats	0.58
PNGG	Purple Needle Grass Grassland	1.15
SGF	Salt Grass Flats	0.50
UM	Upland Mustard	0.47
ABG	Annual Brome Grassland	1.71
WOG	Wild Oat Grassland	1.33
	Subtotal	7.34
Total AB1 Southern Soil Stockpile/Placement Areas		**8.74**
Total AB1 Southern Logistics Areas		**23.43**

Special Status Species
No special status plant species occur within the southern logistics areas.

Four potential seasonal features (Features QQ, RR, SS, and TT) are located within the clean soil stockpile site; however, as detailed in response to comment 29, the USFWS previously determined that features QQ, RR, SS, and TT do not have the potential to support listed fairly shrimp. In addition, the Jurisdictional Determination of Seasonal Features (Dudek, May 2013) concluded that these seasonal features do not meet any wetland indicators. The portion of a minor drainage is located in the southernmost portion of the southern soils borrow/placement area. This feature has been delineated as a CDFW/CCC stream/drainage; however, no wetland or riparian vegetation occurs within the portion of the drainage that would impacted by the soils placement site.

Within the southern soil borrow/placement area, a gnatcatcher pair observation was documented in a non-native grassland/disturbed area (pair, 1998 PRC). In 2013, a gnatcatcher use area was observed along the southern perimeter of the bioremediation site and soils placement site.

Only 3 potential wintering burrowing owls have been observed within the bioremediation area (2 observations 2008/2014) and soil stockpiling site (1

observation 2008). No other special status species have been documented within the southern logistics areas.

Abandonment Area 2 (AB-2) – Northern Logistics Areas (See Exhibit 12)

Vegetation
Abandonment Area 2 (AB-2) encompasses 36.51 acres of primarily developed, non-native disturbed and non-native grassland areas (29.14 acres) located on the Uplands portion of the site, between the southern arroyo and northern oil remainder area. AB-2 logistics areas include an 11.41 acre bioremediation/stockpile area and a 3.29 acre concrete processing area. In addition, AB-2 includes a 16.91 acre combined soil placement/borrow location and clean soil stockpile site located north of the southern arroyo, and a 4.91 acre northern combined soil placement/burrow location and clean soil stockpile site located adjacent to and on the northern slope of the Uplands where it descends to the northern oil remainder area.

As indicated in the following table, the AB-2 bioremediation area would impact 0.23 acre of native vegetation (0.02 acre California brittle brush scrub, 0.03 acre of California brittle bush scrub - mulefat thicket, and 0.18 acre of purple needlegrass) and 0.29 acre of disturbed native vegetation (0.09 acre of disturbed California brittle bush scrub, 0.07 acre of disturbed California brittle bush scrub - coastal prickly pear scrub, and 0.12 acre of disturbed mulefat thicket) following removal of existing oil field facilities within the limits of the bioremediation area. The concrete processing area would impact 0.04 acre of purple needlegrass, and 0.39 acre of disturbed native vegetation (0.22 acre of disturbed California brittle bush scrub, 0.01 acre of disturbed coastal prickly pear scrub – mulefat thicket, and 0.16 acre of disturbed mulefat thicket).

The central soil stockpile/placement areas would impact 1.73 acre of native vegetation (0.06 acre alkali heath marsh, 0.58 acre California brittle brush scrub, 0.23 acre of California brittle bush scrub – coastal prickly pear, 0.11 acre of coastal prickly pear, 0.04 acre mulefat thicket, 0.02 quailbush scrub, and 0.68 acre of purple needlegrass) and 1.49 acre of disturbed native scrub vegetation (1.35 acre of disturbed California brittle bush scrub, 0.01 acre of disturbed California brittle bush scrub - Menzies's golden bush scrub and 0.14 acre of disturbed Menzies's golden bush scrub) following removal of existing oil field facilities.

The northern soil stockpile/placement areas would impact 0.29 acre of native vegetation (0.09 acre California brittle brush scrub, 0.11 acre of California brittle bush scrub – coastal prickly pear, and 0.10 acre of California brittle brush scrub - mulefat thicket) and 0.78 acre of disturbed native scrub vegetation (0.19 acre of disturbed California brittle bush scrub, 0.22 acre of disturbed California brittle bush scrub – mulefat thicket, and 0.37 acre disturbed mulefat thicket) following removal of existing oil field facilities.

In total, 2.29 acres of native vegetation, and 2.96 acre of disturbed native vegetation, would be impacted by implementation of the AB-2 logistics areas.

Vegetation Abbreviation	Vegetation Community	Acres
AB2 Bioremediation Area		
Abandonment & Removal Impacts		
CBBS	California Brittle Bush Scrub	0.03
CBBS-MFT	California Brittle Bush Scrub - Mulefat Thicket	0.03
D	Disturbed	2.83
D-CBBS	Disturbed California Brittle Bush Scrub	0.10
D-CBBS-CPPS	Disturbed California Brittle Bush Scrub - Coastal Prickly Pear Scrub	0.03
D-CBBS-MFT	Disturbed California Brittle Bush Scrub - Mulefat Thicket	0.19
D-M-CBBS	Disturbed Maintained California Brittle Bush Scrub	0.08
D-MFT	Disturbed Mulefat Thicket	0.01
Debris		2.82
DVLP	Developed	1.80
IPM	Ice Plant Mats	0.00
PNGG	Purple Needle Grass Grassland	0.00
StockPile		0.85
UM	Upland Mustard	0.00
	Subtotal	*8.78*
Remaining Logistic Area Impacts		
CBBS	California Brittle Bush Scrub	0.02
CBBS-MFT	California Brittle Bush Scrub - Mulefat Thicket	0.03
D	Disturbed	1.85
D-CBBS	Disturbed California Brittle Bush Scrub	0.09
D-CBBS-CPPS	Disturbed California Brittle Bush Scrub - Coastal Prickly Pear Scrub	0.07
D-M-CBBS	Disturbed Maintained California Brittle Bush Scrub	0.13
D-MFT	Disturbed Mulefat Thicket	0.12
Debris		0.02
DVLP	Developed	0.00
IPM	Ice Plant Mats	0.11
PNGG	Purple Needle Grass Grassland	0.18
	Subtotal	*2.63*

Vegetation Abbreviation	Vegetation Community	Acres
	Total AB2 Bioremediation Area	***11.41***
AB2 Concrete Processing Area		
Abandonment & Removal Impacts		
D	Disturbed	0.33
D-CBBS	Disturbed California Brittle Bush Scrub	0.07
D-M-CBBS	Disturbed Maintained California Brittle Bush Scrub	0.79
D-MFT	Disturbed Mulefat Thicket	0.10
DVLP	Developed	1.28
IPM	Ice Plant Mats	0.08
UM	Upland Mustard	0.00
	Subtotal	*2.67*
Remaining Logistic Area Impacts		
D	Disturbed	0.00
D-CBBS	Disturbed California Brittle Bush Scrub	0.22
D-CPPS-MFT	Disturbed Coastal Prickly Pear Scrub - Mulefat Thicket	0.01
D-M-CBBS	Disturbed Maintained California Brittle Bush Scrub	0.15
D-MFT	Disturbed Mulefat Thicket	0.16
IPM	Ice Plant Mats	0.04
PNGG	Purple Needle Grass Grassland	0.04
	Subtotal	*0.62*
	Total AB2 Concrete Processing Area	***3.29***
AB2 Central Soil Stockpile/Placement Areas		
Abandonment & Removal Impacts		
CBBS	California Brittle Bush Scrub	0.04
CBBS-CPPS	California Brittle Bush Scrub - Coastal Prickly Pear Scrub	0.02
CPPS	Coastal Prickly Pear Scrub	0.00
D	Disturbed	1.09
D-CBBS	Disturbed California Brittle Bush Scrub	0.36
D-CBBS-MGBS	Disturbed California Brittle Bush Scrub - Menzies's Golden Bush Scrub	0.03
D-M-CBBS	Disturbed Maintained California Brittle Bush Scrub	0.09
DVLP	Developed	1.08
MFT	Mulefat Thicket	0.26
PNGG	Purple Needle Grass Grassland	0.01

Vegetation Abbreviation	Vegetation Community	Acres
CBBS	California Brittle Bush Scrub	0.01
D	Disturbed	1.78
D-CBBS	Disturbed California Brittle Bush Scrub	0.21
DVLP	Developed	1.83
IPM	Ice Plant Mats	0.00
PNGG	Purple Needle Grass Grassland	0.02
	Subtotal	***6.85***
Remaining Logistic Area Impacts		
ASH	Alkali Heath Marsh	0.06
CBBS	California Brittle Bush Scrub	0.58
CBBS-CPPS	California Brittle Bush Scrub - Coastal Prickly Pear Scrub	0.23
CPPS	Coastal Prickly Pear Scrub	0.11
D	Disturbed	5.36
D-CBBS	Disturbed California Brittle Bush Scrub	1.35
D-CBBS-MGBS	Disturbed California Brittle Bush Scrub - Menzies's Golden Bush Scrub	0.01
D-M-CBBS	Disturbed Maintained California Brittle Bush Scrub	0.87
D-MGBS	Disturbed Menzies's Golden Bush Scrub	0.14
DVLP	Developed	0.35
IPM	Ice Plant Mats	0.15
MFT	Mulefat Thicket	0.04
MYP	Myoporum Grove	0.04
PNGG	Purple Needle Grass Grassland	0.68
QS	Quailbush Scrub	0.02
UM	Upland Mustard	0.08
	Subtotal	*10.06*
Total AB2 Central Soil Stockpile/Placement Areas		***16.91***
AB2 Northern Soil Stockpile/Placement Areas		
Abandonment & Removal Impacts		
CBBS-CPPS	California Brittle Bush Scrub - Coastal Prickly Pear Scrub	0.02
CBBS-MFT	California Brittle Bush Scrub - Mulefat Thicket	0.06
D	Disturbed	0.26
D-CBBS	Disturbed California Brittle Bush Scrub	0.29

Vegetation Abbreviation	Vegetation Community	Acres
D-CBBS-MFT	Disturbed California Brittle Bush Scrub - Mulefat Thicket	0.10
D-M-CBBS	Disturbed Maintained California Brittle Bush Scrub	0.12
D-MFT	Disturbed Mulefat Thicket	0.11
DVLP	Developed	0.64
IPM	Ice Plant Mats	0.23
UM	Upland Mustard	0.44
	Subtotal	*2.26*
Remaining Logistic Areas		
CBBS	California Brittle Bush Scrub	0.09
CBBS-CPPS	California Brittle Bush Scrub - Coastal Prickly Pear Scrub	0.11
CBBS-MFT	California Brittle Bush Scrub - Mulefat Thicket	0.10
D	Disturbed	0.02
D-CBBS	Disturbed California Brittle Bush Scrub	0.19
D-CBBS-MFT	Disturbed California Brittle Bush Scrub - Mulefat Thicket	0.22
D-M-CBBS	Disturbed Maintained California Brittle Bush Scrub	0.38
D-MFT	Disturbed Mulefat Thicket	0.37
DVLP	Developed	0.10
IPM	Ice Plant Mats	0.87
UM	Upland Mustard	0.20
	Subtotal	2.65
Total AB2 Northern Soil Stockpile/Placement Areas		***4.91***
Total AB2 Logistics Areas		**10.21**

Special Status Species
No special status plant species occur within any of the AB-2 logistics areas.

Ten seasonal features (Features B, C, E, F, AA, CC, DD, EE, FF, and GG) are located within the borrow/placement site. Of these 10 features, only Feature E, which consists of an oil field sump, is occupied by San Diego Fairy Shrimp. The 9 other features have been documented to meet only 1 wetland criteria (Jurisdictional Determination of Seasonal Features, Dudek, May 2013) and occur within oil field areas necessitating removal for abandonment and remediation as follows:

Seasonal	Size	Impact

Feature ID	(approx.)	(due to removal/remediation, etc.)
B	0.030 acre	Removal of stockpiled remediated soil adjacent to two inactive/abandoned oil wells
C	0.001 acre	Removal of stockpiled concrete and removal of oil pipeline
F	0.030 acre	Restoration/remediation of excavated and bermed area
AA	0.002 acre	Removal/remediation of inactive/abandoned well pad
CC	0.003 acre	Removal/remediation of oil pipeline
DD	0.003 acre	Removal of stockpiled concrete
EE	0.003 acre	Removal/remediation of inactive/abandoned oil well pad
FF	0.005 acre	Removal/remediation of inactive/abandoned oil well pad
GG	0.003 acre	Removal/remediation of road within active oil well site

An isolated area of mulefat thicket (associated with Feature E described above) is located in the northernmost extent of the central soil placement site. Additional, isolated patches of disturbed mulefat thicket occur primarily adjacent to or along the northern slope of the Uplands area within the northwest extent of the AB-2 bioremediation area, the northern soil stockpile/placement area and the concrete processing area. No other wetland/riparian areas occur within the AB logistics areas.

Gnatcatcher observations within the AB-2 logistics areas include the following:

- Gnatcatchers and use areas observed in the southernmost portion of the central soil placement site (Dudek 2013/2014)
- Pairs observed in the southwest portion of the bioremediation site (PCR 1997, 2009 Bonterra)
- Pairs (1998 PCR, 2002/2006 GLA), and gnatcatchers/use areas (2013/2014 Dudek) observed within the northern soil stockpile/placement areas
- Use areas have generally been observed in the southern portions of the central soils stockpile/placement areas and bioremediation site, and within the northern soils stockpile/placement area (most concentrated on the periphery of the logistic areas where slopes descend to the southern arroyo and Lowlands. Additional use areas have been observed on slopes located along the northernmost limits of the concrete processing site.

No wintering burrowing owls have been observed within these areas. No other special status species have been documented within the AB-2 logistics areas.

Lowland Staging and Stockpile Logistics Areas (See Exhibit 12)

Vegetation

Two separate staging and stockpiling areas totaling 3.25 acres are proposed to be located with the Lowlands portion of the site. These areas include a 1.12 acre area located adjacent to the Mechanics Shop (SS1), and a 2.13 acre area located north of the northern oil remainder area (SS2).

As indicated in the following table, implementation of the lowland SS1 and SS2 staging/stockpile sites would have no impacts to native vegetation following removal of existing oil field facilities.

Vegetation Abbreviation	Vegetation Community	Acres
SS1 Staging/Stockpile Area		
Abandonment & Removal Impacts		
DVLP	Developed	1.05
PHP	Poison Hemlock Patch	0.02
	Subtotal	*1.08*
Remaining Logistic Area Impacts		
DVLP	Developed	0.00
PHP	Poison Hemlock Patch	0.03
	Subtotal	*0.04*
	Total SS1 Staging/Stockpile Area	***1.12***
SS2 Staging/Stockpile Area		
Abandonment & Removal Impacts		
D	Disturbed	0.43
D-CBBS-MFT	Disturbed California Brittle Bush Scrub - Mulefat Thicket	0.08
DVLP	Developed	1.48
IPM	Ice Plant Mats	0.00
MFT	Mulefat Thicket	0.10
MGBS	Menzies's Golden Bush Scrub	0.03
	Subtotal	*2.12*
Remaining Logistic Areas		
D	Disturbed	0.00
D-CBBS-MFT	Disturbed California Brittle Bush Scrub - Mulefat Thicket	0.00
DVLP	Developed	0.00
IPM	Ice Plant Mats	0.01
	Subtotal	0.01
	Total SS2 Staging/Stockpile Area	**2.13**
Total Lowland Staging/Stockpile Areas		**3.25**

Special Status Species

No special status plant or wildlife species, or seasonal features, have been observed in either of the lowland staging/stockpile areas, and no riparian/wetland resources

occur within the limits of SS1 staging/stockpile site. Within the SS2 staging/stockpile site, isolated and fragmented patches of Menzie's golden bush scrub, mulefat scrub, and disturbed California brittle bush scrub - mulefat thicket occur.

23. *Please provide a thorough evaluation of a reasonable range of alternatives to the proposed bioremediation program. These alternatives should include an evaluation of the use of (a) only remediation and stockpiling sites on one side of the arroyo rather than replicate sites on each side; (b) a phased remediation approach carried out over a longer time period using smaller/fewer remediation, stockpile, and borrow areas; (c) multiple small remediation cells rather than fewer largecells; (d) treated bio-remediated soil to backfill impact sites rather than the excavation and use of clean soil for backfill; (e) a combination of trucking offsite and onsite treatment that includes onsite treatment of only the lowest levels of contaminated soils; and (f) alternative locations and configurations of remediation, stockpiling, and borrow sites that minimizes the use of areas outside current development footprints.*

Response:
Section 3.6.3 of the Abandonment Plan provided a review of various alternative remediation methods including in-situ heat, steam, vapor recovery, air sparging and phytoremediation. Below is an additional discussion of the suggested alternatives to the proposed bioremediation program:

(a). Use only one side of the arroyo:
Utilizing Abandonment Logistics Areas on both sides of the main site arroyo is designed not only to minimize truck traffic across the arroyo which contains both sensitive vegetation and wildlife, but to ensure sufficient soil borrow and placement capacity to carry out the full abandonment and cleanup of the oil field. Considering the clean cap volumes and the final grade elevations, the approximate capacities of the three proposed soil placement locations, from north to south, are 30,000 cubic yards, 270,000 cubic yards and 80,000 cubic yards. The south of the arroyo placement area, within AB-1, has the 80,000 cubic yard estimated capacity and is a critical need to complete the oil field cleanup as the combined northern two placement sites would not have enough capacity for the range of soils expected in the oil field cleanup. The south of the arroyo abandonment and remediation work is estimated to produce a range of 35,000 to 60,000 cubic yards of soils and road materials which are planned to remain in the AB-1 placement area.

(b). Phased/longer timeframe using smaller/fewer logistics and borrow areas:
This alternative would be similar to (a) above as an example of using fewer logistics and borrow areas. If there is not sufficient area to expand the logistics area the result would be a much longer timeframe to complete the full A&R work and bioremediation. The longer schedule would result in extending the time the surrounding community is impacted by the field work and heavy equipment usage. The current proposal has multiple logistics and borrow/placement areas. One of the

objectives was to minimize impacts to resources both within the site and to the areas and communities surrounding the site.

(c). Multiple small bio-cells:
An alternative to use multiple small bio-cells would reduce the efficiencies inherent in working a larger soil area with heavy equipment. Inefficient use of heavy equipment for both the stockpiling, movement and processing of the soils could have multiple effects including increased equipment usage traversing between numerous sites for similar activities, increased emissions due to increased activities, and longer timeframes to complete the same volume of processing. This alternative would seem to increase either the severity or duration of impacts from the use of the heavy field equipment.

(d). Backfill with treated bio-remediated soil rather than excavation and use of clean soil:
The goal of the Abandonment Plan process is to remove the surface indications and impacts of the historic oil operations to then allow alternative public and natural uses, including restoration activities. The use of clean backfill for all the excavated sites allows for the highest use of both public and restoration uses without any concern or stigma of having remediated soils at the surface even if those soils met the approved cleanup criteria. That incremental benefit then allows for all onsite concrete and asphaltic material to be recycled onsite and also below the surface thus producing, or allowing the greater benefit of eliminating the otherwise massive volume of truck traffic for offsite disposal or placement. One of the selection factors of the clean soil borrow pits was that the locations contained less compacted alluvial fill materials that would be easier to excavate and that would need to be excavated in any event for the development project. Since the oil field abandonment and cleanup would not occur with the development project approval, this would avoid duplicative efforts and the associated environmental impacts that would otherwise be produced (traffic, emissions, energy usage).

(e). Onsite treatment of only the lowest levels combined with trucking offsite:
This is in essence the proposed A&R work alternative outlined in the Abandonment Plan. The 2001 EA found no hazardous levels of any materials and indicated that the majority of impacts at the site were from weathered crude oil which could be bioremediated. These are considered the lower levels of impacts. The Abandonment Plan also anticipated that up to 25,000 cubic yards of the more heavily impacted soils would be trucked offsite. It is expected that the larger sump excavations may contain some volume of such materials. These materials would be more difficult and time intensive to bioremediate and would slow that process overall.

(f). Alternative locations of logistics areas that minimizes the use of areas outside the development footprint:
At present, the only proposed Logistic Areas outside the proposed development footprint are the two soil handling areas in the lowlands. These locations use 1.1 acre in the present mechanic shop area, and 2.1 acres where the prior bioremediation

pilot cell is located. Both these area are actively used areas of the oil operations in disturbed areas with little or no vegetation. The 1.1 acres mechanic shop location would have no impact to sensitive vegetation. The 2.1 acre pilot bio cell location would have some minor areas of sensitive vegetation that would be impacted. These were the only larger oil operations areas in the lowlands that could be used for excavated soil staging and stockpiling. These areas would be used to stage soils as they are being excavated into larger stockpiles which could then be transported to the upland areas using larger more efficient haul trucks. There does not appear to be any alternative locations in the lowlands that contain large enough bare disturbed areas.

24. *Please provide a project specific Spill Prevention and Response Plan. This plan must at a minimum (a) quantify a "worst-case" spill scenario and explain the basis for the identified "worst-case" scenar.io, (b) a detailed description of all spill prevention and control measures proposed to be implemented to avoid a spill from occurring, and (c) a description of detailed response measures (e.g., onsite oil spill response equipment) sufficient to respond to the "worst-case" estimate spill.*

Response:
The current oil operator, WNOC, has a Spill Prevention, Control and Countermeasure Plan (SPCC) for the operating oil field and all the facilities and equipment that will be addressed in the A&R work. Since it is a continuing oil field by virtue of the remainder areas, that SPCC will still be in effect. A copy of the WNOC SPCC is included as Attachment 7. After approval of the NBR Project, WNOC will shut down all oil operations outside of the oil remainder areas. This will include flushing all the oil in the flow lines with water, back to the facilities in order to recover all oil remaining in the pipelines.

The active and idle oil wells will then be abandoned as part of the NBR Abandonment Plan using a well workover rig contractor such as Nabors Well Services Company (Nabors). These contractors have their own SPCC for that work. As an example, the Nabors SPCC Plan for the rig work on oil wells in included in Attachment 8. The final selection of the contractor for the NBR well work will be made after project and well permit approvals.

An additional specific SPCC Plan is not normally required for the demolition and abandonment of inactive facilities within an operating oil field where the oil operations SPCC is still be in effect. The Abandonment Plan outlines specific spill prevention and response measures to capture any residual fluids that might occur whenever pipelines are cut. These measures will include the availability of response materials (such as oleophilic sorbent pads and booms), containment pans to be used at every cut point and the availability of mobile vacuum trucks to recover any residual fluids. While any captured residual fluids are expected to be predominantly fresh water from the line flushing operations, the fluids will be recycled back into the

continuing WNOC operations streams in case there are any residual levels of oil remaining.

25. *Please provide all GeoSyntec reports from 1992 through 1996 included in the list of references to the January 1996 Phase I Description Environmental Restoration Program Newport Banning Ranch and from 1989 through 2003 included in the list of references in the August 2009 Draft Remedial Action Plan.*

Response:
Attached is a CD with the Geosyntec references from the August 2009 Draft Remedial Action Plan document. This includes reference number 1, 2, 6, 7, 8, 9, 10 and 11 of the 11 total references. Reference number 3 and 4, shown below, were listed as Draft Reports.

Geosyntec Consultants, "*Draft Summary Report, Environmental Restoration, Newport Banning Ranch, West Newport Oil Company, Newport Banning Ranch, Orange County California,*" prepared for West Newport Oil Company, Costa Mesa, California, 31 January 1996.

Geosyntec Consultants, "*Draft Report, Phase I Description, Environmental Restoration, Newport Banning Ranch, West Newport Oil Company, Orange County California,*" prepared for West Newport Oil Company, Costa Mesa, California, 31 January 1996.

While information gathered for these draft documents were presumably used in either other documents or for other references, the documents themselves were not completed or issued by WNOC and thus should not have been listed as complete documents. Also, it appears that Reference 5 is a duplicate of Reference 3.

Planning Issues Related to NBR Development Plan

26. *Water Quality*
    a. *While Commission staff understands that NBR's proposed water quality basins, both in the lowlands and near the perimeter of the site may be "above and beyond" the water treatment requirements necessary for the development proposed, we still need to understand the construction impacts the development of these basins will have on the resources of the site. In order for us to assess the impacts related to the construction and post-construction, please provide the details regarding the size, specifications, dimensions and cross sections for these two basins.*

Response:
As mentioned in your comment above, the lowland basins are not necessary to comply with the water quality requirements for the project. Both basins are designed to slow and diffuse storm flows prior to discharging to the lowlands. The southerly basin (at the terminus of the large arroyo) collects runoff from the

large arroyo and two storm drain outlets from the upland. The basin is approximately 150' long and the width varies for 20' to 40'. The basin will be rip rap lined and includes a "pool" area to slow the storm flows. The proposed basin and cross sections are shown on Sheet 7 of 12 of the Rough Grading Plan. The northerly basin collects runoff from the upland and is approximately 110' by 150'. Due to the storm water velocity, the northerly basin is also rip rap lined. Three culverts are proposed on the northerly side of the basin to outlet the storm runoff from the basin to the adjacent lowland wetland system. The proposed basin and cross sections are shown on Sheet 3 of 12 of the Rough Grading Plan.

b. *Although OC DAMP has specific requirements for commercial establishments, please provide the details regarding the location, placement, and design of the commercial and resort space features (loading bays, storage areas, refuse, etc.) and proposed BMPs for these features (such as spill prevention techniques, treatments for backup and overflow, etc.).*

Response:
A WQMP exhibit has been prepared that shows the proposed source control, structural, non-structural and LID treatment control BMPs that are applicable for the resort, residential and retail areas. Design features for loading docks, material storage and trash enclosures are also provided on the exhibit including example locations and typical design parameters. It should also be noted that all runoff will drain to the proposed BMPs or will be connected to sewer (if enclosed such as storage areas or covered loading bays). Additional details on design parameters are provided in the attached CASQA fact sheets.

The comment also requests proposed BMPs related to the operations and maintenance of the proposed features. As part of the final conditions of approval, an Operations and Maintenance Manual will be prepared specific to water quality protection and will outline the detailed spill prevention techniques, action steps for backup/overflow conditions and any other measures related to the operations of the resort/residential/retail areas. The O&M Manual will include detailed documentation on the following items:

- BMP Location Map including GPS Coordinates and photos
- BMP Maintenance Schedule including step by step procedures and supporting photos (including bi-lingual documentation)
- Spill Prevention and Spill Containment Plans
- Rain Response Operational Checklists
- Landscape Maintenance Procedures
- Parking Lot Maintenance Procedures
- Staff/Employee Training and Documentation Logs

c. *Stormwater Pollution Prevention Plan (SWPPP). Your May 17, 2013 response letter stated on page 80, "SWPPP's are typically prepared in conjunction with rough grading plans and precise grading plans immediately before the site*

commences construction activities… A detailed SWPPP will be prepared and provided to Coastal Commission review following approval of the site plan." Commission staff would like to review the draft SWPPP. Please provide as soon as it is available.

Response:
Included is the Draft Stormwater Pollution Prevention Plan (SWPPP).

27. Conceptual Plans

a. *Thank you for providing the square footages of the commercial spaces. The cover letter included with the package submitted Oct. 30, 2014 indicated that complete floor plans and foundation plans were included in the exhibits, although these items were not received. Preliminary floor plans were submitted in the EIR for the resort only. Please provide proposed floor plans (architectural plans) for the commercial areas, mixed use areas, and the resort.*

Response:
Floor plans are attached.

b. *The elevations provided depict the heights of the structures, but do not depict the height of the architectural features that extend above the height labeled. While the height of the architectural features is not a filing requirement, it is necessary for staff's analysis.*

Response:
Architectural features that extend above building heights are as follows:

Product Type	Architectural Feature Height
Residential	3-feet
Commercial	15-feet
Resort	15-feet

As per email correspondence dated February 10, 2015, this item is complete.

28. Archeology

a. *Thank you for submitting the Archeological Research Plan (ARP). As a general comment, we find the ARP to be lacking as does not demonstrate that the archaeological testing already performed was adequate to determine that the proposed development (including remediation) will not impact known or unknown archaeological resources. There is no indication that the ARP was subject to peer review nor submitted to State Office of Historic Preservation,*

Native American Heritage Commission, or affected Native American groups for review and comment on the adequacy of the Plan. Some Native American individuals believe that there are burials on the project site. No burials were found. There is no discussion in the Plan as to why no burials were found. Also, the focus of the ARP was to determine whether any sites are eligible for listing on the California Register of Historic Resources or the National Register of Historic Places. However, the focus should be to determine whether there are intact cultural resources, including Native American burials, and if they are present, what measures need to be taken to protect those resources in place, as opposed to careful excavation, regardless of whether it meets CRHR or NRHP criteria.

Response:
The Commission Staff comment indicates that the ARP does not:

1. Indicate that the ARP was subject to peer review nor submitted to State Office of Historic Preservation, Native American Heritage Commission, or affected Native American groups for review and comment on the adequacy of the Plan.
2. Demonstrate that the archaeological testing already performed was adequate to determine that the proposed development (including remediation) will not impact known or unknown archaeological resources.
3. Determine whether there are intact cultural resources, including Native American burials, onsite; and
4. If they are present, what measures need to be taken to protect those resources in place.

Responses to each issue follow:

1. As noted in our last submittal, while the ARP was not peer reviewed or subject to review and comment by the State Historic Preservation Officer, Native American Heritage Commission and affected tribal groups, the Archaeological Resources Assessment, included in the project EIR, was subject to this review. The State Office of Historic Preservation (SHPO) and the Native American Heritage Commission was provided the Draft EIR for review and comment as part of State Clearinghouse distribution. The SHPO did not comment on the EIR or request a review of technical analyses.

   During the EIR process, the City of Newport Beach contacted the NAHC and informational letters were sent to each tribe identified on the NAHC's list. Three requests for consultation under SB 18 were received from the Juaneño Band of Mission Indians, Acjachemen Nation (Anthony Rivera); Juaneño Band of Mission Indians, Acjachemen Nation (David Belardes, Joyce Perry); and Juaneño Band of Mission Indians (Sonia Johnston, Alfred Cruz). The City undertook consultation with each of the three tribes. A representative of the Juaneño Band of Mission Indians, Acjachemen Nation, Anthony Rivera,

was present on site during all archaeological excavations and was afforded the opportunity to examine excavation units and artifact discoveries.

2. The archaeological testing already performed was adequate to determine that the proposed development (including remediation) will not impact known or unknown archaeological resources.

   The project Final EIR (4.13-7) states that "Five prior archaeological investigations have resulted in the examination of the entire Project site and identification of all exposed cultural resources. As recently as 2008, the Project area was surveyed by qualified archaeologists and all previously recorded archeological sites were examined. As a result of these prior investigations, eight prehistoric and three historic resources are recorded on the Project site." These comprehensive studies indicate that professional, expert analyses have been conducted to ensure the absence of "unknown archaeological resources" outside of the eight prehistoric and three historic resources that are recorded on the Project site.

   The ARP summarizes the results of systematic archaeological assessment undertaken at all of the previous archaeological resources. The use of hand-excavated shovel test pits (STPs) were used to "determine the presence or absence of subsurface cultural material in locations where archaeological sites were previously mapped." This is a standard professional archaeological strategy used to evaluate the subsurface presence or absence of cultural materials identified on the ground surface. All archaeological sites that were systematically resurveyed in the course of project analyses and found to retain evidence of cultural resources on the ground surface were subject to STP excavations. Where subsurface cultural resources were identified during STP excavations, additional intensive hand-excavated "control unit" excavations were completed to determine the extent of cultural remains present that would have the potential for addressing California Register of Historic Resources or the National Register of Historic Places eligibility criteria.

   The STP and control unit excavations collectively determined: 1) the presence or absence of subsurface cultural deposits within all previously recorded archaeological site boundaries; and 2) the ability of all identified subsurface cultural deposits to address California Register of Historic Resources or the National Register of Historic Places eligibility criteria. These data allowed for the systematic, comprehensive assessment of potential project impacts on the previously recorded cultural resources.

3. The archaeological investigations conducted on the site sufficiently determine whether there are intact cultural resources, including Native American burials, onsite.

STP and control unit excavations were completed systematically and in a manner to address the "integrity" of the archaeological soils within the previously recorded archaeological sites. This assessment of prior disturbance is based on the presence of obvious soil disruptions, the presence of modern refuse that is mixed with soils during grading, or the complete absence of cultural material indicating prior removal. The following archaeological sites exhibited one or more of those objective criteria, indicating a lack of intact cultural deposits: CA-ORA-148, -843, , -844 Locus B, -845, -1599, -1600, -1601H, - 1602H, and -1610H.

In contrast, the remaining prehistoric archaeological sites CA-ORA-839, -844 Locus A, and -906 retain their integrity as the archaeological soils and cultural deposits do not exhibit evidence of previous grading, or mixing with modern refuse.

The ability to identify the presence of Native American burials within an archaeological site is undertaken by completing sufficient excavations to characterize the nature of prehistoric activities that occurred on the site. A burial can conceivably be located within any prehistoric site, but is traditionally associated with more complex residential camps that were occupied over a longer period of time. Hand-excavated control units completed within CA-ORA-839, -844 Locus A, and -906, intact sites that were residential camps, did not identify any evidence of Native American burials. To eliminate this potential entirely, the intensity of archaeological excavations would result in the complete disturbance of each of the sites. The archaeological control units provide for the reasonable characterization that prehistoric burials are not anticipated in these sites, while minimizing the potential to adversely impact the resource during site testing.

As such, based on review of prior archaeological investigations on the site and the results of the Archaeological Resources Assessment, in which no human remains have ever been identified on the Banning Ranch, the certified Final EIR concludes that there is no indication that there are burials present on the project site. Nevertheless, the EIR recognizes that Native American tribes note that ancestors were often buried in coastal locations and evidence exists to support this supposition. Therefore, the ARP and EIR detail specific procedures to be implemented in the event human remains are discovered during grading activities to ensure potential impacts to such unknown resources are adequately minimized

4. If Native American burials are present, what measures need to be taken to protect those resources in place.

   The ARP identifies in Section 1.4.1, page 3, the mandated processes dictated by Section 7050.5 of the California Health and Safety Code to be followed in

the event that human remains would be encountered during mitigation excavations and construction monitoring.

It should be noted that the ARP, as a standalone document, is not intended to demonstrate that the archaeological testing performed is adequate to determine that the proposed development (including remediation) will not impact known or unknown archaeological resources. Rather, the ARP, when reviewed and considered with the analysis and conclusions of the *Archaeological Resources Assessment* (BonTerra Consulting 2009a) and the certified Final EIR for the Newport Banning Ranch project, collectively demonstrate that 1) the testing conducted by the City in preparation of the EIR was implemented in manner to avoid significant impacts to cultural resources, and 2) potential cultural resources on the property (known and unknown) have been adequately assessed in the context of the proposed project (including remediation) to ensure impacts are avoided, and/or are mitigated, to the maximum extent feasible pursuant to the requirements of the Coastal Act.

NBR requests that the Commission consider the totality of cultural resource information developed for the property and submitted to-date, including information submitted and reviewed by the Commission as part of its approval for permit E-85-1, along with project revisions that have been proposed for the express purpose of eliminating potential development plan impacts to known archaeological sites. We believe this collective body of information provides Commission staff with the information necessary to deem the application complete and to conduct a consistency analysis with applicable Coastal Act policies. As noted above, the focus of the ARP, as well as the Archaeological Resources Assessment, was to determine the disposition and significance of archaeological sites on the Project site, and to establish the dimensions, chronology, density, diversity, and integrity of the archaeological sites, and thereby determine whether the Banning Ranch site contains intact cultural resources. The Archaeological Resources Assessment describes in detail whether there are, or potentially might be, intact cultural resources associated with each site. Neither this archaeological test program nor any of the prior archaeological work conducted on this site identified the presence of human remains or indicated the use of the Banning Ranch for ceremonial or funereal activities. With respect to deposits know to be present, the ARP, Archaeological Resources Assessment and Final EIR, in addition to our previously submitted project revisions intended to avoid archaeological resource impacts, specify in great detail measures that have been undertaken and identified to protect those resources in-place, where feasible.

The Staff comment states that measures need to be taken to protect resources in place, as opposed to careful excavation, regardless of whether it meets CRHR or NRHP criteria. Here again, its worth noting that the proposed development plan has been revised to avoid impacts to potentially significant sites; therefore,

measures have been taken to protect resources in place, where feasible. In addition, Section 30244 of the Coastal Act specifies that reasonable mitigation measures shall be identified for development that would adversely impact resources identified by the State Historic Preservation Officer. The California Office of Historic Preservation's State Historic Preservation Officer (SHPO) maintains the CRHR. As such, determining whether or not a cultural resource meets CRHR criteria is a fundamental element of assessing the applicability of Section 30244 of the Coastal Act to projects that may potentially impact archaeological resources.

b. *Section 2.2 Regulatory Setting includes the California Coastal Act. However, the discussion is vague and does not cite the specific Coastal Act policy, Section 30244, that requires the protection of cultural resources. Page 33 of the Plan states, "through a combination of STPs and intuitively positioned Control Units" measured each site's cultural constituents. One potentially significant site, ORA-906, had only one Unit. It is unclear as to whether the number and depth of STP and hand excavated units were adequate to detect any deeply buried resources. Finally, on page 33 the Plan states that fire affected rocks were discarded after they were recorded. Fire-affected rocks are considered significant cultural resources. It is unclear why these were discarded as opposed to reburied or given to the Cooper Center.*

Response:
Although Section 30244 was not cited in the Regulatory Section of the ARP, the ARP does identify that the Chapter 3 policies of the Coastal Act must be adhered to in examining Coastal Act consistency. Section 30244 is contained within the Chapter 3 policies. Section 30244 requires the identification of "reasonable mitigation measures" for development that would adversely impact resources identified by the State Historic Preservation Officer.

It was the determination of the field archaeologist that one unit was sufficient to obtain the information regarding ORA-906 needed to address the research questions of the ARP and define the ability of the site to address California Register of Historic Resources or the National Register of Historic Places eligibility criteria. With the proposed project revisions, specifically, elimination of North Bluff Road, the proposed development plan will avoid all impacts to this site. In addition, although there is a pipeline corridor located just north of ORA-906, there are no oil field facilities that exist over this site requiring abandonment, and the response regarding A&R work above describes measures that will be taken to reduce impacts as much as feasible. As such, impacts to this site have been avoided to the maximum extent feasible.

The depth of STPs was sufficient to determine the depth of archaeological deposits. Excavations were consistently terminated only after the densities of artifactual materials had substantially diminished or ended completely. The

potential for encountering deeply buried cultural deposits below the materials observed is not considered likely given the absence of recorded phenomena in any previous archaeological investigations in the Newport Bay area.

Although archaeological artifacts found on private property are the property of the landowner who can determine their ultimate disposition, in this case, the City and archaeological investigator made the determination regarding the disposition of the fire-affected rocks. Not all fire-affected rocks are required to be considered a significant cultural resource. Even when identified with a specific prehistoric activity such as a hearth, these non-artifactual materials are curated at a professional archaeological facility for future research use. The research potential of the rocks is exhausted after they are counted and weighed. The discard of the non-cultural artifacts is consistent with professional archaeological practice.

c. *Will an after-the-fact approval be sought for the archeological resources previously disturbed onsite? If so, please amend the current project description to include this.*

Response:
All issues related to archeological resources have been resolved via the executed Settlement Agreement. Future archeological work will require review by the CCC prior to commencement of any work.

d. *Is mitigation proposed for the disturbed and removed archeological resources? Again, if so, please amend the project description to include the mitigation proposed.*

Response:
Mitigation in the form of avoidance and preservation is being proposed for all but two of the archaeological sites. With respect to the excavated archaeological resources, for any artifacts that are in the possession of the City and its consultants, they will be mitigated per CEQA and the City's requirements as set forth in the Final EIR. As noted in our last submittal, mitigation includes curation of cultural materials including food remains and tools in a museum or other scientifically accredited institution that would make the collections available to future researchers or reburial. Additionally, the abandonment and remediation process involve measures to ensure avoidance of any cultural resources to the maximum extent feasible and will be monitored by the cultural resources monitor on site. Please refer to the RAP, attached to this submittal, see Section 4, Site Assessment and Investigation, 4.2 Ground-Truthing.

29. *Biology*

a. *Inconclusive data regarding the presence of fairy shrimp was presented in the summary of wet season survey for several seasonal features including F, 0, S,*

U, AA, and QQ. The summary reported insufficient ponding, however the ponding averages listed were all above the 3m depth required for sampling, except for feature 0. Please explain why features with sufficient ponding had inconclusive results. In the 2013-14 wet season survey, these ponds were not sampled.

Response:
The term "inconclusive results" means that while the depression ponded enough to meet the minimum criteria (3cm deep), the puddle did not last long enough to reach the actual first sampling (approx. 2 weeks from inundation). Therefore, fairy shrimp could not have grown to be identified, if even present. As noted below, there are a couple of exceptions to this.

Feature O never met criteria so no survey, per the USFWS protocol was required.

Feature F – puddle was the result of the creation of a berm and consisted of loamy soils. Loamy soils typically do not produce puddles that last for very long due to their porous nature. It only met the USFWS criteria once (2011/2012 season), but did not last long enough to be sampled. Follow-up dry season sampling resulted in no cysts present. Conclusion is that this is not a vernal pool and has little to no chance of supporting listed fairy shrimp.

Feature S – puddle occurs within a roadside depression within a gravel and soil roadway. Compacted and manufactured areas can support ponding water for periods of time, but are not appropriate listed fairy shrimp habitat. This feature puddled once during the 2011/2012 season but never met the FWS criteria (3cm deep). The 4cm mentioned was the estimated maximum depth determined during the dry season survey. This depth was never exhibited by actual ponding. Follow-up dry season sampling found no cysts. Because the puddle was located in a roadway, never actually met USFWS criteria, and never lasted long enough to sample, the conclusion is that this is not a vernal pool and has little to no chance of supporting listed fairy shrimp.

Feature U – puddle occurs within a parking area that has an asphalt substrate. The area only met criteria in 2011/2012, but for three times: November for 25 days, December for 13 days, and April for 11 days. No shrimp were found during the November inundation, and the December and April inundations did not last long enough to allow for a sampling. Follow-up dry season surveys found no cysts. Technically, the completion of the November pass would constitute a negative survey. Combined with the negative dry season survey, this puddle would be considered to not be occupied in accordance with the USFWS protocol. Regardless, the type of puddle (location and substrate) would make it a poor candidate for supporting listed fairy shrimp and would not be considered to be a vernal pool.

Feature AA – This feature occurs on a scraped and graded well pad. It puddled once during the 2011/2012 season, but never actually met the USFWS criteria. It was documented as being less than 3cm deep. The estimated depth was from the dry season effort and did not represent actual ponding. The feature has never met the USFWS criteria to start surveys. Follow-up dry season surveys found no cysts. Based on this, this feature should not be considered to be a vernal pool and would have little to no chance of supporting listed fairy shrimp.

Feature QQ – This feature occurs on sandy loams. This feature has never been found to pond deep enough to satisfy USFWS criteria. Further, dry season surveys found no cysts. This feature should not be considered to be a vernal pool and would have little to no chance of supporting listed fairy shrimp.

b. *The summary also states that some seasonal features were not surveyed for fairy shrimp including RR, SS, and TT; however it states earlier that they may have been subject to at least 2 wet season surveys. For these reasons, additional surveys comprised of dry season surveys followed by complete wet season surveys or comprised of two consecutive complete wet season surveys are required.*

Response:
Features RR, SS, and TT were not surveyed because the USFWS determined that they did not have potential to support listed fairly shrimp. Please see attached letter from the USFWS to City of Newport Beach, dated October 28, 2011, concurring that features QQ, RR, SS, TT (previously referred to by the Banning Ranch Conservancy as VP 34, 35, 36, and 39) do not require additional sampling.

30. Other Agency Approvals
Please provide an update on the status of the CDFW and USACE permits as of September 2014.

Response:
CDFW:
On September 19, 2014, NBR received a letter from CDFW with a determination that the Notification of Lake or Streambed Alteration was incomplete pending submittal of additional information. Dudek has worked with CDFW staff to ensure that the request for information was thoroughly and adequately addressed. Dudek submitted to CDFW on behalf of NBR the required documentation on January 26, 2015. The project team expects to have the application deemed complete by the first week of March.

USACE:
The JD and application have been received by USACE, and are currently being reviewed. Upon confirmation of the JD USACE will initiate a Section 7 Consultation with the USFWS.

RWQCB:
Section 401 Water Quality Certification in process.