Adequacy of the Biological Report:
Background: The biological assessment was prepared years ago (2012) under old standards, but it can be used to make the biological assessments needed, as the applicants have prepared a plan that shows fuel mod impacts with the new H1 and H2 habitat categories.

HABITAT IMPACTS.
Recommendation 1: New building edges should be sited with exterior edges contiguous with the old buildings' exterior edges. In this way, no fuel modification will be a new impact to H1 or H2 habitat. The fuel mod for the new buildings includes riparian areas and stream courses in the northeast area, some of it in the North Area Plan and some of it in the Santa Monica Mountains Local Coastal Program (LCP). Care for the resources should be equivalent in both jurisdictional areas and be the most stringent required.
Recommendation 2: Fuel modification along the northern fire road in the SEA area that is under jurisdiction of the North Area Plan appears to exceed the 10-ft. clearance required for fire safety and the 200-ft. clearance from buildings. If this extension is not an issue for fire safety, then fuel modification on the north should be curtailed to be only the needed extent. This is fuel modification in what would otherwise be a riparian area, with an incised stream course and probable conversion to grassland generated by the fuel modification treatment. This is fuel modification in the headwaters of important, protected stream courses, where filtration by vegetation is very important. These stream courses are major ones of the Santa Monica Mountains: Trancas Canyon, Zuma Canyon, and Lobo-Triunfo-Malibu Creek.
Recommendation 3: Provide the data for native grassland habitat impacts. There is some impact planned in the area connecting to the water tank and possibly some with infrastructure improvements. Provide the restoration plan for approval by County Biologist and DRP.
Usually this kind of plan is needed before grading or excavation removes the resource, so that the best preservation of the resource can be achieved.

SENSITIVE PLANT SPECIES.
Finding 4: The biological report's treatment of sensitive species that have habitat onsite does not differentiate between those species (not observed) which are possible due to habitat onsite and those (not observed) for which habitat is not onsite. There is a decided difference. The Camp needs to know what its sensitive resources could be, particularly with the plan to renovate Camp Miller at a future date. This supplement is needed for further work on the site and for information of Public Works to better manage the site. Camp Vernon Kilpatrick and Camp Miller are important and have important biological resources for the Santa Monica Mountains.

Recommendation 4. Any supplement to the biological resources should have a table that includes the complete CNDDB and CNPS list of species. For species for which habitat does exist onsite, instead of "not expected," the category should be "possible, not observed." Further sensitive species (including Rare Plant Rank RPR 3 and 4) should be considered, with write-ups and mitigation considered for all listed species and species of RPR 1 and 2. For species of lesser concern that were observed there should also be write-ups and plans to conserve these resources. Plants of concern in this regard are drought-year surveys (2012) for *Baccharis malibuensis, California macrophylla, Calochortus clavatus* var. *gracilis, Pentachaeta lyonii*, and *Phacelia hubbyi*.

CNDDB data indicate high potential for several of these species onsite.

Of particular concern is the endangered annual, Lyon's pentachaeta, which was surveyed in a year of drought. There is federally-listed critical habitat adjacent to the site, and the area outside but directly adjacent to the north fence near the rock outcrop appears to be good habitat for this species. Federal critical habitat and a collection for Lyon's Pentachaeta is just north of the project boundary, and

another known collection is directly east of the project parcel boundary. These collections and critical habitat should be mentioned in the supplement report.

Of further concern is the sensitive mariposa-lily *Calochortus clavatus* var. *gracilis,* which also has habitat onsite.

Deinandra minthornii may not have habitat onsite, but is shown by CNDDB data as potentially onsite.

The Project site was cleared and rough graded in what months? February ?.

Recommendation 5: In a supplement to the plant report, include a Table to include all species in the 9-quad lists of the CNDDB and CNPS. Note which were observed and list as "possible" those for which habitat exists on site. Reserve "not expected" for species without possible habitat on the site. Critically assess whether surveys could have missed any species in the list.

Recommendation 6: Fence work should be preceded by a focused survey in a year with at least average rainfall March-August for both Lyon's pentachaeta and slender mariposa-lily. Protection from construction and further grading should be provided by sturdy fencing if any plant on the list in Recommendation 5 is encountered, and a take permit should be sought from California Dept. of Fish and Wildlife for Lyon's pentachaeta or other listed plants. Survey should be repeated in a year of average rainfall for slender mariposa-lily, and its area should be fenced from construction during the fence and fuel modification work in the chaparral. If any of the other species of the 9-quad lists is encountered, it should be avoided if possible and protective fencing installed. California Dept. of Fish and Wildlife (CDFW) should be notified, and CDFW mitigation directions followed.

Recommendation 7: Provide wording that indicates the status of sensitive species and grassland under the new LCP. P.6. of the report is misleading, indicating that areas with fuel modification would not be sensitive. If areas have sensitive elements, even when classified as H3, then those elements need to be preserved and protected if at all possible.

Recommendation 8: Provide the data on whether grading impacted the known mariposa-lily populations. Provide the plan for protection of Catalina mariposa-lily and other species of the grassland areas of the Project from fuel modification. Provide the plan for the mariposa-lily mitigation. ERB may wish to comment on the mitigation plan of seed and bulb collection (Mitigation document, 4.4-3). Were seeds and bulbs collected?

Recommendation 9: A statement should be prominent in the plan "Herbicide shall not be used for weed control in ~~the areas west and northwest~~ natural habitat of the facility. Weeding needs to be by hand tools that extract all parts of the weeds and send these in closed containers to a landfill. Chemical treatments should be avoided whenever possible." This is particularly important because of the location of the Camps at the headwaters of Zuma Canyon. Many chemicals can dissolve in water and be carried beyond filtration into the natural habitat at lower elevations.

Recommendation 10: Specify the circumstances when herbicide would be used; what a targeted application would be; and what training an individual would need in order to be able to apply it.

OAKS

Applicants mentioned some possible removals, MM 4.4-2 mentions removals, and clearing and encroachment by equipment and personnel will be needed to replace the fence mesh, which passes through oak woodland.

Finding 11a: The Camp Vernon Kilpatrick Mitigation and Monitoring Plan provides for mitigation of oak removals under the County of Los Angeles Oak Tree Ordinance (CLAOTO), but the replacement project before the ERB, plans no (further?) removals, and states that there will be encroachments during the fence replacement. The replacement is planned to chiefly be replacement of the mesh, but in some areas replacement of the footing and the mesh will be needed. The Project narrative states that further mitigation will be under the local plan, the LCP, which calls for mitigation for encroachments as well as removals. The criteria for mitigation trees in the LIP are in §22.44.1920.K.

Finding 11b: Oaks to be considered range to smaller sizes than those considered in the Oak Tree Report. LIP §22.44.1920.K requires mitigation by replacement for encroachment as well as removals

for native trees including oaks of 6-in. diameter and larger. The state requires consideration of oak trees 5-in diameter and larger (PRC §21083.4) to determine oak woodland. The map of native trees needs to include all native trees of 6-in. diameter and larger and native oaks of 5-6-in. diameters in addition.
Recommendation 11: A map of tree trunk locations (5-in. diameter and larger), tree canopy dripline, and tree protected zones is needed. This can be limited to area of impact for operations of fence modification, if this is the only impact area. The area of needed impact must be shown and oaks on both sides of the fence possibly impacted must be shown. Use the widest probable needed area of impact. Impacts to trees and oak woodland need to be assessed from this map. Assess impact to any tree with any part or edge of protected zone in the fence replacement impact zone.
Recommendation 12: Strong temporary fencing, such as chain-link fencing, shall be placed at the distance shown on the map (produced by Recommendation 9) through the woodland during construction on both sides of the fence.
Recommendation 13. Tree impacts and mitigation trees required need to be assessed using LIP specifications in §22.44.1920.K. Note that trees with 10% or less encroachment will need to be monitored for 10 years, and mitigation trees planted (10:1) if any of these suffer health problems or die.

Finding 14: Oak woodlands are a valuable resource in the Santa Monica Mountains. The applicant should be aware that even when oak woodland is considered H3 (disturbed habitat) as is the oak woodland on the west side of the Project, every effort should be made to conserve H1-type (rare) habitat resources wherever they exist. For this reason, oak impacts should be fully mitigated, as required by the LIP, the state oak woodlands ordinance (PRC 21083.4), and the state act's implementation in the Los Angeles County Oak Woodlands Conservation Management Plan. The guide to using the County Plan is at http://planning.lacounty.gov/oakwoodlands/documents)
Recommendation 14a. Oak woodland area impact needs to be evaluated according to the Conservation Plan guide. An area should be set aside for permanent conservation, deed restricted, equal to twice the area of impact. The mitigation oaks should be planted in this conserved area. Typical native oak understory plants shall also be used in the mitigation area. If all mitigation oaks cannot reasonably be accommodated in the conservation area, then additional area with deed-restricted permanent conservation needs to be provided.
Recommendation 14b. Care for mitigation oaks and understory shall be for a period of 7 years. If a mitigation oak dies during this period, it shall be replaced and the period of 7 years begins again for care of the new mitigation oak. Care continues until all mitigation oaks have survived for a period of 7 years.

WATER SUPPLY
Recommendation 15. The project will need to provide an assessment of any impacts to the stream resources and ground water by the well, historical use and any planned increment. The well position should be noted as in the H1 habitat. For any well to be installed describe and map all parts that will have a footprint including tanks, piping, pumps. Assessment by a qualified professional will be required. For an expected increment, provide estimates of how this may affect any nearby drainage, groundwater, vegetation and other natural resources. §22.44.840.W; §22.44.1340.B.2.

INVASIVE PLANT AVOIDANCE
Recommendation 16a. As a measure to avoid introduction of invasive plants to the Project site and adjacent natural areas, which have very little non-native flora, pressure washing on construction vehicles shall be instituted. Immediately before coming to the project site, grading and other construction equipment shall be pressure washed, removing any dirt from previous projects on the equipment body, in the wheel wells, and undercarriages. Pressure washing must be verified by Project Biologist check as equipment is brought to the site, before commencing equipment use. Project

biologist is to have authority to send any equipment with remaining dirt away to be acceptably pressure washed before equipment can be used at the Project site. Contractor is to absorb any additional cost due to delayed construction. Project biologist will prepare summary report on first entry of all construction vehicles and inspection of equipment body, wheel wells, and undercarriages to applicant and to LACDRP.
Recommendation 16b. Applicant is to inform construction contractors of this requirement. Applicant is to hire Biological Monitor to perform inspections. Applicant is to insure that LACDRP receives report of all construction vehicles and pressure washing checks for equipment body, wheel wells, and undercarriage.

NATURAL RESOURCES PROTECTION DURING GRADING AND CONSTRUCTION

Recommendation 17. Soil disturbance (clearing, grading) shall be done in oak tree and other native tree protected zones (greatest distance of dripline + 5 ft. or 15 ft. from trunk) with hand tools and air spade. Roots 2-in. and larger always shall be preserved when feasible, and covered with wet cloths while exposed. Project biologist is to install flagged fencing at periphery of native tree protected zones within 100-ft. vicinity of construction activities prior to commencement of grading. These protective fences are to be maintained throughout project construction activities. Project biologist shall instruct grading crews, including all contractors and foremen, on sensitivity of the native tree protected zones; importance of avoiding this zone with all activities; importance of avoiding damage to roots by not placing graded material or construction material and equipment in the protected zones on top of the roots. The integrity of the native trees is important to the final outcome of the Project.

Recommendation 18. Natural areas shall be prohibited from use during all construction by flagging and fences installed by biological monitor prior to any grading and maintained throughout construction activities. Oaks and other native trees shall be protected at 5-ft. beyond the driplines or 15-ft. from the trunk, whichever is greater. No storage or vehicle parking may be done in these protected areas.

Question: What was the outcome of preconstruction bat surveys before building demolition? Mitigation recommended by CDFW for bats would call for constructed nest boxes in the near vicinity if bats were excluded from potential roosts. This should be added to any future demolition of buildings by County Public Works.
Recommendation 19. Any further tree removal shall be conducted in a manner that saves birds and bats that may be using any tree for roosting. It is preferable to bring down trees or structures in a controlled manner using heavy machinery. In order to ensure the optimum warning for any roosting bats (or birds) that may still be present, the trees or structures shall be nudged lightly two to three times, with a pause of approximately 30 seconds between each nudge to allow bats and birds to become active. Trees or structures may then be pushed to the ground slowly under the supervision of a bat specialist. Felled trees shall remain in place until they are inspected by a bat specialist. Trees that are known to be bat or bird roosts shall not be sawn up or mulched immediately. A period of at least 48 hours shall elapse prior to such operations to allow bats and birds to escape.
Note: This is a better plan for tree removal. The impact of branches crashing to the ground after being sawed off will probably kill any roosting birds and bats hiding in the foliage. These are fragile animals, easily seriously injured or killed by slight impacts.

Recommendation 20. Geofabric covers shall be used to collect refuse in all temporary sediment basins, drains, swales, and covers shall periodically be replaced and old covers and contents taken to a landfill. Temporary erosion control shall be installed for any lull in grading/construction longer than 30 days.

Recommendation 21. Because grading and construction activities may be initiated in the bird nesting season (December 1-August 31) and the bat maternity season (March 1 to September 30), preliminary surveys for nesting birds and/or maternal bat roosting will be needed, and restrictive fencing shall be placed by the biological monitors on the construction area to protect a needed buffer area if either of these sensitive activities are discovered. Surveys are to be conducted by qualified biologists approved by LACDRP. The surveys begin approximately 1 month prior to construction and/or grading, extend to 500 ft. off the construction area, and are conducted at weekly intervals, with the final survey within 3 days of beginning grading and/or construction. More details will be provided by planner in project approval requirements.
Note: The dates specified as required for nesting bird surveys include nesting periods of owls and hummingbirds, which are possible on the site. It also changes the distance to which surveys must extend to the current recognized needed distance for raptors of 500 ft.

LIGHTING

Finding 22: Night lighting interferes with and disrupts many natural processes of the biological environment: photosysthesis, predator-prey balance, and wildlife movement are some of the basic ones. If lighting can be minimized, it should be.
Recommendation 22.. Project shall minimize exterior lighting as possible while providing needed lighting for the operation of the facility. As much as possible, follow minimization measures such as the following:
-Exterior night lighting shall be minimized;
-Use low intensity and low stature fixtures;
-Have automatic controls to turn lighting off when not in use and automatically between 10 p.m. and sunrise.
-Lights shall be directed downwards with good shielding against projection into the nighttime sky, surrounding properties, and undeveloped areas.
-Security lighting, if used, shall be on an infrared detector and may not be continuously illuminated except in cases of actual emergency.
-Eliminate light spillage offsite.

REFLECTIVE SURFACES

Recommendation 23. Implement bird-friendly design in the structure, avoiding glare and potential for bird strikes. For example, Project design should minimize large reflective external surfaces, in order to minimize the danger of bird strikes due to reflections of habitat that make a surface like glass appear to be open habitat. Fritted glass is recommended.

FUEL MODIFICATION

Recommendation 24. Vegetation clearance for fuel modification requirements shall be done using hand tools to minimize soil disturbance. Department of Regional Planning Staff Biologist shall approve landscape/fuel modification plan, which shall show proposed brush clearance. All existing native vegetation shall be clearly depicted. Subsequent final approval by Fire Department's Fuel Modification Unit is required. All vegetation removal activities shall be scheduled outside the nesting season (September 1 to November 30) to the greatest extent feasible, to avoid potential impacts to nesting birds.

Recommendation 25. A fuel modification plan shall be illustrated with the landscape plans. Fuel modification zones and directions shall be as follows:

a. Zone A: 20 ft. wide; irrigated; non-invasive ground covers

b. Zone B: 80 ft. wide beyond Zone A; irrigated; contains non-invasive ground covers, native plants, deep-rooted perennials, some well-spaced shrubs and trees. Zone B irrigation system for native plants may be tested biannually at beginning and end of fire season, but not regularly used in order to protect native plants from overwatering. For oak woodlands: do not irrigate; remove the dead material (but leave the oak leaves to a depth of 6 in.); remove fire ladders (low branches); and remove understory that would be seasonally dry.

c. Zone C: Beyond Zone A (to 200 ft. from the structure or to property line, whichever is less), mosaic of thinned, clumped, native vegetation, pruned on a staggered 2-3 year schedule, with clumps adjacent to one another in alternate pruning times. For oak woodlands, remove the dead material (but leave the oak leaves to a depth of 6-in.), remove fire ladders (low branches), and remove understory that would be seasonally dry. For grasslands, allow alternating clumps to go to seed in alternate schedule periods.

(1) In preparing Zone C for fuel modification:

(2) Retain as many non-sprouting species as possible. (They usually have a single trunk.) Do not cut off the trunk in pruning, as this kills the plant.

(3) Choose multiple-trunked, resprouting species for removal over non-sprouters. The remaining multi-trunked shrubs should be pruned in a staggered, clumped pattern on an alternating schedule, allowing 2-3 years between prunings for any one clump. Resprouting species can be pruned to near ground level. For oak woodlands, remove the dead material (but leave the oak leaves to a depth of 6-in.); remove fire ladders (low branches); and remove understory that would be seasonally dry.

Recommendation 26. Because native grassland has presence on this Project, grass in fuel modification areas should be allowed to go to seed in staggered clumps (approximating a checkerboard pattern) on a staggered schedule of 2-3 years. The standard trim to 3-in. length can be followed in alternate 2-3 year intervals.

Recommendation 27. Areas beyond the irrigated fuel modification Zone A should be protected from any disturbance like irrigation, by implementing measures like bioswales to control runoff. Thinning will be needed. Because fuel modification is in H1-Quiet Zone and H1-Buffer, and because irrigation would promote the invasive Argentine ant (*Linepithema humile*), which has been shown to be very destructive to the natural chaparral community, Zone B irrigation for fire defense shall be installed and tested biannually (at the beginning and after the end of fire season) but shall otherwise not be used in order to protect native vegetation on the site from overwatering.

LANDSCAPING

Recommendation 28. Locally native plants shall be used in landscape plans that also satisfy County Fire requirements for fuel modification zones. These may come from the Director's List that accompanied the LCP. No invasive non-natives, no California natives not indigenous to the project region, and no cultivars of native plants that pose a hybridization potential with local genotypes are to be used. When plant removals are of non-natives and replacement is needed, replace with a locally native plant.

Recommendation 29. All pages of the landscape and fuel modification plans shall have a prohibition against using rodenticides for pest control and recommend non-persistent methods such as traps and fumigation. (This includes, but is not limited to, pest bait that has: Warfarin, Brodifacoum, Bromadiolone, or Diphacinone.)

Recommendation 30 Oak trees are to be used in the landscape plan and shall be local and suitable for the native local setting (be from the same elevation zone of the Santa Monica Mountains). Oak trees

planted in the landscape shall have separate, temporary irrigation systems. Care of planted native oak trees (*Quercus* spp.) shall be on the landscape plans as follows:

> **OAK TREE PLANTING, IRRIGATION AND MAINTENANCE**: For new oaks: Arrange soil around base of tree to slope away from tree so that rainfall drains away from the trunk; avoid ponding at the base of the trunk. Make a tree well about 3 feet from trunk, filled with mulch, that does not touch the trunk. Irrigation can be done with hoses once a month, about 3 gallons until tree is established (several years) in the normal rainfall months, October-June, and then once a week 3 gal. in summer July-September. After establishment, only rainfall should irrigate oaks, and NO water should be applied. In times of severe drought, native oaks may be irrigated once in mid-summer. Leave 6 to 10 feet around the trunk clear and dry. Allow leaf fall to accumulate up to 6-in. depth, and only remove so as to leave 6-in. of leaf fall under the oak trees. **Any temporary irrigation system shall be removed when oaks are established**.
>
> **OTHER NATIVE PLANTS:** Planting in fall is the ideal. Native plants are watered like the oaks (in a plant well filled with mulch 3-ft. from trunks), once a week for 3-6 months until established. Usually, only rainfall should irrigate native plants after their establishment, and NO water should be applied April-September. In times of severe drought, native shrubs may be irrigated once or twice in summer.

Recommendation 31. The DRP and Cal-IPC invasive plant lists shall be used to identify invasive plants, and a list of plants to avoid shall be attached to the landscape plan and identified as "Non-natives that are specifically prohibited include, but are not limited to, palm trees (family Arecaceae), pampas grass (*Cortaderia* spp.), Pepper trees (*Schinus* spp.), *Eucalyptus* spp.

Recommendation 32. Landscape plants are to be of local genetic stock (the same elevation zone of the Santa Monica Mountains). Refer to the document of the California Native Plant Society, Santa Monica Mountains Chapter, entitled ”Recommended List of Native Plants for Landscaping in the Santa Monica Mountains, updated August 2007.”

POOLS AND SPAS

Recommendation 33. Any Pool and/or Spa shall have a no-chlorine or low-chlorine purification system, with maintenance of proper pool water pH, calcium and alkalinity balance, to insure that runoff will not include excessive amounts of chemicals.

Recommendation 34. An additional requirement shall be that emptying of pool shall be done with a pump into tank trucks, avoiding discharge into the native habitat.

WATERSHED PROTECTION

Recommendation 35. For protection of the Zuma and Trancas Watersheds all residences proposed in proximity to riparian and jurisdictional stream resource areas shall have a runoff capture swale with plants or scavenge material that can be changed biannually (at the beginning and following the rainy season), and shall incorporate project design features with a drainage plan to ensure detention of storm water complies with current LIP requirements.