

ATTACHMENT 1. ENVIRONMENTAL ANALYSIS

PAR-04-122

Vector-borne Disease Laboratory

Prepared by:

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Introduction

The University of California, Davis (UC Davis) is applying to the National Institutes of Health (NIH) for federal funds to construct the proposed Vector-borne Disease Laboratory (VBDL) at the California National Primate Research Center (CNPRC). The CNPRC is located on campus approximately two miles west of the academic core and west of the intersection of Hutchison Drive and County Road 98. The proposed 7,200 gross square-foot building would include high quality research laboratories, research support space, and office space to jointly house staff from the CNPRC's Virology and Immunology Unit and research faculty of the Center for Vector-borne Diseases (CVEC). The proposed VBDL would be located at the CNPRC on a vacant site immediately north of the CNPRC's Administration Building. In addition to the laboratory and office building, an approximately 5,500 gross square foot vivarium and insectary would be constructed adjacent to the VBDL to provide secure containment of research insects and animals. The proposed project would include an emergency generator, which would provide power to the facilities in the event of an electrical outage. The proposed project would include new parking in the main CNPRC parking lot at the south of the CNPRC site.

The main purpose of the proposed project is to consolidate, integrate and expand modern and safe research space available for the CVEC and the CNPRC's Virology and Immunology Unit. The Virology and Immunology Unit includes faculty, staff, and graduate students from a variety of disciplines whose research focuses on using non-human primate models of human infectious and immunologic diseases such as AIDS to better understand diseases, diagnostic tools, and treatments. The CVEC faculty's research is focused on aspects of host, pathogen and vector biology including the use of non-human primate models to study vector-borne disease. Significant human illness and death as well as animal suffering occur worldwide due to vector-borne disease. In California, these diseases cause great economic loss to animal producers and recreation-based industries. The rapid spread of West Nile virus in the United States has highlighted the emerging nature of vector-borne diseases and indicates a critical need for expanding the national research capacity in this area of study.

The proposed buildings would accommodate Biosafety Level 3 practices, equipment, and facilities, which are suitable for work involving agents that may cause serious or potentially lethal disease as a result of exposure. The proposed project would also increase building space on campus, would contribute additional fume hoods, would slightly increase utility demand, and would add approximately 15 new employees to the campus population. Materials used in, and wastes generated by, the facility would be handled and treated consistent with state and federal guidelines. Construction of the proposed facility would result in temporary increases in noise and traffic levels. The following Environmental Analysis Form presents the campus' preliminary evaluation of the environmental and community effects of the proposed project pursuant to NIH requirements for the National Environmental Policy Act of 1969 (NEPA).

Permits, Licenses, and Other Approvals

If selected for award of federal funds, the potential environmental effects of the proposed project would be fully evaluated pursuant to the requirements of NEPA. The University will comply with the environmental review requirements of the California Environmental Quality Act (CEQA) prior to potential University approval and development of the project. The University would not take any action giving impetus to the project in a manner that limits the choice of alternatives or mitigation measures prior to completing the environmental review. Any decision by the University to approve the project is contingent upon completion of the CEQA process. Design approval is required before the development of construction drawings for the project. The University would not spend any federal grant funds on the Project unless and until the design is approved by the University.

Construction activity associated with the proposed project would be covered under a statewide National Pollutant Discharge Elimination System (NPDES) General Permit for Discharge of Storm Water Associated with Construction Activity. In compliance with this General Permit, the campus would submit a New Construction Information form to the California Regional Water Quality Control Board and would prepare and implement a project-specific Storm Water Pollution Prevention Plan for construction activities associated with the project. The emergency generator associated with the project would be permitted by the Yolo-Solano Air Quality Management District.

Under state law, the University of California is the lead agency for evaluation and approval of projects on lands owned by The Regents. No additional land use approvals are required for the project from local, regional, or state land use boards. The proposed building site is designated in the 2003 LRDP for *Academic/ Administrative High Density* land uses, and the proposed building would be consistent with this land use designation.

SUGGESTED FORMAT

Environmental Analysis Form

Date _____ Proposed Construction Grant for _____
 (Principal Investigator)

A. USE OF NATURAL RESOURCES

This set of criteria is concerned with the *accessibility* of nonrenewable natural resources such as land, minerals, and fuels as well as the flow resources (water and air) that are constantly renewed but in which short-term or local shortages might occur.

Criteria	Impact		Description of Environmental Impact
	YES	NO	
<i>Will the project:</i>			
1) Change traditional use of the land parcel (by rezoning etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	Present zoning: _____ Present use of site: _____ Proposed zoning: _____
2) After use of other land by related development of stores, roads, or site changes?	<input type="checkbox"/>	<input type="checkbox"/>	
a) Generate new stores?	<input type="checkbox"/>	<input type="checkbox"/>	
b) Cause new roads?	<input type="checkbox"/>	<input type="checkbox"/>	
c) Cause new parking?	<input type="checkbox"/>	<input type="checkbox"/>	
Before answering question 3, consider these items: Soil borings <i>have/have not</i> been completed. Proposed facility <i>will/will not</i> have foundations similar to other facilities in the area. The facility <i>is/is not</i> in a flood plain.			
3) Use land for purposes unsuitable to its physical characteristics?	<input type="checkbox"/>	<input type="checkbox"/>	
4) Include the use of wetlands (swamps, marshes etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	
5) Block access to known mineral deposits?	<input type="checkbox"/>	<input type="checkbox"/>	(Sand, gravel, clay, stone, or other common building materials are not considered mineral deposits.)
6) Increase fuel and mineral consumption in state by more than 1% annually?	<input type="checkbox"/>	<input type="checkbox"/>	Est. annual fuel requirements: _____ gallons of fuel _____ cubic feet of natural gas _____ tons of coal 320,000-480,000 kWh of electricity Expected source(s) of these fuels:

Criteria	Impact		Description of Environmental Impact
	YES	NO	
7) Decrease the volume of water in a lake, river table, reservoir, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
8) Change traditional use of a body water?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
9) <i>Not</i> comply with the local and State land use planning?	<input type="checkbox"/>	<input type="checkbox"/>	

B. POLLUTION

This set of criteria concerns the processes that generate pollution. These include the introduction of pollutants into the environment, changes in the flow of energy through the environment, and changes in the composition of environments through the augmentation or deletion of substances that are naturally present. The criteria are also directly concerned with the production and one-time use of materials and the proper disposal of wastes.

Criteria	Impact		Description of Environmental Impact
	YES	NO	
<i>Will the project:</i>			
1) Increase identifiable ambient air pollution levels from a new emission source or from existing sources?	<input type="checkbox"/>	<input type="checkbox"/>	
2) Increase identifiable ambient air pollution levels through a major increase in the number of or use of automobiles, trucks, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	Approximate number of new employees: _____
3) Exceed city or State health standards with exhausts from fume hoods?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
4) Involve			If yes, describe.
a) Dredging or swamp drainage?	<input type="checkbox"/>	<input type="checkbox"/>	
b) Construction of a waste treatment plant?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe capacity & location.

Criteria	Impact		Description of Environmental Impact
	YES	NO	
c) Discharge of untreated human waste directly into a lake, river, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
d) Discharge of laboratory wastes biohazard wastes directly into a lake, river, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe
5) Overload existing waste treatment plants due to new loads (volume, chemicals, toxicity, etc.) water?	<input type="checkbox"/>	<input type="checkbox"/>	Please obtain and submit a connection permit or other approval from local sewer authority.
6) Cause soil erosion (after completion of construction phase) or leaching of foreign substances (such as salt) into soil?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe
7) Allow seepage of contaminants into the water table?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
8) Increase the stress placed upon an identified earthquake fault?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, please include a statement from a structural engineer.
9) Create an identifiable change in aquatic life by discharge of hot water?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
10) Decrease the percolation on more than one acre of land?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
11) Cause storm water runoff onto land owned by others?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
<p>Consider the following statements prior to answering questions 12-14: Facility <i>will/will not</i> emit noises in excess of local noise standards. Is facility near wildlife sanctuary? Are outdoor animal facilities included? Facility <i>will/will not</i> contain x-ray machines. Facility <i>will/will not</i> meet Atomic Energy Commission standards.</p>			
12) Produce noises considered offensive to a human population?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.

Criteria	Impact		Description of Environmental Impact
	YES	NO	
13) Create sounds that result in changes in behavior patterns of animals?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
14) Introduce major new sources of unshielded radiation?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
15) Cause shock waves and/or vibration (after construction phase)?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
16) Change the direction and wind velocity as to affect the local population (i.e., high-rise building)?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
17) Cause a new, large volume of production of non-recycled items?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
18) Result in the non-recycling of recyclable items such as laboratory glassware, animal cages, and office paper?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe. If no, indicate number of Glassware-washing machines: _____ Cage-washing machines: _____
19) Generate solid wastes that cannot be properly disposed of by existing facilities?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe. If no, describe proposed methods and disposal sites.
20) Dispose of solid wastes in in polluting landfills, wells, caves, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
21) Require storage of waste pending technology for safe disposal?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
22) <i>Not</i> comply with Federal, State, & local requirements for waste handling, transportation, or disposal methods?	<input type="checkbox"/>	<input type="checkbox"/>	Describe proposed methods.

C. POPULATIONS

This section of the initial criteria addresses changes in human & plant populations.
NOTE: For these criteria, the *affected area* is defined as being *greater than 160 acres in size*.

Criteria	Impact		Description of Environmental Impact
	YES	NO	
<i>Will the facility cause:</i>			
1) A 5% change in the density of the local population?	<input type="checkbox"/>	<input type="checkbox"/>	Est. local population: _____ Number of new employees: _____
2) Alteration of transportation, health, education, and/or welfare service?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
3) Change in social service needs by altering population's age pattern (new schools, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
4) A 5% change in the transient population?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe. Include est. number of Visitors: _____ Patients: _____ Students: _____
5) Changes in genetic engineering directed at the human population?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
6) Violation of local, State, or Federal standards pertaining to population densities of or conservation of plants and animals?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe. Also describe any approvals needed or submit those already obtained.

D. HUMAN SERVICES

As society has evolved, traditional self-sufficient human communities have given way to dense populations that depend upon the development and application of technology. Man's highly complex, technological environments are maintained by a variety of services, ranging from the provision of the basic necessities of food and water to a complex system of economic exchange. These services are largely interdependent, and their complexities must be considered.

NOTE: In this section, the *human environment* impacted upon is defined as *less than 160 acres* in size.

Criteria	Impact		Description of Environmental Impact
	YES	NO	
<i>Could the proposed project disrupt:</i>			
1) Food supplies for 48 hours?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
2) Water supplies for over 48 hours?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
3) Electrical power for 48 hours?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
4) Heating supplies (natural gas, heating oil) for over 48 hours?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
5) Or deprive population of housing for over 48 hours?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
6) Removal of sewage for more than 12 hours?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
7) Removal of solid waste (trash) for more than 7 days?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
8) Existing health services' response in case of a disaster?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.

Criteria	Impact		Description of Environmental Impact
	YES	NO	
9) Telephone, telegraph, radio, or mail service for over 2 weeks ?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
10) Transmit service for more than than 2 weeks?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
<i>Will the proposed project use more than 5% of:</i>			
11) Remaining electrical capacity?	<input type="checkbox"/>	<input type="checkbox"/>	Estimated daily usage is ___ kWh. Please obtain & submit an approval letter from local utility or plant engineer.
12) Remaining water?	<input type="checkbox"/>	<input type="checkbox"/>	Estimated daily usage is ___ gallons. Please obtain & submit an approval letter from local utility or plant engineer.
13) Available capacity of the sewage treatment system (branch lines, mains, plants)?	<input type="checkbox"/>	<input type="checkbox"/>	Estimated daily flow is ___ gallons. Please obtain & submit an approval letter from local utility.
14) Available capacity of trash disposal system (collection, incinerator plant, landfill)?	<input type="checkbox"/>	<input type="checkbox"/>	Also clearly explain proposed handling and disposal of chemical wastes, biohazardous, syringes, and other special wastes.
15) Available heating fuel (gas, coal or heating oil)?	<input type="checkbox"/>	<input type="checkbox"/>	Annual quantities have already been described. Explain which of these fuels, if any, are in short supply.
<i>Will the proposed project decrease :</i>			
16) By 5% the food delivery system by removal of retail food stores etc.?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
17) By 5% the area's domestic housing by demolition, closing, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain. Will <i>any</i> housing be demolished, closed, etc.?

Criteria	Impact		Description of Environmental Impact
	YES	NO	
18) By more than 5% the use of existing transit systems (bus, train, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain. Relate to extent of new employment.
19) Accessibility to routine health services by altering point-of-service delivery?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
<i>Will the proposed facility:</i>			
20) Increase by more than 5% the patient load of the area's routine care services?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
21) Change the availability of social services by opening or closing facilities?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
22) Increase by more than 5% the number of social services recipients (through unemployment)?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
23) Cause discontinuation of existing stops or train stations?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain.
24) Increase by more than 5% the annual volume of telephone, telegraph, or mail?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, explain. Relate to new employment or change in location of employees.
25) Eliminate employment sources for 10% of the population.	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
26) Change school enrollment by more than 5%?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.

D. HUMAN VALUES

The fifth set of criteria is directed toward human values concerning the environmental qualities generally agreed upon to the extent that they are stated in statutes, standards, or regulations.

Criteria	Impact		Description of Environmental Impact
	YES	NO	
<i>Will the proposed project:</i>			
1) Encroach upon any historical, architectural, or archeological cultural property?	<input type="checkbox"/>	<input type="checkbox"/>	<i>Historical preservation:</i> Obtain and submit clearance letters from State office. <i>Architectual, archeological, and cultural:</i> Obtain and submit clearance from local government or local society.
2) Affect any endangered species?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.
3) Violate local, State, or Federal standards on aesthetics, or noise?	<input type="checkbox"/>	<input type="checkbox"/>	If yes, describe.

Environmental Analysis – Supplemental Information

All asterisked (*) responses in the Environmental Analysis Form are discussed further below.

A 2) The proposed project would include new parking in the main CNPRC parking lot at the south of the CNPRC site. The Environmental Analysis Form considers the effects of this new parking.

A 3) Consistent with campus policy, a geotechnical analysis would be performed for the proposed project site to identify any land constraints and to inform structural design. Based on the topography of the proposed site and the geotechnical characteristics known to occur on campus, the physical characteristics of the site would be suitable for construction of the proposed facility. Most of the campus, including the proposed site, is topographically flat. Soils on campus are moderately to slowly permeable, have slow runoff rates, minimal erosion hazards, and moderate to high shrink-swell potential. According to the Preliminary Map of Maximum Expectable Earthquake Intensity in California (prepared by the California Department of Mines and Geology), the campus is located in a “moderate” severity zone for earthquakes. Soil shrink-swell, settlement, and seismicity are the primary physical land constraints of the proposed site that would be mitigated through project design.

A 6) Diesel fuel would be purchased from an outside vendor to operate the project's emergency generator. Electricity is provided to the campus through contracts with the Western Area Power Administration and other providers. Electricity for the project would be distributed through campus-owned and operated facilities, and new electrical conduits would be installed to connect the project to the campus system.

A 7) Operation of the proposed project would not require water from surface sources such as lakes or rivers, but it would require approximately 1,000,000 gallons per year of groundwater from a deep aquifer. This consumption was anticipated as part of the overall increase in campus groundwater use through 2015-16 that was thoroughly evaluated in the UC Davis 2003 Long Range Development Plan (LRDP) Environmental Impact Report (EIR).

A 9) Under state law, the University of California is the lead agency for evaluation and approval of projects on lands owned by The Board of Regents of the University of California (The Regents). No additional land use approvals are required for the project from local, regional, or state land use boards. The proposed building site is designated in the 2003 LRDP for *Academic/Administrative High Density* land uses, and the proposed building would be consistent with this land use designation.

B 1) The proposed facility would add fume hoods and an emergency generator to the campus inventory, which could increase the levels of toxic air contaminant emissions in the region. This increase was anticipated as part of the overall campus growth through 2015-16 and was included in the toxic air contaminant health risk assessment performed in support of the 2003 LRDP EIR. The 2003 LRDP EIR concluded that campus growth through 2015-16 would not expose campus occupants or other populations in the vicinity of the campus to significant toxic air contaminant health risks. A wind tunnel analysis

would be performed as part of the project's design to analyze the site-specific risks associated with project emissions and to inform facility design. The project's emergency generator would not require emission credits, but it would be permitted with the Air Quality Management District.

B 2) Construction associated with the proposed project would temporarily increase vehicular traffic. In addition, construction-related activities such as earthmoving, excavation, and grading would temporarily generate dust emissions. During operation, the proposed project would accommodate approximately 15 employees and would introduce a very small number of additional visitors and service/delivery personnel each day. Therefore, the project would cause a minor increase in associated ambient air pollution. The 2003 LRDP EIR fully evaluated increases in ambient air pollution levels associated with campus growth through 2015-16 and mitigated these increases to the extent feasible. The proposed project is consistent with the campus growth evaluated in the 2003 LRDP EIR.

B 3) See response to B 1.

B 5) Wastewater from the facility would be treated at the campus owned and operated wastewater treatment plant. The existing campus wastewater treatment plant currently has adequate capacity to treat wastewater volumes that would be discharged from the proposed facility. The plant could also be expanded in the future to accommodate overall campus growth, including the proposed VBDL. Effluent loads added by the proposed facility would be comparable to that discharged from existing laboratory facilities on campus, and campus programs are in place to address pollutant issues associated with laboratory effluent.

B 10) Construction of the proposed facility would create new impervious surfaces at the site, and thereby decrease percolation of water into the groundwater aquifer. However, storm water runoff from the site would be directed to an existing storm water detention pond at the CNPRC where some of the water would percolate into the ground.

B 11) As described in response to B 10 above, site runoff would be directed to the storm water pond at the CNPRC where it will be detained and released slowly into a culvert that drains into Covell Drain, north of Russell Boulevard. The controlled release would ensure that storm water from the project in conjunction with runoff from other existing facilities at CNPRC would not cause flooding of Covell Drain, and land owned by others would not be affected.

B 12) Construction of the proposed facility would involve temporary short-term increases in existing noise levels. Operation of the facility would generate vehicle trips and equipment operation that would minimally increase existing noise levels. However, due to the location of the proposed project near similar uses and away from residential areas, the minimal noise increases associated with the proposed facility would not be offensive to a human population.

B 13) The minimal noise increases associated with the proposed facility (described in B 12) would not significantly increase existing noise levels in the area so as to affect animal behavior.

B 18) The project would include one dishwasher that would be used to clean reusable items.

B 19) Non-hazardous wastes generated at the proposed facility would be disposed at the campus landfill, which has a projected capacity through 2023. Chemical, biohazardous, or other special wastes would be handled by campus Environmental Health and Safety personnel and contractors through the campus's Environmental Services Facility (a hazardous waste handling facility that has adequate capacity for the proposed project). Hazardous wastes generated on campus are then taken from the campus Environmental Services Facility to off-site facilities for recycling, treatment, or disposal. Off-site facilities are anticipated to have adequate capacity for additional waste generated by the proposed project. All waste disposal/handling facilities on campus and used by the campus are operated in compliance with applicable state and federal regulations. In addition, biohazardous waste generated at the proposed facility would be disposed pursuant to the CNPRC's Medical Waste Plan. The 2003 LRDP EIR evaluated the anticipated increases in campus hazardous materials use and waste generation through 2015-16 and concluded that these increases would not create significant hazards to the public or the environment due to continued implementation of the campus' regulatory compliance programs. The proposed project would be consistent with this analysis.

B 22) Waste handling, transportation, and disposal methods associated with the proposed facility would comply with all applicable requirements. The campus Office of Environmental Health and Safety has the necessary permits and trained personnel for the transportation and handling of hazardous materials that would be associated with the facility. Waste disposal associated with the proposed facility is discussed further in response to B 19.

C 5) No research involving genetic engineering of humans is anticipated to occur within the proposed facility.

D 11) Electricity is provided to the campus through contracts with the Western Area Power Administration and other providers. Electricity for the project would be distributed through campus-owned and operated facilities, and new electrical conduits would be installed to connect the project to the campus system. Current energy use on campus is approximately 200 million kWh per year, and the proposed project (with an estimated 320,000 to 480,000 kWh per year demand) would represent a minor increase in this use. The campus' existing and planned electrical system is anticipated to have adequate capacity for the proposed project.

D 12) Water used by the proposed project would be extracted from campus wells, and new water conduits would be installed to connect the project to campus water systems. Recent annual water use from the campus' domestic water system was approximately 870 million gallons, and the proposed project (with an estimated 1,000,000 gallons per year demand) would represent a minor increase in this use. The campus' existing and planned water systems are anticipated to have adequate capacity for the proposed project.

D 13) Wastewater from the proposed facility would be treated at the campus wastewater treatment plant, and new sanitary sewer lines would connect the proposed project to the campus sewer system. The campus wastewater treatment plant currently operates at

approximately 20 percent below its peak monthly permitted capacity. The campus' existing and planned sanitary sewer treatment and conveyance systems are anticipated to have adequate capacity for the proposed project. The plant could be expanded in the future to accommodate proposed overall campus growth, including the proposed VBDL.

D 14) See response to B 19.

D 15) The proposed project would not use heating oil.

E 1) A cultural survey of the CNPRC site, including pedestrian surface surveys and subsurface testing, was performed by a qualified archaeologist (Pacific Legacy 1999). The survey included generally negative findings. However, consistent with the survey's findings and campus policy, archaeological monitoring would take place during project construction.

E 2) The only Federally-listed endangered species that potentially would be of concern is the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). This species is found only in association with valley elderberry shrubs. The site of the proposed project has been surveyed for these shrubs, and none are found on or in the vicinity of the project site. Swainson's hawk (*Buteo swainsoni*), a species listed as Threatened by the State of California, potentially uses the site as foraging habitat. Mitigation for loss of Swainson's hawk foraging was included in the 2003 LRDP EIR, and no permits would be required from the California Department of Fish and Game to construct and operate the proposed project. Burrowing owl (*Athene cuniculari*), a state species of special concern, has not been observed on or adjacent to the site during past surveys.