

Response to Inquiries from the Legislative Analyst's Office  
Air Resources Board's Proposed Southern California Consolidation Project

1. Building Size: Please outline the process used to determine the building size/square footage listed in the Capital Outlay Budget Change Proposal (COBCP).

Response: The Air Resources Board (ARB) initially identified the need to consolidate and relocate ARB's existing motor vehicle and engine emissions testing and research facilities in 2006. The need was based upon significant space inadequacies, inadequate mechanical systems, and numerous fire, life, and safety issues.

To support this initial effort, ARB contracted with Design for Science to develop a feasibility study. Working with ARB program and administrative staff, the Design for Science Team conducted a comprehensive assessment of space needs based on program requirements at that time. This assessment identified that a total space need of approximately 249,000 square feet was needed to support staff and meet program needs. At that time, the assessment indicated that the current El Monte facilities encompassed approximately 112,000 square feet.

Since 2006, ARB's program expanded. ARB's current program mandates are outlined in the COBCP. The Southern California facilities now encompass approximately 132,000 square feet. Two significant areas that were not included in the 2006 feasibility study are the increased focus on heavy-duty vehicles and the climate change program. As the workload expanded, ARB recognized that the Southern California facilities could no longer meet current needs, much less future needs. It was also clear that the 2006 feasibility study would need to be updated to reflect ARB's current program needs and staffing considerations. Therefore, ARB worked with the Department of General Services (DGS) to contract with the IBI Group (IBI) to update the 2006 feasibility study. IBI is a global architectural, planning, engineering and technology firm.

The updated feasibility study work began in May 2014. ARB had already formed an internal team of key program staff that had been assessing program needs since the middle of 2013. The first kick-off meeting with IBI was held on June 11, 2014. In July, IBI conducted interviews that spanned several days and site visits to gain an understanding of the work performed at our Southern California facilities. In addition, DGS informed IBI of their guidelines to determine space needs for State-owned and leased facilities as provided in the State Administrative Manual. Lastly, ARB gave IBI information describing the program changes that occurred since the 2006 study.

In July and August, IBI met on numerous occasions to discuss the assessment. IBI then assembled detailed information on all aspects of the Southern California operations. The information was organized into the following areas:

- Light-Duty Testing
- Heavy-Duty Testing and Onboard Diagnostic Systems
- Portable Emissions Measurement Systems
- Chemistry Laboratories
- Staff Offices and Shared Operations
- Administrative Services
- Parking and Outside Facilities

For each of these areas, IBI worked with ARB and DGS to provide detailed square footage.<sup>1</sup> ARB also conducted benchmarking exercises to ensure that identified space needs were reasonable. For example, ARB compared its light-duty and heavy-duty test cells to other known test cells in the United States. Other entities that operate test cells include the U.S. Environmental Protection Agency, automotive manufacturers, universities, and the Southwest Research Institute. The comparison of facilities showed that the size of test cells being proposed is reasonable considering the array of vehicles testing and the scope of tests performed.

For each major area listed above, IBI applied a “grossing factor”<sup>2</sup> to the raw square footage data. The grossing factor accounts for circulation corridors, stairs, restrooms, and other requirements associated with mechanical, electrical, and plumbing infrastructure. Using this information, IBI then drafted proposed building configurations and possible plot plans. This building massing exercise then formed the basis of the square footage estimate and the cost analysis.

There was significant interaction between IBI, ARB, DGS, and the Department of Finance (DOF) on the development of the square footage. IBI estimated the original building footprint at approximately 450,000 square feet. However, ARB worked with IBI to scale back the building footprint to approximately 299,250 square feet. This building size provides the minimum amount of space necessary to meet program needs and was used as the basis for the COBCP submitted for inclusion in the Governor’s Budget.

The IBI Program Summary dated January 7, 2015, provides the details of the analysis. The Program Summary is available on our website at <http://www.arb.ca.gov/socalfacility>.

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<sup>1</sup> DGS space allowances outlined in the State Administrative Manual, Section 1321.14 provide a general guideline for calculating office space.  
[http://www.documents.dgs.ca.gov/sam/SamPrint/new/sam\\_master/rev429/chap1300/1321.14.pdf](http://www.documents.dgs.ca.gov/sam/SamPrint/new/sam_master/rev429/chap1300/1321.14.pdf)

<sup>2</sup> Based on the program area, a grossing factor ranging between .15 to .6 was applied to the net square footage.

2. Development of Performance Criteria: Please provide a description of the development of performance criteria, including a description of the deliverables.

Response: ARB is requesting \$5.7 million for the development of detailed guidelines and performance criteria to consolidate and relocate ARB's existing motor vehicle and engine emissions testing and research facilities.

The performance criteria phase includes a number of tasks and deliverables. The Department of General Services is the lead agency for this phase. DGS hires a Master Architect, Construction Management Consultant, and CEQA Consultant. In coordination with DGS and ARB, the Master Architect develops Design Guidelines and Performance Criteria that extensively define the level and expectations related to multiple requirements of the building's performance. A summary of typical performance criteria is presented below. The criteria are based on program needs and guided by professional codes, reference standards, and guidelines. The Design Guidelines and Performance Criteria are presented to the Public Works Board<sup>3</sup> for approval. Once approved, the findings of this effort are then incorporated into a Request for Proposal (RFP).

Concurrently, DGS issues a Request for Qualifications (RFQ). Potential qualified design-build teams respond with their Statement of Qualifications based on the RFQ. The top five teams are interviewed to further evaluate their qualifications. The top three teams are invited to submit an RFP. A Selection Committee consisting of the Master Architect, Project Consultant, and State representatives score the RFPs and select the top team. The agreement is awarded based on the best value to the State.

Table 1 summarizes the cost breakdown of the requested \$5.7 million. DGS estimates these costs based on their extensive experience in building construction. These costs are also documented in the COBCP. Note that the performance criteria phase also includes the initial preparation of environmental documents.

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<sup>3</sup> The State Public Works Board (Board) was created by the Legislature to oversee the fiscal matters associated with construction of projects for state agencies, and to select and acquire real property for state facilities and programs. The Board is also the issuer of lease-revenue bonds, which is a form of long-term financing that is used to pay for capital projects.

The Legislature appropriates funds for capital outlay projects such as acquiring land, planning and constructing new buildings, expanding or modifying existing buildings, and/or purchasing equipment related to such construction. Through review and approval processes, the Board ensures that capital outlay projects adhere to the Legislature's appropriation intents.

Voting members of the Board include the Director of Finance (Board Chair), the Director of Transportation, and the Director of General Services. When the Board deals with matters related to the issuance of revenue bonds the State Controller and the State Treasurer are added as members. Advisory members include the Director of the Employment Development Department, three Senators appointed by the Senate Rules Committee, and three Assembly members appointed by the Speaker of the House.

**Table 1**  
**Summary of Costs**  
**Performance Criteria Phase**

<b>Description</b>	<b>Amount</b>
Architectural and Engineering Design	\$1,900,000
Stipend for Three Teams	\$450,000
Advertising, Printing, and Mailing	\$50,000
Special Consultants (Soil/Survey)	\$800,000
Project Construction Management (DGS)	\$1,100,000
Contract Construction Management	\$800,000
Environmental Document	\$500,000
Due Diligence	\$75,000
Other Costs (State Fire Marshal)	\$18,000
<b>Total Performance Criteria Costs</b>	<b>\$5,693,000</b>

### Summary of Performance Criteria

#### Laboratory Design:

- Environmental Quality
- Density of Lab Space
- Flexibility and Adaptability
- Planning
- Circulation/Flow
- Furniture and Equipment
- Finishes and Materials
- Health and Safety

#### Mechanical Engineering Design: Identifies codes, reference standards, and guidelines.

- Outside Design Conditions
- Air Conditioning Systems
  - Central Plant Equipment
  - Offices
  - Laboratories
  - Vehicle Testing Areas
- HVAC controls
- Energy Conservation Systems

#### Electrical Engineering Design: Identifies codes, reference standards, and guidelines.

- Site Utility
- Electrical Power Distribution Systems
  - Electrical Engineering Design Criteria
  - Proposed Distribution
  - Proposed Distribution Voltages
- Power
- Lighting
- Lighting Control System
- Emergency and Distribution Standby Service

- Proposed Distribution Voltages
- Emergency system
- Standby system
- Emergency Distribution System
- Harmonic Distortion/Transient Voltages
- Grounding
- Telephone/Data
- Equipment Rooms
- Supporting Equipment
- Design Criteria
  - Design Voltages
  - Preliminary Design Loads
  - Equipment Sizing
  - Lighting Criteria
- Intrusion System
- Fire Alarm System
- Zero Net Energy

Plumbing Engineering Design: Identifies codes, reference standards, and guidelines.

- Water Supply
- Domestic Hot and Cold Water
- Natural Gas
- HVAC Condensate Drainage
- Roof/Overflow Drainage
- Drainage, Waste, and Vent
- Domestic Plumbing Piping Materials
- Emergency Eyewash and Shower Equipment
- Distribution
- Purified Water
- Laboratory Vacuum
- Laboratory Gas
- Analytical/Specialty Gases
- Industrial Hot and Cold Water
- Laboratory Waste and Vent System
- Laboratory Utility Distribution Piping Materials
- Automatic Fire Sprinkler Systems
- Fire Protection Piping Materials

LEED-New Construction

- Location and Transportation (parking footprint)
- Sustainable Sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality
- Innovation and Design

3. Identification of Foreseeable Costs at the El Monte Facilities: Please provide an overview of costs that would be necessary over the next 20 years to continue operations at the Haagen-Smit Laboratory (HSL) and adjacent leased facilities in El Monte.

Response: Table 2 summarizes the costs that are anticipated to support the ongoing use of the El Monte facilities for 20 years. These costs include ongoing leases and updates to several major infrastructural areas to meet basic vehicle testing needs. This includes the modification of the facility to accommodate an environmental test chamber and the costs necessary to upgrade light-duty test cells. It is critical to note that even with the upgrades identified above, the existing facility will still not provide the infrastructure necessary for ARB to effectively carry out our mission going forward and would not meet existing program needs. For example, the MTA facility would not provide the resources necessary for additional heavy-duty vehicle testing.

ARB assumed that the projected lease costs increase two percent annually. However, this is modest as business records indicate lease costs have sometimes increased between three and 14.5 percent in a given year. In addition, ARB has not included any costs for tenant improvements. Based on past experience, these tenant improvements can be significant; in the past, a single tenant improvement cost \$0.9 million. ARB did not include the cost of maintenance contracts as the new facility would also likely have similar contracts.

Information Technology (IT) is a major area that needs to be upgraded. For the IT infrastructure upgrade, ARB would need to refresh and/or rebuild its IT infrastructure due to aged technology such as wiring, telecommunication, and other computing IT equipment. ARB needs to retrofit room(s) to accommodate the IT equipment with technology and facilities that provides cooled space to certain specifications, and includes noise reduction. The costs equate to approximately \$3.9 million for servers, network, telecommunications, office IT equipment, and space retrofitting. In addition, the seven test cells need to be updated to meet new technology standards at a cost of approximately \$4.3 million.

If there is a clear indication that ARB will be consolidating and relocating the facilities, many of the identified modifications and upgrades will not be undertaken.

**Table 2  
Anticipated Costs for the El Monte Facilities**

Year	Leases	Utilities HSL+Annex 4 (Elec+Gas)	Modification/Description	Cost to Upgrade	Total Annual Cost
2015	\$2,000,000	\$444,000			\$2,444,000
2016	\$2,040,000	\$381,000	1. Fire Alarm System	\$400,000	\$3,841,000
			2. Electrical System	\$500,000	
			3. Surveillance System	\$100,000	
			4. Fume Hoods	\$420,000	
2017	\$2,081,000	\$233,000	1. HVAC Upgrade	\$1,085,000	\$8,499,000
			2. Roof	\$270,000	
			3. Energy Improvements - Solar	\$900,000	
			4. OIS Infrastructure Upgrades	\$3,900,000	
			5. Hazardous Waste Upgrade	\$30,000	
2018	\$2,122,000	\$233,000	1. Environmental Chamber	\$20,000,000	\$26,675,000
			2. Asbestos Abatement	\$50,000	
			3. OIS Test Cell Upgrades (7 cells)	\$4,270,000	
2019	\$2,165,000	\$233,000	1. Underground Storage Tanks	\$688,000	\$3,086,000
2020	\$2,208,000	\$233,000			\$2,441,000
2021	\$2,252,000	\$233,000			\$2,485,000
2022	\$2,297,000	\$233,000			\$2,530,000
2023	\$2,343,000	\$233,000			\$2,576,000
2024	\$2,390,000	\$233,000			\$2,623,000
2025	\$2,438,000	\$233,000			\$2,671,000
2026	\$2,487,000	\$233,000			\$2,720,000
2027	\$2,536,000	\$233,000			\$2,769,000
2028	\$2,587,000	\$233,000			\$2,820,000
2029	\$2,639,000	\$233,000			\$2,872,000
2030	\$2,692,000	\$233,000			\$2,925,000
2031	\$2,746,000	\$233,000			\$2,979,000
2032	\$2,800,000	\$233,000			\$3,033,000
2033	\$2,856,000	\$233,000			\$3,089,000
2034	\$2,914,000	\$233,000			\$3,147,000

Notes:

- Increased capability for heavy-duty testing is not included in the estimate. The estimated costs would be \$96.4 million for the facility; please see Question #4, Alternative #1
- Existing leased space is at capacity; the cost for additional space is not included in the estimate. The estimated cost is \$29,000 annually. To adhere to DGS guidelines, this estimate assumes an office lease for 15,000 square feet at \$1.90/sf, the average cost of the three most recently negotiated leases in El Monte.
- Energy efficiency improvements (solar, fume hoods) reduced the annual utility costs. The cost savings are reflected in the reduced utility costs for 2016 and 2017.

4. Alternatives: Please provide a description and cost of possible additional alternatives to the proposed alternative to consolidate and relocate the ARB's existing motor vehicle and engine emissions testing and research facilities. Specifically, discuss alternatives for building smaller test facilities and maintaining existing leases.

Response: ARB is proposing to consolidate and relocate its existing motor vehicle and engine emissions testing and research facilities. Currently, ARB maintains one State-owned facility and leases office and laboratory space in five adjacent buildings. These facilities are located in El Monte. ARB also operates a small heavy-duty test facility at the Metropolitan Transit Authority (MTA) facility in Los Angeles. This facility is operated under a Memorandum of Understanding with MTA.

ARB's preferred alternative is to consolidate and relocate existing motor vehicle and engine emissions testing and research facilities. The projected cost of this new facility is approximately \$258.2 million. In addition, ARB estimates that there is a need for \$101.8 million in replacement equipment costs, \$0.2 million for a site assessment, and \$5.7 million for developing performance criteria.

The LAO request was generally to evaluate the costs associated with building only those facilities that need to be added in order to meet program needs, while retaining the current State-owned and leased facilities. In response to the LAO request, ARB conducted an analysis of two alternatives. These two alternatives are presented below:

- 1.) Construct a new emissions testing and research facility only for heavy-duty vehicles, including the testing of onboard diagnostic systems (OBD) and portable emissions measurement systems (PEMS) on light-duty and heavy-duty vehicles. Include laboratory space in the new facility sufficient to conduct limited chemical analyses of collected samples. Include space for offices, support functions (e.g., central cylinder storage, shipping and receiving, machine and electronic fabrication shops, network services), outside services (e.g., liquid nitrogen, hazardous waste storage, underground fuel storage tanks), and parking for staff, visitors, and test vehicles. Conduct major facility modifications in El Monte to allow for the construction of an environmental chamber to conduct evaporative emissions testing to meet federal test procedure requirements and light-duty research needs. Continue to lease office and shared space in El Monte.

Facility and Site Footprint: The IBI analysis of space needed to accommodate the heavy-duty vehicle and onboard diagnostic testing needs and PEMS testing is approximately 69,000 square feet. In addition, ARB estimates for the new facility that additional space is needed to support laboratory operations, staff offices, shared space, and administrative services. These additions bring the total facility size to 100,000 square feet. ARB also estimates that the total site footprint would be approximately five acres, or about 218,000 square feet. Note that this analysis assumes that there is no available space adjacent to the existing facilities. Therefore, the new

facility would not achieve the fiscal benefits of co-locating all facility operations. Table 3 summarizes the footprint for the new facility. These estimates are generally based on the IBI analysis.

**Table 3**  
**Estimated Facility and Site Size– Alternative 1**  
**Construct New Heavy-Duty Vehicle Facility and Maintain Existing Facilities**

<b>Program Area</b>	<b>Estimated Square Feet</b>
Heavy-Duty Testing and Onboard Diagnostic Systems	62,300
Portable Emissions Measurement Systems	6,700
Chemistry Laboratory	20,000
Offices and Shared Operations	10,000
Administrative Services	1,000
<b>Subtotal Facility</b>	<b>100,000</b>
Parking (Staff/Visitor/Test Vehicles)	50,000
<b>Total Site Footprint (5 acre site)</b>	<b>217,800</b>

Estimated Cost: The estimated total cost for the new facility is approximately \$96.4 million. This cost includes the direct cost of \$70.6 million and is estimated based on the same dollars per square foot that IBI used for ARB’s preferred alternative. In addition to the direct costs, there is \$25.8 million in other costs associated with constructing the facility. These costs include escalating costs to the start of construction, various fees such as architectural and engineering fees, materials testing, project construction, and contract management costs, and project contingency costs.

There would also be costs associated with upgrading the El Monte facilities. In particular, ARB would need to upgrade the test cells and modify the building to accommodate an environmental test chamber. ARB estimates that these costs would be approximately \$20 million. Finally, there would be new and replacement equipment costs. ARB estimated previously that equipment costs would equal \$101.8 million in 2020. Maintaining two separate facilities would result in some duplication of needed equipment. This includes laboratory equipment (e.g., fume hoods, chemical analyzers), machine and electronic fabrication shop equipment, liquid nitrogen tanks, and forklifts. However, some equipment would not need to be replaced in the existing facility. Therefore, ARB assumed no change in the total equipment costs. Finally, there is approximately \$2.0 million in annual lease payments for the El Monte facilities. ARB assumed that these costs would continue for 25 years at an annual increase of two percent for a total present value cost of \$39.4 million. Considering all costs, the total project cost would be \$263.5 million. Table 4 summarizes the total project costs.

**Table 4**  
**Estimated Costs – Alternative 1**  
**Construct New Heavy-Duty Vehicle Facility and Maintain Existing Facilities**

<b>Description</b>	<b>Estimated Cost</b>
Direct Costs – New Facility	\$70,640,000
Other New Facility Costs	\$25,790,000
<b>Total New Facility Costs</b>	<b>\$96,430,000</b>
HSL Facility Modifications	\$20,000,000
Present Value of El Monte Lease Payments	\$39,400,000
<b>Total Facility Costs</b>	<b>\$155,830,000</b>
Equipment Costs	\$101,800,000
Site Assessment and Performance Criteria	\$5,900,000
<b>Total Project Costs</b>	<b>\$263,530,000</b>

Analysis: This alternative does not meet ARB program needs. In particular, there is only a limited upgrade in the light-duty testing area. Currently, ARB estimates that there is essentially only one-half of the light-duty testing space necessary as detailed in the COBCP. In addition, there is no upgrade in the El Monte chemical laboratory functions. There are some benefits in the additional chemical laboratory space at the new heavy-duty facility that would reduce the impact on the El Monte laboratory. However, it is not anticipated that duplication of the more expensive laboratory equipment would be done; therefore, all of these samples would be transported to the El Monte chemical laboratory.

This alternative is also not practical from an operational or long-term financial perspective. Separate facilities would require significant duplication of infrastructural and site work support. Duplicative areas include outdoor fuel pumps, underground fuel tanks, cylinder storage, liquid nitrogen, shipping and receiving, hazardous waste storage, machine and electronic shops, storage, secured fleet storage, and equipment for testing support.

The cost to lease facilities in El Monte for office space, a portion of testing space, and for continued access to a large liquid nitrogen tank would continue to increase incrementally. While this analysis assumes a 25-year present value of the lease payments, we expect to be in the facility much longer; thus, both the existing and long-term lease payments are of no value to the State. Furthermore, several major infrastructural areas at the Haagen-Smit Laboratory also need to be replaced in the near future. These infrastructure components include the roof, the HVAC systems, multiple fume hoods, the fire alarm and electrical systems, and underground storage tanks. These costs have not been included in this analysis; they are detailed in LAO Question #3 on pages 6 and 7.

In an attempt to reduce the amount of energy the Haagen-Smit Laboratory consumes, ARB would pursue energy efficiency measures. However, existing facility site options

are limited and the cost is expected to be high due to site layout, aged infrastructure, and the need for asbestos abatement.

- 2.) Construct a new emissions testing and research facility that would include just test facilities and laboratories sufficient to meet program needs, with only limited office and shared space. Continue to lease office space in El Monte. Enhance the existing space to allow for testing of all PEMS, as well as limited light-duty vehicle testing at the Haagen-Smit Laboratory and in Annex 4. The light-duty testing could include durability testing, as well as limited other testing. Continue limited laboratory operations. This alternative is similar to Alternative 4 in the COBCP.

Facility and Site Footprint: ARB estimates that approximately 232,000 square feet of space would be needed in this alternative. This includes space for light-duty testing, heavy-duty testing, laboratory operations, staff offices and shared space, and administrative functions. ARB also estimates that the total site footprint would be approximately 12 acres, or about 523,000 square feet. For reference, ARB's proposed alternative consists of a facility size of approximately 292,250 square feet and a total site footprint of 14 acres, or about 609,840 square feet. Table 5 presents a summary of the footprint for the new facility. These estimates are generally based on the IBI analysis.

**Table 5**  
**Estimated Facility and Site Size– Alternative 2**  
**Construct New Emissions Testing and Research Facility and Maintain Existing Facilities**

<b>Program Area</b>	<b>Estimated Square Feet</b>
Light-Duty Testing	70,000
Heavy-Duty Testing and Onboard Diagnostic Systems	62,300
Chemistry Laboratory	40,000
Offices and Shared Operations	50,000
Administrative Services	10,000
<b>Subtotal Facility</b>	<b>232,300</b>
Parking (Staff/Visitor/Test Vehicles)	90,000
<b>Total Site Footprint (12 acre site)</b>	<b>522,720</b>

Estimated Cost: The estimated total cost for the new facility is approximately \$196.4 million. This cost includes the direct cost of \$143.9 million and is estimated based on the same dollars per square foot that IBI used for ARB's preferred alternative. In addition to the direct costs, there is \$52.5 million in other costs associated with constructing the facility. These costs include escalating costs to the start of construction, various fees such as architectural and engineering fees, materials testing, project construction, and contract management costs, and project contingency costs.

There would also be costs associated with upgrading the El Monte facilities. In particular, ARB would need to upgrade several test cells and modify the building to

accommodate the portable emissions measurement systems testing. ARB estimates that these costs would be approximately \$5 million. Finally, there would be new and replacement equipment costs. ARB estimated previously that equipment costs would equal \$101.8 million in 2020.

As the new facility is basically a complete upgrade of the existing facilities, ARB assumed no change in the total equipment costs. Finally, ARB assumed that approximately 150 staff would move to the new facility. These are staff that are directly associated with the testing and laboratory operations. Thus, ARB reduced the leased payments by one-third to approximately \$1.3 million per year. ARB assumed that these costs would continue for 25 years at an annual increase of two percent. Considering all costs, the total project cost would be \$335.3 million. Table 6 summarizes the total project costs.

**Table 6**  
**Estimated Costs – Alternative 2**  
**Construct New Emissions Testing and Research Facility and Maintain Existing Facilities**

<b>Description</b>	<b>Estimated Cost</b>
Direct Costs – New Facility	\$143,890,000
Other New Facility Costs	\$52,530,000
<b>Total New Facility Costs</b>	<b>\$196,420,000</b>
HSL Facility Modifications	\$5,000,000
Present Value of El Monte Lease Payments	\$26,210,000
<b>Total Facility Costs</b>	<b>\$227,630,000</b>
Equipment Costs	\$101,800,000
Site Assessment and Performance Criteria	\$5,900,000
<b>Total Project Costs</b>	<b>\$335,330,000</b>

Analysis: This alternative meets ARB program needs, but imposes operational inefficiencies. The total project costs of this alternative are about \$30 million less than the preferred alternative. The savings do not justify the selection of this alternative. The difficulties of maintaining two separate operations in Southern California also make it very difficult from a management perspective. About 90 percent of the 414 ARB staff located at the existing Southern California facilities is either directly associated with testing operations or are major users of the data. However, if ARB maintains the existing State-owned and leased space, only the approximately 150 staff directly associated with testing operations would be located at the new facility. Thus, maintaining separate locations impedes operational efficiencies by adversely affecting the day-to-day interactions between the data generators and the data users.

The costs associated with maintaining the Haagen-Smit Laboratory are not fully considered in this analysis. As mentioned in the analysis of Alternative 1, these costs are detailed in LAO Question #3 (pages 6-7) and are significant. Furthermore, ARB expects to maintain the new facility well into the future. While this analysis assumes a

25-year present value of the lease payments, we expect to be in the facility much longer; thus, both the existing and long-term lease payments are of no value to the State.

ARB would still need to meet energy requirements in the State-owned Haagen-Smit Laboratory. However, as discussed above, the options are limited and the cost is expected to be high due to site layout, aged infrastructure, and the need for asbestos abatement.