

UNCLASSIFIED



Office of Inspector General
United States Department of State

AUD-CGI-20-36

Office of Audits

July 2020

**Management Assistance Report:
Execution of the New Embassy Compound
London Construction Project Offers
Multiple Lessons**

MANAGEMENT ASSISTANCE REPORT

UNCLASSIFIED

CONTENTS

BACKGROUND.....	3
About New Embassy Compound London.....	3
About the Early Contractor Involvement Delivery Method.....	4
Purpose of the Audit and This Management Assistance Report	4
RESULTS.....	5
Finding A: Inadequate Attention to Major Systems Design and Local Building Requirements..	5
Finding B: Decisions Resulted in Deficiencies That Will Require Continuous Attention	12
Finding C: Final Acceptance of the NEC London Construction Project Remains Pending	17
RECOMMENDATIONS	21
APPENDIX A: BUREAU OF OVERSEAS BUILDINGS OPERATIONS RESPONSE	23
OIG AUDIT TEAM MEMBERS.....	27

Summary of Review

The Department of State (Department) broke ground on the new embassy compound (NEC) London, the United Kingdom, in November 2013. The former embassy property, located at Grosvenor Square in London's Mayfair district, was being replaced with NEC London in large part because it did not meet current physical security standards. NEC London was erected in the Nine Elms district of London, a revitalized industrial neighborhood close to the center of the city. The construction project was widely hailed by the Department's Bureau of Overseas Buildings Operations (OBO) for its "Design Excellence" concept.

The budgeted cost of NEC London was approximately \$1.022 billion, and OBO chose a delivery method known as Early Contractor Involvement (ECI) to execute this construction project. ECI is a form of collaboration by which the contractor works to assist the U.S. Government and the design team during the design and construction phases of the work. By employing the ECI delivery method, the construction contractor for NEC London, B.L. Harbert International, LLC (BLHI), provided preconstruction services concurrent with the design of the project by the Architect and Engineering (A&E) firm Kieran-Timberlake, PLC (KT).

The timely construction of NEC London was particularly important because of a lease-back arrangement for the former embassy property. Specifically, the Department sold its former embassy property located at Grosvenor Square to Qatari Diar with an original lease-back agreement until February 2017, after which the Department would owe additional rent every 6 months. Because construction was not completed by February 2017, as contracted, the Department had to extend the lease-back option of the former embassy property for an additional year at a cost of \$34 million. Moreover, approximately \$19.8 million rent would have been assessed for an additional 6-month period had the Department not vacated by the end of February 2018. This created an obvious financial incentive to occupy NEC London as quickly as possible.

OBO certified that construction of NEC London was substantially complete in December 2017 and occupancy followed in January 2018. Substantial completion is the point when the OBO project director (PD) determines that work is sufficiently complete and satisfactory to occupy the structure with only minor items remaining to be completed or corrected. However, the Office of Inspector General (OIG) found that inadequate attention to major systems design and local building requirements present challenges that have—or will require—additional financial outlays to remedy. Specifically, OIG found major building systems that were either abandoned or had to be modified to function properly. For example, the Wastewater Treatment Plant (WWTP) for NEC London cost approximately \$2 million to install but was abandoned when it did not function as intended. In another example, the Combined Heat and Power (CHP) system was not completed under its original contract, in part because of design deficiencies. As a result, a separate contract was issued to ENGIE Urban Energy Limited (ENGIE) for \$1.6 million in September 2019 to complete installation of the CHP system. Furthermore, OIG learned that the natural gas internal piping system installed at NEC London did not comply with local building standards. This occurred because OBO officials applied U.S. standards for the natural gas internal piping system instead of local standards.

Finally, the semicircular pond located on one side of the NEC London, which serves partly as a security barrier, had design flaws, and NEC London officials had to replace the piping and pumping system as a result.

OIG also found that certain decisions and inadequate installation, among other issues, resulted in building deficiencies that will require continuous attention. Specifically, ground water is seeping into the lower levels of NEC London because a decision was made following a value engineering study not to include an additional floor “slab” and a perimeter masonry wall. In addition, interior stone tiles have cracked, and exterior stone pavers have deteriorated to the point that vehicle traffic in certain areas has been limited to avoid additional damage. Furthermore, portions of the roof at NEC London were improperly installed and will require continuous attention to avoid leaks and water damage. For example, in October 2018, a third-party contractor identified more than 700 defects with the exterior façade covering NEC London, including missing restraint lugs and improperly installed, missing, or damaged gaskets.

Furthermore, OIG found that, even though 2 years have passed since OBO declared NEC London “substantially complete,” final acceptance of the NEC London construction project remains pending as of February 2020. According to OBO’s “Construction Management Guidebook,” the construction contractor has 6 months to complete all outstanding items after substantial completion is reached. However, in October 2019, OIG found that 274 identified defects or “punch list” items were still awaiting remediation. A punch list item is typically a minor defect that needs to be corrected, adjusted, or replaced before a Certificate of Final Acceptance for the construction project can be issued. OIG determined that the extensive time it has taken to address the punch list is due, in part, to the failure by OBO officials to follow prescribed procedures for preparing a consolidated punch list. Specifically, during OIG’s audit of OBO’s construction closeout process, which is currently underway, OIG found that OBO did not prepare a consolidated punch list but instead provided the contractor with 14 separate “Notices of Deficiencies.”

This Management Assistance Report is intended to provide early communication of the deficiencies OIG identified at NEC London during its audit of OBO’s construction closeout process. OIG made seven recommendations to address the deficiencies identified during the project. In response to a draft of this report, OBO concurred with the recommendations offered and stated that it had taken, or planned to take, action to address them. On the basis of OBO’s concurrence with the recommendations and actions taken, OIG considers six recommendations closed and one resolved pending further action. A synopsis of OBO’s responses to the recommendations offered and OIG’s reply follow each recommendation in the Results section of this report. OBO’s response to a draft of this report is reprinted in its entirety in Appendix A.

BACKGROUND

About New Embassy Compound London

According to an OBO memorandum from October 2013, NEC London had a final authorized budgeted cost of approximately \$1.022 billion. The Department broke ground on NEC London in November 2013 to replace the former embassy property because the latter did not meet current physical security standards, among other reasons. Specifically, the Grosvenor Square property was built in 1960 and did not comply with current standards for setback, infrastructure, operational space, and electrical and mechanical systems. Moreover, the location of the Grosvenor Square property and other limitations made it impossible to bring the building into compliance via renovation.

NEC London was erected in the Nine Elms district of London, a revitalized industrial neighborhood close to the center of the city. The construction project was hailed for its design, which incorporated sustainable features at the leading edge of practice, including aspirations for carbon neutrality, a self-sufficient water system, and goals for minimum certification as Leadership in Energy and Environmental Design (LEED®)¹ “Gold.” NEC London is situated on a 4.9-acre tract and includes a chancery, a consular section, support spaces, a U.S. Marine residence, access pavilions, and parking. Figure 1 is a photo showing the exterior of NEC London.

Timely construction of NEC London was important because of a lease-back arrangement of the former Grosvenor Square embassy property. Specifically, the Department sold the Grosvenor Square embassy property to Qatari Diar but agreed to lease back the property through February 2017, during which time NEC London was under construction. If the Department

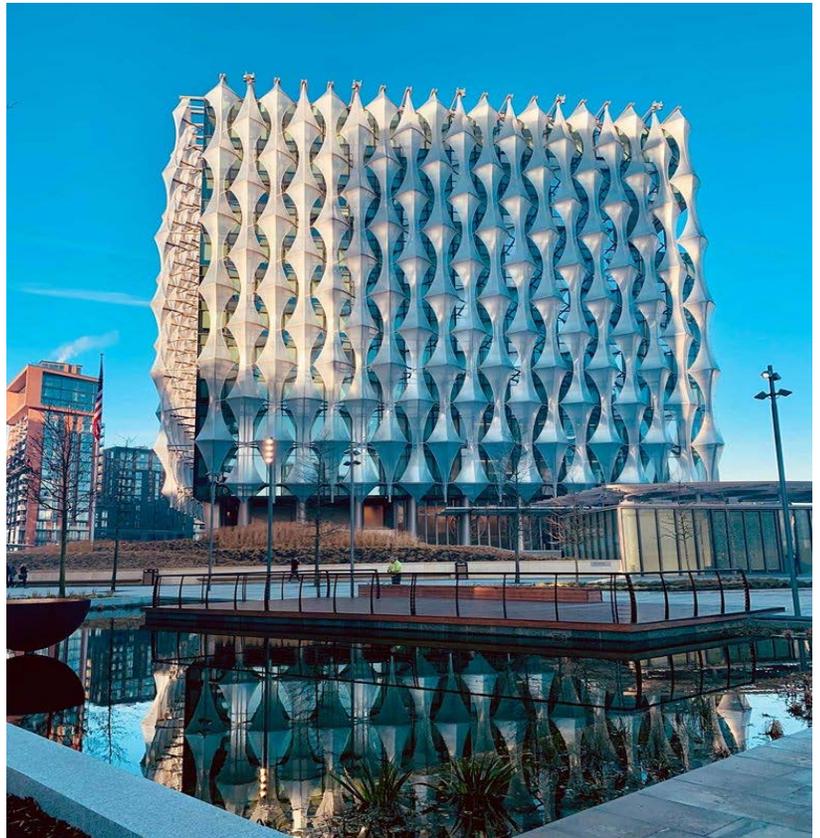


Figure 1: Exterior of NEC London.

Source: Photograph from Embassy London Facebook page.

¹According to the Green Building Certification Institute, LEED is the most widely used green building rating system in the world. The Green Building Certification Institute states that LEED is available for virtually all building project types, from new construction to interior fit-outs and operation and maintenance and that it provides a framework that project teams can apply to create healthy, highly efficient, and cost-saving green buildings. The Institute further noted that LEED certification is a globally recognized symbol of sustainability achievement.

needed additional time, the contract contained an escalated lease-back agreement based on 6-month periods. In fact, the Department did extend the lease-back option for an additional year, from February 28, 2017, to February 28, 2018, at a cost of \$34 million. The additional \$19.8 million 6-month lease obligation the Department would incur if it did not vacate by February 28, 2018, was an obvious financial incentive to occupy NEC London as quickly as possible. OBO certified the construction of NEC London as substantially complete in December 2017 and occupancy followed in January 2018. Substantial completion² is the point when the OBO PD determines that work is sufficiently complete and satisfactory to occupy the structure, with only minor items remaining to be completed or corrected.

About the Early Contractor Involvement Delivery Method

OBO chose the ECI delivery method to execute the NEC London construction project.³ By employing this delivery method, the construction contractor for NEC London, BLHI, provided preconstruction services concurrent with the design of the project by the A&E firm KT. As part of these preconstruction services, BLHI provided construction execution and material cost information to the Government at the same time that scope and quality decisions were being refined.

The preconstruction services portion of the ECI contract was negotiated as a firm-fixed-price⁴ effort, although the construction services portion of the contract was a negotiated fixed-price-incentive (successive targets) effort. Construction services were included within the ECI contract as a separate contract line item number to be exercised at a time agreed upon by the Department and the construction contractor. Competition for this contract was based on contractors' proposals to perform both the preconstruction and construction services. As the contract recipient, BLHI was part of the "one team" concept during the design phase, which is a feature of ECI contracts. According to the construction solicitation, "As the design evolves and develops, the three members of the One Team will work together to promote innovation, challenge convention as is prudent and reasonable, mutually vet and develop consensus on all progressive design elements tendered, and bring the project in within budget and schedule while maintaining the highest standards of Design Excellence."

Purpose of the Audit and This Management Assistance Report

This Management Assistance Report is intended to provide early communication of the deficiencies OIG identified at NEC London during its audit of OBO's construction closeout process, which is currently underway. The objective of the audit is to determine whether OBO personnel executed closeout procedures in accordance with Federal, Department, and project-

² OBO Policy and Procedures Directive CM01, Appendix B, "Definitions."

³ According to the Statement of Work for Preconstruction and Construction Service, ECI is a form of collaboration by which the contractor works to assist the U.S. Government and the design team during the design and construction phases of the work. The construction contractor works alongside the Department and the A&E firm, operating as "one team" to complete the project.

⁴ According to FAR 16.202-1, "Firm-fixed-price contracts," a firm-fixed-price agreement provides for a price that is not subject to any adjustment on the basis of the contractor's cost experience in performing the contract.

specific requirements. OIG is reporting the conditions discussed in this Management Assistance Report in accordance with generally accepted government auditing standards. In performing the work related to this report, OIG interviewed OBO officials, reviewed applicable criteria and supporting documentation, and conducted audit fieldwork at both OBO headquarters in the Washington, DC, metro area and at NEC London. OIG believes that the evidence obtained pertaining to the conditions and deficiencies identified provide a reasonable basis for the conclusions presented in this report.

RESULTS

Finding A: Inadequate Attention to Major Systems Design and Local Building Requirements

OIG found that inadequate attention to major systems design and local building requirements presents challenges that have—or will require—additional financial outlays to remedy. Specifically, OIG found major building systems that were either abandoned or had to be modified to function properly. For example, the WWTP for NEC London cost approximately \$2 million to install but was abandoned when it did not function as intended. In another example, the CHP system was not completed under its original contract, in part because of design deficiencies. As a result, a separate contract was issued to ENGIE⁵ for \$1.6 million in September 2019 to complete installation of the CHP system. Furthermore, OIG learned that the natural gas internal piping system installed at NEC London did not comply with local building standards. This occurred because OBO officials decided to apply U.S. standards for the natural gas internal piping system instead of local standards. Finally, the semicircular pond located on one side of NEC London, which serves partly as a security barrier, had design flaws, and NEC London officials accordingly had to replace the piping and pumping system.

NEC London Wastewater Treatment Plant

OIG found that the WWTP installed at NEC London was abandoned because it did not function as intended. The WWTP system, which cost approximately \$2 million to install, was intended to allow NEC London to use reclaimed, non-potable water for purposes such as irrigation and for the CHP cooling tower. However, the WWTP did not function properly because of limitations in the type of sewage materials it could process. Specifically, the system grinding pumps were not large enough and were not designed to process items such as baby wipes and sanitary napkins that were found in the system. According to NEC London officials, the WWTP system was installed at the new facility primarily to achieve a high-level Leadership in Energy and Environmental Design certification, often referred to as “LEED certification.” OIG does not question the Department’s choice to seek LEED certification either generally or in specific building projects. In this case, however, it was not necessary to install a WWTP at the Embassy to achieve this goal because it would have received the same gold certification that it ultimately was awarded even without building the WWTP. OIG also noted that London has an adequate sewage system that the NEC could use (and was in fact using as of January 2020).

⁵ ENGIE Urban Energy Limited is an energy services provider with offices in the UK.

According to Embassy officials, a subcontractor designed the WWTP. Initially, BLHI attempted to hold the subcontractor responsible for an inappropriately designed system. However, the subcontractor stated that all parties agreed to the design and that the system was installed as designed. NEC London officials ultimately decided to abandon the WWTP, connect the building directly into the City of London's sewage system, and bypass the WWTP. They will eventually remove the WWTP system from the facility. Because the London sewage system was available for use by the NEC, the inclusion of a WWTP in the design of NEC London was unnecessary, the WWTP failed to function as intended, and OIG is questioning the \$2 million initial cost of the WWTP as well as the costs incurred to bypass and remove the system.

Combined Heat and Power System

OIG found that the CHP system designed for NEC London was not completed under the BLHI contract, in part because of design deficiencies. As a result, a separate contract was issued to ENGIE for \$1.6 million on September 24, 2019, to complete installation of the CHP system. A September 6, 2018, OBO memorandum⁶ stated the CHP had not been completed and fully commissioned "for a variety of reasons including design deficiencies and contractor deficient installation." As a result, ENGIE was selected to complete, commission, and operate the system.

According to OBO, installation of the CHP was required by two local planning commissions—the Greater London Authority and the London Borough of Wandsworth. The planning commissions determined that NEC London would be the anchor tenant of the Nine Elms "Opportunity Area" and accordingly would be required to provide district heating. In April 2015, the Embassy, the London Borough of Wandsworth, and major developers in the area signed a Memorandum of Understanding to create the "Embassy Quarter Heat Network." In compliance with the planning commissions' requirements, the CHP system was designed to be composed of two natural gas generators that would provide heat and power for NEC London. In addition, the CHP system was designed to provide excess electricity and hot water to the local grid once the building demand was met.⁷

Natural Gas Internal Piping System

During audit fieldwork at NEC London in October 2019, OIG learned that the natural gas internal piping system that had been installed did not comply with local building standards. Specifically, gas intake into NEC London is at a higher pressure level than allowed by local building standards. This occurred because OBO officials applied U.S. standards for the natural gas internal piping system instead of local standards. However, the contract with BLHI clearly stated that the contractor must comply with all laws, codes, ordinances, and regulations of the host country, which is also required by the FAR.⁸ Specifically, according to the contract:

⁶ "New London Embassy Path to Full Occupancy and Final Acceptance."

⁷ OBO, "New Embassy Construction Project, Embassy of the United States of America, London, England, Final Completion Report" (March 2018), 1.2.6.5

⁸ FAR 52.236-7, "Permits and Responsibilities."

LAWS AND REGULATIONS - The Contractor shall, without additional expense to the Government, be responsible for complying with all laws, codes, ordinances, and regulations applicable to the performance of the work, including those of the host country, and with the lawful orders of any governmental authority having jurisdiction. Host country authorities may not enter the construction site without the permission of the Contracting Officer. Unless otherwise directed by the Contracting Officer, the Contractor shall comply with the more stringent of the requirements of such laws, regulations and orders and of the contract. In the event of a conflict between the contract and such laws, regulations and orders, the Contractor shall promptly advise the Contracting Officer of the conflict and of the Contractor's proposed course of action for resolution by the Contracting Officer.

Within OBO, the Design and Engineering Division is charged with developing, coordinating, and maintaining all applicable building codes, standards, criteria, and guidelines for facility design. The Design and Engineering Division acts as the "building code official" to confirm the technical adequacy of construction documents.⁹ Because this project was located overseas, construction should have complied with both the "2011 Building Code of the Overseas Buildings Operations" (2009 International Building Code) and the host country's local building codes.

In addition, issues with the gas pressure should have been identified by OBO and properly mitigated during the design phase of construction. According to the "Contract and the Project Managers Handbook," during project design an architectural and engineering assessment¹⁰ should be conducted by OBO to analyze the local construction environment to determine locally available labor, materials and equipment resources, potential cost escalation, labor and industry standards and practices, safety standards, and other factors that may impact the construction of the project. An OBO official told OIG that the natural gas internal piping system was designed according to U.S. construction standards, rather than "mixing and matching" U.S. and U.K. standards. Furthermore, according to OBO, the OBO Mechanical Commissioning Agent commissioned the natural gas internal piping system as being fully compliant with U.S. standards. However, during installation of the gas piping system, local technicians refused to activate the gas system because the pressure entering the facility was greater than permitted by local standards. Eventually, natural gas was connected to the NEC and activated. However, certified U.K. gas technicians will not perform future maintenance because of the risk of losing their certification. As a result, technicians from the United States will be needed to perform maintenance or train NEC London facility maintenance staff to perform the required maintenance.

Furthermore, because of noncompliance with local building standards, the kitchen appliances in the NEC London cafeteria, which were expected to be powered by natural gas, are being replaced with electric appliances at an added cost of approximately \$147,120. Because the

⁹ OBO "Project Manager's Handbook" (March 2010), Section 3.2, "Roles and Responsibilities of OBO Offices."

¹⁰ OBO "Project Manager's Handbook" (March 2010), Initial Planning Survey, "Part III Architectural and Engineering Assessment," 391.

natural gas internal piping system did not function as expected, OIG considers the funds expended to replace the appliances and mitigate the conditions surrounding the natural gas internal piping system as questioned costs.

NEC London Pond

OIG found that the semicircular pond located on one side of NEC London, which serves partly as a security barrier, was inadequately designed and that NEC London officials had to replace the piping and pumping system as a result. Specifically, the piping and pumping system that is used to fill and maintain the water level in the pond was poorly designed because the elevation of the intake pipe was above the pump intake, which caused air to be trapped and prevented the pumps from properly engaging. In addition, only one strainer¹¹ was installed with the pumping system and it was not sufficient for the size of the pond. Furthermore, according to the OBO project director, the drain line collected sand and gravel because a liner was not included in the design to keep the sand and gravel away from the piping.

OIG found that OBO did not require the construction contractor to repair the issues identified because the pond had been constructed and installed as designed. Therefore, NEC London officials took action to replace the piping and added two pumps and two strainers to the system. Even with the replacements, algae continues to be an issue with the pond, and the A&E contractor stated that it will take 2 years for the plants to begin to absorb the algae-producing contaminants in the water. In the interim, NEC London has spent approximately \$200,000 each year on chemicals to clean the pond and reduce algae.

Because of the design deficiencies with the pond and because the Department expended additional funds to remove the existing system and design and install another piping and pumping system, OIG considers these additional financial outlays questioned costs.

OIG Questioned Costs

OIG determined that the deficiencies described above stemmed, in part, from inadequate attention to major systems design and local building requirements. As a result, additional financial outlays were required to replace, remove, or modify the inadequate systems. Moreover, the lease-back option had to be extended, at a cost of \$34 million, to provide additional time to address the conditions encountered. OIG considers the costs associated with the inadequate major systems, the financial outlays necessary to remove or make them operable, and the lease-back extension questioned costs because the systems failed to meet their intended purpose or were unnecessary and delayed the scheduled occupancy of NEC London. Table 1 presents the costs OIG questioned by major system and the lease-back extension.

¹¹ A strainer is used to intercept debris and keep it away from the pump.

Table 1: OIG Questioned Costs Related to Major Systems and Lease-Back

Major Systems	Questioned Cost
Wastewater Treatment Plant	\$2,000,000 ^a
NEC London Pond	\$235,967 ^b
Gas Kitchen Appliance Replacement	\$147,120 ^c
Lease-Back Extension	\$34,000,000
Total	\$36,383,087

^a WWTP estimated installation costs.

^b NEC London pond estimated modification costs.

^c Electric appliance estimated replacement costs.

Source: Generated by OIG from data provided by OBO.

Responsibility for Major Systems Design and NEC Construction Delays and Additional Costs

KT, the A&E firm for NEC London, had primary responsibility for the design of NEC London, including the major systems installed. According to the Office of the Procurement Executive, “The architecture-engineer contractor must prepare drawings and specifications describing the work to be done in sufficient detail to permit a construction contractor to submit a firm-fixed-price proposal for the work.”¹² Additionally, the Federal Acquisition Regulation (FAR) provides that architecture-engineer contractors are responsible for the professional quality, technical accuracy, and coordination of all services required under the contract.¹³ Therefore, when modifications are required to a contract because of an error or deficiency in the design, the Contracting Officer shall consider the extent to which the architecture-engineer contractor may be reasonably liable.¹⁴ Additionally, the FAR states that failure by the architecture-engineer contractor to comply with the contract may be grounds for rejection and, moreover, that the Government’s failure to identify noncompliant items does not relieve the architecture-engineer contractor of the duty to comply with the contract requirements.¹⁵

BLHI and OBO both had responsibilities related to the design of NEC London during the early pre-construction phase and as part of the “one team” concept under the ECI process. ECI is intended to bring key stakeholders to the table earlier than typical design-build or design-bid-build processes. Specifically, BLHI’s contract required that preconstruction services include a review and evaluation of the design documents for constructability, operability, cost, value engineering suggestions, risk management review and workshops, identification of any problems or errors in the design and design documentation, consultation during construction document production, assistance in defining bid packages and construction phasing, integration of IT, mockups and mockup testing, preliminary project schedule development, cost estimates along with substantiating documentation, and development of subcontractor and supplier interest. Because OIG is unaware of any effort by the Department to analyze and potentially

¹² OPE Overseas Contracting and Simplified Acquisition Guidebook (December 2017), Chapter 9, II.B.

¹³ FAR 36.608, “Liability for Government costs resulting from design errors or deficiencies.”

¹⁴ Ibid.

¹⁵ FAR 52.236-23, “Responsibility of the Architect-Engineer Contractor.”

pursue liability claims against the A&E firm or the construction contractor involved with the design and construction of NEC London, including its major systems, OIG is offering the following recommendations.

Recommendation 1: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with the Bureau of Administration and the Office of the Legal Advisor, a) determine whether and, if so, to what extent the architecture-engineering firm Kieran-Timberlake PLC (under contract # SAQMMA-10-C-0060)—for design deficiencies—and the construction contractor B.L. Harbert International, LLC (under contract # SAQMMA-12-C-0111)—for construction deficiencies—are responsible for the \$34 million in identified questioned additional costs expended for the otherwise unnecessary lease-back extension of the former U.S. Embassy London and b) recover from each firm those costs for which they are determined to be responsible.

Management Response: OBO concurred with the recommendation and provided consolidated comments that apply to Recommendations 1–4. In those comments, OBO stated that the costs expended for the lease-back extension were directly related to the delayed contract completion. In April 2016, OBO ordered BLHI to accelerate the work and take all necessary actions to increase productivity. In response, BLHI engaged specialty consultants to assist with planning, assigned additional resources, and expedited all logistics and supply chains to complete the project as soon as possible. The order to accelerate resulted in a request for equitable adjustment (REA) by BLHI to recover costs for actions outside of its contract requirements. The Department specifically stated that “[s]ettlement of the REA took into consideration the status of the construction progress at the time the order to accelerate was given, the impact of ongoing design questions on BLHI’s progress, and the availability of local construction labor in the surging local economy.” Negotiation of the REA and contract close-out were finalized in three rounds of meetings—one related to schedule delays, one related to direct costs of design changes, and the last one related to acceleration and disruption. Accordingly, determination for BLHI’s responsibility in both construction delays and deficiencies was made as part of the negotiation and contract close-out. “The contract modifications that were executed account for BLHI’s responsibilities and also waive [its] rights to make additional claims against the U.S. government.”

In addition, OBO reviewed the magnitude of the changes with respect to the size and complexity of the project and concluded that Kieran-Timberlake PLC’s work met the standard of care that would normally be expected on projects of “similar scope and complexity.” OBO found that design issues by Kieran-Timberlake PLC did not significantly impact its schedule. Design issues that did occur early in the 5-year process were found to be well within the standard of care for an architectural engineering effort and the project was reported to be on schedule until the last year of construction.

OIG Reply: On the basis of OBO’s concurrence with the recommendation and actions taken, OIG considers this recommendation closed. OIG reviewed the memorandum signed by the OBO Design and Engineering office director stating that OBO has reviewed the performance of the Architectural Company Kieran-Timberlake PLC that provided the Architectural and

Engineering Services for the New London Embassy and is fully satisfied that its services meet the standard of professional care. In addition, OIG reviewed the REA negotiation memorandum and contract modifications and determined that the Department considered BLHI's liability for construction delays. No further action regarding this recommendation is required.

Recommendation 2: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with the Bureau of Administration and the Office of the Legal Advisor, a) determine whether and, if so, to what extent the architecture-engineering firm Kieran-Timberlake PLC (under contract # SAQMMA-10-C-0060)—for design deficiencies—and the construction contractor B.L. Harbert International, LLC (under contract # SAQMMA-12-C-0111)—for construction deficiencies—are responsible for the \$2 million in identified questioned additional costs expended to install the subsequently abandoned Wastewater Treatment Plant at the New U.S. Embassy London and b) recover from each firm those costs for which they are determined to be liable.

Management Response: OBO concurred with the recommendation, noting that, as set forth in response to Recommendation 1, with respect to the responsibility of Kieran-Timberlake PLC, OBO reviewed the magnitude of the changes in regard to the size and complexity of the project and concluded that its work met the standard of care that would normally be expected on projects of similar scope and complexity. In addition, the wastewater treatment plant ultimately functioned and can continue to do so. OBO worked with KT and BLHI to “rectify the function of the plant and replace parts that were not adequate.”

OIG Reply: On the basis of OBO's concurrence with the recommendation and actions taken, OIG considers this recommendation closed. OIG reviewed the memorandum signed by the OBO Design and Engineering office director stating that OBO has carefully reviewed the performance of the Architectural Company Kieran-Timberlake PLC that provided the Architectural and Engineering Services for the New London Embassy and is fully satisfied that its services meet the standard of professional care. No further action regarding this recommendation is required.

Recommendation 3: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with the Bureau of Administration and the Office of the Legal Advisor, a) determine whether and, if so, to what extent, the architecture-engineering firm Kieran-Timberlake PLC (under contract # SAQMMA-10-C-0060) is responsible for its design deficiencies resulting in \$235,967 in additional costs expended to modify the new U.S. Embassy London semicircular pond and b) recover those costs for which the firm is determined to be liable.

Management Response: OBO concurred with the recommendation, noting that the pond system was not performing as desired, but OBO could not determine whether the circulation system was installed as designed without “costly, unsightly, and impractical demolition testing.” Instead, OBO worked with Kieran-Timberlake PLC and BLHI to modify the system to bring it into greater balance and restore it as a naturally functioning pond.

OIG Reply: On the basis of OBO’s concurrence with the recommendation and actions taken, OIG considers this recommendation closed. OIG reviewed the memorandum signed by the OBO Design and Engineering office director stating that OBO has carefully reviewed the performance of the Architectural Company Kieran-Timberlake PLC that provided the Architectural and Engineering Services for the New London Embassy and is fully satisfied that its services meet the standard of professional care. No further action regarding this recommendation is required.

Recommendation 4: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with the Bureau of Administration and the Office of the Legal Advisor, a) determine whether and, if so, to what extent the architecture-engineering firm Kieran-Timberlake PLC (under contract # SAQMMA-10-C-0060)—for design deficiencies—and the construction contractor B.L. Harbert International, LLC (under contract # SAQMMA-12-C-0111)—for construction deficiencies—are responsible for the \$147,120 in questioned additional costs expended to replace gas appliances with electric appliances at the new U.S. Embassy London due to the failure to comply with contract requirements regarding host country laws, codes, ordinances, and regulations and b) recover from each firm those costs for which they are determined to be liable.

Management Response: OBO concurred with the recommendation, noting that the gas line and gas kitchen equipment in London were designed pursuant to OBO’s 2012 Standard Embassy Design program and applicable codes of the United Kingdom. OBO further stated that a formal review by local permit officials and the London Fire Brigade was conducted on the subject of U.S. versus UK gas service standards and it was decided by the UK officials that it was “better to stay with one standard (U.S.) rather than mix and match.” The design was reviewed and accepted by both OBO and BLHI during the design phase. OBO became aware of the differing gas service standards when the kitchen was being set up for a potential vendor. Post officials made the decision to switch to electric appliances because such appliances were less costly to maintain and service and were in compliance with local standards for a food operator.

OIG Reply: On the basis of OBO’s concurrence with the recommendation and actions taken, OIG considers this recommendation closed. OIG reviewed the memorandum signed by the OBO Design and Engineering office director stating that OBO has carefully reviewed the performance of the Architectural Company Kieran-Timberlake PLC that provided the Architectural and Engineering Services for the New London Embassy and is fully satisfied that its services meet the standard of professional care. No further action regarding this recommendation is required.

Finding B: Decisions Resulted in Deficiencies That Will Require Continuous Attention

OIG found that certain decisions and inadequate installation, among other issues, resulted in building deficiencies that will require continuous attention. Specifically, ground water is seeping

into the lower levels of NEC London because a decision was made, following a value engineering study,¹⁶ not to include an additional floor “slab” and a perimeter masonry wall. In addition, portions of the roof at NEC London were improperly installed and will require continuous attention to avoid leaks and water damage. A third-party contractor identified more than 700 defects with the exterior façade covering NEC London, including missing restraint lugs and improperly installed, missing, or damaged gaskets. Furthermore, interior stone tiles have cracked, and exterior stone pavers have deteriorated to the point that vehicle traffic in certain areas has been limited to avoid additional damage.

Ground Water Seeping Into NEC London Lower Level

OIG found ground water seeping into the lower level of NEC London because a decision was made, following a value engineering study, not to include an additional floor “slab” and a perimeter masonry wall in the lower level. The purpose of a value engineering study is to improve the function or reduce cost by promoting the substitution of material and methods with less expensive alternatives without sacrificing functionality. According to OBO policy, a value engineering study is required for construction projects that cost more than \$5 million.¹⁷

The value engineering study conducted for NEC London proposed removing the additional floor slab on the lower level to reduce cost. OBO accepted that recommendation and removed the floor slab from the design. However, the value engineering study also noted the potential consequences of removing the slab, stating, “The parking would be directly on the structural slab. It is noted that there will be moisture on the parking slab coming up from below. There will be drainage to move the water away, but moisture will be present.” OBO made the decision to remove the additional floor slab and, as predicted in the value engineering study, ground water is seeping into the lower level of NEC London. Figures 2, 3, and 4 are photographs from the lower level of NEC London taken in January 2020.

¹⁶ Value engineering provides a systematic review that aims to lower life-cycle costs and improve quality and performance.

¹⁷ OBO “Policy and Procedures Directive (P&PD),” Cost 02, “Value Engineering.”



Figure 2: Ground water seeping into the lower level parking garage of NEC London.
Source: OIG photograph taken January 2020.



Figure 3: Ground water seeping through the lower level floor of NEC London.
Source: OIG photograph taken January 2020.



Figure 4: Mold forming on the wall in the lower level parking garage of NEC London.
Source: OIG photograph taken January 2020.

Roof

OIG found that portions of the roof at NEC London were improperly installed and will require continuous attention to avoid leaks and water damage. According to the NEC London project director, the roof design for NEC London prepared by the A&E contractor KT never aligned with OBO's expectations. However, OBO did not require changes to the design from the A&E firm. Instead, an OBO roofing expert was assigned to the NEC London project to make changes to the original roof design. This created a "hybrid" design with features from both the A&E

contractor's design and from OBO's standard roof design. OIG found that the finished roof was completed improperly and identified defects with the equipment pads. Because OIG does not know the basis by which OBO chose to alter the design of the roof after accepting the design of the roof from the A&E contractor, OIG is not offering a recommendation to address this condition. Figures 5 and 6 show the results of improper installation of roofing over equipment pads.



Figure 5: Improper installation of roofing over equipment pad.

Source: Photograph taken by OIG in April 2019.



Figure 6: Improper installation of roofing on sidewall.

Source: Photograph taken by OIG in April 2019.

Exterior Façade

Before the 11-month warranty inspection in November 2018, post officials commissioned two third-party contractors to conduct inspections on the building's rain cladding and tensioned sails. The contractor inspecting the rain cladding identified more than 700 defects, including missing restraint lugs and improperly installed, missing, or damaged weatherproofing gaskets.

In addition, the contractor inspecting the tensioned sails listed in its inspection report 30 types of construction phase defects and hundreds of individual deficiencies, including wrinkles, splits, and tears in the sails and several loose wind cables. Additionally, the inspectors found missing, improperly installed, or incorrectly sized nuts, bolts, and clamps used to secure the sail panels, which caused broken or missing fittings. The audit team observed detached brackets and other defects during the team's visit, but for security reasons could not take photographs.



Figure 7: Wind Cable detached from building.

Source: Photograph from Stan Ltd. Inspection.

These issues were not identified and addressed prior to declaring NEC London substantially complete because OBO did not conduct an effective quality assurance inspection of the façade

before issuing the certificate of substantial completion.¹⁸ The consequences of these problems are substantial. Post personnel stated that exterior building maintenance, including window washing and treatment costs for the complex façade would increase tenfold, from \$30,000 for the prior embassy to \$300,000 per year for the new embassy.

Although OIG has identified design decisions as a cause for deficiencies resulting in additional attention and possible additional cost, it is not making a recommendation at this time. However, an audit of the design approval and coordination process is included in the FY 2020–FY 2021 workplan.

Stone Tiles and Pavers Cracking and Deteriorating

OIG found that interior stone tiles have cracked and exterior stone pavers have deteriorated to the point that vehicle traffic leading into the main entrance of NEC London has been limited to avoid additional damage. OIG could not determine the specific cause for the defects, but the quality of the tiles and stone pavers as well as the way they were installed could be the reason since NEC London has only been open for approximately 2 years. Figures 8, 9, and 10 demonstrate these defects, including cracking, delamination, and color variances.

Because OIG could not determine the specific cause for the defects, OIG is recommending that OBO verify that the stone pavers and tiles installed were the grade and quality of materials approved and that they were installed correctly. If the grade and quality of materials was not consistent with contract requirements, then OBO, in coordination with the Bureau of Administration and the Office of the Legal Advisor, should determine the extent to which BLHI is responsible and recover any associated costs.



Figure 8: Damaged interior stone tiles on sixth floor showing spalling and delamination.

Source: Photograph taken by OIG in January 2020.



Figure 9: Damaged (cracked) interior stone tiles.

Source: Photograph taken by OIG in April 2019.

¹⁸ FAR 46.102, "Policy," requires inspections for quality of work before Government acceptance.



Figure 10: Damaged edges of exterior stone pavers on embassy driveway.

Source: Photograph taken by OIG in April 2019.

Recommendation 5: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with Embassy London and prior to issuing the Certificate of Final Acceptance, verify that the stone pavers and tiles that were installed at Embassy London were the grade and quality of materials approved and that they were installed correctly. If the grade and quality of materials is not consistent with contract requirements, in coordination with the Bureau of Administration and the Office of the Legal Advisor, OBO should determine the extent to which the construction contractor, B.L. Harbert International, LLC, (under contract # SAQMMA-12-C-0111) is responsible and recover any associated costs.

Management Response: OBO concurred with the recommendation, noting it “verified that the Coquina stone installed on the 6th and 7th floors was provided and installed per contract requirements. OBO also verified that the exterior paver China Impala stone was provided and installed per the contract requirement.”

OIG Reply: On the basis of OBO’s actions taken, OIG considers this recommendation closed. OIG reviewed the approved submittals for the stone tiles and pavers that were installed. In addition, as noted above, OBO represented that it had verified the approved tiles were appropriately installed. No further action regarding this recommendation is required.

Finding C: Final Acceptance of the NEC London Construction Project Remains Pending

OIG found that, as of April 2020, more than 2 years since OBO declared NEC London “substantially complete,” final acceptance of the construction project remains pending.

According to OBO’s “Construction Management Guidebook,” the beginning of the construction project closeout process occurs when the contractor notifies the PD in writing that construction work is substantially complete. The PD performs inspections and tests to verify that, in fact, the

work is substantially complete. Upon satisfactory completion of the inspections, the PD issues a Certificate of Substantial Completion and provides the contractor with a list of the remaining minor unfinished items, referred to as a schedule of defects or punch list, that must be corrected within 6 months.¹⁹ The final steps of project completion and acceptance typically begin 60 days or less after the Certificate of Substantial Completion is issued. The length of time for project completion depends on the contractor's ability to correct the items listed in the punch list.

As of October 2019, nearly 2 years after substantial completion, OIG found that 274²⁰ identified defects or punch list items were still awaiting remediation. A punch list item is typically a minor defect that needs to be corrected, adjusted, or replaced before a Certificate of Final Acceptance for the construction project can be issued. OIG determined that the lengthy time it has taken to address the punch list is due, in part, to the failure by OBO officials to follow prescribed procedures for preparing a consolidated punch list. Specifically, during OIG's audit of OBO's construction closeout process, which is currently underway, OIG found that OBO did not prepare a consolidated punch list that the contractor needed to address. Instead, OBO officials provided the contractor 14 separate "Notices of Deficiencies" in January 2018, the month following substantial completion. The separate lists of items were a result of the multiple inspections occurring on various earlier dates, such as those for security, fire safety, and elevators. Having separate deficiency lists, rather than one consolidated punch list, made it difficult for both OBO and BLHI to track the defects on the punch list.

According to FAR 52.236-11, "Use and Possession Prior To Completion," a single "list" is required:

The Government shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

¹⁹ OBO, "Construction Management Guidebook," Volume 1, Section 3.3.18, "Substantial Completion," 3-54, and Volume 2, Appendix B, "Policy and Procedures Directives," P&PD CM 01, "Commissioning and Transition to Occupancy of Overseas Facilities," Attachment 4, "Transition to Occupancy Activities," Appendix B, "Definitions," 30.

²⁰ Some punch list items contained several separate defects from notices of deficiencies that were combined into a single line item for tracking purposes when OBO and the contractor agreed, as described subsequently, to merge the punch list and warranty tracking list for convenience. The actual number of defects contained on the list is more than 274.

In addition, OIG found that some of the items on the punch list (14 separate lists) related to warranties. Likewise, some of items listed on the warranty list should have been identified as punch list items. Eventually, OBO and the contractor agreed to combine the punch list and the warranty list²¹ because, according to OBO officials, this would make it easier to track both. However, because OIG identified items that appeared to have been marked as defects and claimed as warranty items and vice versa, it was difficult to identify the punch list contractual requirements. In fact, combining the issues in this way was inconsistent with OBO Construction Alert A-2010-06, which states that the contractor shall not be allowed to view the Schedule of Defects as “warranty issues.”²² In addition to failing to follow its own policy, this practice makes it difficult for OBO to hold the construction contractor accountable for contractual obligations to address all punch list items before final acceptance.

Furthermore, during a second site visit, in January 2020, the PD stated that he did not have a current punch list available. After completion of the site visit, the PD provided an updated punch list on January 24, 2020, which continued to include warranty items. In addition, OIG found that the punch list did not accurately document the status of each item listed. For example, the list received from OBO on January 24, 2020, included 29 items, of which 4 appear to be closed. However, according to comments associated with those items, it appears that OBO officials were not necessarily in agreement that the items were indeed closed. For example, “strip lighting” on the 5th and 7th floors were one such deficiency. The notes state that this issue was closed on October 12, 2019. However, the next comment referred to a subsequent email from post stating that some of these items had not, in fact, been cleared, and another comment noted that six new lights were required. In another example, “power sockets” were described as being inoperable in four rooms. One comment stated that the items were subsequently closed, but the next comment cited a later email from post explaining that some of these items had not been cleared; yet another comment stated that post and the contractor were to review the issue during the next visit by the electrical subcontractor. As a result of these inconsistencies, OBO is unable to demonstrate what items remain open and what actions are ultimately needed to close them and achieve final acceptance of the NEC London construction project.

Because OBO did not adhere to its closeout process in two of the three projects reviewed for the audit, the deviation from the process is presented in detail in the upcoming audit report and will present a recommendation to address the shortcoming. However, because of the importance of ensuring that all punch list items are completed before final acceptance, OIG is making two recommendations to address this shortfall for NEC London.

Recommendation 6: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with Embassy London, create and formally communicate to the contractor a

²¹ FAR 46.7, “Warranty,” defines warranty list as a stated period of time or use, or the occurrence of a specified event, after acceptance by the Government to assert a contractual right for the correction of defects. That is, in contrast to a punch list, which are items that are identified before acceptance, warranty items are non-functional items identified after acceptance (i.e., substantial completion).

²² OBO, Office of Construction Management, Construction Alert A-2010-06, September 21, 2010.

consolidated schedule of defects (punch list) that describes all defects that the contractor must address prior to final acceptance of the building. The schedule of defects should not include any items related to warranties. Furthermore, the schedule of defects should reflect the current status of each reported defect.

Management Response: OBO concurred with this recommendation and provided an updated list with deficiencies (defects) that remained open. Other than the items on the updated list, OBO stated that it had verified that all items on the schedule of defects have been completed.

OIG Reply: On the basis of OBO's concurrence with the recommendation and actions taken, OIG considers this recommendation closed. OIG verified that a consolidated schedule of defects (punch list) had been created and that the information had been communicated to the contractor. No further action regarding this recommendation is required.

Recommendation 7: OIG recommends that, once an accurate consolidated schedule of defects is developed (Recommendation 6), the Bureau of Overseas Buildings Operations, in coordination with Embassy London, establish timeframes for completing all identified defects and verify completion before final acceptance.

Management Response: OBO concurred with this recommendation, noting it will work with Embassy London to verify completion of all defects identified on the list of deficiencies (defects), referred to in OBO's response to Recommendation 6, before final acceptance. OBO established a timeframe and estimated that the task would be completed by October 2020.

OIG Reply: On the basis of OBO's concurrence with the recommendation and planned actions, OIG considers this recommendation resolved, pending further action. The recommendation will be closed when OIG receives and accepts documentation demonstrating that all defects identified on the list of deficiencies (defects) have been completed.

RECOMMENDATIONS

Recommendation 1: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with the Bureau of Administration and the Office of the Legal Advisor, a) determine whether and, if so, to what extent the architecture-engineering firm Kieran-Timberlake PLC (under contract # SAQMMA-10-C-0060)—for design deficiencies—and the construction contractor B.L. Harbert International, LLC (under contract # SAQMMA-12-C-0111)—for construction deficiencies—are responsible for the \$34 million in identified questioned additional costs expended for the otherwise unnecessary lease-back extension of the former U.S. Embassy London and b) recover from each firm those costs for which they are determined to be responsible.

Recommendation 2: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with the Bureau of Administration and the Office of the Legal Advisor, a) determine whether and, if so, to what extent the architecture-engineering firm Kieran-Timberlake PLC (under contract # SAQMMA-10-C-0060)—for design deficiencies—and the construction contractor B.L. Harbert International, LLC (under contract # SAQMMA-12-C-0111)—for construction deficiencies—are responsible for the \$2 million in identified questioned additional costs expended to install the subsequently abandoned Wastewater Treatment Plant at the New U.S. Embassy London and b) recover from each firm those costs for which they are determined to be liable.

Recommendation 3: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with the Bureau of Administration and the Office of the Legal Advisor, a) determine whether and, if so, to what extent, the architecture-engineering firm Kieran-Timberlake PLC (under contract # SAQMMA-10-C-0060) is responsible for its design deficiencies resulting in \$235,967 in additional costs expended to modify the new U.S. Embassy London semicircular pond and b) recover those costs for which the firm is determined to be liable.

Recommendation 4: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with the Bureau of Administration and the Office of the Legal Advisor, a) determine whether and, if so, to what extent the architecture-engineering firm Kieran-Timberlake PLC (under contract # SAQMMA-10-C-0060)—for design deficiencies—and the construction contractor B.L. Harbert International, LLC (under contract # SAQMMA-12-C-0111)—for construction deficiencies—are responsible for the \$147,120 in questioned additional costs expended to replace gas appliances with electric appliances at the new U.S. Embassy London due to the failure to comply with contract requirements regarding host country laws, codes, ordinances, and regulations and b) recover from each firm those costs for which they are determined to be liable.

Recommendation 5: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with Embassy London and prior to issuing the Certificate of Final Acceptance, verify that the stone pavers and tiles that were installed at Embassy London were the grade and quality of materials approved and that they were installed correctly. If the grade and quality of materials is not consistent with contract requirements, in coordination with the Bureau of

Administration and the Office of the Legal Advisor, OBO should determine the extent to which the construction contractor, B.L. Harbert International, LLC, (under contract # SAQMMA-12-C-0111) is responsible and recover any associated costs.

Recommendation 6: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with Embassy London, create and formally communicate to the contractor a consolidated schedule of defects (punch list) that describes all defects that the contractor must address prior to final acceptance of the building. The schedule of defects should not include any items related to warranties. Furthermore, the schedule of defects should reflect the current status of each reported defect.

Recommendation 7: OIG recommends that, once an accurate consolidated schedule of defects is developed (Recommendation 6), the Bureau of Overseas Buildings Operations, in coordination with Embassy London, establish timeframes for completing all identified defects and verify completion before final acceptance.

APPENDIX A: BUREAU OF OVERSEAS BUILDINGS OPERATIONS RESPONSE



United States Department of State

Washington, D.C. 20520

June 11, 2020

UNCLASSIFIED

TO: OIG/AUD – Denise M. Colchin

FROM: OBO/RM – Jeffrey Reba, acting \s\

SUBJECT: OIG Draft Management Assistance Report: Execution of the New Embassy Compound
London Construction Project Offers Multiple Lessons

The Bureau of Overseas Buildings Operations (OBO) has reviewed the draft OIG Management Assistance Report. Attached is OBO's response to recommendations 1-7.

Attachment:

As stated.

UNCLASSIFIED

UNCLASSIFIED

**OBO Comments on the OIG Draft Management Assistance Report:
Execution of the New Embassy Compound London Construction Project
Offers Multiple Lessons**

Completing the new London Embassy project became a top priority for OBO Director Tad Davis upon his arrival in OBO in September 2018. Recognizing the importance and magnitude of the project, the potential risks, as well as Congressional interest, Director Davis made multiple visits – the first within 30 days of coming onboard - to inspect the project and get a firsthand perspective of the issues and challenges on the ground. He established monthly meetings with the project team to track the progress of every outstanding item and issue, held multiple meetings with the president of B.L. Harbert International, and hosted a number of technical discussions with architects and engineers focused on the design and construction of selected features of the project, to include the combined heating and power plant, wastewater treatment plant, and pond. This detailed attention from OBO leadership put the appropriate pressure on both the contractor and OBO team to bring the project to a successful completion and achieve the mutual ultimate goal of moving embassy staff into a new, safe, secure and resilient facility.

Recommendation 1: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with the Bureau of Administration and the Office of the Legal Advisor, a) determine whether and, if so, to what extent the architecture-engineering firm Kieran-Timberlake PLC (under contract # SAQMMA-10-C-0060)—for design deficiencies—and the construction contractor B.L. Harbert International, LLC (under contract # SAQMMA-12-C-0111)—for construction deficiencies—are responsible for the \$34 million in identified questioned additional costs expended for the otherwise unnecessary lease-back extension of the former U.S. Embassy London and b) recover from each firm those costs for which they are determined to be responsible.

Recommendation 2: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with the Bureau of Administration and the Office of the Legal Advisor, a) determine whether and, if so, to what extent the architecture-engineering firm Kieran-Timberlake PLC (under contract # SAQMMA-10-C-0060)—for design deficiencies—and the construction contractor B.L. Harbert International, LLC (under contract # SAQMMA-12-C-0111)—for construction deficiencies—are responsible for the \$2 million in identified questioned additional costs expended to install the subsequently abandoned Wastewater Treatment Plant at the New U.S. Embassy London and b) recover from each firm those costs for which they are determined to be liable.

Recommendation 3: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with the Bureau of Administration and the Office of the Legal Advisor, a) determine whether and, if so, to what extent, the architecture-engineering firm Kieran-Timberlake PLC (under contract # SAQMMA-10-C-0060) is responsible for its design deficiencies resulting in \$235,967 in additional costs expended to modify the new U.S. Embassy London semicircular pond and b) recover those costs for which the firm is determined to be liable.

Recommendation 4: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with the Bureau of Administration and the Office of the Legal Advisor, a) determine whether and, if so, to what extent the architecture-engineering firm Kieran-Timberlake PLC (under contract # SAQMMA-10-C-0060)—for design deficiencies—and the construction contractor B.L. Harbert International, LLC (under contract # SAQMMA-12-C-0111)—for construction deficiencies—are responsible for the \$147,120 in questioned additional costs expended to replace gas appliances with electric appliances at the new U.S. Embassy London due to the failure to comply with contract

UNCLASSIFIED

UNCLASSIFIED

requirements regarding host country laws, codes, ordinances, and regulations and b) recover from each firm those costs for which they are determined to be liable.

OBO Response to Recommendations 1-4: OBO concurs with Recommendations 1-4 and has taken the following actions to resolve and close these issues:

The costs expended for the lease-back extension are directly related to the delayed contract completion. When it was apparent that B.L. Harbert International, LLC, (BLHI) was not going to achieve substantial completion before the contract completion date, in April 2016 the U.S. government ordered them to accelerate the work and take all necessary actions to increase their productivity. In response, BLHI engaged specialty consultants to assist with planning, assigned additional resources, and expedited all logistics and supply chains in order to complete the project as soon as possible. The order to accelerate resulted in a request for equitable adjustment (REA) by BLHI to recover costs for actions outside of their contract requirements. Settlement of the REA took into consideration the status of the construction progress at the time the order to accelerate was given, the impact of ongoing design questions on BLHI's progress, and the availability of local construction labor in the surging local economy.

The U.S. government derived a benefit from the acceleration which resulted in project completion sooner than what would have been achieved otherwise. Negotiation of the REA and contract close-out were finalized in three rounds of meetings – one related to schedule delays, one related to direct costs of design changes, and the last one related to acceleration and disruption. Accordingly, determination for the responsibility of BLHI in both construction delays and deficiencies was made as part of the negotiation and contract close-out. The contract modifications that were executed account for BLHI's responsibilities and also waive their rights to make additional claims against the U.S. government.

With respect to the responsibility of Kieran-Timberlake PLC, OBO reviewed the magnitude of the changes in regards to the size and complexity of the project and concluded that their work met the standard of care that would normally be expected on projects of similar scope and complexity.

The waste water treatment plant in the end was functioning and is capable of continuing to do so. OBO worked with KT and BLHI to rectify the function of the plant and replace parts that were not adequate. The system was not required in the UK due to a lack of a utility network, but was designed to provide recycled gray water for irrigation and waste plumbing. However, the plant was taken off line by the Post facility staff to avoid future maintenance time and costs.

The pond system was not performing as desired, but OBO could not determine whether the circulation system was installed as designed without costly, unsightly and impractical demolition testing. Instead, OBO worked with KT and BLHI to modify the system to bring it into greater balance and restore it as a naturally functioning pond.

The gas line and gas kitchen equipment in London were designed per 2012-OBO-ICS-IPC-2009, the kitchen guidelines in the 2012 SED program, and UK codes BS1710 and 12056. A formal review by Wandsworth permit officials and the London Fire Brigade on the subject of US versus UK standards and in particular the gas service was conducted and it was decided by the UK officials that it is better to stay with one standard (US) rather than mix and match. The design

UNCLASSIFIED

UNCLASSIFIED

was reviewed and accepted by both OBO and B.L. Harbert during the design phase. OBO became aware of the issue of UK versus US standard for the gas service when the kitchen was being set up for a potential vendor. Post made a decision to switch to electric appliances because it is less costly to maintain and service, and is in compliance with local standards for a food operator.

OBO respectfully requests that OIG close recommendations 1-4.

Recommendation 5: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with Embassy London and prior to issuing the Certificate of Final Acceptance, verify that the stone pavers and tiles that were installed at Embassy London were the grade and quality of materials approved and that they were installed correctly. If the grade and quality of materials is not consistent with contract requirements, in coordination with the Bureau of Administration and the Office of the Legal Advisor, OBO should determine the extent to which the construction contractor, B.L. Harbert International, LLC, (under contract # SAQMMA-12-C-0111) is responsible and recover any associated costs.

OBO Response: OBO concurs with the recommendation and verified that the Coquina stone installed on the 6th and 7th floor was provided and installed per contract requirements. OBO also verified that the exterior paver China Impala stone was provided and installed per the contract requirement.

OBO respectfully requests that OIG close this recommendation.

Recommendation 6: OIG recommends that the Bureau of Overseas Buildings Operations, in coordination with Embassy London, create and formally communicate to the contractor a consolidated schedule of defects (punch list) that describes all defects that the contractor must address prior to final acceptance of the building. The schedule of defects should not include any items related to warranties. Furthermore, the schedule of defects should reflect the current status of each reported defect.

OBO Response: OBO concurs with this recommendation and provides the attached list of schedule of defects. This list of defects is OBO's response to BLHI's September 22, 2017 request for substantial completion submittal. Also included is an updated list with deficiencies (defects) that remain open. Other than the items on the updated list, OBO has verified that all items in the schedule of defects have been completed.

OBO respectfully requests that OIG close this recommendation.

Recommendation 7: OIG recommends that, once an accurate consolidated schedule of defects is developed (Recommendation 6), the Bureau of Overseas Buildings Operations, in coordination with Embassy London, establish timeframes for completing all identified defects and verify completion before final acceptance.

OBO Response: OBO concurs with this recommendation and will work with Embassy London to verify completion of all defects identified in the deficiencies list, referred to in OBO response to recommendation 6, before final acceptance. The end of October 2020 is the estimated timeframe for completion of this task.

UNCLASSIFIED

OIG AUDIT TEAM MEMBERS

Denise M. Colchin, Director
Contracts, Grants, and Infrastructure Division
Office of Audits

Mark P. Taylor, Audit Manager
Contracts, Grants, and Infrastructure Division
Office of Audits

David R. Tolle, Senior Advisor for
Construction and Contracts
Office of Audits

Rachel A. Kell, Audit Manager
Contracts, Grants, and Infrastructure Division
Office of Audits

Brian K. Jones, Senior Auditor
Contracts, Grants, and Infrastructure Division
Office of Audits

Mario O. Barco, Auditor
Contracts, Grants, and Infrastructure Division
Office of Audits

UNCLASSIFIED



HELP FIGHT FRAUD, WASTE, AND ABUSE

1-800-409-9926

[Stateoig.gov/HOTLINE](https://stateoig.gov/HOTLINE)

If you fear reprisal, contact the
OIG Whistleblower Coordinator to learn more about your rights.

WPEAOmbuds@stateoig.gov

UNCLASSIFIED