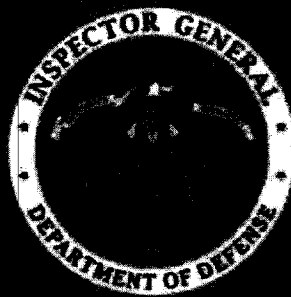


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Inspector General

United States
Department of Defense



Report No. 10-INTEL-10
August 6, 2010

DEPUTY INSPECTOR GENERAL FOR INTELLIGENCE

**Report of the National Security Agency Georgia
Cryptologic Center Construction Project (U)**

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(U)

Acronyms and Abbreviations

DFW	Definable Feature of Work
HPK	Hensel Phelps/Kiewit Joint Venture
NSA	National Security Agency
QA	Quality Assurance
QC	Quality Control
USACE	United States Army Corps of Engineers

(U)



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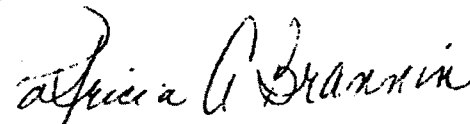
August 6, 2010

MEMORANDUM FOR COMMANDER, UNITED STATES PACIFIC COMMAND
DIRECTOR, NATIONAL SECURITY AGENCY/CHIEF
CENTRAL SECURITY SERVICE
DIRECTOR, DEFENSE FINANCE AND ACCOUNTING
SERVICE
COMMANDER, UNITED STATES ARMY CORP OF
ENGINEERS

SUBJECT: (U) Report of the National Security Agency Georgia Cryptologic Center
Construction Project (Report No. 10-INTEL-10)

(U) We are providing this report for your information and use. No written response to this report was required, and none was received. Therefore, we are publishing this report in final form. We performed this audit of the National Security Agency Georgia Cryptologic Center Construction Project as part of our annual audit plan. The audit assessed whether the construction project at the National Security Agency Georgia Cryptologic Center was effectively monitored and managed.

(U) We appreciate the courtesies extended to the staff. Questions should be directed to me at (703) 604-^{(b)(6)} (DSN 664-^{(b)(6)}


Patricia A. Brannin
Deputy Inspector General
for Intelligence

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Results in Brief: Report of the National Security Agency Georgia Cryptologic Center Construction Project (U)

(U) What We Did

~~(U//FOUO)~~ Our objective was to assess whether the construction projects at the National Security Agency Cryptologic Centers are being effectively monitored and managed. This audit focused specifically on the Georgia site. We plan to examine the other sites at a future date.

(U) Management Comments

(U) We do not require a written response to this report.

(U) What We Found

~~(U//FOUO)~~ The NSA Georgia Cryptologic Center was a (b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. construction project that was successfully administrated by the United States Army Corps of Engineers.

- The Source Selection award to Hensel Phelps/Kiewit Joint Venture was performed according to the Federal Acquisition Regulation.
- Quality Assurance and Quality Control were in compliance with relevant plans and procedures.
- The project was on schedule and within budget.
- Progress payments were verified and made in a timely manner.
- Modifications were justified and approved.

(U) What We Recommend

(U) We did not have any recommendations for this report.

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Introduction (U)

Objectives (U)

~~(U//FOUO)~~ Our objective was to assess whether the construction projects at the National Security Agency (NSA) Cryptologic Centers were being effectively monitored and managed. This audit focused specifically on the construction of the Georgia site. We plan to perform audits of the other sites at a future date.

Background (U)

~~(U//FOUO)~~ NSA conducts two core missions of the United States Cryptologic System, Signals Intelligence and Information Assurance, which operate in a common space referred to as the communication network. The NSA-Washington headquarters serves as the centric-hub for the Cryptologic Centers located in Hawaii, Georgia, Colorado, and Texas. In early 2000, NSA headquarters programmed funds to replace the Regional Security Operations Centers facilities. These Military Construction projects were to encompass the cost of architecture and engineering services, construction design, and acquisition costs necessary to complete the construction projects.

~~(U//FOUO)~~ The NSA Director's strategic vision of the NSA Mission Alignment Build-Out Transformation 2.0 new analytic workforce themes began in 2003 with emphasis on the development of a globally networked cryptologic enterprise. The NSA Build-Out was a strategy designed to enhance and improve the performance of the four Cryptologic Centers: NSA Hawaii, NSA Georgia, NSA Texas, and NSA Colorado.

~~(U//FOUO)~~ The Mission Alignment Regional Security Operations Center Program Management Office was created in 2004, to lead the planning and implementation of the alignment of missions, resources, enablers and infrastructure. In January 2005, the Director announced the development of a "design concept" for the Mission Alignment and Build-Out of Cryptologic Centers for NSA Hawaii, NSA Georgia, and NSA Colorado, and renovation of the NSA Texas leased facility. (b)(3); 50 U.S.C. § 3605, P.L. 86-36, Sec. 6

[REDACTED] The physical design facilitated a new cryptologic information technology system that is resilient, agile, assured, and effective in prosecuting a dynamic target/threat environment. (b)(3); 50 U.S.C. § 3605, P.L. 86-36, Sec. 6

[REDACTED] Once the concept was approved, the NSA Associate Director of Installations and Logistics was designated to lead the Build-Out program. In 2005, NSA Installation and Logistics created the Cryptologic Centers Installations, Design and Construction Office to execute the construction and renovation of the Cryptologic Centers using the U.S. Army Corps of Engineers (USACE) and the Naval Facilities and Engineering Command-Pacific.

NSA Georgia Cryptologic Center (U)

~~(U//FOUO)~~ The NSA Georgia Cryptologic Center project consisted of three main contracts that totaled (b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6.¹ The construction contract cost for the main Cryptologic Center buildings totaled (b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6. The remaining two contract costs were (b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6.

(b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6. The project was executed as a two-phase design-build request for proposal for a secure, (b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6.

~~(U//FOUO)~~ The new facility is approximately (b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6, which includes conference rooms, an auditorium, visitor work center, on-site dining facility, fitness area with locker room facilities, controlled shipping and receiving area, and storage areas. (b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6.

(b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6. The construction involved extensive site development over almost (b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6, including construction of a new (b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6 and parking for more than 2400 assigned personnel. Several outbuildings were constructed to support the Cryptologic Center including a (b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6, and a visitor control building.

~~(U//FOUO)~~ Our audit examined the source selection, quality assurance and control, progress payments and modifications. The audit did not identify any findings, or issues related to these areas.

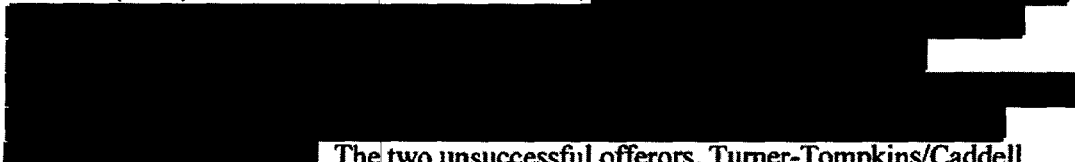
Source Selection (U)

~~(U//FOUO)~~ Federal Acquisition Regulation 36.303, "Two Phase Design-Build Selection Procedures," states that "One solicitation may be issued covering both phases, or two solicitations may be used in sequence. Proposals will be evaluated in Phase One to determine which offerors will submit proposals for Phase Two. One contract will be awarded using competitive negotiation." The Phase One solicitation was issued on February 14, 2006 and 7 proposals were received in response. The three most highly qualified offerors were selected to submit proposals for Phase Two of the solicitation.

¹ This contract total includes the contingency (modifications) percentage and a 5.7 percent fee for supervision, inspection and overhead (United States Army Corps of Engineers).

The Phase Two solicitation was issued on June 29, 2006. Technical proposals were received on September 28, 2006 and price proposals were received on October 17, 2006.

~~(U//FOUO)~~ NSA and USACE representatives selected Hensel Phelps/Kiewit Joint Venture (HPK) from the Phase Two solicitation, (U//FOUO) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6

 The two unsuccessful offerors, Turner-Tompkins/Caddell Joint Venture and Clark/Hunt Joint Venture were both awarded \$150,000 for their effort in the design phase and for their overall satisfactory rating on the project.

Quality Assurance and Control (U)

~~(U//FOUO)~~ Federal Acquisition Regulation Part 46.102 "Quality Assurance," states that contracts must include inspections and other quality requirements that are determined necessary to protect the Government's interest. The USACE monitors the contractor's quality control process using Quality Assurance (QA) procedures, to assure it is working properly. Contractor Quality Control (QC) is a quality maintenance process that is controlled and maintained by the construction contractor throughout the life of the contract. The QC process provides the contractor a method of overall effort to manage and control contract processes to achieve quality.

~~(U//FOUO)~~ HPK QC plan established six steps of quality to follow in the construction of the Georgia Cryptologic Center project: 1) Buyout Meeting, 2) Pre-Mobilization Meeting, 3) Preparatory Meeting, 4) Initial Inspection, 5) Follow-up Inspection, and 6) Final Inspection. These quality steps were to provide the necessary controls, supervision, inspections, tests, and documentation required to successfully install all Definable Features of Work (DFW) required by the contract. Each DFW was to be tested for conformance to contract specification requirements. Adherence to the plan ensures compliance with all contract documents and applicable standards related to materials, equipment, craftsmanship, fit, finish, and functional performance. Since a review of the preparatory meetings and inspections provided sufficient information to analyze quality controls, we did not review the buyout and pre-mobilization meetings.

~~(U//FOUO)~~ The Georgia project had 16 DFW divisions, of which each had sub-categories. We reviewed one subcategory from each of the 16 DFW divisions. HPK performed preparatory meetings and inspections (initial, and follow-up) for each subcategory of the DFW to ensure work conformed to the specifications of the contract. HPK and USACE documented the inspections in the quality process log and the USACE QA and HPK QC daily reports. Any construction issues were corrected in a reasonable time and did not affect the timeline for project completion.

~~(U//FOUO)~~ **Preparatory Meeting.** A preparatory meeting was held for each DFW to ensure that the subcontractor foreman fully understood the requirements to complete the work in compliance with the contract. HPK prepared the agenda and facilitated the meeting. An HPK Engineer was responsible for all prerequisite documents and submittals required to hold a meeting. Representatives of the USACE, NSA, HPK, and the appointed subcontractor attended the preparatory meetings. They documented and approved work scope and standards, and scheduled the initial inspection of each DFW. The preparatory meetings were generally held no earlier than two weeks prior to the start of work so not to lose their effectiveness.

~~(U//FOUO)~~ **Initial Inspection.** Initial inspections occurred as each new DFW was introduced on the project site. Any action items generated at the preparatory meeting were required to be completed prior to the initial inspection. The initial inspection was approved before the subcontractor could proceed with work beyond the defined area. If discrepancies were noted during the inspection, no additional work was installed until the subcontractor successfully rectified the discrepancies. The initial inspection typically occurred within two weeks of the preparatory meeting. Non-compliant work items were listed on the initial inspection form. Approvals for continuation of work were documented in the Quality Control Daily Report.

~~(U//FOUO)~~ Because of the overwhelming quantity of materials on the construction project, HPK did not prepare material inspections reports for each item on the Submittal Register (listing of materials required for contract). HPK QC engineers typically prepared material inspection reports for the most critical items. However, the USACE considered the initial and follow-up inspections to be field verifications that the workmanship and materials conformed to the contract requirements. Engineers provided initial inspection results in the USACE quality assurance and the contractor quality control daily reports. In addition, the sub-contractor may request payment for stored materials, in which a job-site walkthrough with HPK and the government is conducted to verify contract compliance.

~~(U//FOUO)~~ **Follow-up Inspections.** This step re-confirms that materials and methods demonstrated during the initial inspection continue to be installed to standards. Follow-up inspections were required for all DFWs and HPK typically completed the inspections at regular, three to four week intervals. HPK QC conducted the inspections and completed the inspection forms. The inspections were randomly selected, although inspections of recently installed work areas were preferred. If deviations from contract standards existed, HPK advised the subcontracting foreman to bring the work back to conformance. The checklist developed for the preparatory meeting and initial inspection was used to verify that installations conformed to contract requirements. HPK documented follow-up inspections in the quality process log.

~~(U//FOUO)~~ **Final Inspections.** The final inspection provided the owner the opportunity to verify if work performed by HPK and their subcontractors met the contract

requirements. Any deficient items were to be completed and signed off. During our field work, final inspections were just beginning; therefore, we did not have the opportunity to verify the outcome of the final inspections.

~~(U//FOUO)~~ **Specialty/Work Completion.** Upon substantial completion of each definable feature of work, QC Engineers conducted an inspection. HPK required that subcontractors submit an inspection request for all work prior to being concealed or closed off from view (such as underground utilities). HPK QC performed these inspections

(b)(3) 50 U.S.C. § 3805, P.L. 86-36, Sec. 6

[REDACTED]. HPK noted special inspections in the daily reports.

~~(U//FOUO)~~ **Tests.** We reviewed tests conducted for DFW #15400 "General Purpose Plumbing" from Division 15 (Mechanical). This particular DFW was chosen because it possessed a high number of tests. Also, we believe that mechanical work has a high risk for undetected inadequacies because the work installation is usually concealed behind the walls and flooring. We reviewed all eight types of tests conducted for this DFW and the corresponding tests under each category. All tests associated with the DFW #15400 passed; 95 percent of the test documents were signed by a USACE representative. The tests were done in accordance to the Test and Inspection Register within the HPK QC plan, as well as the USACE QA plan.

~~(U//FOUO)~~ **Documentation Supporting Quality Control and Quality Assurance.** USACE and HPK engineers created daily reports. The HPK QC system networked to a repository site that allowed the USACE engineers to access HPK QC daily report information and consolidate it into the USACE Resident Management System. The USACE QA daily reports were not specifically linked to a DFW, which made it difficult to track activities of each DFW. However, the contractor's QC reports did match each activity by a DFW. Between eight and twelve QA engineers conducted daily inspections at any given time. None of the QA engineers were specifically responsible for reporting on a particular DFW. The USACE engineers recorded the daily reports into the QA narratives according to type of engineering functions.

~~(U//FOUO)~~ The USACE QA narratives were contractor performance evaluation reports that the QA engineers entered into the Resident Management System on a daily basis. The narratives were taken directly from the daily reports. The daily reports listed information gathered as one large summary; however, the QA narratives were listed by date, representative, narrative, and an unresolved issue column. During our field work, out of over 4,000 entries from the QA narratives, 22 unresolved issues remained on the contract.

~~(U//FOUO)~~ Whenever the daily reporting revealed a major deficiency, the USACE engineers noted the deficiency on the punch list, within the RMS. The punch list showed the deficiency description, location, status, and date that the deficiency was recorded.

Until the item was corrected and approved by the USACE, the contractor would not be paid for that portion of work. During February 2010, 8 out of 65 items on the punch list that QA had not verified as being corrected. The construction was scheduled to be completed in June 2010.

~~(U//FOUO)~~ The discrepancies list was an internal contractor list, separate from the punch list. It was a minor list of issues that the contractor fixed before inspections were completed. The discrepancy list contained 37 items that had all been completed and approved.

Progress Payment and Modification (U)

~~(U//FOUO)~~ **Progress Payments.** The Progress Payments covered payments made between the contract award date of December 2006 to March 2010. USACE submitted 37 payments that totaled (b)(3) 50 U.S.C. § 2605, P.L. 86-36, Sec. 5. All invoices were paid on or before the due date with the exception of invoice number 12 and 26. Invoice 10 recorded a hold of (b)(3) 50 U.S.C. § 2605, P.L. 86-36, Sec. 5

~~(U//FOUO)~~ The invoices showed the description of work, scheduled value, percentage complete, and the balance amount to finish. Before any payments were made to the contractor, the USACE verified what work had been done by going over the Progress Payment Checklist to determine if the percentage of work the contractor reported was accurate. Any modifications on the contract approved in that time period were also documented on the invoices.

~~(U//FOUO)~~ **Progress Schedule.** The progress schedules did not tie into the DFWs as required. The previous Area Engineer waived this QA requirement that the contractor was supposed to perform. Therefore, we were unable to compare the activity schedule of a DFW to be completed with the actual progress payments. The contractor wanted to use their own systems, which were not compatible to the USACE Resident Management System. The progress schedule not properly linking to the DFWs resulted in a limitation to oversight. However, this issue did not pose a high risk because the contract was firm-fixed priced. If the contractor slipped in schedule, the responsibility would fully reside with the contractor for any additional costs incurred. Any delay over the June 2010 date would result in the contractor paying the government \$11,000 per day as stated in the Request for Proposal. Although the progress payments showed the percentage of work completed on a monthly basis, we could not determine what job would be completed next using the progress schedule.

~~(U//FOUO)~~ **Modifications.** The Georgia Cryptologic Center Construction contract had 64 modifications from award (December 2006) until January 2010. Each modification

with a dollar change was documented on the invoice with the modification number. Government Furnished Property was provided to the contractor under modifications P60 and P61 for projection screens and computer racks, respectively. These modifications resulted in an increased cost for labor. The final contract modification (P64) was to install additional showers in the fitness area, and additional appliances in the cafeteria. As of January 2010, the dollar change in the total of all 64 modifications resulted in a ~~(b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6~~ to the original contract, which brought the contract total to ~~(b)(3) 50 U.S.C. § 3605, P.L. 86-36, Sec. 6~~.

Conclusion (U)

~~(U//FOUO)~~ The USACE performed contract management and quality assurance as required in the Federal Acquisition Regulation 36, "Construction and Architect-Engineer Contracts," and 46, "Quality Assurance." With the exception of not being able to track the definable features of work through the progress schedule, the USACE adhered to federal regulations with the Georgia Cryptologic Center construction project.

Appendix. Scope and Methodology (U)

~~(U//FOUO)~~ We conducted this performance audit from October 2008 through June 2010 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Work on this project was suspended for 7 months between June 2009 and January 2010.

~~(U//FOUO)~~ We reviewed documentation dating from December 2006 to February 2010. We reviewed National Security Agency contractor source selection documentation. We assessed the management of the Georgia Cryptologic Center construction by reviewing U.S Army Corps of Engineer and Hensel Phelps/Kiewit Joint Venture daily reports; quality control and quality assurance plans; contract modifications and progress payment history; general purpose plumbing tests; preparatory meetings; and initial, follow-up, material, and close-in inspections.

Use of Computer-Processed Data (U)

~~(U//FOUO)~~ We did not use computer processed data.

Prior Coverage (U)

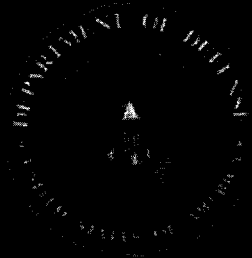
~~(U//FOUO)~~ No prior coverage has been conducted on the construction of the National Security Agency Cryptologic Centers during the last 5 years.

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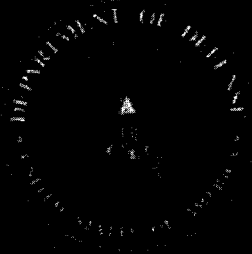


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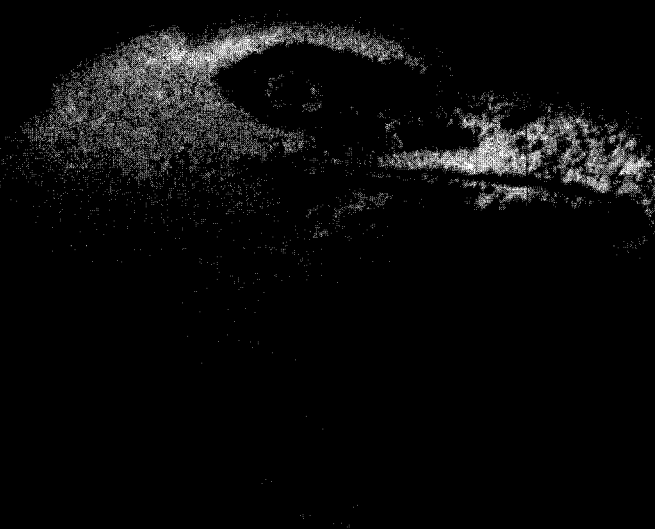


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