


Memorandum

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To: PRAKASH SIVA GNANASUNDA
District 04 Consultant Services Unit
Contract Manager, Contract 04A3144

Date: December 15, 2008

From: STEVE ALTMAN 
Chief, Office of Structural Materials
Materials Engineering and Testing Services
Division of Engineering Services

Subject: Contract 04A3144—NDT Evaluation of Personnel

Attached is the final report on the Caltrop Quality Assurance (QA) Personnel Review conducted with the assistance of Mayes Testing Engineers, Inc. The report provides the background on the procedures, the personnel conducting the review, the findings on each individual evaluated, and a summary. During the course of the Caltrop nondestructive testing (NDT) personnel evaluations, Division of Engineering Services, Materials Engineering and Testing Services (METS) and Toll Construction management met with Caltrop management daily to review the findings of the day. With the exception of one individual, all individuals were found to have the skill and certification for a place within the Caltrop organization chart. A revised organization chart was provided by Caltrop on November 29, 2008. See attached.

As pointed out in the final report, the one issue that needs to be finalized with Caltrop is determining who will be the Caltrans Outside Level III. This individual will be responsible to ensure all current and future NDT staff, not already evaluated by our recent efforts, will be evaluated by the Caltrop written practice. The Caltrans Level III will be responsible to provide oversight of the NDT personnel, ensure an effective on-going training program, and keep documentation to verify that certifications are kept current. In addition to providing the staff member that will be acting in this capacity, a final organization chart from Caltrop needs to be provided to verify the placement of personnel. Also, it was requested previously with Caltrop management that duty statements accompany the organization chart to assist in defining roles and responsibilities.

At this time you can forward the attached report to Caltrop along with the comments made within this memo. If you have any questions do not hesitate to contact me at (916) 227-7016.

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December 8, 2008

Steve Altman
Department of Transportation
DES – Materials Engineering & Testing Services
5900 Folsom Blvd, Room 101
Sacramento, CA 95819

Re: Caltrop QA Personnel Review
November/December 2008
HNTB Work Order No. 46218 –CN-005
Task Order No. 1
MTE Project No. S08093

Dear Mr. Altman,

Over the past few weeks we have reviewed personnel proposed by Caltrop for contract quality assurance services for the new Bay Bridge project. To assist Caltrans with this review we prepared interview sheets and interview questions. Test questions were designed to determine candidate knowledge of welding, nondestructive evaluation (NDE) and bridge inspection, specifically on Fracture Critical Members (FCMs). Interview form and list of questions are attached. We also designed a practical ultrasonic examination, which was based on the AWS D1.8 Seismic Welding Code. We acquired welded test plates with known flaws for the practical ultrasonic examination. We utilized Mayes Testing Engineers Level II NDE personnel to assure that the test plate flaws could be successfully located and evaluated.

Michael Mayes attended a meeting on November 21, 2008, at the Caltrans field office in Oakland, California. This meeting was attended by Steve Altman, Keith Hoffman and Phil Stolarski of DES-METS, Peter Seigenthaler and Mark Woods of Caltrans and Mazen Wahbeh and David Saber of Caltrop. Test protocol and interview procedures were discussed. In accordance with Caltrans "Written Practice for the qualification and Certification of Nondestructive Testing Personnel Assigned to Quality assurance and Source Inspection", Michael Mayes has been designated "Outside Level III" by the current Caltrans Certifying Authority, Steve Altman. This is meant to be a temporary assignment until Caltrop is able to fill this position to the satisfaction of the Caltrans Certifying Authority.

Mayes and Mike Virgilio returned to Oakland on November 23 and 24 and December 1, 2 and 3 to interview and test Caltrop personnel. Mike Virgilio, a Mayes Testing Engineers NDE Level II, setup and proctored the ultrasonic practical exam (see attached). Mayes interviewed personnel along with Keith Hoffman and Mark Woods (Brian Boal replaced Mark Woods for interviews on December 1 and 2). Caltrop provided a project organization charts, personnel resumes, certifications and references. The following is a summary of personnel interviewed, test results and interview panel recommendations:

Steve Pacheco: Pacheco (an employee of sub consultant Signet) was shown on the original organization chart as "Lead Inspector – China". It became clear during the interview that Pacheco had no intention of working in China. His role on this project would apparently be

inspection at shops in the Pacific Northwest as he was moving to Washington State in the near future. Based on our interview, Pacheco was found to have good NDE experience but very limited bridge experience. He passed the Caltrans Ultrasonic Practical Examination. It was the interview panel's opinion that Pacheco was not qualified to be a Lead Inspector for this project. He would be well suited as an NDE inspector working under a Lead Inspector.

Randy Riegler: Riegler (an employee of sub consultant NDT Group) was shown on the original organization chart as "ASNT Level III". After talking with him, we understand that his role will actually be "Lead Inspector" for U.K. casting inspection. Based on our interview, we found that Riegler had limited bridge inspection experience. It was the interview panel's opinion that he would not be qualified as a Lead Inspector for typical bridge fabrication assignments. He has good experience with castings and would be a good choice for Lead Inspector for U. K. Castings. Riegler passed the Caltrans Ultrasonic Practical Examination. He also has excellent experience for NDE consulting and troubleshooting but would not be appropriate for Caltrans Outside Level III for this project.

James Cook: Cook (an employee of sub consultant Consolidated Engineering) was shown on the organization chart as "ASNT Level III". Based on our interview, we found that Cook had very limited bridge inspection experience with very little knowledge of FCMs. Cook did not pass the Caltrans Ultrasonic Practical Examination. It was the interview panel's opinion that he would not be qualified as a "Lead Inspector" or "Caltrans Outside Level III" for this project.

Johnny Thompson: Thompson (a Caltrop employee) was shown on the original organization chart as "ASNT Level III" although he indicated that he would have overall responsibility for all NDE personnel for the project. Based on our interview, we found that Thompson had very limited bridge inspection experience with little knowledge of FCMs. Thompson passed the Caltrans Ultrasonic Practical Examination. Thompson also indicated that he would not be traveling overseas for this project. Although Thompson appears to have a solid NDE background, it was the interview panel's opinion that he would not be qualified as the "Caltrans Outside Level III" due to his lack of experience with bridge fabrication.

Neil Brown: Brown (a Caltrop employee) was shown on the original organization chart as "OBG Task Leader" in China. Based on our interview, we found that Brown had excellent bridge experience with good knowledge of FCMs. He previously worked for Mactec, in China, on this project. We found him to be confident, a good communicator and a good choice for Task Leader. Brown did not pass the Caltrans Ultrasonic Practical Examination. We recommend that Brown receive additional UT training or that his project position be revised to not include ultrasonic testing responsibility.

Mahlon Lindenmuth: Lindenmuth (a Caltrop employee) was shown on the original organization chart as "Tower Task Leader" in China. Based on our interview, we found that Lindenmuth had excellent bridge experience with good knowledge of FCMs. He also previously worked for Mactec, in China, on this project. Lindenmuth passed the Caltrans Ultrasonic Practical Examination. We found him to be very knowledgeable of Caltrans procedures, a good communicator and a good choice for "Task Leader" for both welding inspection and NDE.

Dean Fonceca: Fonceca (an employee of sub consultant Consolidated Engineering) was shown on the original organizational chart as a "Lead Inspector" in China. Based on our

interview, Fonceca was found to have good NDE experience but very limited bridge experience. Fonceca passed the Caltrans Ultrasonic Practical Examination. It was the interview panel's opinion that Fonceca was not currently qualified to be a Lead Inspector for this project. He would be well suited as an NDE inspector working under a Lead Inspector. He could potentially function as a "Lead Inspector" with additional training and supervision.

Richard Bettencourt: Bettencourt (an employee of sub consultant Richard Brady & Associates) was shown on the original organization chart as a United States "Task Leader". The revised 11-29-08 organization chart shows him as a China "Lead Inspector". Based on our interview, we found that Bettencourt had excellent bridge experience with good knowledge of FCMs. He is also currently working on this project. Bettencourt passed the Caltrans Ultrasonic Practical Examination. Although he doesn't appear to have extensive experience, the interview panel felt that Bettencourt would be a good choice for "Lead Inspector" for both welding inspection and NDE.

Joe Adame: Adame (a Caltrop employee) was not shown on either of the organization charts, but we understand that his proposed role will be United States "Task Leader". Based on our interview, we found that Adame had excellent bridge experience with good knowledge of FCMs. He also previously worked for Mactec on this project. Adame passed the Caltrans Ultrasonic Practical Examination. We found him to be very knowledgeable of Caltrans procedures, a good communicator and a good choice for "Task Leader" for both welding inspection and NDE.

Scott Croff: Croff (an employee of sub consultant Richard Brady & Associates) was shown on the 11-29-08 organization chart as a China "NDT Tech" but we understand that he is being considered as a "Lead Inspector". Based on our interview, we found that Croff had limited bridge experience but has adequate knowledge of FCMs. He has spent the last 4 years working on this project and has good knowledge of project requirements. Croff passed the Caltrans Ultrasonic Practical Examination. Although he doesn't appear to have extensive experience the interview panel felt that Croff would be well suited as "NDT Tech". He could function as "Lead Inspector" if properly supervised and further trained.

Robert Mertz: Mertz (a Caltrop employee) was not shown on either of the organization charts, but we understand that his proposed role will be United States "Task Leader". Based on our interview, we found that Mertz had excellent bridge experience with good knowledge of FCMs. He also previously worked for Mactec on this project. Mertz did not pass the Caltrans Ultrasonic Practical Examination. We found him to be very knowledgeable of Caltrans procedures, a good communicator and a good choice for "Task Leader" for welding inspection. We recommend that Mertz receive additional UT training or that his project position be revised to not include ultrasonic testing responsibility.

Craig Hager: Hager (a Caltrop employee) was shown on the 11-29-08 organization chart as "Lead Inspector" in China. Based on our interview, we found that Hager had excellent bridge experience with good knowledge of FCMs. He also previously worked for Mactec, on this project. Hager passed the Caltrans Ultrasonic Practical Examination. We found him to be very knowledgeable of Caltrans procedures, a good communicator and a good choice for "Lead Inspector" for both welding inspection and NDE.

Bill Levell: Levell (a Caltrop employee) was not shown on either of the organization charts, but we understand he is proposed to be "Task Leader" in the United States. Based on our interview, we found that Levell had excellent bridge experience with good knowledge of FCMs. He also previously worked for Mactec, on this project. Levell has not taken the Caltrans Ultrasonic Practical Examination. We found him to be very knowledgeable of Caltrans procedures, a good communicator and a good choice for "Task Leader" for both welding inspection and NDE.

Ed Trotter: Trotter (a Caltrop employee) was shown on the original organization chart as "ASNT Level III" for China. The 11-29-08 organization chart shows Trotter as "Task Leader" for China. Based on our interview, we found that Trotter had very limited bridge inspection experience with no experience with FCMs. He has spent time in China on other types of fabrication projects and speaks Mandarin Chinese. Trotter initially failed the Caltrans Ultrasonic Practical Examination on 12-1-08 but subsequently passed the examination on 12-3-08. Although Trotter appears to have a solid NDE background, it was the interview panel's opinion that he may not be qualified as the "Caltrans Outside Level III" due to his lack of experience with bridge fabrication.

In summary we interviewed proposed personnel with a wide variety of knowledge and skills. We were concerned that Caltrop doesn't appear to have a procedure in place to evaluate sub consultant personnel. Several of the proposed personnel did not appear to be qualified for the assignments shown on the original Caltrop organizational chart. The 11-29-08 organization chart for China changed most of the lead positions. However, the interview panel was still concerned that Caltrop will not have a strong NDE Level III with bridge experience that will be based in China. At this time Caltrop does not appear to have an individual that would be qualified to be the "Caltrans Outside Level III". It is recommended that Caltrop provide a final organization chart, showing all current proposed personnel with position descriptions for each position. Caltrop should also clarify how NDE inspectors in China and other locations will be tested to determine their qualifications to do quality assurance for this project.

Respectfully Submitted,



Michael J. Mayes, P.E.
Welding Engineer/NDE Level III

Attachments:

Caltrop Original Organizational Chart
Caltrop 11-29-08 Organizational Chart – China
Caltrans NDE/Welding Personnel Verification Form
Caltrans Interview Questions
Caltrans Ultrasonic Practical Examination Instructions
Caltrans Ultrasonic Practical Examination Results



DRAFT Organization Chart China

