

**OFFICE OF THE CITY CONTROLLER**



**PUBLIC WORKS AND ENGINEERING DEPARTMENT  
CONTRACT COMPLIANCE REVIEW  
KINSEL INDUSTRIES, INC. – CONTRACTOR  
FOR THE PERIOD OCTOBER 30, 1995  
THROUGH DECEMBER 19, 1997**

**Sylvia R. Garcia, City Controller**

**Judy Gray Johnson, Chief Deputy City Controller**

**Steve Schoonover, City Auditor**



OFFICE OF THE CONTROLLER  
CITY OF HOUSTON  
TEXAS

SYLVIA R. GARCIA

March 6, 1998

The Honorable Lee P. Brown, Mayor  
City of Houston, Texas

**SUBJECT:** Public Works & Engineering Department  
Contract Compliance Review  
Kinsel Industries, Inc. - Contractor

Dear Mayor Brown:

In accordance with the City's contract with Mir•Fox & Rodriguez, P.C. (MFR), MFR has completed a review of the Public Works and Engineering Department's Greater Houston Wastewater Program's (GHWP) contract with Kinsel Industries, Inc. (Kinsel), contract number 34605.

MFR limited their review to determining if Kinsel's construction services were performed in compliance with the Construction Contract terms and that engineering testing services were performed as required by the Construction Contract. Their report, attached for your review, notes that there was inadequate information regarding failed engineering tests available in the GHWP's files for MFR's examination to determine if services were performed in compliance with the terms of the Construction Contract. Draft copies of the matters contained in the report were provided to Department officials. The views of the responsible Department officials as to actions taken or being taken are appended to the report as Exhibit 1.

We appreciate the cooperation extended to the MFR auditors by City and GHWP personnel during the course of the review.

Sincerely,

  
Sylvia R. Garcia  
City Controller

xc: City Council Members  
John Baldwin, Deputy Director, Public Works & Engineering Department  
Wendell Barnes, Deputy Director, Public Works & Engineering Department  
Richard Lewis, Director, Finance & Administration Department  
Jimmie Schindewolf, Director, Public Works & Engineering Department

January 12, 1998

Honorable Sylvia R. Garcia, City Controller  
City of Houston  
901 Bagby, 8th Floor  
Houston, Texas 77002

Dear Controller Garcia:

In connection with the Greater Houston Wastewater Program (GHWP), we have completed a review of construction contract number 34605 (Construction Contract) in the amount of \$4,567,926 between the City of Houston (City) and Kinsel Industries, Inc. (Kinsel). The Construction Contract represents a lump sum and unit price contract for the project designated as Sanitary Sewer Rehabilitation, Sims Bayou (Sims Bayou). The City retained Montgomery Watson Americas, Inc. (MWA) as the Engineer and Program Manager of the GHWP. MWA and its program management consultants provided oversight to the construction process. The City also awarded Geotest Engineering, Inc. (Geotest) contract number 34604 (Testing Contract) for \$80,000 to provide engineering testing services as required by the Construction Contract.

Our review was limited to determining if Kinsel's construction services were performed in compliance with the Construction Contract terms and that the engineering testing services were performed as required by the Construction Contract. The scope of our review was for the period of November 1, 1994 through November 30, 1997, and consisted of the following procedures:

- Obtained an understanding of the construction project by reviewing the Construction Contract, Testing Contract, change orders, Proposed Modifications (PMODs), Request for Council Action (RCA), submittal files, engineering test reports and invoices, minutes of GHWP progress meetings, and correspondence files.
- Interviewed GHWP personnel, reviewed and analyzed the Engineering Construction Reports (ECRs) and other supporting documentation.
- Selected and analyzed a sample of Geotest's invoices and compared them to the engineering test reports and Testing Contract.
- Interviewed Kinsel personnel and examined a sample of their invoices, shipping reports, and other supporting documentation in order to gain assurance that materials used for the project met the Construction Contract requirements.
- Identified significant issues related to the Construction Contract and reviewed supporting documentation.

Honorable Sylvia R. Garcia, City Controller  
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Our procedures were performed through the date of this report and have not been updated since that date. As described in the findings attached, there was inadequate information regarding failed engineering tests to determine if Kinsel's construction services were performed in compliance with the terms of the Construction Contract. Accordingly, the required engineering testing services may not have been adequately performed as required by the Construction Contract. In addition, GHWP was not in compliance with the City's procurement policies and procedures when the scope of the construction work was significantly increased. The findings described and noted in this report are the only significant matters that came to our attention.

Mir•Fox & Rodriguez, P.C. is pleased to have assisted you with this project, and we appreciate the assistance and cooperation of the Kinsel and GHWP personnel.

Very truly yours,

Mir•Fox & Rodriguez, P.C.

A handwritten signature in cursive script, appearing to read "Gasper Mir, III".

Gasper Mir, III  
Principal

GM/sf

**Findings and Recommendations for the Greater Houston Wastewater Program  
Kinsel Industries, Inc. Construction Contract**

**Background**

The initial scope of work for construction contract number 34605 was to perform pipebursting and slipline work for the Sims Bayou project. After being awarded the Construction Contract and beginning work on the Sims Bayou project, Kinsel discovered that portions of the project that they had been contracted to perform had been completed by the City's Public Works and Engineering (PW&E) department's Operating and Maintenance Division (OMD). Kinsel submitted PMODs to GHWP to reduce the amount of their Construction Contract pertaining to the work that had been completed by PW&E's OMD. Kinsel completed the Construction Contract before the target date with approximately \$500,000 of the \$4.6 million of the Sims Bayou contract amount left unused.

According to GHWP management, certain repairs to the sewer lines that were included in the scope of work on the Construction Contract were required to be made on an urgent basis. Accordingly, they had been performed by PW&E's OMD. We understand that before GHWP had completed the planning and design work for construction contract 34605 and before Kinsel had started any work on the project, several of the sewer lines had been repaired by the OMD. Through discussions with GHWP personnel, we understand that a certain portion of the repairs performed by OMD had even been completed before GHWP solicited bids from the construction contractors for the project.

After the reduction to the scope of work and related costs for the Construction Contract was determined, GHWP assigned Kinsel three additional projects outside the scope of the original Sims Bayou project in the approximate amount of \$500,000. These are referred to in the PMODs submitted to GHWP as "Bonner Street Lift Station, FM & San. Sewer" (Bonner), "5425 Polk Street Sanitary Sewer" (Polk), and "N. Main Storm Sewer" (Main). It is our understanding that Bonner had been previously designed and approved by PW&E's OMD as an independent project whose budget had already been determined, and that the City requested GHWP to add Bonner to the Construction Contract in the form of a PMOD in order to expedite the construction. Polk and Main were also requested by the City to be added to the Construction Contract.

**Finding:**

The GHWP's Construction Contract files did not contain sufficient documentation to determine when GHWP had identified that the construction work on Sims Bayou had been performed by the PW&E's OMD. There was no indication in the files as to the timing or completeness of the communication between the PW&E's OMD and the GHWP design team assigned to the Sims Bayou project. Accordingly, we could not determine whether GHWP identified the extent of work performed by OMD prior to processing Pay Estimates for payments made to Kinsel.

In addition, we were unable to determine from the documentation provided to us which City personnel had requested and approved the scope change that added approximately \$500,000 in additional work to the Construction Contract for Bonner, Polk, and Main. According to GHWP management, the extra projects had to be completed in a minimum amount of time, but we could find no documentation in GHWP's files to support that they had been classified as "emergency" projects or a reason that demonstrated to us that these projects should have been excluded from the bid process.

The "GHWP Definition of Terms and Acronyms," item 2 under "PMOD - Proposal/Project Modification" states that "an approved PMOD provides the contractor with the written authorization to perform the additional or changed work described in the PMOD." However, it is our understanding after reviewing the "GHWP Definition of Terms and Acronyms," that a PMOD specifically refers to modifications made to the work defined in the Construction Contract, not the addition of new work outside of the scope of the Construction Contract.

There was inadequate information in GHWP's records to determine the commencement and substantial completion dates of the Bonner, Polk, and Main projects. In addition, we reviewed and analyzed the daily ECRs prepared by GHWP's on-site inspectors and noted that several daily ECRs were not available in GHWP's files during the period May 24, 1997 through August 8, 1997. We noted two daily ECRs with pay items listed that had been signed by both GHWP's inspector and lead inspector; however, they had "N/A" written in the space that normally contained the approval of Kinsel's representative.

The City is at risk of GHWP not being in compliance with its policies and procedures for awarding construction work to the lowest qualified bidder. Without adequate documentation in GHWP's file pertaining to the Construction Contract and coordination with PW&E's OMD, the City is also at risk of paying for work that has either been previously performed by the PW&E's OMD or not performed by the construction contractor in accordance with the Construction Contract.

**Recommendation:**

To reduce the risk of GHWP not being in compliance with either the City's or its policies and procedures, GHWP, in conjunction with the City, should develop a process to facilitate the addition of certain types of projects to expand the scope of existing contracts. Such procedures would include defining the levels of authority and the types of scope changes that are allowed to be made without City Council's review and approval.

GHWP should also determine the amounts paid, by the City, to Kinsel pertaining to the Construction Contract to ascertain whether the City has overpaid Kinsel for work performed. The review of the amounts paid should be performed by personnel from both GHWP and the City's PW&E's OMD who have a detailed knowledge of the work performed by Kinsel.

**Background**

The initial scope of construction contract number 34605 was to perform pipebursting and slipline work. PW&E's Manager of Quality Control, Technical Services (Manager) identified an engineering testing service contractor qualified to perform the type of testing required by the Construction Contract. The Manager developed an engineering test budget for Sims Bayou and based on the budget, the City awarded Geotest the Testing Contract for \$80,000 to perform the engineering testing services specified in the Construction Contract. At certain times during the construction work, GHWP's on-site inspector, in conjunction with Kinsel, requested Geotest to conduct the required tests.

**Finding:**

The City paid Geotest \$74,000 of the \$80,000 for engineering tests relating to the Sims Bayou portion of the Construction Contract. However, when GHWP assigned the Bonner, Polk, and Main projects for approximately \$500,000 to Kinsel's Construction Contract, GHWP did not request additional funds for testing from City Council. It is our understanding that the remaining Testing Contract amount of \$6,000 was insufficient to provide adequate testing for construction projects of this type and magnitude.

In addition, the GHWP files did not have documentation indicating the type of testing required on the Bonner, Polk, and Main projects since the normal process of identifying a qualified engineering test service and developing an engineering test budget for each individual project was not performed by either GHWP or PW&E.

We reviewed the engineering test reports provided to us and noted that Geotest used the same description: Sanitary Sewer Rehabilitation in Sims Bayou, Slipline and Pipebursting, Project R-1033-07-03, File No. 4250-69 on all four projects. Accordingly, the reports did not readily indicate that the tests related to the Bonner, Polk, and Main projects.

In addition, due to the extensive variety of tests and testing methods, GHWP has no process in place to track failed tests that need to be retested once the engineering testing service has left the construction site. Of the 518 test reports prepared by Geotest, we identified 100 failed tests that did not meet the minimum specification as indicated on the test report. Based on information available for our review, additional tests were not performed. We were told by the GHWP inspector and PW&E's Manager that there can be various causes for retesting not to be performed. We understand that certain tests are not critical when determining whether to accept or retest a sample particularly when the original test results are marginal. Other tests have outdated technical parameters which show them as "out of range" when they are actually satisfactory. GHWP's inspector and PW&E's Manager determined that several of the failed tests were insignificant; however, we noted the following failed tests that should have required follow up action.

- Required density testing as noted on one test report could not be performed because backfilling of the trench was already completed when Geotest arrived on site to perform field density tests.
- All three core samples failed the compressive strength test on one test report, with no retest noted elsewhere in the test reports.
- Geotest was not able to perform tests on five occasions primarily due to Kinsel not being ready when Geotest arrived on-site to perform their testing procedures even though Geotest was requested to come. In addition, the City paid Geotest \$662 for Geotest's time pertaining to these five unproductive site visits; however, the City did not recover these costs from Kinsel in accordance with the Construction Contract.

The most noticeable trend in the failed tests was that most retests were done during the same site visit by Geotest. However, once Geotest left the site, GHWP did not have a clearly defined process for ensuring that retesting was performed.

#### Recommendation:

To reduce the risk of the City accepting construction work below its standards, GHWP inspectors should not approve payments for bid items that require testing unless all tests have been performed. Failed tests should be followed up by either a retest performed by the engineering testing services contractor or by review and approval of the failed test by GHWP management personnel including the design engineer. The results of the retest or corrective action performed by the construction contractor should be documented on the ECR by the GHWP inspector for tests that fail to meet the City's standards.

In addition, to ensure that failed tests are adequately followed up, the GHWP inspector should maintain a control log that identifies the tests performed, the tests that failed, and the approved follow up action. To facilitate the maintenance of the control log, GHWP should consider requiring their inspector to maintain the control log in an electronic format so that it can be transmitted on a periodic basis to certain GHWP and PW&E management for their review and approval.



# CITY OF HOUSTON

Post Office Box 1562 Houston, Texas 77251-1562

Lee P. Brown, Mayor

CITY COUNCIL MEMBERS: Bruce Tatro Michael J. Yarbrough Martha J. Wong Jew Don Boney, Jr. Rob Todd Ray F. Driscoll Jean Kelley Felix Fraga  
John E. Castillo Annise D. Parker Joe Roach Orlando Sanchez Chris Bell Carroll G. Robinson CITY CONTROLLER: Sylvia R. Garcia

Chief of Staff  
Office of the Mayor

**JIMMIE SCHINDEWOLF, P.E.**

Director of Public  
Works & Engineering

January 26, 1998

Mr. Gasper Mir  
Mir\*Fox & Rodriguez  
1300 Riverway  
Houston, Texas 77056

Dear Mr. Mir:

In response to your audit report on Contract No. 34605 (Job No. 4250-69), I have the following reply:

In response to finding No. 1, Job 4250-69 was designed by City engineers. In this case, once the job was bid and construction began, both the inspector and contractor noted that a segment of this project had already been rehabilitated by the City. This portion of the contract was deleted from the contract. Three Proposals for modifications (P/MODs) were approved, including a modification based on a complaint from a State Senator's office, co-located with TNRCC and another modification tied to a rehabilitation grant that would have been lost had the work not been completed quickly. Future P/MODS which could be outside the scope will be addressed as emergency bid contracts.

In the aforementioned case, the Wastewater Program believes the negotiated price was fair. Nevertheless, we will review the amount negotiated and paid by the City to the Contractor.

In cases where the Contractor's representative was not available to sign the daily reports, the inspector noted "N/A" for not available, and gave the representative a copy at a later date. If the contractor noted discrepancies, the matter was resolved.

In response to finding No. 2, the Wastewater Program does not request additional monies for testing from City Council. If the testing budget overruns, the City's Quality Assurance Section issues a change order to the testing laboratory to increase the contract amount for testing.

Geotest used the same description: Sanitary Sewer Rehab in Sims Bayou, Slipline and Pipebursting because all of the testing was done under the same contract. The ECRs referenced the three additional P/MOD projects but they were categorized under the main project, Job No. 4250-69.





Mr. Gasper Mir  
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Normally, routine tests like compaction testing is retested by the testing laboratory after the Contractor recompacts the backfill material. This is done within a few minutes after the failed test and compaction continues until the specified densities are achieved. Out of the 100 failed tests, most of the compaction tests were retested and passed on subsequent retesting. If the compaction tests do not meet the moisture requirements but meets the density and compressive strength requirements, it is generally considered acceptable. Also, some of the results are marginal and are generally accepted. The asphalt gradation is said to have not met the job mix tolerance in a few cases. The samples were tested in accordance with TxDOT specifications. The gradations were well within the Wastewater Program project specification requirements. The HVEEM stability was above the specification requirements in some cases. Most of these were in the interior streets and side roads which are not subjected to heavy traffic. In such situations, if the compaction and densities are met, then it normally considered acceptable.

On specific test reports in question, Report 391 dated 10/11/95, the Wastewater Program inspector normally schedules the testing laboratory based on his judgement of when the Contractor would be ready. In some cases the Contractor, working with the Inspector, will schedule the lab. On some occasions the Contractor is ready before the testing lab technician arrives at the job site. In such cases, the Contractor proceeds with the work and when the technician is available, the testing takes place.

On report No. 445A dated 12/1/95, all three core samples tested for compressive strength failed. The results were consistent and were within five percent of passing. Hence, these were accepted as a marginal case.

On report Nos. 470, 473, 55, 68, and 79A, as we discussed above, the Inspector and the Contractor attempt to scheduled lab tests for the best time. Nevertheless, sometimes the contractor is not ready because of various reasons, including unexpected problems frequently associated with underground construction.

Your recommendation that we withhold payment from Contractors until all testing is completed may not be feasible. In many instances, testing scheduling problems are not the fault of the Contractor, and it would be unfair to withhold payments under these circumstances.

Upcoming training will focus on better manual tracking and following up on testing reports and documents. At this point Inspectors have limited access to computers. However, the Department has completed a pilot program using hand-held computational devices for electronic transfer of data by Inspectors.

Mr. Gasper Mir  
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The issue of a control log for testing will be evaluated for its effectiveness and feasibility. It may be included in future training.

Sincerely,



Wendell L. Barnes, P.E.

Deputy Director

Department of Public Works and Engineering

WLB:fh

cc: Jimmie Schindewolf, P.E.  
Richard C. Scott, P.E.  
John Baldwin  
Fred Perrenot, P.E.  
Anthony Crisci, P.E.  
Joe Basista, P.E.