



Lexington-Fayette Urban County Government  
OFFICE OF INTERNAL AUDIT

## **INTERNAL AUDIT REPORT**

DATE: June 17, 2011

TO: Jim Gray, Mayor

CC: Richard Moloney, Chief Administrative Officer  
Cheryl Taylor, Commissioner of Environmental Quality & Public Works  
Jane Driskell, Commissioner of Finance & Administration  
Marwan Rayan, Director of Engineering  
Phyllis Cooper, Director of Accounting  
Susan Straub, Communications Director  
Urban County Council Members  
Internal Audit Board Members

FROM: Bruce Sahli, Director of Internal Audit

RE: Division of Engineering NDS Review

### **Background**

On June 19, 2009, the Office of Internal Audit issued an audit report on the Division of Engineering New Development Section (NDS) process. The report contained several significant findings related to the inspection and documentation procedures used by the NDS on new projects. This follow-up review was conducted to evaluate controls put in place by management to address those specific findings from the June 19, 2009 report as summarized below:

- Inspection documentation standards needed to be established
- The bonding inspection process needed improved documentation
- Improvement was needed in the NDS organization structure

- NDS problem resolution tracking needed significant improvement
- Licensed Professional Engineers (P.E.'s) were not assigned to commercial project management as required by Engineering procedures
- Commercial project file documents were not sealed by a P.E. as required by Engineering procedures
- LFUCG needed to continue placing reliance on external P.E.'s to provide detailed reviews of development plans
- Commercial project pre-construction meetings were not documented
- Commercial project inspections were not tracked in the database
- Supplemental commercial project files needed project checklists

### **Scope and Objectives**

The general control objectives for the audit were to provide reasonable assurance that:

- Inspection documentation standards have been established
- Documentation for the bonding inspection process has been improved
- The NDS reporting structure has been reorganized to include more supervision for field inspectors
- The NDS problem resolution tracking has been improved to better meet NDS's needs
- A licensed P.E. has been designated for commercial project management
- Commercial project file documents include a licensed P. E.'s seal
- Engineering process risk remains with external development firm's P.E.s
- Commercial project preconstruction meetings are documented
- Commercial project inspections are tracked and documented in the database
- Supplemental commercial project files have appropriate project checklists

Audit results are based on observations, inquiries, transaction examinations, and the examination of other audit evidence and provide reasonable, but not absolute, assurance controls are in place and are effective. In addition, effective controls in place during an audit may subsequently become ineffective as a result of technology changes or reduced standards of performance on the part of management.

The period of review included transactions occurring during July 2008 through February 2011.

## **Statement of Auditing Standards**

We conducted our audit in accordance with the International Standards for the Professional Practice of Internal Auditing. Those standards require that we plan and perform the audit to afford a reasonable basis for our judgments and conclusions regarding the organization, program, activity or function under audit. An audit also includes assessments of applicable internal controls and compliance with requirements of laws and regulations when necessary to satisfy the audit objectives. We believe that our audit provides a reasonable basis for our conclusions.

## **Audit Opinion**

In our opinion, the controls and procedures implemented by the Division of Engineering provided reasonable assurance that the general control objectives were being met. Opportunities to further enhance controls are included in the Summary of Findings.

## **Priority Rating Process**

To assist management in its evaluation, the findings have been assigned a qualitative assessment of the need for corrective action. Each item is assessed a high, moderate, or low priority as follows:

High - Represents a finding requiring immediate action by management to mitigate risks associated with the process being audited.

Moderate – Represents a finding requiring timely action by management to mitigate risks associated with the process being audited.

Low - Represents a finding for consideration by management for correction or implementation associated with the process being audited.

## **SUMMARY OF AUDIT FINDINGS**

### **Finding #1: Improved Documentation Needed on Inspection Forms**

**Priority Rating: High**

#### **Condition:**

We reviewed 147 NDS inspection forms completed during calendar year 2010 and noted insufficient documentation regarding actions taken by inspectors when non-compliance issues were identified. Although these forms provide a section for comments and/or checkboxes if a verbal warning or Notice of Violation (NOV) is issued to a developer or contractor, only two inspection forms tested indicated the plan of action for a non-compliance issue.

#### **Effect:**

The absence of sufficient information regarding non-compliance action plans indicates improved standards of documentation are needed to document the issuance of verbal warnings and NOV's to developers and contractors. This may also indicate that the NDS inspectors are not communicating these issues to developers and contractors for resolution when they arise.

#### **Recommendation:**

Procedures should be established to require inspectors to document on the inspection forms courses of action taken to communicate and resolve non-compliance issues. Inspection forms should be revised where needed to facilitate this type of documentation. This will also improve Engineering's ability to demonstrate corrective actions to the EPA and other regulators.

#### **Director of Engineering Response:**

A training session will be held for the NDS inspectors to specifically address the proper completion of inspection forms and special emphasis will be placed on documenting courses of action.

#### **Commissioner of Environmental Quality & Public Works Response:**

Prior to training, the DOE will document the processes to be used (flow chart preferred) and the methods for record keeping and follow-up. All forms will be updated to reflect recent requirement changes including storm water and sanitary sewer improvements, forestry requirements, current BMP's ,etc. Inspectors will be trained on the procedures and forms, will acknowledge (sign off) that they understand the requirement, and will be held accountable for results.

**Finding #2: Improved Documentation and Oversight of LOC Inspections Needed**  
**Priority Rating: High**

**Condition:**

We examined 12 projects wherein Letter of Credit (LOC) amounts were reduced and ten projects wherein LOC's had been released. Some of the inspection notes and other documentation used to reduce or release the LOCs consisted of inspector's handwritten notes and cross-through of completed construction punch list items. We also noted the standardized LOC checklist form recommended in the prior audit and agreed to by Engineering management had not been implemented.

The prior audit also recommended quality control review inspections be conducted for LOC inspections. However, since Engineering's implementation of LOC quality control review inspections in September 2009, only eight of the 179 inspections subsequently conducted had been reviewed by management through January 2011. In addition, many of the reductions in or releases of LOCs had already been processed by the time the management reviews occurred.

**Effect:** Without thorough and proper documentation, the Bonding Officer responsible for adjusting or releasing LOCs may misinterpret the inspection results and incorrectly reduce or release LOCs. LOCs represent surety amounts available to the LFUCG to complete or remedy construction projects either abandoned or insufficiently completed by developers and contractors, and therefore clear and concise communication of LOC inspection results are essential to the correct reduction or release of LOCs.

**Recommendation:**

Management should develop standardized documentation requirements for LOC field inspections, including a checklist of duties to be included with each inspection. We also recommend a form be created to clearly document items removed from construction punch lists to remove the Bonding Officer's reliance on and interpretation of handwritten notes to reduce or release LOCs. We also recommend Engineering management periodically review a larger percentage of LOC monthly quality review inspections (perhaps 5%) to increase management oversight of inspection quality. The quality review inspections should occur before any reductions or releases are processed.

**Director of Engineering Response:**

We currently use a copy of the punch list of the initial request for LOC reduction in subsequent requests. Prior to processing the LOC reduction by the Bonds Officer the punch list is checked by the engineer in charge. Should there be any errors in the adjustment of quantities, corrections are made before submitting it to the Bonds Officer. We feel that

transferring information from the original punch list to another form might increase the potential for errors. The rest of the recommendations are addressed in our response to Finding # 5.

**Commissioner of Environmental Quality & Public Works Response:**

Although we want to minimize errors in data transmission, over the course of FY 2011-12 DOE will develop a standard format for the punch list that can be completed for each project and will have clear information regarding the release (or retention) of the bond. The standard format must be available to and submitted by the project manager and signed off by the LFUCG inspector with clear rationale for the recommended action. The rationale will be stored as an electronic record that can be referred to if there are questions regarding the project. Ultimately this will minimize errors.

**Finding #3: Commercial Project Preconstruction Meetings Not Consistently Documented**

**Priority Rating: High**

**Condition:**

Two of nine commercial project files examined did not contain evidence of a preconstruction meeting. Preconstruction meetings are required before a grading permit can be issued.

**Effect:**

Failure to conduct or otherwise document preconstruction meetings prior to the issuance of grading permits is a violation of Engineering's procedures and diminishes the effectiveness of the grading permit process.

**Recommendation:**

The procedure for conducting and documenting preconstruction meetings prior to the issuance of grading permits should be consistently adhered to.

**Director of Engineering Response:**

I agree with the recommendations of this report. Inspectors will be instructed to adhere to the established procedure.

**Commissioner of Environmental Quality & Public Works Response:**

The procedure will be adhered to and will be clearly documented in a DOE format. Meeting notes will be stored as an electronic file that can be referred to if questions occur regarding the project's original scope and the actual work in the field.

**Finding #4: Supplemental Commercial Files Did Not Contain Required Checklist**  
**Priority Rating: High**

**Condition:**

Three of six supplemental commercial files examined did not contain a project checklist designed to ensure personnel are aware of and document compliance with all required project meetings and inspections. This checklist was recommended in the prior audit and agreed to by Engineering management.

**Effect:**

The absence of a commercial project checklist increases the risk certain project steps may be omitted. Such a checklist represents a simple but effective tool to ensure good project management and process compliance.

**Recommendation:**

Engineering management should instruct NDS personnel to complete the commercial files checklist and intermittently review commercial files for compliance.

**Director of Engineering Response:**

NDS personnel will be instructed to complete commercial files checklists for all commercial projects including supplemental commercial projects.

**Commissioner of Environmental Quality & Public Works Response:**

The checklist will be reviewed and updated by DOE if appropriate. DOE will also establish a format for project files that clearly identifies all materials the file must contain. Each project file will be the responsibility of the project inspector to maintain appropriately. Random file audits will be conducted to assure all files are in compliance.

**Finding #5: Quality Control Review Inspections Should be Increased**  
**Priority Rating: Moderate**

**Condition:**

During calendar year 2010, Engineering NDS management conducted an average of 12 quality control review inspections per month from an average population of 446 total inspections conducted per month (2.7%). In December 2010, Engineering NDS procedures were revised to require two quality control review inspections per month per inspector. As there are presently five inspectors in Engineering NDS, a total of ten quality control review inspections per month would be conducted under these revised procedures.

**Effect:**

Quality control review inspections are an essential management tool used to monitor the quality of NDS inspections. An inadequate number of quality control inspections may result in failure to identify inspection issues in a timely manner. It should also be noted that having a set number of quality control review inspections as opposed to a percentage of the overall population of inspections conducted will result in a decrease of overall coverage should the number of total inspections increase.

**Recommendation:**

In our opinion, the percentage of quality control review inspections should be increased (perhaps to 5%) of the total average number of monthly inspections to provide reasonable assurance the quality control process includes sufficient field level reviews.

**Director of Engineering Response:**

After two attempts at performing a number of quality control inspections that would provide a reasonable assurance we found that two inspections per inspector per month was the most manageable, considering the current level of staffing. We will look at increasing the QC inspections as we become fully staffed.

**Commissioner of Environmental Quality & Public Works Response:**

I support Director Rayan's suggestion for the coming FY. We commit to reviewing the number of reviews at least annually. If additional inspections are needed for QC, we may consider using an outside contractor for this function.