

**PENNDOT – Engineering District 10-0
ISO 9001 Internal Audit Report
(01/13)**

Department	Audit Process	Date & Time of Audit
GEOTECHNICAL UNIT	7.5.1 – GT3	02/27/17 @ 8:30 am

Auditor(s)	Audit Objectives:
1. MARC GARDNER 2. MIRANDA STINER	

Name of Auditee(s)	Auditee(s) job Function
1. ALICIA KAVULIC	1. DISTRICT GEOTECHNICAL ENGINEER

Item(s) or areas audited
7.5.1 – GT3 Geotechnical Hazard Inspection and Remediation Process

Auditee Comments:
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<u>Plan approved by: (Management Representative)</u>
Tab Boyer

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Audit Criteria

External requirements (questions)

1. In the second step of the ISO Process Map, who is the 'management personnel' that is giving input to the DGE? What kind of input does the DGE receive from the management personnel? What happens if the DGE cannot determine the severity of the hazard with just the input given? Can a review be requested thru PPCC?
2. Who is responsible for the ISO Process Map in the event that the DGE is unable to be reached, or unable to do a field view in the designated time frame? Are consultants involved in this process?
3. Where is the Geotechnical Hazard Work Sheet located? Who is responsible for completing this sheet? Should the person completing the sheet be initialing or signing the form in some way?
4. Can you show us the recent Process of the Geotechnical Hazard Inspection and Remediation?
5. In the Scope Section, would these processes be the same for a sink hole? Has District 10 ever had a sink hole that needed evaluated?

External requirements (answers)

1. The Management Personnel, referred to in the second step of the ISO Process Map, is County Maintenance Managers, the ADE of Maintenance, Construction Services Engineer and the ADE of Construction. They tell the DGE important information such as Traffic Data, Technical Data, History of the Roadway, and suggestions to detours and fixes. The Management Personnel usually knows when they call whether it is an emergency or not. If the roadway needs to be closed or to have a lane restricted then it is an Emergency, if no traffic restrictions then it is not an emergency. Maintenance Unit does not have access to PPCC.
2. In the event that Alicia Kavulic (DGE) is not available, anyone from the Geotechnical Unit would be able to assist. Ray Suhadolnik is usually who helps with Geotechnical Hazards Inspections. Ron Schreckengost would be the next in command from Alicia. Consultants are not usually involved in this process, unless it was a major Hazard (i. e. a large retaining wall).
3. The Geotechnical Hazard Work Sheet is located on the J-Drive. Whoever looks at the job is responsible for filling out the form. The name of who did the field inspection and who reported the Hazard to the Geotechnical Unit are listed at the top of the form.
4. Alicia Kavulic (DGE) and Ray Suhadolnik showed us the process that is being done for the a current Slide in District 10 (Butler County, Lancaster Township, SR 19, Segment 0280/0200)
5. In District 10, we do not have the right Geology that causes sink holes like seen in Florida. If we have anything like that, it would be from an underground mine, and that would have the same process.

Internal requirements (questions)

1. Once the remediation plan is constructed, are there any follow up processes involved? If so, should it be defined in the process?
2. Who makes the deciding determination whether Maintenance can do the remediation plan or if the job needs to go out for bid? If so, how is it determined?
3. In the step that asks if drilling is required, should this say coring/sampling instead of drilling?
4. After boring log data is reviewed, does the Geotechnical Unit send the samples to the District 10 Lab or to Harrisburg MTD for testing? What is the time frame to get results from the material testing?
5. Is the process the same for Hazards found on an active Construction site?

Internal requirements (answers)

1. There is someone from the Geotechnical Unit on site during the construction of the remediation plan, sometimes every day and sometimes just stopping by to check job out. There is no process for this part because there are so many things involved and every project would be different.
2. It is a collaborative decision about it Maintenance can fix the Hazard or not. It mostly depends on the size of the project. Funding also comes into play a little after that, but it is not the deciding factor.
3. The process is actually considered drilling not coring. The procedure is explained in Pub. 222. The process most resembles auguring/drilling.
4. The Geotechnical Unit has an open ended contract with a Soils Lab, and they are required to have the results back to the Geotechnical Unit within 10 working days. If for some reason there is a pressing time constraint, the Soils lab will usually work with the unit to get the results back faster.
5. Usually, in the construction jobs, there is already prior knowledge of a slide, and there are different things put in place in the contract to remediate the issue. If an unforeseen circumstance caused a Geotechnical Hazard on a work site, then they would follow the same process.

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Overall Statement of Effectiveness of the Quality Management System

Areas of strength regarding ability to meet requirements- including observed BEST Practices

1. The Geotechnical Unit follows the ISO Process Map when made aware of a Hazard, and files proper documentation to support their findings.

Areas to consider for improvement:

1. The abbreviation for District Geotechnical Engineer is used throughout the ISO Process Map for space saving. The process owner should be stated as: District Geotechnical Engineer (DGE) to alleviate confusion.
2. In the ISP Process Map the location for the Geotechnical Hazard Worksheet should be stated.

Specific observed nonconformities (Findings): If Applicable, Follow-up Scheduled:

1. N/A

Observations and auditor comments:

1. Owner of Process and staff are very knowledgeable about the process and very willing to explain the process in detail.

Statement of overall effectiveness of the system:

- System working with minimal issues.

Distribution of Audit Report:

- Manager of area audited
- A.D.E. Construction
- ISO Management Representative

Unit Manager Comments Including Follow-Up Action: (if any)

