



Project 140928.01.S01, Job # 380042500  
Project 180928.01.S01, Job # 380046500

# **Kent County Department of Public Works**

**Dover, DE**

**Surveillance Audit**

**ISO 14001:2004, OSHAS 18001:2007**

KEMA-Registered Quality, Inc.

Chalfont, Pennsylvania

November 17 to 19, 2009

CONFIDENTIAL REPORT

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Author: Jon Shaver

Approved by: NPR

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## 1 SUMMARY

KEMA conducted a Surveillance Audit of the Environmental and Occupational Health and Safety Management Systems (EHSMS) of Kent County Department of Public Works. To meet the requirements of KEMA accreditations, sector-qualified auditors conducted this audit in accordance with the "KEMA Auditor Manual" and the "KEMA Audit Planning Guide."

KEMA auditor, Jon Shaver, was on site for 3 eight hour days each, for a total of 3 man days.

The objective of the audit was to determine the extent of conformity of the organization's management systems, or parts of it, with audit criteria of the ISO 14001:2004 and OHSAS 18001:2007 to evaluate the effectiveness of the management system in meeting its specified objectives (such as management priorities), and identify areas for potential improvement of the management systems.

During the audit, KEMA reviewed the Continual Management Dynamics and audited the processes listed in sections 5 below, finding no Major Nonconformances and 5 Minor Nonconformances. The review of the Management Systems confirmed that Kent County Department of Public Works' Management System has been effectively maintained. Periodic surveillances may proceed on schedule.

## 2 AUDIT FINDINGS, STRENGTHS AND OPPORTUNITIES

### 2.1 Strengths, Opportunities

The audit team noted the following strengths and opportunities:

#### STRENGTHS

- Kent County is an excellent example for sustainability efforts at wastewater treatment plants (e.g. reduced energy use, reduced manmade chemicals)...
- Several programs are being planned that will contribute significantly to improved EHS performance at KCRWTF.
- The internal audit performed in 2009 was concise, effective and provided useful findings.

#### OPPORTUNITIES:

- The EHSS MS management of change procedure could include documentation of satisfactory completion of planning events, such as need for environmental and/or safety and health hazards review, communications, training, operational controls and provision for prestartup safety review.
- A written understanding document for contractors who will perform work on behalf of KCRWTF could help provide “right to know” and emergency response information and EHS rules / practices that the contractor is expected to follow.
- When complaints from the public are handled, recording feedback to the person complaining could help ensure confidence in KC’s handling of those inquiries.
- Internal audit results could be presented in an Executive Summary that relates results to the purpose of the audit.
- The EHSMS process for Corrective & Preventive Action could include the various ways that needs for corrective action are identified (e.g. complaints, incidents, SSOs), with an analysis of trends for all corrective action.
- Maintenance Safe Work Practices, such as lockout / tagout, confined space entry, linebreaking, could be included as required operational controls in collection, treatment & production areas.

### 2.2 Findings

The processes described in Section 5 and the CMD in Section 4 were found to satisfy the applicable elements of the appropriate standards, with the exceptions noted below:

Description of Finding:

Minor Nonconformance JS/09-01/4.3.1 ISO-14001 and OHSAS-18001 require environmental impacts and safety & health hazards be analyzed throughout the management system scope and NBP EMS Element 3 requires that critical control points and operational controls be identified for all biosolids management activities.

Maintenance activities, laboratory activities and the landfill biosolids use option were not considered in analyzing environmental impacts and health and safety hazards and were not included in the identification of critical control points and operational controls.

Minor Nonconformance JS/09-02/4.3.3 ISO-14001, OHSAS-18001 and NBP EMS Elements require progress in achieving objectives to be monitored and measured.

Some objectives and targets (e.g. TMDL results, energy reduction) are not being presented at management reviews in a measurable way.

Minor Nonconformance JS/09-03/4.4.3 ISO-14001, OHSAS-18001 and NBP EMS Elements require a procedure be established, implemented and maintained for receiving, documenting and responding to relevant communication from external interested parties.

There is no documented procedure for receiving, documenting and responding to relevant communication from external interested parties and some inquiries (e.g. truck traffic, biosolids land permitting) and responses were not recorded.

Minor Nonconformance JS/09-04/4.4.5 ISO-14001, OHSAS-18001 and NBP EMS Elements require control of management system documents.

Some SOPs in use are in “draft” form (i.e. no final approval), some (such as confined space entry procedure) have more than one version in place and some (e.g. EHSMS Manual) do not have pages identified, dated or numbered.

Minor Nonconformance JS/09-05/4.6 ISO-14001, OHSAS-18001 and NBP EMS Elements require that management reviews the effectiveness of the management system.

Some management review records do not summarize EHS performance or information supporting assessment of performance.

### 3 REQUESTS

Kent County would like to continue with integrated audits covering requirements of ISO-14001, OHSAS-18001 and biosolids EMS Elements.

Kent County will modify the scope statement in their EHSMS Manual to be the same as that shown on ISO-14001 and OHSAS-18001 certificates.

Per audit discussions, Kent County will submit a corrective action plan to KEMA's office by December 19, 2009 and an onsite follow-up is scheduled to verify corrective action by May 19, 2010. The follow-up will take approximately 1 day.

The current total headcount is 58 and the number of shifts and shift worker headcount are 2/5 and has not changed substantially since the last audit.

The next audit, a Surveillance was tentatively scheduled for the week of November 15, 2010. KEMA's office will confirm the exact date

## **4 CONTINUAL MANAGEMENT DYNAMICS REVIEW**

### **4.1 Organization Revisions**

Recent revisions to the organization were reviewed and there were no substantial or structural changes. Several new technology and equipment changes are planned to be implemented during 2010.

### **4.2 Revisions to the Management System including Documents**

Major changes to the EH&S Manual(s), top level documentation and major systems of the EH&S were reviewed and there were no structurally significant revisions. The management system documentation (EHS MS Manual) was modified to describe the process approach that Kent County employs in managing their EHS management system covering environmental health and safety and biosolids program requirements.

### **4.3 EH&S Management System Internal Audits, Assessments of Regulatory and Other Compliance Requirements**

Internal audits conducted since the last surveillance were reviewed. Effectiveness of the audits as well as resultant corrective action was assessed. An internal audit was conducted in November 2009 (previous in Oct 2008) and findings were corrected quickly using the corrective action process (CPAR). The internal audit process was found to be effective.

The compliance assessment to regulatory requirements conducted since the last surveillance was reviewed. An audit by DNREC was conducted in August 2009. Effectiveness of the assessments as well as resultant corrective action was assessed. The process of compliance assessment to regulatory requirements was found to be effectively implemented.

The compliance assessment to other requirements conducted since the last surveillance was reviewed. There are no "other" requirements specified by Kent County that affect their management system.

### **4.4 Closed Corrective Actions from prior KEMA Audits**

No Corrective Actions from Prior KEMA Audits remain open.

### **4.5 Corrective Actions from Prior KEMA Audits remaining open**

No Corrective Actions from Prior KEMA Audits remain open.

#### **4.6 Performance Measurement and monitoring including Corrective Actions**

EHS performance measures are used, including daily operating data, TMDL results, number of callouts, energy use, chemical use, OSHA Incidence Rate. Action is taken to correct any deficient results.

#### **4.7 Accidents, Incidents, Nonconformances and Corrective / Preventive Action not found in other sections**

Not applicable

#### **4.8 Review of Environmental, Occupational Health and Safety Policy including commitment to comply with Regulatory and Other Requirements, Continual Improvement, Prevention of Pollution, and Improve Health and Safety Performance**

Environmental, Occupational Health and Safety Policy: The EHS Policy was revised in May 2009 to include commitment to sustainability. The Policy was approved by Levy Court (Commissioners) and communicated to employees. Objectives and targets were developed to help ensure the commitment to sustainability is part of operations.

Commitment to comply with Regulatory and Other Requirements: An assessment by DNREC in August 2009 resulted in 2 suggestions. Action was taken to address both of these within 2 months.

Continual Improvement: Several programs are in place to reduce energy use, reduce / eliminate use of chemicals (chlorine and sulfur dioxide). Cross training of operators is well underway.

Prevention of Pollution: A program is in place to reduce TMDL loadings in water sent to nearby river. A pretreatment program is planned to address incoming phosphorous loadings.

Improve Health and Safety Performance: The EHS Committee meets monthly to address safety and health issues.

#### **4.9 Review of status of hazards identification, significant aspects, objectives, targets, OH&S risk assessments and applicable programs**

Objectives and targets for 2008 were achieved. New objectives and targets were developed, including sustainability objectives, with targets and action plans for achieving them.

#### **4.10 Internal and External Communications**

Telephone inquiries from residents are handled within 24 hours. Callout complaints are tracked and responded to the same day. Requests for changes by regulatory agencies (DNREC) are responded to. Internal communication about the EHSMS and performance measures is discussed in plant meetings and posted on bulleting boards. Safety meetings are held monthly.

#### **4.11 Management Involvement (includes Management Review)**

Management involvement has been demonstrated through actions taken regarding issues raised in management reviews and programs for measurement and improvement. The management review process includes weekly staff meetings and quarterly “Core Team” meetings in which EHSMS performance is addressed. The actions taken are consistent with communicated environmental, health and safety objectives.

#### **4.12 Use of Certificate and Registrar Seals**

Use of Certificate References and Registration Seals were reviewed, and changes were discussed. The scope statement stated in the EHS Manual will be modified to be the same as shown on the ISO-14001 and OHSAS-18001 certificates, as discussed in the “Requests” section above.

#### **4.13 Audit Program Changes**

The audit program(s) was not modified. The Audit Program(s) used at the audit will be adjusted to reflect current status, including the next audit processes

## 5 PROCESS AUDITS

### 5.1 Participants

The principal staff involved on behalf of the company were:

Name	Position/Department	
Rheinhold Betschel	Assistant Works Director	KCRWTF
Mari Favres	Plant Secretary	KCRWTF
Mike Harrington	Maintenance Manager	KCRWTF
Hans Medlarz	Works Director	KCRWTF
Jim Newton	Environmental Program Manager	KCRWTF
Keith Powell	Acting Assistant Works Director	KCRWTF
Bill Vincent	Operations Supervisor	KCRWTF
Alton Collins	Biosolids user / farmer	
Brian Churchill	Biosolids regulator	DNREC

Where necessary other employees provided additional explanations.

### 5.2 Processes Audited

To meet the requirements of KEMA accreditations, Sector-qualified auditors conducted this audit in accordance with the “KEMA Auditor Manual” and the “KEMA Audit Planning Guide.”

The following processes were audited:

Process	Audit Planning Guide Used
Corrective & preventive action (incl accidents, incidents)	1.02
Internal audits (incl compliance assessment)	1.08
Goals / objectives / targets / programs (+ mgmt of change)	1.11
Environmental aspects / impacts	1.12
OH&S hazards / risk assessment	1.12
Maintenance – field (incl collection)	3.12
Biosolids Storage & Transportation	5.18
Biosolids Use – Agriculture	5.18
Laboratory	5.18
Wastewater collection (incl pump stations)	5.18

### 5.3 Reviewed documents

Bid award memorandum 11-17-09

Biosolids Program Performance Report 2008  
CPAR (various)  
Critical control points & operational controls  
day report (various)  
Delaware State News article 11/15/09  
DMRQA Final complete review 9-20-09  
EHSMS Management Plan  
Environmental aspects / OHS hazards & risks analysis  
Equipment information spreadsheet (Maintenance)  
Incident report / callout (various)  
Inquiries / Complaints report (various)  
Internal audit report 11-6-09  
KCRWTF Environmental, Safety & Health meeting minutes (May 14 2009, Aug 17,  
2009, Nov 5 2009)  
Kent Connections Newsletter  
Letter from DNREC 9-9-09 + response 10-29-09  
Lockout / tagout procedure 3/8/06  
Management of Change for PV solar system  
Management Review minutes – October 27 2009, May 2009  
MSDS (various)  
Nonhazardous waste & transport permit 3-10-06  
NPDES lab performance evaluation 9-19-09  
Procedure for land application of Kentorganite  
SPCC Plan 8/5/09  
Spill control program 7-1-09  
SSO emergency protocol  
Training matrix

## 6 DEFINITION OF TERMS AND GUIDELINES FOR CLOSURE OF FINDINGS

### **NONCONFORMANCE:**

Whenever it is found that a requirement of the standard or of the organization's EOH&SMS is not fully conformed to, the nonconforming condition is documented in a Corrective Action Request, and included in this report. Nonconformances are classified according to risk, as Major and Minor:

### **MAJOR NONCONFORMANCE:**

The requirement has not been met. Evidence indicates one or more of the following:

- 1) Systemic failure of the EOH&SMS
- 2) Any situation that would most probably result in the adverse effect to the EH&S policy.
- 3) A condition that may result in an adverse effect to the environment or to the health and safety of the employees.

### **MINOR NONCONFORMANCE:**

The requirement has not been fully met. Evidence indicates the finding is:

- 1) Non-systemic
- 2) An isolated occurrence
- 3) Not likely to result in the failure of the EOH&SMS

**CORRECTIVE ACTION:** Closed loop Corrective Action by the organization is required to be initiated, carried out, and completed in a timely manner whenever a requirement of the standard or of the organization's EOH&SMS has not been met. Corrective action analysis by the organization shall include determination of applicability to other parts and processes of the registered organization.

Major Nonconformances will be monitored closely by KEMA. The organization shall:

- 1) Within thirty days of the audit: Submit a corrective action plan to KEMA's office.
- 2) Within ninety days of the audit: Correct the nonconformance, and submit objective evidence of corrective action to KEMA's office for approval.
- 3) KEMA may conduct a follow up audit to verify closure of a Major Nonconformance.

For each Minor Nonconformance, the organization shall:

- 1) Within thirty days of the audit, submit a corrective action plan to KEMA's office.
- 2) Within time lines established in the Corrective Action plan, correct the nonconformance.
- 3) Within six months of the audit, KEMA will verify the implementation of the corrective actions, either at the next scheduled audit, or in a follow-up audit, unless arranged otherwise.

**STRENGTHS and OPPORTUNITIES:** Additionally, KEMA auditors may identify strengths and opportunities in areas where requirements of the standard and of the organization's EOH&SMS have been met. In these cases, no corrective action is required, and there is no formal review by KEMA.

## 7 CLIENT CERTIFICATION



Affiliate with the N.V. KEMA in The Netherlands



# CERTIFICATE

Certificate Number: 140928.01

The Environmental Management System of:

**Kent County Regional Wastewater  
Treatment Facility  
139 Milford Neck Road  
Milford, DE 19963  
United States**

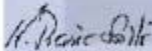
Including its implementation, meets the requirements of the standard:

## ISO 14001:2004

Scope:

The collection and treatment of wastewater and generation of treated water and biosolids

This Certificate is valid until: January 25, 2012  
This Certificate is valid as of: January 25, 2009  
Certified for the first time: January 25, 2006



H. Pierre Salle  
President  
KEMA-Registered Quality

The method of operation for environmental certification is defined in the KEMA General Terms And Conditions For Quality And Environmental Management Systems Certifications. Integral publication of this certificate is allowed.

Experience you can trust.

KEMA-Registered Quality, Inc.  
4377 County Line Road  
Chalfont, PA 18914  
Ph: (215)997-4519  
Fax: (215)997-3809  
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Accredited By:  
ANAB





Affiliate with the N.V. KEMA In The Netherlands



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Certificate Number: 180928.01

The Environmental Management System of:

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139 Milford Neck Road  
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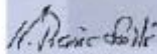
Including its Implementation, meets the requirements of the standard:

## OHSAS 18001:2007

Scope:

The collection and treatment of wastewater and generation of treated water and biosolids

This Certificate is valid until: January 25, 2012  
This Certificate is valid as of: January 25, 2009  
Certified for the first time: January 25, 2006



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Ph: (215)997-4519  
Fax: (215)997-3809  
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This certificate shows information valid as of the day of the audit. It has been included in this report per accreditation body requirements.