

Biosolids EMS Audit Plan Orange County Sanitation District

Audit: Biosolids EMS Interim Audit #4

Audit Dates: June 18 – 20, 2007

Audit Purposes

Interim audit (#4) to analyze the effectiveness of the Orange County Sanitation District (OCSD) biosolids EMS and verify continuing conformance with expectations and requirements of the National Biosolids Partnership “Biosolids EMS Program” and EMS Elements.

Audit Scope

The OCSD Biosolids EMS covers all biosolids activities that OCSD controls throughout their biosolids value chain. Per the attached Interim Audits Plan and KEMA’s Scope of Work (dated 3/17/07), this audit will assess certain EMS processes and include other activities as noted below. Upon completion of this interim audit, all requirements of the 17 EMS Elements (NBP) will have been audited during the 4 interim audits since Verification in 2003.

Process Audits

- Review - EMS Documentation / EMS Manual (changes only)
- Review - Management Involvement Process (including Management Review)
- Review - Communication Process
- Review - Goals and Objectives (Performance)
- Review - Corrective and Preventive Action Process
- Audit – Compliance Process (including Legal & Other Requirements)
- Audit – Document Control & Recordkeeping Process
- Audit – Emergency Preparedness Process
- Audit – Maintenance Process
- Audit – Pretreatment Process
- Audit – Biosolids Use & Disposition (at South Kern Composting facility)

Additional Audit Activities

- Review of Significant EMS Changes (see below)
- Interested Party Interviews (as agreed by OCSD)
- Examination of EMS Outcomes
- Verification of Open Nonconformances

**Biosolids EMS Audit Plan
Orange County Sanitation District**

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Significant Changes

OCSD advise that since our previous audit (May 2006), they have added a biosolids use / disposition options at the South Kern Composting facility. This facility is included in the scope of this audit. The EMS Manual has been modified and will be reviewed during this audit. In addition, the EMS response to significant changes in the management organization will be reviewed.

Agency Information

Orange County Sanitation District, 10844 Ellis Avenue, Fountain Valley CA 92728

Treatment Plants: Fountain Valley & Huntington Beach Treatment Plants (Orange County California)

EMS Coordinators: Ms. Michelle Hetherington (phone: 714-593-7400)

Ms. Deirdre Bingman (phone: 714-593-7459)

KEMA Auditors:

Jon Shaver (phone: 610-742-0379, e-mail: jshaver@krqusa.com)

Ralph Eschborn (phone: 610-742-7537, e-mail: reschborn2@comcast.net)

**Biosolids EMS Audit Plan
Orange County Sanitation District**

Audit: Biosolids EMS Interim Audit #4

Audit Dates: June 18 – 20, 2007

Audit Schedule (draft)

June 18, 2007

8:00 AM Arrival at OCSD offices + coordination discussion
8:30 AM Opening Meeting (attendance as desired)
9:00 AM – 9:45 AM Discussion – Significant EMS changes
10:00 AM – 12:00 PM Audit - Compliance Process
1:00 PM – 2:00 PM Review - Goals and Objectives Process
2:00 PM – 3:00 PM Review - Communication Process
3:00 PM – 4:30 PM Review - Management Involvement & Review Process
4:45 PM (approx) Daily Review Meeting

June 19, 2007

Note – Auditors will separate. One auditor will go to Kern County to assess control of the contracted composting operation. The other auditor will remain at OCSD to continue audits and transaction tests.

Auditor 1

Time TBD – Audit - Biosolids Use & Disposition (at South Kern Composting facility)

Auditor 2

8:30 AM – 9:30 AM Audit – Pretreatment Process
9:30 AM – 10:30 AM Audit – Maintenance Process
10:30 AM – 12:30 PM Audit – Emergency Preparedness Process (both plants)
1:30 PM – 3:00 PM Audit - Document Control & Recordkeeping Process
3:00 PM – 4:30 PM Audit - Competency, Training & Awareness Process
4:45 PM (approx) Daily Review Meeting
Evening audit – process & timing TBD

June 20, 2007

8:00 AM Daily Preparation

Auditor 1

8:30 AM – 9:30 AM Verification of open nonconformances
9:30 AM – 11:00 AM Review - Corrective and Preventive Action Process

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Auditor 2

8:30 AM – 10:30 AM Review EMS Documentation / EMS Manual (changes only)

10:30 AM – 11:30 AM Interested party interviews (to be arranged by OCSD)

Note – interested party interviews can occur at any time during the 3 days at the convenience of persons being interviewed.

Both Auditors

12:30 PM - 2:15 PM Examination of EMS Outcomes

2:15 PM – 3:00 PM Auditor Preparation Time

3:00 PM – 3:30 PM Informal discussion of audit results

3:30 PM Closing Meeting (attendance as desired)

4:30 PM Planning discussion (if desired)



Biosolids EMS Interim Audits Plan Orange County Sanitation District

The following Audit Program provides a plan for performing interim audits of the OCSD biosolids EMS. The scope in any year can be modified due to changing circumstances.

Date of this Plan: March 15, 2007

EMS Verification Date: June 30, 2003

EMS Process	Key EMS Elements *	Interim Audit #1 (2004)	Interim Audit #2 (2005)	Interim Audit #3 (2006)	Interim Audit #4 (2007)
Examination of EMS Outcomes	-	X	X	X	X
Biosolids Policy	2	X			
Biosolids Production - Pretreatment	3, 10, 13				X
Biosolids Production - Solids Stabilization, Conditioning & Handling (Fountain Valley & Huntington Beach plants)	3, 10, 13			X	
Biosolids Production - Solids Storage & Transportation (Fountain Valley & Huntington Beach plants)	3, 10, 13			X	
Biosolids Production - Wastewater Treatment & Solids Collection (Fountain Valley & Huntington Beach plants)	3, 10, 13			X	
Biosolids Use & Disposition – Agriculture – Tule Ranch (Kern County)	3, 10, 13	X			
Biosolids Use & Disposition – Agriculture – Tule Ranch (Yuma County AZ)	3, 10, 13	X			
Biosolids Use & Disposition – Composting – Synagro (Kern County)	3, 10, 13				X
Biosolids Use & Disposition – Composting – Synagro (LaPaz County AZ)	3, 10, 13	X			
Biosolids Use & Disposition – Composting – Synagro (Riverside County CA)	3, 10, 13				Not audited
Communication	6, 9, 15	X	X	X	X
Competency, Training & Awareness	7, 8				X
Compliance (with legal & other requirements)	4, 13, 14				X
Contractor Control	Performed as part of other audits, as applicable				
Corrective and Preventive Action	14	X	X	X	X
Critical Control Points (Identification)	3	X			
Document Control & Recordkeeping	12				X
Emergency Preparedness	11				X
EMS Documentation	1			X	
EMS Planning & Public Participation	2, 6, 7	X		X	
Goals & Objectives	5, 13	X	X	X	X
Internal EMS Audits	16			X	
Maintenance	10				X
Management Involvement (incl Mgmt Review)	2, 5, 17	X	X	X	X

* - applicable requirements of all EMS Elements will be audited for each process. "Key elements" are shown for reference to demonstrate that all 17 EMS Elements are covered during the 4 interim audits.

**Proposed Statement of Work
Orange County Sanitation District
Biosolids EMS Interim Audit #4**

KEMA-Registered Quality Inc. (KEMA) is pleased to submit the following proposed Statement of Work for performing a Biosolids EMS audit at Orange County Sanitation District, Orange County CA (OCSD), as requested by the National Biosolids Partnership (NBP).

Audit Purpose

KEMA will plan and conduct this audit to assess the effectiveness of the OCSD biosolids EMS and verify continuing conformance with requirements of the NBP Biosolids EMS Program.

Background

OCSD's Biosolids EMS applies to the full biosolids value chain, as practiced by OCSD, for biosolids produced at treatment plants in Huntington Beach and Fountain Valley, California. Our original Verification of OCSD's Biosolids EMS within the NBP Biosolids EMS Program was completed in June 2003. Since then, 3 interim audits have been completed, as required by NBP, and our Verification is current. This will be interim audit #4 within the present Verification cycle. Successful completion of this audit and correction of any nonconformances that may be found is required to maintain our Verification. OCSD has the option to use an internal audit as this interim audit, or have an accredited Third Party (such as KEMA) perform the audit.

Significant Changes

OCSD has reported that the following changes have occurred in the past year affecting their Biosolids EMS:

- Certain personnel and organizational changes have affected EMS roles and responsibilities.
- The Synagro South Kern Compost Manufacturing Facility has been added as a biosolids use location as of December 2006.

Current Audit Program

Attached is the Interim Audit Program for interim audits of the OCSD Biosolids EMS, showing audits that have been completed during the current cycle of interim audits and those that are required to ensure all EMS Elements and processes are covered during the 4 interim audits between Verification and Re-Verification. The Audit Program has been updated to include recent significant changes noted by OCSD that affect their Biosolids EMS.

Audit Scope – Interim Audit #4

Listed below are the audits that will be included in this interim audit, consistent with NBP's Auditor Guidance and the attached Interim Audit Program.

**Proposed Statement of Work
Orange County Sanitation District
Biosolids EMS Interim Audit #4**

1. Verification of open nonconformances from previous KEMA audits (i.e. interim audit #3, May 2006)
2. Examination of EMS Outcomes (regulatory compliance, interested party relations, environmental performance, quality practices)
3. Review - EMS Documentation / EMS Manual (changes only)
4. Review - Management Involvement Process (including Management Review)
5. Review - Communication Process
6. Review - Goals and Objectives (Performance)
7. Review - Corrective and Preventive Action Process
8. Audit – Compliance Process (including Legal & Other Requirements)
9. Audit – Document Control & Recordkeeping Process
10. Audit – Emergency Preparedness Process
11. Audit – Maintenance Process
12. Audit – Pretreatment Process
13. Audit – Biosolids Use & Disposition - South Kern Composting (including applicable contractor control) – offsite audit
14. Audit – Biosolids Use & Disposition - Riverside Composting (including applicable contractor control) – offsite audit

Notes

- Since the EMS functions as a system of interacting processes, conformance with requirements of more than one EMS Element may be reviewed in each audit.
- At least three transactions will be tested during the audit to verify that the EMS is functioning as intended.
- Interested parties, including State and Federal regulators, may be interviewed as part of this audit to demonstrate EMS effectiveness. OCSD is entitled to pre-approve and arrange for any interested parties to be interviewed.
- OCSD may include observers in any audits. KEMA requests that we be made aware of the intended presence of any such observers in advance and that OCSD be responsible for controlling observers during the audits.

Audit Methods

Using sampling techniques, this audit will be performed by interviewing persons directly involved in each EMS process, observing practices in place and reviewing pertinent documentation. Auditing methods and criteria will be consistent with the NBP Biosolids EMS

**Proposed Statement of Work
Orange County Sanitation District
Biosolids EMS Interim Audit #4**

Auditor Guidance (March 2006). NBP may be consulted during the audit to resolve any differences in interpretation of the Auditor Guidance.

Timing

In order to maintain our Verification, this audit needs to be completed before June 30, 2007. In response to OCSD's request that the audit be conducted in May 2007, we propose the dates of May 14 to 16, 2007 (3 days) for the audit. OCSD and KEMA will agree on the actual audit dates and an acceptable audit schedule in advance of the audit.

Reporting

KEMA will issue a draft report of the results of this audit to OCSD within 14 days following the audit. The final report will be issued within 2 weeks of receiving feedback from OCSD.

Auditors

KEMA's Audit Team will include Mr. Jon Shaver (Biosolids EMS Lead Auditor) & Mr. Michael Wardell (Biosolids Auditor).

Fees

KEMA's lump sum fee schedule for work described in this proposal is outlined below.

Activity	Days	Total Cost	Comment
Preparation, Planning & Reporting	-		Lead Auditor
Onsite audit	3		2 Auditors
Other	-		Auditors travel time
Sub-Total			-
Travel Expenses (estimate)			-
Total Budget			-

The audit fee shown includes all audit activities described above. Actual travel expenses will be submitted at cost. Any NBP fees are not included. The cost of any follow-up audit that may be required to verify effective correction of major nonconformances is extra. Fees for such an audit, if required, will be [redacted] per day, plus travel expenses.

Once this scope of work is accepted by NBP, cancellation of this audit within 45 days of the agreed audit date will result in 100% of the fee plus any irreversible travel expenses being due.

**Proposed Statement of Work
Orange County Sanitation District
Biosolids EMS Interim Audit #4**

Additional Work (Optional)

The scope of this audit can be modified to include additional processes, if requested by NBP or OCSD, particularly if OCSD management feels an audit could help improve any of their EMS processes. Related timing and fees may need to be revised if the scope changes.

Proposal Submitted By: Jon Shaver / KEMA-Registered Quality, Inc.

Date: March 17, 2007

Biosolids EMS Interim Audits Plan

Orange County Sanitation District, Orange County CA

Interim Audit Program

The following Audit Program provides a plan for performing interim audits of the OCSD biosolids EMS. The scope in any year can be modified due to unplanned and/or changing circumstances.

Date of this Plan: March 15, 2007

EMS Verification Date: June 30, 2003

EMS Process	Key EMS Elements *	Interim Audit #1 (2004)	Interim Audit #2 (2005)	Interim Audit #3 (2006)	Interim Audit #4 (2007)
Examination of EMS Outcomes	-	X	X	X	X
Biosolids Policy	2	X			
Biosolids Production - Pretreatment	3, 10, 13				X
Biosolids Production - Solids Stabilization, Conditioning & Handling (Fountain Valley & Huntington Beach plants)	3, 10, 13			X	
Biosolids Production - Solids Storage & Transportation (Fountain Valley & Huntington Beach plants)	3, 10, 13			X	
Biosolids Production - Wastewater Treatment & Solids Collection (Fountain Valley & Huntington Beach plants)	3, 10, 13			X	
Biosolids Use & Disposition – Agriculture – Tule Ranch (Kern County)	3, 10, 13	X			
Biosolids Use & Disposition – Agriculture – Tule Ranch (Yuma County AZ)	3, 10, 13	X			
Biosolids Use & Disposition – Composting – Synagro (Kern County)	3, 10, 13				X
Biosolids Use & Disposition – Composting – Synagro (LaPaz County AZ)	3, 10, 13	X			
Biosolids Use & Disposition – Composting – Synagro (Riverside County CA)	3, 10, 13				Not audited
Communication	6, 9, 15	X	X	X	X
Competency, Training & Awareness	7, 8				X
Compliance (with legal & other requirements)	4, 13, 14				X
Contractor Control	Performed as part of other audits, as applicable				
Corrective and Preventive Action	14	X	X	X	X
Critical Control Points (Identification)	3	X			
Document Control & Recordkeeping	12				X
Emergency Preparedness	11				X
EMS Documentation	1			X	
EMS Planning & Public Participation	2, 6, 7	X		X	
Goals & Objectives	5, 13	X	X	X	X
Internal EMS Audits	16			X	
Maintenance	10				X
Management Involvement (incl Mgmt Review)	2, 5, 17	X	X	X	X

* - applicable requirements of all EMS Elements will be audited for each process. "Key elements" are shown for reference to demonstrate that all 17 EMS Elements are covered during 4 interim audits.