National Biosolids Partnership
Biosolids EMS Interim Audit Report

New England Organics, Hawk Ridge Composting Facility
Portland & Unity, Maine

Audit Dates: March 30 to April 1, 2011

Audit Conducted By: DEKRA Certification, Inc. (Chalfont, PA)

Audit Team: Mr. Jon Shaver, Certified Biosolids EMS Lead Auditor / Biosolids Auditor

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Report Date: April 28, 2011

Reviewed By: New England Organics

Approved By: Pierre Salle, President DEKRA Certification, Inc.

Biosolids EMS Audit Report

New England Organics, Portland, ME

Interim Audit, March 30 to April 1, 2011

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1. SUMMARY

DEKRA Certification, Inc. (DEKRA) conducted an independent audit of the environmental management system (EMS) being used by New England Organics (Portland, Maine) in managing its biosolids program for the Hawk Ridge Composting Facility (HRCF). The audit was conducted March 30 to April 1, 2011 (2½ days) at New England Organics' request and was interim audit #2 following Verification of the New England Organics biosolids management system in 2009.

Audit Purposes

The purposes of this audit were to:

- Verify that the biosolids management system being used by New England Organics conforms to expectations and requirements of the National Biosolids Partnership (NBP) *Environmental Management System for Biosolids*, comprised of 17 EMS Elements
- Confirm that New England Organics biosolids management system is functioning as intended, with practices and procedures performed as documented.
- Assess the effectiveness of the New England Organics biosolids management system, including outcomes being achieved.

Audit Criteria and Scope

Criteria for this audit were requirements of the National Biosolids Partnership EMS Elements and requirements of the New England Organics biosolids management system.

The scope of this audit included review of the dynamics of the New England Organics biosolids management system and audits of parts of that system, consistent with NBP requirements for interim audits and the interim audit program and Statement of Work agreed upon by New England Organics and DEKRA.

Audit Conclusions

The audit determined that:

- New England Organics biosolids management system is generating positive outcomes and functioning as intended, with five minor exceptions.
- No major nonconformances and five minor nonconformances were found with respect to the audit criteria. Approved corrective action plans are in place to address the nonconformances.
- All nonconformances from prior third party audits have been effectively corrected.

Based on results of this audit, DEKRA continues our Verification that the New England Organics biosolids management system meets the expectations and requirements of the NBP EMS Elements. We recommend continuing certification within NBP's Biosolids Management (EMS) Program.

2. AUDIT DETAILS

2A. Local Agency Details

Preparer Name: New England Organics (referred to as NEO in this report)

Facility: Hawk Ridge Compost Facility, Unity Plantation, Maine

Volume of Biosolids Compost Produced = 90K cubic yards per year

Number of Employees = 43

2B. Audit Team

The audit was conducted by Mr. Jon Shaver on behalf of DEKRA Certification, Inc. DEKRA is an accredited Third party Audit Company within the NBP Biosolids Management (EMS) Program and Mr. Shaver is certified by NBP as a Biosolids EMS Lead Auditor and Biosolids Auditor. DEKRA and the auditor assigned to this audit have an independent relationship with New England Organics that meets criteria established by the National Biosolids Partnership.

2C. Audit Scope and Methodology

The scope of this audit covered parts of New England Organics biosolids program, with special attention to practices and management activities that directly support biosolids-related operations, processes and activities. The following topics were covered:

1. Management System Dynamics / Effectiveness Review
   - Significant changes
   - Policy commitments
   - Goals & objectives process
   - Internal audits
   - Corrective & preventive action process
   - Management Review process
   - Correction of open nonconformances from previous third party audits (interim audit, 2010)
   - Examination of outcomes - regulatory compliance, interested party relations, environmental performance and quality practices.
2. Audit of the following EMS processes
   - Biosolids Composting Operations (at Hawk Ridge facility)
   - Competency, Awareness & Training
   - Compliance (with legal & other requirements)
   - Emergency Preparedness (at Hawk Ridge facility)
   - Maintenance (at Hawk Ridge facility)
   - Transportation (at Hawk Ridge facility)
3. Interested party interviews

The audit was performed by interviewing key personnel involved in New England Organics biosolids program, observing practices in place and reviewing pertinent documents and records. Interested parties were interviewed and transaction tests were performed to verify management system

effectiveness. It was conducted in a manner that is consistent with the NBP Auditor Guidance (August 2007). Sampling techniques were used.

2D. Definitions of Audit Findings & Required Corrective Action

Major Nonconformance – an omission from requirements and/or other departure that represents, or could cause, a systemic failure, or the existence of multiple related minor nonconformances, or failure to effectively correct a previous Third Party Audit nonconformance in a timely manner. For verification to proceed, correction of major nonconformances must be verified by third party audit within 90 days.

Minor Nonconformance – an isolated departure from requirements that does not represent a systemic failure. Minor nonconformances require timely and effective correction by the agency and verification by a Third Party Auditor during the next third party audit.

Opportunity (for improvement) – possible improvement in the EMS based on auditor observations. There is no obligation for action in response to these observations.

2E. Reference Materials

The following documents were used as references during this audit:

New England Organics Biosolids EMS Manual
National Biosolids Partnership "EMS Elements" standard (May 2002)
National Biosolids Partnership Biosolids EMS Third Party Auditor Guidance (August 2007)
National Biosolids Partnership Code of Good Practice
National Biosolids Partnership Manual of Good Practice

3. SUMMARY OF AUDIT RESULTS

3A. Verification Decision

Based on the results of this audit, DEKRA has verified that the New England Organics biosolids management system continues to meet the expectations and requirements of the National Biosolids Partnership Biosolids EMS Program. DEKRA's verification of that management system will continue and continuing certification within the NBP Biosolids Management Program is recommended.

3B. EMS Strengths

During this audit DEKRA noted the following strengths in New England Organics biosolids management system.

- Willingness to consider input from interested parties – A plan is in place and will be implemented for alternate pathogen reduction methods suggested by Maine DEP.
- Incident investigation system (part of corrective action process) used extensively, generating improvements, including tracking to identify system improvements.

3C. Nonconformances

One nonconformance from the KEMA interim audit in February 2010 remains open. That nonconformance is listed below:

Minor Nonconformance JS 10-01/3 NEO's definition of critical control points and operational controls states that they address legal, quality and public acceptance requirements. NEOs' identification of critical control points and operational controls does not clearly reference legal, quality or public acceptance requirements.

Four minor nonconformances with respect to requirements of the NBP EMS Elements were found during this audit. Those nonconformances are listed below.

Minor Nonconformance JS / 11-01/3 NBP EMS Element 3 requires the organization to identify potential or actual environmental impacts at each critical control point.

The revised Critical Control Point table notes that "environmental performance" needs to be controlled, however in some cases does not specify the performance or impact(s) that require control.

Minor Nonconformance JS / 11-02/9 NBP EMS Element 9 requires the organization to communicate information about its biosolids policy, biosolids management activities and EMS to employees.

Some aspects of the EMS are not fully understood by Transportation personnel. Awareness of EMS has not been fully communicated to those employees.

Minor Nonconformance JS / 11-03/14 NBP EMS Element 14 requires corrective actions be taken to address identified nonconformances.

Corrective action determined necessary for an incident that was recorded in May 2010 was not completed over 8 months past the June 2010 deadline. The action, therefore, is considered to have not been effectively implemented.

Minor Nonconformance JS / 11-04/17 NBP EMS Element 17 requires that management review performance of the biosolids program relative to established performance measures.

The Q4 2010 "Biosolids Program Management Review" does not include description (or discussion) of performance measures.

3D. Plans for Closure of Nonconformances

One nonconformance remains open from the interim audit conducted by KEMA (now DEKRA) in February 2010. The Lead Auditor has determined that the lack of closure does not represent a systemic problem since a simple omission occurred during the correction. A follow-up review will be conducted within 90 days (i.e. by June 30, 2011) to verify effective correction of that nonconformance.

New England Organics has prepared a Corrective Action Plan for each nonconformance found during this audit. Those plans have been reviewed and approved by DEKRA's Lead Auditor. Effective correction of each nonconformance will be verified during or before the next Third Party Interim Audit, which is currently planned to occur in March 2012.

3E. Opportunities for Improvement

The following "opportunities" for improving New England Organics biosolids program were noted during the audit. Opportunities do not represent nonconformances and New England Organics has no obligation to take any action in response to them.

Policy

- A link could be established between the Biosolids Policy and NEO mission statement / strategic initiatives

EMS Documentation

- Table 4.1 identifying applicable legal and other requirements could include SPCC requirements and refer to "other requirements" that may apply.
- Identification of process (critical) control points could reference significant quality requirements, customer expectations, community relations as well as environmental impacts and compliance requirements.

Internal Audits

- Nonconformances identified in internal audits could be written in a way that describes the requirement not being met
- Assessment of transportation contractors could be included as part of internal audits.

Corrective and Preventive Action

- The Incident Investigation form could reference whether further action is required, and if so what action.

Management Involvement

- Management reviews could be considered as a process, rather than a meeting, that includes planning meetings, monthly management meetings, quarterly biosolids program performance summaries, with a focus on recommendations for improvement.

Emergency Planning

- Emergency Plans in place at HRCF could be simplified and/or consolidated and, in some cases updated (e.g. Site Plan).

Hawk Ridge Composting Facility Operation

- Warning labels (e.g. NFPA or HMIS) could be shown on sulfuric acid tank (or door to room) at Hawk Ridge.

3F. Appeals

The NBP provides an appeals process for biosolids organizations and interested parties that disagree with the Verification conclusions of a third party EMS audit. The appeals process involves an Appeals Board; representing a balance of biosolids management interested parties, including an environmental advocacy group, and wastewater industry professionals. Appeals must be submitted within 30 days of the Audit Company's official verification decision. Anyone who may need help in understanding the appeals process should contact the National Biosolids Partnership staff, Mr. Jim Cox (e-mail jcox@wef.org).

An appeal process is available to persons concerned about the methods and/or scope of this audit. Further information about this appeal process can be obtained directly from DEKRA (contact Pierre Salle, pierre.salle@kema.com or Jon Shaver jon.shaver@kema.com) or from NBP (contact Jim Cox, jcox@wef.org).

3G. Agreements

A follow-up review will be conducted by June 30, 2011 (+1/2 day) to verify effective correction of the one nonconformance that remains open from the previous interim audit.

New England Organics and DEKRA have agreed that the next Interim Audit will occur in March 2012 and be conducted as a Third Party Audit. The scope of that audit will be consistent with the Interim Audits Program agreed by New England Organics and DEKRA. New England Organics will make arrangements for the follow-up audit and the next interim audit directly with DEKRA.

4. MANAGEMENT SYSTEM DYNAMICS

DEKRA reviews the dynamics of the biosolids management system to verify that the system is functioning effectively. The dynamics review covers reviews significant changes that the organization has implemented affecting its biosolids program, the effectiveness of key processes within the system, correction of open nonconformances from previous Third Party Audits and outcomes (results) the organization is achieving through the use of their management system

4A Outcomes

New England Organics biosolids program is improving through the use of their management system. The following outcomes were achieved within the past year.

Regulatory Compliance

Memo of Agreement completed with ME DEP to reduce spill reporting requirements

Environmental Performance

Energy use at Hawk Ridge has been reduced 10% from 2008 levels (high efficiency equipment, participation in Maine Efficiency Program)

Waste heat recovery from scrubbers has been designed for use in heating buildings at Hawk Ridge.

Continual improvement in groundwater quality at Hawk Ridge plant – nitrates continue to decrease; many wells now meet drinking water standards

Quality Product

Use of Solvita testing allows more timely and useful measures of compost quality

Product quality improving, coupled with customer networking helped double sales of a key blended product

Incident investigation (corrective action) process has led to improved SOPs

Interested Party Relations

NBP Certification recognized by generators (more credibility), allowing differentiation of services

Sales functions have been regionalized to better respond to local interests, standardize procedures

4B Significant Changes

One significant change occurred in the past year affecting the New England Organics biosolids management program. That change was the adoption of the Solvita method for testing and evaluating compost quality. Review during this audit confirmed the testing method is being used effectively to monitor quality.

Two personnel changes have occurred - a Director of Operations has been appointed and a new Director of Sales / Marketing has been appointed.

4C Management System and Documentation Revisions

Major changes to the EMS Manual, top level documentation and major processes within the biosolids management system were reviewed. The Critical Control Points table in the EMS Manual has been modified to include specific legal and other requirements that need to be controlled. There were no other structurally significant revisions.

4D Correction of Nonconformances From Previous Third Party Audits

Corrective action taken in response to nonconformances from KEMA's Verification Audit of New England Organics Biosolids Management System in February 2010 and the status of those nonconformances are sumarized below.

Minor Nonconformance JS 10-01/3 NEO's definition of critical control points and operational controls states that they address legal, quality and public acceptance requirements. NEOs' identification of critical control points and operational controls does not clearly reference legal, quality or public acceptance requirements.

Minor Nonconformance JS 10-02/12 NBP EMS Element 12 requires biosolids program documents be kept up to date. SOP #4 refers to monitoring and measurement at locations noted as "????" and is, therefore, incomplete.

> Corrective Action - New England Organics determined that the cause of this nonconformance was a typographical error. In response New England Organics corrected the procedure, omitting the "????" notation. This nonconformance is now closed.

Minor Nonconformance JS 10-03/13 NBP EMS Element 13 requires the organization to track progress in achieving its biosolids program goals and objectives. Reviews of performance in achieving objectives note the status of action plan steps, but have not identified the extent to which each objective is being achieved.

> Corrective Action - New England Organics determined that the cause of this nonconformance was an inadequate procedure. In response New England Organics developed a quarterly report to Directors that discusses progress in achieving objectives. This nonconformance is now closed.

Minor Nonconformance JS 10-04/17 NBP EMS Element 17 requires that management reviews address the need for changes in the EMS based on audit results. Limited discussion of required actions and changes resulting from the July 2009 internal audit were discussed at Management Reviews.

> Corrective Action - New England Organics determined that the cause of this nonconformance was an inadequate procedure. In response New England Organics developed a quarterly report to Directors that discusses internal audit results and planned corrective actions. This nonconformance is now closed.

4E Biosolids Policy Commitments

New England Organics Biosolids Management Policy remains as approved in 2009. The Policy includes a commitment to follow the principles of the NBP Cde of Good Practice. The following summarizes DEKRA's review of New England Organics's operational consistency with that commitment:

Compliance – HRCF continues with no regulatory NOVs. Relations with regulators in Maine and New Hampshire are excellent.

Product Quality and Monitoring – Compost prepared at HRCF continues to meet Class A and customer requirements. A new method (Solvita) is being used to further define compost quality.

Environmnetal Management System – A "biosolids management system" is in place. Annual audits verify it meets requirements of NBP EMS Elements.

Emergency Plans – Emergency plans are in place and tested periodically.

Sustainable Management Practices – Procedures are in place consistent with accepted sustainability initiatives, particularly in energy use reduction.

Preventive Maintenance -. Practices for preventive maintenance are in place.

Communications – Proactive communications with interested parties occurs through meetings and brochures about compost material. Regular internal comunication occurs through staff meetings.

Continual Improvement – NEO is committed to continually improving compost quality and environmental performance. Examples of outcomes are discussed under "Outcomes".

4F Effectiveness - Biosolids Goals and Objectives Process

All 5 objectives for improving the NEO biosolids program in 2010 were achieved.

4G Effectiveness – Internal Audits Process

An internal audit of the NEO biosolids management system was conducted in December 2010. The audit addressed conformance with requirements of the NBP EMS Elements. Results were reported to management and findings from the audit are being corrected.

4H Effectiveness - Management Involvement (including Management Reviews)

Management involvement has been demonstrated through actions taken regarding issues raised in management reviews and programs for measurement and improvement. The actions taken are consistent with defined objectives. Monthly Directors meetings are conducted, including quarterly performance reviews for the bioslids management system.

4I Effectiveness - Corrective and Preventive Action Process

A robust Corrective and Preventive Action Process is in place and being used to address audit findings and incidents that occur. The process was used to correct nonconformances from previous Third Party Audits.

4J Use of NBP Certification and DEKRA Verification

Use of Certificate references and DEKRA's Verification were reviewed. There were no concerns.

4K Audit Results – Management System Dynamics & Effectiveness

Review of the dynamics of New England Organics Biosolids Management System confirmed that it is generating positive outcomes and functioning effectively, except as noted below:

Minor Nonconformance JS / 11-01/3 NBP EMS Element 3 requires the organization to identify potential or actual environmental impacts at each critical control point. The revised Critical Control Point table notes that "environmental performance" needs to be controlled, however in some cases does not specify the performance or impact(s) that requires control.

Minor Nonconformance JS / 11-03/14 NBP EMS Element 14 requires corrective actions be taken to address identified nonconformances. Corrective action determined necessary for an incident that was recorded in May 2010 was not completed over 8 months past the June 2010 deadline. The action, therefore, is considered to have not been effectively implemented.

Minor Nonconformance JS / 11-04/17 NBP EMS Element 17 requires that management review performance of the biosolids program relative to established performance measures. The Q4 2010 "Biosolids Program Management Review" does not include description (or discussion) of performance measures.

5. RESULTS - PROCESS AUDITS

The following describes results of DEKRA's audit of processes that New England Organics uses in managing biosolids activities at the Hawk Ridge Composting Facility and the level of conformance with applicable requirements of the EMS Elements.

5A Biosolids Composting Operations (at Hawk Ridge facility)

Solids received from Generators are received and mixed with sawdust, paper fiber and other organics and composted in an aerated tunnel vessel. Air emitting from the process is scrubbed in an acid scrubber. The compost is cured, matured in windrows, blended to meet specific customer needs andre- tested (pathogen reduction) in a laboratory. Finished material is shipped via trucks to customer sites. Personnel are experienced and capable of handling multiple tasks. Written SOPs are available.

Audit Result:

Audit of the process described above found it meets NBP expectations and conforms to applicable requirements of the EMS Elements.

5B Competency, Awareness & Training

Roles and responsibilities are defined in the organization chart and in Job Design documents. Regulatory requirements and annual appraisals are used to define training needs. Personnel are also trained in new equipment and/or methods. EMS Awareness training is conducted annually for all employees.

Audit Result:

Audit of the process described above found it meets NBP expectations and conforms to applicable requirements of the EMS Elements.

5C Compliance (with legal & other requirements)

Legal requirements specific to HRCF are listed in the EMS Manual. A Compliance Calendar is used to denote regulatory reporting. Any noncompliance (or near miss) is investigated and corrective action taken if needed. Relations with State regulators are excellent.

Audit Result:

Audit of the process described above found it meets NBP expectations and conforms to applicable requirements of the EMS Elements.

5D Emergency Preparedness and Response (at Hawk Ridge facility)

Several emergency plans are maintained in a single binder, including Spill Control Plan, Hazmat Response Plan and Emergency Action Plan. Plans are reviewed annually and updated as needed. Desktop exercises are conducted periodically.

Audit Result:

Audit of the process described above found it meets NBP expectations and conforms to applicable requirements of the EMS Elements.

5E Maintenance (at Hawk Ridge facility)

Basic maintenance on equipment is done by Operators. More complex maintenance is done by outside contractors selected based on their qualifications. Records of maintenance performed on each critical piece of equipment are kept in files and reviewed to determine if predictive trends are evident.

Audit Result:

Audit of the process described above found it meets NBP expectations and conforms to applicable requirements of the EMS Elements.

5F Transportation (at Hawk Ridge facility)

Solids from Generators are transported to the Hawk Ridge plant using NEO trucks and occasionally via contracted carriers. Expectations for contractors are communicated to them in writing. EMS requirements are reportedly communicated to NEO personnel.

Audit Result:

Audit of the process described above found it meets NBP expectations and conforms to applicable requirements of the EMS Elements, except as noted below.

> Minor Nonconformance JS / 11-02/9 NBP EMS Element 9 requires the organization to communicate information about its biosolids policy, biosolids management activities and EMS to employees. Some aspects of the EMS are not fully understood by Transportation personnel. Awareness of EMS has not been fully communicated to those employees.

APPENDICES

List of Participants

The following persons participated in this audit. Other persons provided additional explanations, as necessary.

New England Organics Personnel

George Belmont	HRCF Facility Manager
James Ecker	General Manager
John Kelly	Director of Product Sales
Jeff McBurnie	Director of Strategic Permitting & Regulatory Affairs
Jen McDonnell	Director - Marketing & Sales
Bob Trombley	Transportation Manager
Mary Waring	Compliance Mgr (+ EMS Coordinator)

Other

Mike Rainey	New Hampshire Biosolids Regulator
Geraldine Reynolds	Neighbor (interested party)
Mark Wright	Customer / Distributor

List of Documents & Records Reviewed

Acton Plan Tracking Template 2011, 2010
Analysis reports (various)
Biosolids Policy 2/19/09
Biosolids Program Performance Report 2010
Casella Mission Statement & Strategic initiatives
Cassella Strategic Plan 2012-14
Compliance Calendar 2011
Corrective Action worksheets (various)
Critical Control Points table
Directors Meeting minutes (various)
Emergency Action Plan 2/3/10
Emergency Plan – Extremely Hazardous Materials May 2010
EMS Awareness Training program (2010)
HRCF Finished Production and Quality Control Plan 2/5/10
Incident & Accident review (various)
Incident report – 11/17/08
Incident report – hydraulic spill 2010
Incident system reporting form
Internal audit report 12/30/10
Job Design – Env'l Compliance Manager
List of legal and other requirements specific to HRCF
Maine Env'l Lab Analysis Report 10/26/10
Management Review (Q1, Q2, Q3, Q4 2010)
MSDS (various)
NEO Mission Statement & Strategic initiatives (draft)
NEO Organization chart 1/3/11
Performance review (confidential)
Safety Inspection checklist 3-16-11)
Solvita Digital Systems information
SOPs (various)
Spill control plan 6/9/10
Spill Prevention Countermeasures & Control Plan
Training records (various)
Tunnell Report 1/10/11

END OF REPORT