

NATIONAL BIOSOLIDS PARTNERSHIP AUDIT REPORT

**Central Davis Sewer District
Wastewater Treatment Facility
Kaysville, Utah**

Audit conducted by

NSF-International Strategic Registrations

William R. Hancuff, Lead Auditor

References:

**National Biosolids Partnership (NBP) *EMS Elements*
NBP *Third Party Verification Auditor Guidance – November 2001*
(Latest Revision August 2011)
NBP Code of Good Practice
Central Davis Sewer District
Environmental Management System Manual
*(Revised – March 17, 2012)***

Final Report – October 1, 2012

INTRODUCTION

The purpose of the Biosolids Management Program (BMP) Third Party Re-verification audit is to verify the Central Davis Sewer District (CDS) Wastewater Treatment Facility Biosolids Environmental Management System (EMS), Kaysville, Utah conforms to BMP requirements of the National Biosolids Partnership (NBP). The goal of the Third Party Re-verification audit is to collect and evaluate objective evidence that determines whether the CDS BMP is functioning as intended, that practices and procedures are conducted as documented, and that the BMP as implemented conforms to the NBP's BMP Elements, the Code of Good Practice and the BMP program objectives.

RECOMMENDATION

The results of the Central Davis Sewer District re-verification audit and review of their corrective actions are positive, and it is the recommendation of the audit team that the Wastewater Treatment Facility Biosolids Management Program (BMP), maintain its "Certification" status. Re-verification of the BMP is part of the continual improvement process.

AUDIT SCOPE

In general terms, the scope of the Third Party Verification audit encompasses the entire biosolids value chain (pretreatment, collection and treatment, through final end use) with special attention on those practices and management activities that directly support biosolids-related operations, processes, and activities within the Wastewater Treatment Plant's operations.

The NSF- International Strategic Registrations, Ltd. (NSF-ISR) conducted a third party re-verification audit of the CDS Wastewater Treatment Facility's Biosolids Management Program. The re-verification process consisted of an on-site visit from 19 September to 21 September 2012. The on-site audit team consisted of Dr. William R. Hancuff, Lead Auditor.

The physical biosolids facilities included in the audit and visited during the re-verification audit included the CDS Wastewater Treatment Facility (including the biosolids composting operation) and the land application site contiguous with the treatment plant site.

The following individuals were interviewed as part of the audit process:

Steve Brough, Trustee, Central Davis Sewer District, Board of Trustees.
Leland Myers, Director, Central Davis Sewer District.

Jill Houston, Assistant Manager, Plant Engineer, Grade IV Wastewater treatment plant operator and Grade IV collection operator
Dave Barnes – Maintenance Superintendent
Brent Justensen, Operations Manager
Jon Hess, Plant Superintendent, Grade III Wastewater treatment plant operator and Grade III collection system operator
Nate Cloward, Grade III, Wastewater treatment operator, Grade IV Collection Operator
Trace Workman, Grade IV Wastewater treatment plant operator and Grade III collection operator.
Rowdy DeJong, Grade III, Wastewater treatment plant operator
Larry Justicesen, farmer, part time employee
Jace Woodrow, Belt Press Operator
Ryan Weeks, Plant maintenance worker
John Woodrow – Grade IV, Collection Operator
Bob Brobst – US EPA Region VIII
Mark Schmitz, State Biosolids Management Program Coordinator, Environmental Scientist, State of Utah, Department of Environmental Quality
John Mackey, PE, Staff Engineer, State of Utah, Department of Environmental Quality
Vaughn Raymond – Kaysville Citizen and compost user

RE-VERIFICATION AUDIT FINDINGS

The re-verification audit covered all elements of the standard in considerable detail. It included review of the latest version of the CSDS EMS Manual dated March 17, 2012 and employed the most recent version of the NBP Third Party Verification Auditor Guidance dated September 9, 2011. The re-verification audit found 1 minor non-conformance, 6 opportunities for improvement and 2 commendations or positive observations.

The following is a review of the positive observations made during this audit. The minor non-conformance and opportunities for improvement follow and are listed by item number, which correspond to the Element minimum conformance requirement, in the sequence of the NBP standard elements.

Positive Observations

The CSDS Wastewater treatment management and plant operations personnel involved in the biosolids environmental management system development should be recognized for their outstanding achievements, and the exceptional features of their Biosolids EMS. The following is a summary of those positive items observed during the audit.

Commendations:

CDSO maintains an excellent library of training videos addressing the operations of wastewater and biosolids management. This is a first rate production of training modules for various critical control points such as mixer truck loading and operation; belt press start up and operation; gravity belt start up and operation; and compost turner operation.

CDSO maintains an exemplary communication program with federal and state regulators. This high level of interaction has resulted in the District attaining regional recognition as a leader throughout the rocky mountain area, not only in biosolids, but also water quality and other environmental issues.

And finally, the hard work and dedication of the CDSO Team must be acknowledged. While maintaining the BMP certification goal is obviously a team effort the guidance provided by the CDSO Director to ensure accomplishment of this goal must be recognized.

Minor Nonconformance

Requirement 11.2 – Element 11: Emergency Preparedness & Response procedure # 1 indicates that the CDSO has an Emergency Response Plan which is reviewed yearly and updated as needed. The current Emergency Response Plan is dated 2007 and there was no objective evidence available to demonstrate that the plan was reviewed yearly. Consider updating the plan.

Opportunities for Improvement

Requirement 5.5 – For Goal number 2 related to use of wood waste from windstorm, consider providing quantity of wood waste generated and the amounts used for different purposes. For Goal number 3 related to installation of new step screens and improvement in rag removal, consider quantifying the increase in the amount of rags removed from the waste stream. (note: improved performance results in reduction in operational problems and lower maintenance costs.) For Goal number 4, consider relating the increase in phosphate removal to the benefit for biosolids (and quantify if possible).

Requirement 10.1 – Consider developing a set of operations and maintenance instructions or procedures and/or a training videos for the newly acquired compost turner (Kobe) and possibly the in-line grinder (Roto Chopper).

Requirement 10.1 – Element 10: Operational Control procedure #3 indicates that operational controls will be reviewed on an annual basis or whenever significant changes in the plant processes and/or operational controls occur. Clarify the intent of this step of the procedure and how the procedure header (date reviewed) along with the revision history might be used to document this review.

Requirement 12.2 – Consider including a footer on all Element procedures and Standard Operating Procedures stating that any printed version of the procedure is not controlled and the only official current version is available on the computer.

Requirement 12.2 – Consider removing the reference to William R. Hancuff as the last reviewer of the Element 14: Nonconformance – Preventive and Corrective Action procedure.

Requirement 14.5 – Consider including a section in this procedure that describes how the District intends to address opportunities for improvement identified in audits.

For the minor non-conformance, the District personnel prepared Audit and Corrective Action Worksheets and will implement corrective actions according to their EMS procedures to provide continual improvements to their biosolids program. The proposed corrective action was found to be acceptable and final closure will be completed during the next third party interim audit.

CENTRAL DAVIS SEWER DISTRICT COMMENTS

Central Davis Sewer District accepts the audit comments and appreciates the effort of the Auditor during the process. As of September 29, 2012 the District has corrected all minor non-conformances and has implemented all Opportunities for Improvement. The District will maintain the Certified EMS program for the foreseeable future.

OUTCOMES MATTER

The CDSB Biosolids Management Program established five biosolids BMP goals for 2011. In addition four BMP goals were established for 2012. The goals and objectives were developed with input from the operators and consideration of potential public concerns. The final goals and objectives were formulated by the CDSB Manager and selected by the Board of Trustees. The CDSB Biosolids goals for its BMP were established to align with each of the four outcome focal points of the NBP program as identified below:

1. Environmental Performance,
2. Regulatory Compliance,
3. Relations with Interested Parties, and
4. Quality Biosolids Management Practices.

While it is not a requirement to attain all goals and objectives, it is a critical component of the program to demonstrate overall biosolids and BMP improvements. As was mentioned the CDSB established several goals for 2011 and 2012. The goals were developed using Specific, Measurable, Achievable, Relevant, and Time Bound (SMART) criteria. All of the goals and objectives for 2011 were accomplished with some mid-term

shifts and substantial progress was made on those goals established for 2012. The facility's performance relative to each of the above outcome groups is addressed below.

In the Environmental Performance outcome area, the CDSO established one goal in 2011 and one goal in 2012.

The goal and objective for 2011 was to upgrade polymer feed controls for the belt press and thickener systems. The objective was to replace the polymer feed system, which was antiquated and did not provide the needed operational controls. The design for the replacement feed controls was completed in early 2011 and the system installation occurred in July 2011. The improvement allowed for lower polymer feed and greater operating efficiency. The installation, operation and improved efficiency of this upgrade was fully successful.

The goal and objective for 2012 was to install a second step screen in the headworks with the purpose of vastly improving rag removal. In the present configuration only a portion of the influent flows through an existing step screen thus allowing a measurable quantity of rags to pass into the downstream biosolids value chain critical control points. These rags cause considerable maintenance problems in the pumps throughout the treatment processes. The rags also accumulate in the anaerobic digesters, diminishing digester capacity and increasing the frequency of digester cleaning. Removal of these rags will result in improved performance of the biosolids process operations and decrease the operation and maintenance cost of the plant. This goal also results in benefits in the Quality Biosolids Management Practices and Relations with Interested Parties outcome areas due to the removal of aesthetically displeasing materials that might otherwise reach the final compost product. A purchase order for the new step screen was issued on March 17, 2012 and delivery was expected in September 2012. Installation was scheduled immediately on receipt.

In the Regulatory Compliance outcome area, the District established one goal for 2011 and one goal for 2012.

The goal and objective for 2011 was to evaluate the impact on volatile solids reduction and increase in heavy metals in the biosolids associated with adding alum or ferric chloride to the trickling filter to improve the removal of phosphorus through the wastewater plant. The District selected alum as the chemical of choice and began its addition to the trickling filter in March 2011 and with the exception of May continued through early August 2011. An empirical evaluation of the impact of the chemical addition indicated that the phosphorus concentration was reduced by about 0.5 percent and that in order to improve removal efficiency intense flash mixing at the point of chemical addition would be required. During the testing period the treatment facility did not experience any significant change in the concentration of heavy metals in the biosolids or an obvious increase in volatile solids reduction.

The goal and objective for 2012 was to follow on to the accomplishments of 2011. The goal was to install alum/flash mixing equipment to augment phosphorus removal. The

district issued a purchase order for the mixers in May 2012. The manhole to house the mixer was purchased in July, and the manhole, piping and mixer brackets were installed in August. The power was supplied in September and operational testing was scheduled for October and November. A final report on the project is set for delivery to the Board in November. This goal also results in benefits in the Quality Biosolids Management Practices and Environmental Performance outcome areas due to the benefits derived in both of those outcomes.

In the Relations with Interested Parties outcome area, the District established one goal for 2011 and one for 2012.

The goal and objective for 2011 was to make a presentation to water quality professionals on the impacts of solids minimization on biosolids quality, specifically on the potentially unintended increase in metals concentration associated with decreased solids production. In April 2011 Leland Myers gave a presentation on the subject at the Water Environment Association of Utah annual meeting. The technical paper improves awareness of interested parties in the potential consequences associated with increasing solids concentrations.

The goal and objective for 2012 was to improve the public perception of biosolids compost. In December 2011 a major windstorm caused considerable tree damage and loss to the residents of Kaysville. Based on the Central Davis Sewer District's desire to be a good neighbor the District offered to accept the wood waste from the storm. Additionally, the CDS D has an annual requirement for admixture to compost its biosolids. The District received significant excess bulking agent (green and wood waste) from the local citizens. The goal and objective was to develop a beneficial product that uses this wood waste product and continues the good will generated by the acceptance of this waste. It was determined to compost the green waste and distribute the product back to the locals. Any remainder could be used as bulking agent for the biosolids. The state has regulations that apply to green waste only composting and CDS D met these regulations following the same composting technique used for composting biosolids. The limbs and branches were passed through the inline grinder and the chips were stacked in two windrows for composting. In accordance with the regulations the compost pile temperatures were maintain at greater than 60 degrees Celsius for a minimum of seven days. A press release was prepared in July notifying the District resident of the availability of the compost and alerting the public to the biosolids compost as well. Many individuals that would not have seen the quality of the biosolids compost were made aware of its nature by seeing it at the same time as they picked up the wood waste compost. This was a major accomplishment in relations with interested parties. Additionally CDS D had a more than adequate supply of bulking agent to carry it through the winter of 2013.

In the Quality Biosolids Management Practices outcomes area, the District established two goals for 2011 and one goal for 2012.

The first goal for 2011 was to evaluate compost pile mixing using a pile turner versus a front-end loader to observe possible product quality impacts and changes in odor production. The District maintains an aging pile mixer at significant cost and has experienced challenges obtaining replacement parts. Using a front-end loader to accomplish pile turning and mixing has potential to be cost effective. During the year the District located reasonably priced replacement parts for the pile turner and postponed this goal and objective for consideration in the future. (Note that by 2012 CDS D purchased a replacement pile turner for the high maintenance machine.)

The second goal and objective was to evaluate the side stream treatment of decant water from belt presses and thickener. A study was made of the following side streams: aerobic biosolids dewatering, anaerobic biosolids thickening, and anaerobic biosolids decanting. All three side streams are enriched with phosphorus sufficiently high to make removal a feasible alternative. Additionally nitrogen reduction is also a possibility for anaerobic processes. An independent consultant from the University of Utah provided the evaluation and made recommendations relative to side treatment alternatives. Such side stream treatment as part of the biosolids value chain can impact nutrient concentrations in the final biosolids product as well as producing other potentially useful end products.

The goal and objective for 2012 was to develop a mechanism to identify and measure savings and cost avoidance associate with implementing quality biosolids management. A report titled “ Measuring and Assessing Cost Savings and Cost Avoidance in Biosolids Management” was prepared and presented at the Board Meeing in April 2012. The implementation of this process is scheduled to be used as part of the evaluation of the improvements of quality biosolids management and performance outcomes in 2013.

CONCLUSIONS AND RECOMMENDATIONS

The results of the re-verification audit show the CDS D has a very strong Environmental Management System. The NSF lead auditor reviewed and approved the implementation of the corrective actions from the past nonconformance. Therefore the recommendation for the (CDS D) Wastewater Treatment Facility Biosolids Management Program (BMP), Kaysville, Utah to maintain its “Certification” status is made to the NBP. The full implementation of the corrective actions for the minor finding will be accomplished according to the schedule proposed in the corrective actions worksheets.

As was mentioned previously, the BMP is a continual improvement process. The results of this and future audits will provide value added to the system and should be viewed as an overall opportunity to improve. Every audit is a snapshot in time, and does not, or cannot, identify each and every area for improvement. And yet, while no single audit identifies all of the areas for improvement the results of each audit provide an additional incremental step in the overall system’s improvement.

Based on discussions the following is the proposed interim audit approach. Each interim audit will include a review of: the organization's progress toward goals and objectives; EMS outcomes (environmental performance; regulatory compliance; interested party relations; quality practices); actions taken to correct minor non-

conformances; the management review process; corrective action requests and responses; and preventive actions. The above areas are mostly addressed in the standard Elements 4, 5, 14, and 17 and to a lesser degree in Elements 1, 2, 15 and 16.

In addition to the above, the following elements will be audited in detail according to the proposed schedule:

Year 6 (third party) – Elements 3, 10, 12, 13

Year 7 (third party) – Elements 1, 8, 15, 17

Year 8 (third party) – Elements 5, 6, 9, 14, 16

Year 9 (third party) – Elements 2, 4, 7, 11

Year 10 (third party) Re-verification

Attachment 1

Documents and Other Objective Evidence Reviewed During Re-verification Audit

Element 1. Documentation of EMS for Biosolids

- Central Davis Sewer District – EMS Manual – July 2006, updated March 17, 2012, signed by Leland J. Meyers, District Manager.
- EMS Manual Element 1: Central Davis Sewer District EMS Manual, last revised June 24, 2010.
- Central Davis Sewer District signed letter of understanding with NBP dated December 16, 2002 signed by Dean Brand, Chairman Board of Trustees.
- EMS Manual Element 2: Biosolids Management Policy containing CDSD Biosolids Management Policy Statement, last revised June 24, 2010.
- Interview Steve Brough, Trustee, Central Davis Sewer District, Board of Trustees.
- Interview with Leland J. Meyers, Director, Central Davis Sewer District.
- EMS Manual Element 6: Public Participation in Planning, last revised June 24, 2010.
- EMS Manual Element 9: Communication, last revised June 24, 2010.
- EMS Manual Element 11: Emergency Preparedness and Response, last revised June 24, 2010.
- Table 3.1: Critical Control Points, Operational Controls, SOPs, Monitoring and Measurements and Environmental Outcomes, last revised June 24, 2010.
- EMS Manual Element 7: Roles and Responsibilities, last revised June 24, 2010.

Element 2. Biosolids Management Policy

- EMS Manual Element 2: Biosolids Management Policy containing CDSD Biosolids Management Policy Statement, last revised June 24, 2010.
- Central Davis Sewer District signed letter of understanding with NBP dated December 16, 2002 signed by Dean Brand, Chairman Board of Trustees.
- Interview with Steve Brough, Trustee, Central Davis Sewer District, Board of Trustees.
- Interview with Leland J. Meyers, Director, Central Davis Sewer District.
- Interviews with Brent Justensen, Jon Hess, Nate Cloward, Jace Woodrow, Ryan Weeks, and John Woodrow on Policy awareness.
- Reviewed Safety training log for 2010 - 2012, containing EMS training activities.
- Reviewed EMS training log for 2010 - 2012.
- Verified BMP policy communicated to interested parties through availability on web-site (cdsewer.org).

Element 3. Critical Control Points

- EMS Manual Element 3: Critical Control Points, last revised June 24, 2010.

- Table 3.1: Critical Control Points, Operational Controls, SOPs, Monitoring and Measurements and Environmental Outcomes, last revised June 24, 2010.
- Interview with Leland J. Meyers, Director, Central Davis Sewer District.
- Interviews with Jill Houston, Brent Justensen, Jon Hess, Nate Cloward, Jace Woodrow, and John Woodrow on Critical Control Points.
- Comparison of Critical Control Points with those contained in Appendix F.
- Spot checked operational controls in SOPs.
- Field review of wastewater treatment plant facilities.
- Toured onsite land application area.
- Cross-checked operational SOPs with critical control points.

Element 4. Legal and Other Requirements

- EMS Manual Element 4: Legal and Other Requirements, last revised June 22, 2010.
- Table 4.1 – Legal Requirements and Guidance Specific to Central Davis Sewer District Biosolids Land Application Program.
- Table 4.2 - UT0020974 – Summary of Permit Requirements (Table of Contents).
- Interviews with Leland J. Meyers, Jill Houston, Brent Justensen and Jon Hess.
- Interview with Mark Schmitz, State Biosolids Management Program Coordinator, Environmental Scientist, State of Utah, Department of Environmental Quality.
- Interview with Bob Brobst – US EPA Region VIII
- Interview with John Mackey, PE, Staff Engineer, State of Utah, Department of Environmental Quality.
- Reviewed UPDES Discharge Permit No. UT0020974, Part II – Industrial Pretreatment Program, effective March 1, 2010 and expiring on February 28, 2015.
- Reviewed UPDES Discharge Permit No. UT0020974 Part III – Biosolids Requirements (UPDES Biosolids Permit No. UTL-020974) effective March 1, 2010 and expiring on February 28, 2015.
- Reviewed Standard Operating Procedure #001 – Anaerobic Digestion, last revised September 22, 2010, for inclusion of legal requirements.
- Reviewed Standard Operating Procedure #002 – Class A EQ Composting, last revised September 22, 2010, for inclusion of legal requirements.
- Reviewed Standard Operating Procedure #003 – Class B Composting, last revised September 22, 2010, for inclusion of legal requirements.
- Reviewed Standard Operating Procedure #004 – Land Application of EQ Biosolids, last revised September 4, 2007, for inclusion of legal requirements.
- Discussed industrial pretreatment local limits development.

Element 5. Goals and Objectives for Continual Improvement

- EMS Manual Element 5: Goals and Objectives, last revised June 24, 2010.
- Goals & Objectives - Action Plan and Tracking Template for 2012.
- Goals & Objectives - Action Plan & Tracking – Critical Outcome Indicators 2012.
- Interviews with Leland J. Meyers and Jill Houston

- Reviewed CDSW Wastewater Treatment Plant Odor Management Plan dated November 4, 2003.
- Discussed input from interested parties use of wood waste from windstorm for compost and mulch production goals and objectives.
- Reviewed EMS Annual Report and Management Review submitted to Board of Trustees – January 2012.

Element 6. Public Participation in Planning

- EMS Manual Element 6: Public Participation in Planning Public, last revised June 24, 2010.
- Interview with Steve Brough, Trustee, Central Davis Sewer District, Board of Trustees.
- Interviews with Leland J. Meyers and Jill Houston.
- Interview with Mark Schmitz, State Biosolids Management Program Coordinator, Environmental Scientist, State of Utah, Department of Environmental Quality.
- Interview with Bob Brobst – US EPA Region VIII.
- Interview with John Mackey, PE, Staff Engineer, State of Utah, Department of Environmental Quality.
- Interviews with compost users – Larry Justicesen, farmer, part time employee and Vaughn Raymond – Kaysville Citizen.
- Reviewed public notice of third party audit published in Central Davis County Sewer District public notice of Board of Trustees meeting held September 13, 2012.
- Reviewed odor complaint contact log – last recorded complaint 3/12/10.
- Discussion of past odor complaints.
- Reviewed CDSW Wastewater Treatment Plant Odor Management Plan, dated November 4, 2003.
- Comment options on website.
- CDSW Consumer Information sheet on Compost (distributed to recipients of final compost product on request).

Element 7. Roles and Responsibilities

- EMS Manual Element 7: Roles and Responsibilities, last revised June 24 2010.
- Board of Trustee Meeting Minutes – November 14, 2002 – authorization of District Manager to participate in EMS program (reviewed previously).
- Central Davis Sewer District Organization Chart.
- Interviews with Leland J. Meyers, Jill Houston, Brent Justensen and Jon Hess.
- Review of resources expended on EMS related biosolids operations

Element 8. Training

- EMS Manual Element 8: Training, last revised June 24, 2010.
- Interview with Leland J. Meyers, Director, Central Davis Sewer District.

- Interviews with Brent Justensen, Jon Hess, Nate Cloward, Jace Woodrow, Ryan Weeks, and John Woodrow on BMP awareness.
- Verification of Operator Certifications for 2012.
- Reviewed Safety training log, containing training activities on 6/20/12, 7/18/12 and 8/15/12.
- Reviewed EMS training log, containing EMS training activities on 6/8/11, 11/30/11 and 9/13/12.
- Watched training video on mixer truck loading and operations.
- Other videos viewed included – Belt press start up and operation, gravity belt start up and operation, and planned compost turner operation.
- Employee General Awareness Training Attendance Sheet in log books.

Element 9. Communications

- EMS Manual Element 9: Communication, last revised June 24, 2010.
- Reviewed Biosolids EMS web-site (cdsewer.org).
- Interview with Steve Brough, Trustee, Central Davis Sewer District, Board of Trustees.
- Interviews with Leland J. Meyers and Jill Houston.
- Interviews with compost users – Larry Justicesen, farmer, part time employee and Vaughn Raymond – Kaysville Citizen.
- CDS D Consumer Information sheet on Compost (distributed to recipients of final compost product on request).
- Reviewed Safety training log for 2010 - 2012, containing EMS training activities.
- Reviewed EMS training log for 2010 - 2012.
- Reviewed 2006 Biosolids Annual Report and National Biosolids Partnership Report and Audit – February 19, 2007.

Element 10. Operational Control of Critical Control Points

- EMS Manual Element 10: Operational Controls, last revised June 24, 2010.
- Reviewed Standard Operating Procedure #001 – Anaerobic Digestion, last revised September 22, 2010.
- Reviewed Standard Operating Procedure #002 – Class A EQ Composting, last revised September 22, 2010.
- Reviewed Standard Operating Procedure #003 – Class B Composting, last revised September 22, 2010.
- Reviewed Standard Operating Procedure #004 – Land Application of EQ Biosolids, last revised September 4, 2007.
- Reviewed Standard Operating Procedure #005 – Distribution and Marketing of Class A EQ Compost, last revised September 22, 2010.
- Reviewed Standard Operating Procedure 006 – General Operations/Daily Operating Duties, last revised June 22, 2010.
- Reviewed Standard Operating Procedure #007 – Digester Mixing, last revised September 22, 2010.

- Reviewed Standard Operating Procedure #008 – Belt Press/Thickener Operations, last revised September 22, 2010.
- Reviewed Standard Operating Procedure #009 – Preparation of Admixture – Wood Grinding, last revised June 22, 2010.
- Reviewed Standard Operating Procedure #010 – Dust Production Activities, last revised July 10, 2008.
- Interview with Leland Myers, Director, Central Davis Sewer District.
- Interview with Jill Houston, Assistant Manager, Plant Engineer, Grade IV Wastewater treatment plant operator and Grade IV collection operator
- Interview with Dave Barnes – Maintenance Superintendent
- Interview with Brent Justensen, Operations Manager
- Interview with Jon Hess, Plant Superintendent, Grade III Wastewater treatment plant operator and Grade III collection system operator
- Interview with Nate Cloward, Grade III, Wastewater treatment operator, Grade IV Collection Operator
- Interview with Trace Workman, Grade IV Wastewater treatment plant operator and Grade III collection operator.
- Interview with Jace Woodrow, Belt Press Operator
- Interview with Ryan Weeks, Plant maintenance worker
- Interview with John Woodrow – Grade IV, Collection Operator

Element 11. Emergency Preparedness and Response

- EMS Manual Element 11: Emergency Preparedness & Response, last revised June 24, 2010.
- Reviewed CDSO Emergency Response Plan March 2007.
- Interview with Leland J. Meyers.

Element 12. EMS Documentation and Document Control

- EMS Manual Element 12: Documentation, Document Control & Recordkeeping, last revised June 24, 2010.
- Central Davis Sewer District – EMS Manual – July 2006, updated March 17, 2012.
- Reviewed EMS revision logs for each element 2012.
- Interviews with Leland J. Meyers and Jill Houston.
- Reviewed all Standard Operating Procedures.
- Reviewed UPDES Permit UT0020974 and UTL-020974 Part V – Monitoring, Recording & General Reporting Requirements additional recordkeeping requirements.
- UPDES Permit UT0020974 Part III Section G – Additional Record Keeping Requirements Specific to Biosolids.

Element 13. Monitoring and Measurement

- EMS Manual Element 13: Monitoring and Measurement, last revised June 24, 2010.
- Goals & Objectives - Action Plan & Tracking – Critical Outcome Indicators for 2011 and 2012.
- Reviewed Standard Operating Procedure #001 – Anaerobic Digestion, last revised September 22, 2010.
- Reviewed Standard Operating Procedure #002 – Class A EQ Composting, last revised September 22, 2010.
- Reviewed Standard Operating Procedure #003 – Class B Composting, last revised September 22, 2010.
- Reviewed Standard Operating Procedure #004 – Land Application of EQ Biosolids, last revised September 4, 2007.
- Reviewed Standard Operating Procedure #007 – Digester Mixing, last revised September 22, 2010.
- Reviewed Standard Operating Procedure #008 – Belt Press/Thickener Operations, last revised September 22, 2010.
- Reviewed Standard Operating Procedure #009 – Preparation of Admixture – Wood Grinding, last revised June 22, 2010.
- Interviews with Leland J. Meyers and Jill Houston.
- Discussed maintenance management.
- Discussed land application controls and settings.
- Discussed Operations and Maintenance Manual containing operational controls and maintenance for specific equipment.
- Interviews with Operations and Maintenance staff: Dave Barnes – Maintenance Superintendent, Brent Justensen, Operations Manager, Jon Hess, Plant Superintendent, Nate Cloward, Grade III, Wastewater treatment operator, Grade IV Collection Operator, Trace Workman, Grade IV Wastewater treatment plant operator and Grade III collection operator, Jace Woodrow, Belt Press Operator, Ryan Weeks, Plant maintenance worker, and John Woodrow, Grade IV, Collection Operator.
- Reviewed sampling of monitoring and measurement records (digester and composting operations) as contained EMS Annual Report and Management Review submitted to Board of Trustees – 2011.
- UPDES Permit UT0020974 Part III Section G – Additional Record Keeping Requirements Specific to Biosolids.
- Visual observation of compost temperature monitoring procedure.
- Reviewed biosolids application records by zones.
- Reviewed compost records.

Element 14. Nonconformances: Preventive and Corrective Action

- EMS Manual Element 14: Nonconformances – Preventive and Corrective Actions, last revised October 7, 2011.
- Interview with Leland J. Meyers.
- Interviews with internal auditors Jill Houston and Mark Schmitz.

- Reviewed Audit and Corrective Action Binder containing worksheets prepared to address third party interim audit findings from September 2011, and internal audit findings.
- Internal Audit Report for audit conducted in December 2011.
- Corrective Action - BMP Deficiency Worksheet Form (Routine Operation and Maintenance Activities)
- Board of Trustees Meeting Agenda for June 14, 2007 (included review of external audit results.)

Element 15. Periodic Biosolids Program and EMS Performance Report

- EMS Manual Element 15: Biosolids Management Program Report, last revised June 24, 2010.
- EMS Annual Report and Management Review submitted to Board of Trustees – 2012.
- Interviews with Leland J. Meyers and Jill Houston.
- Interview with Steve Brough, Trustee, Central Davis Sewer District, Board of Trustees.
- Reviewed 2011 Annual Biosolids Report with extensive summaries of monitoring and measurements.

Element 16. Internal EMS Audit

- EMS Manual Element 16: Internal EMS Audit, last revised September 22, 2010.
- Interview with Leland J. Meyers.
- Interviews with internal auditors Jill Houston and Mark Schmitz.
- Reviewed Internal Auditor's Worksheet.
- Reviewed Internal Audit Report for BMP audit conducted December 2011.
- Reviewed Biosolids Quarterly Internal Audits (regulatory compliance) for 2011 and 2012.

Element 17. Periodic Management Review of Performance

- EMS Manual Element 17: Management Review, last revised June 24, 2011.
- Reviewed 2011 Biosolids Annual Report and National Biosolids Partnership Report and Audit – January 2012.
- Interview with Steve Brough, Trustee, Central Davis Sewer District, Board of Trustees.
- Interviews with Leland J. Meyers and Jill Houston.

Attachment 3

National Biosolids Partnership Appeals Process

Biosolids organizations that participate in the National Biosolids Partnership (NBP) Environmental Management System (EMS) Program are required to undergo an EMS verification audit by an independent, third party auditor assigned by the NBP and yearly interim audits. The purpose of the EMS audit is to determine whether or not the organization's EMS conforms with -- that is, meets the requirements of -- the NBP program, as defined in the EMS Elements¹. The spirit of these requirements includes a well-documented program and meaningful opportunities for interested party involvement.

The NBP provides an appeals process for biosolids organizations and interested parties that disagree with the findings of a third party EMS audit. The verification appeals process involves an Appeals Board; representing a balance of biosolids management interested parties, including an environmental advocacy group, and wastewater industry professionals. An appeal must be submitted within 30 days of the audit company's official verification decision or interim audit decision.

To submit an appeal before the Appeals Board, the petitioner must set forth the specific EMS element(s) and requirements that is believed to have not been evaluated and/or implemented consistent with NBP requirements as reflected in the EMS Elements, along with the objective evidence to support that claim. For example, a petitioner may believe that a major nonconformance exists but was not found by the auditor. In this case, the petitioner would need to identify in the petition the specific EMS element believed to be out of conformance and why.

To submit an appeal, petitioners must fill out and submit the standardized appeals petition form that is available on the NBP website at <http://www.biosolids.org>. A formal appeal must be submitted within 30 days of the verification decision or interim audit decision by the audit company.

The Board's Administrative Officer receives all appeals petitions on behalf of the Board and conducts a basic completeness check. Upon completion of this check, the petition is either forwarded to Appeals Board members or back to the petitioner with incomplete areas documented. Petitions should be sent via certified, return receipt requested mail to:

The NBP EMS Appeals Board, Attention: Board Administrative Officer, c/o Water Environment Federation, 601 Wythe Street, Alexandria, VA 22314

The Appeals Board will examine the facts, interview parties involved, deliberate the case, and then make a determination as to whether a major nonconformance does or does not exist. Appeals cases vary in complexity. As a result, the time required for the Board to evaluate a case and make a decision might vary. However, the overall Board target for processing an appeal is approximately four months.

¹ The *EMS Elements* and other program materials are available on the NBP website at <http://www.biosolids.org>.