

**NATIONAL BIOSOLIDS PARTNERSHIP
THIRD INTERIM 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 2007)
NBP *Code of Good Practice*
Central Davis Sewer District EMS Manual – July 2006
*(Updated – June 2010)***

Final Report – September 26, 2010

INTRODUCTION

The purpose of the Biosolids Environmental Management System (EMS) interim audits is to verify through regular reviews the system's health and effectiveness between verification audits. The third party on-site interim audits provide independent reviews and supports credibility between re-verification audits. The goal of the third party interim audit is to collect and evaluate objective evidence related to a portion of the EMS such that over the course of the four interim audits conducted between verification audits all 17 elements are covered. The audits determine whether the Central Davis Sewer District (CDS) Wastewater Treatment Facility Biosolids EMS is functioning as intended, that practices and procedures are conducted as documented, and that the EMS as implemented conforms to the NBP's Code of Good Practice and EMS program objectives.

RECOMMENDATION

The results of the Central Davis Sewer District interim audit and review of their biosolids EMS program are positive, and it is the recommendation of the audit team that the Wastewater Treatment Facility Biosolids EMS maintain its "Certification" status.

AUDIT SCOPE

The NSF-International Strategic Registrations, Ltd. (NSF-ISR) conducted a third party interim audit of the Central Davis Sewer District's EMS for Biosolids from September 22, 2010 through September 23, 2010. The on-site interim audit team consisted of Dr. William R. Hancuff, Lead Auditor.

The scope of the third interim audit included a review of areas generally covered in Elements 4, 5, 14, and 17; namely the organization's progress toward goals and objectives; EMS outcomes (environmental performance, regulatory compliance, interested party relations, and quality practices); actions taken to correct minor nonconformances; the management review process; and corrective and preventive action requests and responses.

Other elements that were audited in their entirety were 3, 10, and 13. Additional elements that were partially audited as they related to outcomes, changes in equipment and processes, composting and land application sites and internal auditing included Elements 1, 2, 4, 6, 9 and 16.

The physical biosolids facilities included in the audit and visited during the on-site audit were the screening facilities, screw pumps, oxidation ditch, anaerobic digesters,

digester boiler, belt press/thickener operations, biosolids truck loading facilities, bulking agent storage area, farm equipment storage area, biosolids drying beds, future polymer addition facilities, tub grinder, windrow compost piles, compost final storage area, and land application sites.

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

Susan Holmes, Chair of the Central Davis Sewer District Board of Trustees
Leland Myers, District Manager, Central Davis Sewer District
Jill Houston, Assistant Manager, Plant Engineer, Grade IV Wastewater treatment plant operator and Grade IV collection system operator
Jon Hess, Plant Superintendent, Grade III Wastewater treatment plant operator and Grade III collection system operator
Mark Schmitz, State Biosolids Management Program Coordinator, Environmental Scientist, State of Utah, Department of Environmental Quality.
Bob Brobst – US EPA Region VIII
Mike Snow, local citizen and compost user
Dave VanHoff, Grade IV Wastewater treatment plant operator and Grade IV collection system operator
Trace Workman, Grade IV Wastewater treatment plant operator and Grade III collection system operator.
Rowdy DeJong, Grade II Wastewater treatment plant operator and Grade I collection system operator.
Bruce Gorham, temporary biosolids operations personnel
Nate Cloward, Grade III Wastewater treatment plant operator and Grade III collection system operator
Kasey Cloward, Grade I collection system operator
John Woodrow, Grade III collection system operator
Debby DeJong, laboratory analyst

INTERIM AUDIT FINDINGS

The interim audit found 2 positive finding, no major non-conformances, no minor non-conformances, and 10 opportunities for improvement.

The following is a review of the positive observation made during the interim audit. 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 CDSW Wastewater treatment management and plant operations personnel involved in the biosolids environmental management system development and maintenance should be recognized for their outstanding achievements, and the

exceptional features of their Biosolids EMS. The following positive items were observed during this audit.

Commendations:

- The CDSB Board of Trustees is extremely knowledgeable regarding their Biosolids Environmental Management System. They are very proactive in participating in the detailed review of the annual biosolids management report and participate in the selection of the annual goals and objectives. Additionally, they are dedicated to the ultimate objective of continual improvement.
- The District has made improvements in its public participation program by encouraging local citizens to bring their tree trimmings and tree wastes to the composting operations site so they can be used as a compost bulking agent. This has increased the active involvement of the neighbors in the biosolids process and compost production as well as promoting consumption of the final product.

The continued hard work and dedication of the EMS Team is also acknowledged. While maintaining the EMS verification status is obviously a team effort the guidance provided by the CDSB Manager to ensure continual improvement of the system is recognized.

Opportunities for Improvement

- Element 5 – Opportunity for Improvement – Within the Goals and Objectives for Continual Improvement consider accepting the accomplishment of the goal to maintain exceptional operations, as demonstrated by no violations or complaints. This has been a goal for a few years and has been consistently attained. Also consider for future goals and objectives some of the planned capital improvements or operational changes, such as: the purchase of a new pile turner, the possibility of switching to covered static pile operations, the installation of new controls and instrumentation at the belt press and dewatering operations, the upgrade of the SCADA system, and the future use of alum or ferric for improving performance of SVI and other longer term biosolids benefits.
- Element 10 – Opportunity for Improvement – Within Standard Operating Procedure #001 it references that the anaerobic digester shall remain above 35 degrees C. This figure is used throughout the procedure yet the field temperature data gathered and recorded is in degrees F. Consider clarifying the regulatory temperature requirements as degrees F (note that 35 degrees C is equivalent to 95 degrees F) or changing the temperature data collected and recorded to degrees C. Also consider clarifying in the procedure that if the digester temperature drops to 97 degrees F, operational personnel notify the plant superintendent so that corrective actions can be taken before the temperature drops below 95 degrees F.

- Element 10 – Opportunity for Improvement – In item 2(e) of Standard Operating Procedure #001 within the Volatile Solids Reduction section it indicates that the digester system should be frequently tested to monitor progress toward achieving 38% volatile solids reduction. Consider including a specific monitoring frequency range in the procedure for this process.
- Element 10 – Opportunity for Improvement – Within Standard Operating Procedure #002 in the Wood Waste – Admixture Preparation section, consider modifying item 2 to reflect that grinding is performed by CSDS personnel but in emergency situations contract personnel may be utilized.
- Element 10 – Opportunity for Improvement – Within Standard Operating Procedure #005 in the “Testing Process” section consider including the specific standard for pathogen testing, namely reducing fecal coliforms to less than 1000 MPN/gram or reducing Salmonella to less than 3 MPN/4grams. Also consider including the specific heavy metal numerical values contained in Table 3 of 40 CFR 503.
- Element 10 – Opportunity for Improvement – Within Standard Operating Procedure #007 in the Daily System Checks section consider clarifying item 2 to indicate the “kick test” is performed on the primary digester and a visual check with a tape measure is performed on the secondary digester. Also, within the Weekly System Checks section consider adding a new item related to the specific weekly checks made on the digester boiler.
- Element 10 – Opportunity for Improvement – Within Standard Operating Procedure #008 in the Aerobic Biosolids – Belt Presses section, consider defining in item 6 that the Ashbrook belt presses are exercised approximately monthly.
- Element 14 – Opportunity for Improvement – Within 2(e) of the CSDS procedure addressing element 14 it states that the District Manager is responsible for tracking progress on corrective actions, which will be documented by completing the tracking section included as part of the audit worksheet. A review of the audit worksheets used for corrective actions did not demonstrate that these forms were being used to document the tracking as identified in the procedure.
- Element 14 – Opportunity for Improvement – Throughout the CSDS procedure addressing Element 14 it refers to the “audit worksheet” which has evolved into the “audit and/or corrective action worksheet.” Consider editing the element 14 procedure and other places in the manual to reflect the current title.
- Element 16 – Opportunity for Improvement – Within the CSDS procedure addressing Element 16 in the section addressing Periodic Auditor Review it indicates that the “audit and corrective action worksheet” will be used to document the quarterly audit reviews. The quarterly audit reviews use a different format from that described in the procedure. Consider either changing the

procedure to reflect the use of the form presently in use, or begin using the “audit and corrective action worksheet”.

The CDSO has indicated that it will address the opportunities for improvement as outlined above and will develop new objectives and targets for approval by the Board of Trustees at its January 2011 meeting.

The District’s EMS has demonstrated continual improvement over the past year and it is expected that this will continue into the future.

CENTRAL DAVIS SEWER DISTRICT COMMENTS

Central Davis Sewer District management accepts the audit comments and agrees with the opportunities for improvement. The District believes that it has an excellent biosolids EMS and the results of the audit confirm that the program is operating successfully. The continuous improvement program using the SMART process allows the District to explore ways to improve operations and contact with customers. The District appreciates the verbal suggestions from the Auditor relating to potential future goals.

OUTCOMES MATTER

The CDSO Biosolids Environmental Management System established five biosolids EMS goals for 2009. In addition five biosolids EMS goals were established for 2010. 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 CDSO Manager and selected by the Board of Trustees. The CDSO Biosolids goals for its EMS 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 system to demonstrate overall biosolids and EMS improvements. As was mentioned the CDSO established several goals for 2009 and 2010. The goals were developed using Specific, Measurable, Achievable, Relevant, and Time Bound (SMART) criteria. All of the goals and objectives for 2009 were attained and most of the goals and objectives for 2010 were accomplished with some mid-term shifts. The facility’s performance relative to each of the above outcome groups is addressed below.

In the Environmental Performance outcome area, the CDSO established two goals in 2009, each with a specific objective. In 2010 the District also established two goals. The first goal for 2009 and 2010 has been the same for a few years and was to maintain exceptional operations throughout the calendar year. The objective of this goal was to

have no violations or complaints. The goal and its objective were accomplished in both 2009 and 2010, as well as in past years.

The second goal established for 2009 was to evaluate the potential for recycling additional waste wood products through coloring of ground wood chips. The objective of this evaluation was to determine the costs and marketability of colored wood chips. The use of this approach would allow the District to maintain a surplus of bulking agent wood chips, which if not used could be marketed as opposed to disposed in a landfill. In 2009 a report was prepared which showed that the cost benefit of purchasing coloring equipment would not be offset by the sale of such a product.

The second goal established for 2010 was to evaluate the potential for co-composting phragmites with biosolids. The objective was to determine the feasibility of using phragmites as a bulking agent for biosolids composting. Phragmites are an invasive species along the shore of the Great Salt Lake. The evaluation was to determine if they could be effectively composted and the seeds inactivated with the addition of biosolids. This would be a benefit for both the availability of bulking agents and reduction of an invasive species. The results of the study indicated that with the addition of biosolids, phragmites could be composted and reasonable results obtained. However, without additional treatment the appearance of the product would detract from the salability of the final product. Two additional concerns related to the feasibility of using phragmites as a bulking agent were: the unknown viability of the phragmites seed after composting, and the potential carryover effect of herbicides used to eradicate the plants.

In the Regulatory Compliance outcome area, the District established one goal for 2009 and one goal for 2010. The goal for 2009 was to raise the field dikes to insure they contained storm water runoff. The objective was to ensure that phosphorus was not flushed into the Great Salt Lake. This objective was based on the results of a previous goal of the EMS accomplished in 2008, which was to evaluate the land application field dikes to ensure they were sufficient to contain storm water runoff and minimize the possibility of flushing phosphorus into the lake. The District completed the survey of the dikes and evaluated the retention area along with the potential runoff. A report of the dikes adequacy was prepared and it was determined that the dikes needed to be raised in some areas. The 2009 goal was completed by July 2009 through raising the embankment levels by addition to or rearrangement of dike soils.

A new goal and objective was developed for 2010. In recent years the copper concentration had been increasing in the anaerobic biosolids and was approaching the regulatory limit for heavy metals as presented in Table 3 of 40 CFR 503. The goal was to model the sources of copper contributing to the District's wastewater treatment plant and to determine if reduction was necessary, and if so, possible. The initial phase of the study was to identify copper entering the wastewater plant from multiple areas within the District. This involved testing 13 zones throughout the District's collection system to locate possible sources of elevated copper concentration. Two hot spots were identified but on further testing one was determined to be a laboratory error. The second area was found to be in the location of new expensive homes where copper plumbing had been

installed. Subsequent follow-up analyses of anaerobic biosolids showed an inexplicable decrease in the copper concentration, dropping to a level of lower concern, and no further action was needed for the time being.

In the Relations with Interested Parties outcome area, the District established two goals and objectives in 2009 and one goal and objective for 2010.

The first goal in 2009 was the completion of a goal established in 2007/2008 and associated with the installation of a six foot high security fence along the boundary of the District's property. There are homes proposed for construction on the east of the District's northern farm fields. Secure separation is needed to ensure site restrictions are met and to prevent problems with children in the farm/land application area. The objective was to provide separation from future housing by installing a six-foot high security fence along the District property in this area. This goal also met regulatory requirements to ensure site restrictions are met for land application areas

A security fencing contract was awarded to Custom Fence in mid-2007. By the end of 2007 the contractor had installed 3,480 feet of chain link fence with three strand barb wire on top. One gate was also installed. The District awarded an additional contract to Custom Fence in 2008 for the installation of 3,300 feet of the same fencing along with two gates. This work was completed by mid-2008.

As was mentioned this goal and objective was carried forward to 2009 and fencing was installed on the remainder of the District site. Custom Fence completed the installation of all fencing in June 2009, such that now all of the property not bounded by the Great Salt Lake is fenced.

The second goal established for 2009 was carried over from 2008 and associated with the creation and distribution of a public education video and brochure containing information on the problems associated with commode disposal of rags and wipes.

This goal was also used to meet the quality biosolids management outcome. The latter was intended to improve compost quality by reducing the amount of rag/clean wipes reaching the wastewater treatment plant. Some rag/clean wipes are produced with a soft fiber that disintegrates well when passing through the wastewater system; while others with interlocking fibers are extremely resistant to tearing and pass through the system. These materials often compromise the operation of the collection system and treatment plant as well as impacting the composting operations and final product quality. The objective of this goal was to create and distribute information to home owners explaining the problem and requesting assistance in reducing quantities disposed in the commode.

Two methods of public education were determined to be used: a video and a brochure. An educational video was produced and has been used in school education programs, tours and neighborhood presentations, and is distributed to interested parties through the Water Environment Association of Utah. Although the use of a brochure

(leaflet) met some resistance final approval of the format and content was attained in October 2009.

The goal for 2010 was to improve citizens understanding and acceptance of the beneficial use of composted biosolids and the objective was to provide individuals with valid scientific information about composting. This objective was to be carried out by CDSO having a booth at the Kaysville Farmers Market to provide education on the use of compost as a soil amendment. Because the District had sold all available compost it was decided not to market an unavailable product, so a new mid-year alternative goal and objective was established, and the existing goal was proposed to be carried over as a goal for 2011.

The new 2010 goal was to improve the general understanding of how microbiological growth indicates the health of the activated sludge process, as a critical control point in the production of biosolids. The objective was to create a video to explain how microscopic evaluation of activated sludge can be used to determine the condition of biomass and what can be done to change operating conditions. This goal can be equally used to meet the environmental performance outcome as well as the quality biosolids management practices outcome. Progress is being made on the development of this video and it is expected it will be completed by the end of the 2010 calendar year.

In the Quality Biosolids Management Practices outcomes area, the District established two goals and objectives for 2009 and one for 2010. Each of the goals for 2009 were previously discussed in other outcome sections but are referenced here.

The first 2009 goal was carried over from 2008 and was described previously in the Relations with Interested Parties outcome section. It was the goal associated with minimizing rag and wipe disposal into the wastewater collection system. Reduction in these materials will eliminate their interference in the composting process as well as make the aesthetics of the final compost product more appealing. Educational materials were produced and used in 2008 and leaflets were produced in 2009.

The second 2009 goal was also carried over from 2008 and was the same as the one originally described in the Relations with Interested Parties Outcome section dealing with installation of fencing around the District boundary of the northern farming area. The installation of this fencing provides an indirect benefit to biosolids management practices and all fencing was completed by June 2009.

The 2010 goal was to increase operator awareness and understanding of critical control points. The objective of this goal was to prepare a training video relating to critical control points and how such points are determined and incorporated into the District's EMS and specifically the biosolids value chain. The video was completed in 2010 and all operational personnel had viewed the training video by September 2010.

CONCLUSIONS AND RECOMMENDATIONS

The results of the third party interim audit show the CDS D has a very strong Environmental Management System. The NSF lead auditor found no major or minor nonconformities. Therefore, it is the recommendation of the audit team that (CDS D) Wastewater Treatment Facility Biosolids Environmental Management System (EMS), Kaysville, Utah retain its “verification” status.

As was mentioned previously, an EMS is a continuous improvement process, and retention of verification status is not the end. The results of this and future audits are intended to 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 between the Facility’s Biosolids EMS Coordinator and the third party auditor the following interim audit schedule is proposed for the next year.

The scope of each interim audit will include a review of areas generally covered in Elements 4, 5, 14, and 17; namely the organization’s progress toward goals and objectives; EMS outcomes (environmental performance, regulatory compliance, interested party relations, and quality practices); actions taken to correct minor nonconformances; the management review process; and corrective and preventive action requests and responses.

In addition, other EMS components that will generally be audited include Elements 1, 2, 15 and 16, while concentration will be placed on the following elements during each interim audit:

Year 4 (third party) – Elements 7, 11, and 12

Attachment 1

Documents and Other Object Evidence Reviewed During the Third Third Party Interim Audit

Element 1. Documentation of EMS for Biosolids

- Central Davis Sewer District – EMS Manual – Developed June 2006, Last Updated June 2010.
- EMS Manual Element 1: Central Davis Sewer District EMS Manual, dated July 13, 2006, revised June 24, 2010.
- EMS Manual Element 2: Biosolids Management Policy containing CDSD Biosolids Management Statement, dated July 13, 2006, revised June 24, 2010.
- Interview with Susan Holmes, Chair of the Central Davis Sewer District Board of Trustees.
- Interview with Leland Myers, District Manager, Central Davis Sewer District
- EMS Manual Element 3: Table 3.1 – Critical Control Points, Operational Controls, SOPs, Monitoring/Measurement and Environmental Outcomes, Rev 6 – June 2010.
- EMS Manual Element 10: Operational Controls, dated July 13, 2006, revised June 8, 2007.
- EMS Manual Element 13: Monitoring and Measurement, dated July 13, 2006, revised June 24, 2010.

Element 2. Biosolids Management Policy

- EMS Manual Element 2: Biosolids Management Policy containing CDSD Biosolids Management Statement, dated July 13, 2006, revised June 6, 2007.
- Interview with Susan Holmes, Chair of the Central Davis Sewer District Board of Trustees.
- Interview with Leland Myers, District Manager, Central Davis Sewer District
- Interviews with Jill Houston, Jon Hess, Dave VanHoff, Trace Workman, Rowdy DeJong, Bruce Gorham, Nate Cloward, Kasey Cloward, John Woodrow, and Debby DeJong.
- Policy communicated to interested parties through availability on web-site (cdsewer.org).

Element 4. Legal and Other Requirements

- EMS Manual Element 4: Legal and Other Requirements, dated July 13, 2006, revised June 22, 2010.
- Utah Pollutant Discharge Elimination System Permit Number Major Municipal Permit UT0020974, signed 1 March 2010.
- Utah Pollutant Discharge Elimination System Permit Number Biosolids Permit UTL-020974, signed 1 March 2010.

- Interview with Leland Myers, District Manager, Central Davis Sewer District.
- Interviews with Mark Schmitz, State Biosolids Management Program Coordinator, Environmental Scientist, State of Utah, Department of Environmental Quality and Bob Brobst – US EPA Region VIII.

Element 5. Goals and Objectives for Continual Improvement

- EMS Manual Element 5: Goals and Objectives, dated July 13, 2006, revised Jan 7, 2010.
- Goals & Objectives - Action Plan & Tracking – Critical Outcome Indicators 2008.
- Goals & Objectives - Action Plan & Tracking – Critical Outcome Indicators 2009.
- Goals & Objectives - Action Plan & Tracking – Critical Outcome Indicators 2010.
- Interview with Susan Holmes, Chair of the Central Davis Sewer District Board of Trustees
- Interviews with Leland J. Myers and Jill Houston.
- Interviews with Dave VanHoff, Trace Workman, Rowdy DeJong, Bruce Gorham
- CDSO Annual Biosolids Management Report for 2009
- CDSO NBP EMS Report on Goals and Objectives – Reporting Year 2009
- Goal # 3 – Relations With Interested Parties - Revised
- Annual Activities – Management Review – January 7, 2009.
- Report on Modeling/Evaluation of Influent Copper.
- Report on Co-composting of Phragmites and Biosolids.
- Viewed CCP Training Video on Critical Control Points.
- Access and evaluation of website (cdsewer.org).

Element 6. Public Participation in Planning

- Reviewed Relations with Interested Parties Outcomes
- Interview with Susan Holmes, Chair of the Central Davis Sewer District Board of Trustees
- Interview with Leland Myers, District Manager, Central Davis Sewer District
- Interview with Mike Snow, local citizen and compost user

Element 8. Training

- Viewed CCP Training Video on Critical Control Points.
- Interviews with operational personnel - Jon Hess, Dave VanHoff, Trace Workman, Rowdy DeJong, Bruce Gorham, Nate Cloward, Kasey Cloward, John Woodrow.

Element 9. Communications

- Interview with Susan Holmes, Chair of the Central Davis Sewer District Board of Trustees
- Interview with Mike Snow, local citizen and compost user.

Element 10. Operational Control of Critical Control Points

- EMS Manual Element 10: Operational Controls, dated July 13, 2006, revised June 8, 2007
- Interview with Leland Myers, District Manager, Central Davis Sewer District
- Interviews with operational personnel - Jon Hess, Dave VanHoff, Trace Workman, Rowdy DeJong, Bruce Gorham, Nate Cloward, Kasey Cloward, John Woodrow.
- Reviewed Standard Operating Procedure #001 – Anaerobic Digestion, dated July 13, 2006, revised February 6, 2007.
- Reviewed Standard Operating Procedure #002 – Class A EQ Composting, dated July 13, 2006, revised October 29, 2007.
- Reviewed Standard Operating Procedure #003 – Class B Composting, dated July 13, 2006, revised September 9, 2007.
- Reviewed Standard Operating Procedure #004 – Land Application of EQ Biosolids, dated July 13, 2006, revised September 9, 2007.
- Reviewed Standard Operating Procedure #005 – Distribution and Marketing of Class A EQ Compost, dated July 13, 2006, revised June 1, 2007.
- Reviewed Standard Operating Procedure #006 – General Operations/Daily Operating Duties, dated December 14, 2006, revised June 1, 2007.
- Reviewed Standard Operating Procedure #007 – Digester Mixing, dated June 14, 2007, revised June 5, 2007.
- Reviewed Standard Operating Procedure #008 – Belt Press/Thickener Operations, dated June 14, 2007, revised June 6, 2007.
- Reviewed Standard Operating Procedure #009 – Preparation of Admixture – Wood Grinding, dated September 20, 2007, revised June 12, 2008.
- Reviewed Standard Operating Procedure #010 – Dust Production Activities, dated July 10, 2008, revised July 10, 2008.
- Visited and reviewed the following operations: screening facilities, screw pumps, oxidation ditch, anaerobic digesters, digester boiler, belt press/thickener operations, biosolids truck loading facilities, bulking agent storage area, farm equipment storage area, biosolids drying beds, future polymer addition facilities, tub grinder, windrow compost piles, compost final storage area, and land application sites.
- Viewed CCP Training Video on Critical Control Points.

Element 13. Monitoring and Measurement

- EMS Manual Element 13: Monitoring and Measurement Operational Controls, dated July 13, 2006, revised June 24, 2010.
- Interview with Leland Myers, District Manager, Central Davis Sewer District
- Interviews with operational personnel - Jon Hess, Dave VanHoff, Trace Workman, Rowdy DeJong, Bruce Gorham, Nate Cloward, Kasey Cloward, John Woodrow.
- Interview with Debby DeJong, laboratory analyst
- Reviewed 2010 biosolids application record for zone 16.
- Reviewed 2010 CDS aerobic biosolids load count
- Reviewed 2010 CDS compost piles records

- Reviewed August and September 2010 daily digester temperature logs
- Reviewed August and September 2010 operational duties (DODs) charts
- Reviewed Standard Operating Procedure #001 – Anaerobic Digestion, dated July 13, 2006, revised February 6, 2007.
- Reviewed Standard Operating Procedure #002 – Class A EQ Composting, dated July 13, 2006, revised October 29, 2007.
- Reviewed Standard Operating Procedure #003 – Class B Composting, dated July 13, 2006, revised September 9, 2007.
- Reviewed Standard Operating Procedure #004 – Land Application of EQ Biosolids, dated July 13, 2006, revised September 9, 2007.
- Reviewed Standard Operating Procedure #005 – Distribution and Marketing of Class A EQ Compost, dated July 13, 2006, revised June 1, 2007.
- Reviewed Standard Operating Procedure #006 – General Operations/Daily Operating Duties, dated December 14, 2006, revised June 1, 2007.
- Reviewed Standard Operating Procedure #007 – Digester Mixing, dated June 14, 2007, revised June 5, 2007.
- Reviewed Standard Operating Procedure #008 – Belt Press/Thickener Operations, dated June 14, 2007, revised June 6, 2007.
- Reviewed Standard Operating Procedure #009 – Preparation of Admixture – Wood Grinding, dated September 20, 2007, revised June 12, 2008.
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- Visited and reviewed the following operations: screening facilities, screw pumps, oxidation ditch, anaerobic digesters, digester boiler, belt press/thickener operations, biosolids truck loading facilities, bulking agent storage area, farm equipment storage area, biosolids drying beds, future polymer addition facilities, tub grinder, windrow compost piles, compost final storage area, and land application sites.
- Viewed CCP Training Video on Critical Control Points.

Element 14. Nonconformances: Preventive and Corrective Action

- EMS Manual Element 14: Nonconformances – Preventive and Corrective Action, dated July 13, 2006, revised September 10, 2007.
- Reviewed Audit and/or Corrective Action Worksheets prepared to address third party interim audit findings from September 2009.
- Reviewed Internal Audit Report for audit conducted on December 15 and 16, 2009.
- Reviewed Audit and Corrective Action Worksheets prepared to address results of internal audit of December 15 and 16, 2009.
- Interview with Leland J. Myers.
- Interview with Jill Houston, Internal Audit Lead Auditor.
- Interviewed Mark Schmitz, State Biosolids Management Program Coordinator, Environmental Scientist, State of Utah, Department of Environmental Quality. (internal auditor).

Element 15. Periodic Biosolids Program and EMS Performance Report

- EMS Manual Element 15: Biosolids Management Program Report, dated July 13, 2006, revised December 16, 2006.
- EMS Annual Report and Management Review submitted to Board of Trustees – February 2009.
- Interview with Susan Holmes, Chair of the Central Davis Sewer District Board of Trustees.
- Interviews with Leland J. Myers
- CDSN NBP EMS Report on Goals and Objectives – Reporting Year 2009.
- CDSN NBP EMS Report on Goals and Objectives – Reporting Year 2010.
- Reviewed 2009 Annual Biosolids Report

Element 16. Internal EMS Audit

- EMS Manual Element 16: Internal EMS Audit, dated July 13, 2006, revised January 24, 2010.
- Reviewed Internal Audit Report for audit conducted on December 15 and 16, 2009.
- Reviewed Internal Auditor's Worksheets.
- Biosolids internal quarterly audits; September 21, 2010, May 12, 2010, January 2010, August 2008.
- Interview with Leland J. Myers.
- Interview with Jill Houston, Internal Audit Lead Auditor.
- Interviewed Mark Schmitz, State Biosolids Management Program Coordinator, Environmental Scientist, State of Utah, Department of Environmental Quality. (internal auditor)

Element 17. Periodic Management Review of Performance

- EMS Manual Element 17: Management Review, dated July 13, 2006, revised June 8, 2007.
- Reviewed CDSN Annual Activities Management Review - January 2010.
- Reviewed CDSN 2010 Annual Biosolids Management Report
- Interview with Susan Holmes, Chair of the Central Davis Sewer District Board of Trustees.
- Interview with Leland Myers, District Manager, Central Davis Sewer District

Susan Holmes, Chair of the Central Davis Sewer District Board of Trustees.

Leland Myers, District Manager, Central Davis Sewer District

Jill Houston, Assistant Manager, Plant Engineer, Grade IV Wastewater treatment plant operator and Grade IV collection system operator

Jon Hess, Plant Superintendent, Grade III Wastewater treatment plant operator and Grade III collection system operator

Mike Snow, local citizen and compost user

Dave VanHoff, Grade IV Wastewater treatment plant operator and Grade IV collection system operator
Trace Workman, Grade IV Wastewater treatment plant operator and Grade III collection system operator.
Rowdy DeJong, Grade II Wastewater treatment plant operator and Grade I collection system operator.
Bruce Gorham, temporary biosolids operations personnel
Nate Cloward, Grade III Wastewater treatment plant operator and Grade III collection system operator
Kasey Cloward, Grade I collection system operator
John Woodrow, Grade III collection system operator
Debby DeJong, laboratory analyst

Attachment 2

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

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

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.