NATIONAL BIOSOLIDS PARTNERSHIP
REVERIFICATION AUDIT REPORT

Village Creek Water Reclamation Facility
Fort Worth, Texas

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 – August 2007
NBP – Code of Good Practice
Village Creek Water Reclamation Facility
Environmental Management System for Biosolids Manual
(Latest Revisions – 2016)

Final Report – September 8, 2016
INTRODUCTION

The purpose of the Biosolids Management Program (BMP) re-verification audit is to verify the Village Creek Wastewater Reclamation Plant’s (VCWRP) Environmental Management System (EMS) for Biosolids 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 VCWRP 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 BMP Elements, the Code of Good Practice and the program goals and objectives.

RECOMMENDATION

The results of the Village Creek Wastewater Reclamation Plant’s Re-verification audit are positive and it is the recommendation of NSF that the VCWRP’s BMP maintain its Platinum Level Recognition Certification status.

AUDIT SCOPE

The NSF- International Strategic Registrations, Ltd. (NSF-ISR) conducted a third party re-verification audit of the Village Creek Wastewater Reclamation Plant’s Environmental Management System for Biosolids from August 8 through August 11, 2016. The on-site re-verification audit team consisted of Dr. William R. Hancuff, Lead Auditor.

In general terms, the scope of the Third Party Re-verification audit encompassed 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 biosolids value chain.

The physical biosolids facilities visited during the re-verification audit included the VCWRP administrative offices, two sets of headworks, two sets of bar screens, grit chamber and classifier building, ferric chloride feed station, two sets of primary settling tanks, septic truck unloading facilities, high strength waste receiving station, woodchip biofilter odor scrubbers, aeration tanks, secondary clarifiers, dual media filter with traveling bridge backwash, deep media filters, backwash clarifiers, dissolved air flotation thickeners, anaerobic digesters (6 for high strength waste), digester gas compressors for generators, biosolids holding tanks, biosolids belt presses, cationic polymer feed system, lime silos, lime mixing augers, lime treated biosolids collection pads, truck scales, chlorination/dechlorination facilities, high rate clarifiers (HRC) for storm flow treatment, wastewater outfall, and biosolids land application site in Johnson County.
The following individuals were interviewed as part of the re-verification audit process:

Sebastian “Buster” Fichera – Assistant Water Director of Wastewater Treatment  
Steven Nutter – Biosolids Manager/EMS Manager, VCWRP  
Magan Lersch – Senior Environmental Specialist, VCWRP  
Glory Walker – Senior Environmental Specialist, VCWRP  
Jerry Pressley – Water System Superintendent, VCWRP  
Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor)  
Oscar Renda – Owner, Renda Environmental, Inc. (REI) (contractor)  
Ana Pena-Tijerina – Engineering Manager, VCWRP  
Ginger Laird – Assistant Water System Superintendent, VCWRP  
Laly Joseph – Environmental Program Manager, Ft. Worth Water Department  
Prasad Vattakunnel – I.T. Business Systems Coordinator, VCWRP  
Ron Nason – Operator - Training Specialist, VCWRP  
Rick Herling – Control Room Operator, VCWRP  
Brent Candler – Water Quality Work Leader, TCEQ Region IV – Dallas/Ft. Worth  
Jose Valdez – Land Application Supervisor, REI (contractor)  
Miguel Luna – Truck Driver, REI (contractor)  
Marco Luna – Contract Laborer, REI (contractor)  
Coy Nall – Biosolids using farmer and landowner  
Steve Daniels – Environmental Service Coordinator, Trinity River Authority of Texas (observer)  
Bill Tatum – Project Manager (biosolids) Central Regional Wastewater System, Trinity River Authority of Texas (observer)

RE-VERIFICATION AUDIT FINDINGS

The re-verification audit found no major non-conformances, 4 minor non-conformances, 10 opportunities for improvement and 4 positive commendations.

The following is a review of the positive observations made during the re-verification audit. The minor non-conformances and opportunities for improvement follow and are listed by requirement number in the sequence of the Third Party Verification Auditor Guidance.

Positive Observations

- The EMS management team demonstrated its commitment to the “Code of Good Practice” by doing the right thing over the past two years in addressing an extremely challenging problem associated with biosolids odors. Their commitment to compliance, quality monitoring, quality practices, communication and continual improvement have resulted in substantially resolving significant odor generation problems and reducing odor complaints.
• Ft Worth established a benchmark program for integrating its primary biosolids contractor into the biosolids management program. The Reclamation Plant personnel and contractor work seamlessly in addressing the requirements of the program and implementing continuous improvements in their biosolids management system.

• VCWRP developed a simple biosolids-related survey form to be completed by the attendees at each wastewater treatment plant tour. The information is collected and analyzed to identify the demographics of responders along with their perceptions of biosolids and any major concerns or interests of individuals regarding its beneficial use.

• Public Relations personnel developed a unique approach to providing information to the general public in the vicinity of its land application sites, by preparing a “Frequently Asked Questions” sheet and placing it in an information tube (similar to real estate fliers) located on the post that displays the land application notification sign displayed at each application site.

Minor Nonconformances

• Requirement 7.3 – There was no evidence available to demonstrate the official appointment of an individual with overall responsibility for ensuring the BMP is implemented and maintained, i.e. the Biosolids EMS Manager.

• Requirement 10.2 – Several critical control point operational controls must meet specific legal requirements. Not all of these Standard Operating Procedures (SOP) have the regulatory requirement incorporated into the procedure.

• Requirement 11.1 – The standard requires that the organization establish and maintain Emergency Preparedness and Response Plans and Procedures to assure effective responses to accidents and emergency situations associated with biosolids management activities. The existing Biosolids EMS Manual Element 11.0 – Emergency Response Procedure contains a considerable amount of information related to emergency responses not related to biosolids incidents, spills or releases and it does not meet all of the minimum conformance requirements of Element 11 of the standard.

• Requirement 14.4 – Ft. Worth has not fully implemented their corrective action program to identify operational incidents, malfunctions or problems (i.e. nonconformities identified during routine monitoring and measurement) so that root causes and/or corrective actions can be taken to improve the system.

Opportunities for Improvement
• Requirement 2.2 – Ft. Worth uses its website to communicate its Biosolids Management Policy to all interested parties; however the policy is not easily located on the site. Consider posting the Policy independently so that a “search” of the site will make it easily locatable.

• Requirement 7.1 – Review the Critical Control Points Master Table for the appropriateness of the role of “contractor” identified several places in the Roles and Responsibilities column of the table.

• Requirement 7.4 – Although the roles and responsibilities of the contractor, Renda Environmental Inc., are identified in several locations throughout the EMS element procedures, consider including Renda’ roles and responsibilities in the Biosolids EMS Manual Element 7.0 – Roles and Responsibilities.

• Requirement 8.2 – Plant operations personnel have observed that new or reassigned employees are much more receptive to learning what is important in the management of the plant than existing employees. Consider developing a special Biosolids Management System training program for new or transferred employees to ensure they understand the importance to management of the Code of Good Practice and the Biosolids Management Program.

• Requirement 9.1 – Consider having Todd Kimbrell, a farmer who uses biosolids, be used in a video (or You-tube) to explain the benefits of farming using biosolids.

• Requirement 10.1 – REI Procedure EMS-SOP-LND-3 Land Application SOP, Rev 9, dated 9/9/15 does not include a requirement to notify the state in the event of any noncompliance with TPDES Permit No. WQ0010494013.

• Element 15 – Consider including a description of the positive aspects of the pretreatment program in the Biosolids Management Program & Environmental Management System Annual Performance Report.

• Requirement 15.1 – Consider including a narrative summary of the past years performance of the biosolids program accomplishments relative to its goals and objectives as well as improvements resulting from corrective actions implementation (as appropriate).

• Requirement 15.1 – Consider identifying the total annual cost of biosolids handling and beneficial use so that this value can be used in the annual performance report to emphasize the management systems’ importance in overall wastewater treatment plant’s operation and management.

• Requirement 17.2 – The NBP BMP standard requires that documentation of follow-up actions from the management review be maintained. Consider adding “follow-up action items” to the management review agenda.
The corrective actions for minor non-conformances were prepared, submitted and reviewed by the auditor within 30 days. The corrective action approaches and schedules for closure were approved. Verification of closure of these minor findings will be submitted to the auditor as they are accomplished and the field verification of their implementation will be completed during the next third party interim audit.

VILLAGE CREEK WATER RECLAMATION FACILITY COMMENTS

The Fort Worth Biosolids Program was one of the first institutions to volunteer to become a NBP Demonstration Agency, and in 2005 became the seventh facility in the country and the first in Texas to receive NBP EMS certification. Fort Worth and its contractor, Renda Environmental Inc., remain fully committed to the EMS program. We recognize the opportunity to improve our program as a result of the issues identified during the third party audit. Fort Worth will fully implement the needed changes and will strive to continually improve its EMS program.

OUTCOMES MATTER

The Ft. Worth EMS Management Team continued to redefine its goals and objectives program in 2015. The Biosolids Manager/EMS manager and the Management Team developed and/or refined its goals for 2015 resulting in 8 goals and objectives. Several of the earlier goals were accomplished, some were not, and others were delayed until more information and data could be developed so that Specific, Measurable, Achievable, Relevant, and Time Bound (SMART) criteria could be used in their formulation. The EMS management team established biosolids goals for its BMP cognizant of each of the four outcome areas of the NBP program as identified below:

- Environmental Performance,
- Regulatory Compliance,
- Relations with Interested Parties, and
- Quality Biosolids Management Practices

The team continued to improve its use of SMART criteria in establishing goals and objectives, and in some cases attempted to identify cost savings as an addition measure of improvement.

While it is not a requirement to attain all goals and objectives established, a critical part of the system is to make progress towards the overall goals. Some goals were found to be technically or financially infeasible while others experienced considerable delays because of budget constraints and others were dropped after determining they did not meet SMART criteria. The City of Fort Worth’s performance relative to each of its 2015
goals is addressed below and the outcome areas affected by the goal are addressed at the end of each discussion.

**Increase Grit Collected And Removed By 10,500 lbs/day**

This goal was initially developed to address problems experienced in the grit removal process. The grit collected had highly variable characteristics and lacked quality controls. An arbitrary measurable goal of increasing the grit collected and removed was established. The average amount of grit collected and removed per day was calculated and determined to be 52,680 lbs. One of the challenges associated with the operations was related to sending the grit to the REI biosolids processing operations, where they were causing problems. Note this conveyance was discontinued, resolving that issue. Another challenge was associated with grit washing, which was addressed by installing a new grit washer. Subsequent to the new installation trouble shooting and system modifications were required to reduce the quantity of grit being transported to the landfill for ultimate disposal. This goal and objective was reported complete in April 2016.

**Outcome Areas: Environmental Performance, Regulatory Compliance, and Quality Biosolids Management Practices.**

**Reduce Odor Complaints From Reporting Year 2013-2014 By 50% (46 Complaints/Year To 23 Complaints Per Year)**

This goal was established because of an inordinate number of odor complaints caused by operational difficulties associated with the biosolids dewatering and stabilization processes. A consultant undertook detailed and extensive investigation of the root cause of the odors and several alternative recommendations were identified. Changes were made in the chemicals used for dewatering and other standard operating procedures were changed to reduce the possibility of odor generation.

Despite the efforts, the number of odor complaints received in 2014-2015 was only reduced to 38. However, efforts continued and the number of complaints received in the year 2015-2016 met the goal by having only 16 complaints. This was qualified by the fact that during three months of that year the biosolids were not land applied but landfilled. Regardless, using the average number of complaints per month to calculate an estimate for the entire year results in only 21 complaints – still accomplishing the goal. This goal was completed at the end of 2015, but complaints are still tracked.

**Outcome Areas: Environmental Performance, Regulatory Compliance, Relations with Interested Parties, and Quality Biosolids Management Practices.**

**Increase Gas Production In The Digesters By At Least 5% During The Scum Addition Interval**

The original intent of this goal and objective, which was established in March 2014, was to divert scum from landfill disposal to the digesters with the intent of reducing the
cost of disposal and increasing the amount of useable digester gas generation. It was estimated that the increase of gas would be in the range of 5% during the periods when scum was fed to the digesters. As the project commenced it was determined that measuring the gas production increase correlated with the scum feed would be difficult, if not impossible, since the scum system was only run intermittently or as necessary. Additionally it was observed that other factors influenced the amount of gas generated to a much greater degree than the scum.

While the project was a success in terms of diverting the scum to the digesters the only method of quantification of gas would be to theoretically calculate the amount by using the digestible amount of organic material in scum and multiplying by the quantity of scum discharged to the digesters. This goal was determined to be a success from the standpoint of increasing gas generation, but not to the anticipated degree or quantity. It was completed in April 2016.

Outcome Areas: Environmental Performance, Relations with Interested Parties, and Quality Biosolids Management Practices.

Increase Digested Sludge Percent To At Least 2.5% For 90% Of The Time During A Given Month

This goal was originally established in late 2012 and required the installation of an additional gravity belt thickener (GBT) to increase the digested solids concentration. The action plan proceeded through conceptual design, detail design, construction, and evaluation of effectiveness.

After analyzing data for percent solids feeding into the blend tank, it was determined that this was not the best data point from which to determine whether digested sludge percent solids have increased due to the addition of the third GBT. This goal was determined to be successful from the standpoint of improving the reliability of the operations but no measurable data was determined to be available to demonstrate precisely the accomplishment. The goal was completed and removed in April 2016.

Outcome Areas: Environmental Performance and Quality Biosolids Management Practices.

Increase Percent Solids Of Biosolids (Prior To Lime Addition) By 3%

This goal was established in April 2014. The action plan to improve the concentration of biosolids prior to lime addition requires the installation of a new belt press, resulting in a total of 6. In addition to the press a new chemical feed system is required to keep up with the polymer and lime demand at all times. The new belt press, polymer and lime systems were installed by August 1, 2016 and operational performance testing should commence by January 2017. It is anticipated that the percent solids will meet the goal of 3%. Confirmation of the actual performance will verify the results.
Outcome Areas: Environmental Performance, Regulatory Compliance, Relations with Interested Parties, and Quality Biosolids Management Practices.

Increase Biosolids Processing and Storage Capacity by 100% at REI Facilities

This goal was established in May 2015 and consists of design and construction of new dewatering system (centrifuges, belt presses, screw presses, or other dewatering processes) for the digested biosolids. In addition, one of the key components to be added includes increasing the biosolids storage facilities by 100%. The City Council approved the project in late May 2016 and conceptual design selection is in process. The measureable results of this goal will be an increase in reliability of the biosolids stabilization and distribution, which ultimately will reduce odors and consequential complaints.

Outcome Areas: Environmental Performance, Regulatory Compliance, Relations with Interested Parties, and Quality Biosolids Management Practices.

Increase TSS Removal In The Primaries To 80%

The intention of this goal was to develop a Chemically Enhanced Primary Treatment technique for use to ensure a reliable consistent high percent removal (80%) of total suspended solids in the primary treatment systems. Pilot scale testing of the smaller primaries was performed to determine whether to introduce new technology or rehabilitated them. The testing was successful, but inconclusive. Therefore, it was decided to close this goal.

Outcome Areas: Environmental Performance and Quality Biosolids Management Practices.

Identify Four Public Concerns Regarding Biosolids (evolved from previous goal to add three new biosolids public outreach activities.)

This goal represents a major breakthrough in the requirement for proactive public participation. There were four action plans developed to address this goal. The first was to determine concerns of the public based on feedback received from interested parties. The concerns were: The City of Fort Worth biosolids webpages are out of date; the EPA and TCEQ standards are not strict enough; too much about biosolids are unknown, and are there pharmaceuticals and personal care products (PPCPs) in biosolids?

The second action plan was to improve the ability to identify concerns via FAQs placed in information tubes at land application sites. The third action plan was to improve ability to identify concerns using the Water Department’s social media accounts. The forth action plan was to improve the ability to address public concerns by updating the biosolids webpage. And the final action plan was to improve the ability to address or identify concerns via tour surveys. The initial results (six months of surveys from January
to July 2016) from the latter action plan were used to identify the first group of concerns as presented above.

As results from the implementation of the action plans are gathered appropriate outreach activities will be developed.

**Outcome Areas: Relations with Interested Parties.**

**CONCLUSIONS AND RECOMMENDATIONS**

The results of the re-verification audit were positive. The review and approval of the corrective action plans for the minor non-conformances identified during the re-verification audit were completed. It is therefore the recommendation of the audit team that the Village Creek Wastewater Reclamation Plant’s EMS for biosolids maintain its Platinum Level Recognition Certification status.

Discussions between the VCWRP Biosolids EMS manager and the third party auditor resulted in agreement to the following 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. In addition to the above, the following elements will be audited according to the following tentative schedule:

Year 11 (third party) – Elements 3, 10, 12, 13

Year 12 (third party) – Elements 1, 8, 15, 17

Year 13 (third party) – Elements 5, 6, 9, 14, 16

Year 14 (third party) – Elements 2, 4, 7, 11

Year 15 (third party) Re-verification

The results of the current 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.
Attachment 1

Documents and Other Object Evidence
Reviewed During the Re-verification Audit

Element 1. Documentation of EMS for Biosolids

- Interviews with Steven Nutter – Biosolids Manager/EMS Manager, VCWRP, Magan Lersch – Senior Environmental Specialist, VCWRP, Glory Walker – Senior Environmental Specialist, VCWRP, and Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor)
- National Biosolids Partnership – Letter of Understanding on NBP EMS Demonstration Project – August 30, 2000
- Biosolids EMS Manual – Procedures for Elements 2, 3 (including Table 3.0), 6, 9, and 11.
- EMS Planning Schedule (By Calendar Year) – 2015

Element 2. Biosolids Management Policy

- Interview with Sebastian “Buster” Fichera – Assistant Water Director of Wastewater Treatment
- Interviews with Steven Nutter – Biosolids Manager/EMS Manager, VCWRP; Jerry Pressley – Water System Superintendent, VCWRP; Ginger Laird – Assistant Water System Superintendent, VCWRP; Magan Lersch – Senior Environmental Specialist, VCWRP and Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor)
- Website - City of Fort Worth Wastewater Biosolids EMS

Element 3. Critical Control Points

- Interviews with Steven Nutter – Biosolids Manager/EMS Manager, VCWRP, Magan Lersch – Senior Environmental Specialist, VCWRP, Glory Walker – Senior Environmental Specialist, VCWRP, and Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor)
- Ft Worth Village Creek Wastewater Treatment Plant process flow diagram – November 29, 2004
Element 4. Legal and Other Requirements

- Interviews with Sebastian “Buster” Fichera – Assistant Water Director of Wastewater Treatment; Steven Nutter – Biosolids Manager/EMS Manager, VCWRP; Magan Lersch – Senior Environmental Specialist, VCWRP; Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor); Jerry Pressley – Water System Superintendent, VCWRP; Laly Joseph – Environmental Program Manager, Ft. Worth Water Department; and Brent Candler – Water Quality Work Leader, TCEQ Region IV – Dallas/Ft. Worth.
- Table entitled Regulations Applicable to the Village Creek Wastewater Reclamation Facility Biosolids Value Chain attached to Biosolids EMS Manual Element 4.0 (Regulation, Description, Location (web site), governing agency, and areas of influence within biosolids value chain) – August 01, 2016.
- City of Fort Worth TPDES Permit to Dispose of Waste – Permit No. WQ 0010494013 – “Sludge Provisions”.
- Analytical Reports and Supporting Documentation for Annual Sludge Report.
- SOPs for Land Application and Digester Operation

Element 5. Goals and Objectives for Continual Improvement

- Interview with Sebastian “Buster” Fichera – Assistant Water Director of Wastewater Treatment
- Interviews with Steven Nutter – Biosolids Manager/EMS Manager, VCWRP; Magan Lersch – Senior Environmental Specialist, VCWRP; Glory Walker – Senior Environmental Specialist, VCWRP; Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor); Ana Pena-Tijerina – Engineering Manager, VCWRP; Ginger Laird – Assistant Water System Superintendent, VCWRP and Jerry Pressley – Water System Superintendent, VCWRP.
- Appendix 5a: Biosolids Goals and Objectives Summary – EMS Element 5.0 (Biosolids year 2014) – September 25, 2014.
- Appendix 5a: Biosolids Goals and Objectives Summary – EMS Element 5.0 (Biosolids year 2014) – December 31, 2014.
- Appendix 5a: Biosolids Goals and Objectives Summary – EMS Element 5.0 (Biosolids year 2015) – March 26, 2015.
- Appendix 5a: Biosolids Goals and Objectives Summary – EMS Element 5.0 (Biosolids year 2015) – September 25, 2015
- Appendix 5a: Biosolids Goals and Objectives Summary – EMS Element 5.0 (Biosolids year 2016) – March 31, 2016
- Detailed review of each Goal and Objective established for 2014 through 2016.
- Internet posting of Goals and Objectives

Element 6. Public Participation in Planning

- Interviews with Steven Nutter – Biosolids Manager/EMS Manager, VCWRP; Magan Lersch – Senior Environmental Specialist, VCWRP; Glory Walker – Senior Environmental Specialist, VCWRP; Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor); Ron Nason – Operator - Training Specialist, VCWRP; and Ginger Laird – Assistant Water System Superintendent, VCWRP.
- Ft. Worth SOP for Audit Notification of Interested Parties, Rev 00, 7/13/16.
- City of Fort Worth Website – Public invitation to observe audit of biosolids EMS audit Monday, August 8 through Thursday, August 11, 2016.
- Landowner and Interested Party third party EMS audit notification dated July 12, 2016.
- Survey form to gather information from public attending wastewater reclamation facility tours before the tour and after the tour.

Element 7. Roles and Responsibilities

- Biosolids EMS Manual – Element 7.0 – Table 7.1: Roles and Responsibilities (Department, Roles, Responsible Person, and Responsibilities) – August 3, 2016.
- Interviews with Sebastian “Buster” Fichera – Assistant Water Director of Wastewater Treatment; Jerry Pressley – Water System Superintendent, VCWRP; Ginger Laird – Assistant Water System Superintendent, VCWRP; Laly Joseph –
Environmental Program Manager, Ft. Worth Water Department; Steven Nutter – Biosolids Manager/EMS Manager, VCWRP; Magan Lersch – Senior Environmental Specialist, VCWRP; Ana Pena-Tijerina – Engineering Manager, VCWRP; Prasad Vattakunnel – I.T. Business Systems Coordinator, VCWRP; Ron Nason – Operator - Training Specialist, VCWRP; Rick Herling – Control Room Operator, VCWRP, and Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor)

- City of Fort Worth Biosolids Organization Chart
- City of Fort Worth Pollution Control Division Organization Chart.

Element 8. Training

- Interviews with Sebastian “Buster” Fichera – Assistant Water Director of Wastewater Treatment; Steven Nutter – Biosolids Manager/EMS Manager, VCWRP; Magan Lersch – Senior Environmental Specialist, VCWRP; Glory Walker – Senior Environmental Specialist, VCWRP; Ginger Laird – Assistant Water System Superintendent, VCWRP; Ron Nason – Operator - Training Specialist, VCWRP; Rick Herling – Control Room Operator, VCWRP; Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor); Jose Valdez – Land Application Supervisor, REI (contractor); Miguel Luna – Truck Driver, REI (contractor); Marco Luna – Contract Laborer, REI (contractor)
  - Biosolids power point training presentation
  - Employee EMS awareness training sign-in sheets and records for 2015 and 2016
  - Plant Safety Meeting records – general overview.

Element 9. Communications

- Interviews with Steven Nutter – Biosolids Manager/EMS Manager, VCWRP; Magan Lersch – Senior Environmental Specialist, VCWRP; Glory Walker – Senior Environmental Specialist, VCWRP; Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor); Ron Nason – Operator - Training Specialist, VCWRP; and Ginger Laird – Assistant Water System Superintendent, VCWRP.
- City of Fort Worth Website – section related to wastewater biosolids.
- Biosolids Complaint Log Listing form
- Biosolids Complaint Log Listings from 2/1/13 through 7/29/16.
Element 10. Operational Control of Critical Control Points

- Interviews with Steven Nutter – Biosolids Manager/EMS Manager, VCWRP; Magan Lersch – Senior Environmental Specialist, VCWRP; Ana Pena-Tijerina – Engineering Manager, VCWRP; Ginger Laird – Assistant Water System Superintendent, VCWRP; Jerry Pressley – Water System Superintendent, VCWRP; Laly Joseph – Environmental Program Manager, Ft. Worth Water Department; Ron Nason – Operator - Training Specialist, VCWRP; Rick Herling – Control Room Operator, VCWRP; Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor); Jose Valdez – Land Application Supervisor, REI (contractor); Miguel Luna – Truck Driver, REI (contractor); Marco Luna – Contract Laborer, REI (contractor); Coy Nall – Biosolids using farmer and landowner.
- Review REI Field Book containing land application site directions and all relevant SOPs for land application.
- Ft. Worth SOP for Land Application Site Visit, Rev 5, 3/20/15.
- Ft. Worth SOP for Audit Notification of Interested Parties, Rev 00, 7/13/16.
- SOP binders for wastewater treatment plant.
- RENDA SOP binder – Land Application EMS SOPs.
- RENDA Procedure EMS-SOP-LND-3, Rev 9, 9/9/15 – Land Application SOP.
- Wastewater Operator Licenses.
- Month of August 2016 REI Land Application Schedule.

Element 11. Emergency Preparedness and Response

- VCWWTP Risk Management Plan – June 2009
- VCWWTP Accidental Release Prevention Program – June 2009
- Interviews with Steven Nutter – Biosolids Manager/EMS Manager, VCWRP; Magan Lersch – Senior Environmental Specialist, VCWRP; Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor); Jose Valdez – Land Application Supervisor, REI (contractor); Miguel Luna – Truck Driver, REI (contractor); and Marco Luna – Contract Laborer, REI (contractor).
- REI Environmental Field Manual
Element 12. EMS Documentation and Document Control

- Interviews with Steven Nutter – Biosolids Manager/EMS Manager, VCWRP; Magan Lersch – Senior Environmental Specialist, VCWRP; Glory Walker – Senior Environmental Specialist, VCWRP, and Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor).
- TPDES Permit – Required Report Summary listing the reports required for each of the critical control points of the biosolids value chain and the frequency required.
- Biosolids EMS Manual – Element Procedures change history logs for each.

Element 13. Monitoring and Measurement

- Interviews with Steven Nutter – Biosolids Manager/EMS Manager, VCWRP; Magan Lersch – Senior Environmental Specialist, VCWRP; Glory Walker – Senior Environmental Specialist, VCWRP; Ana Pena-Tijerina – Engineering Manager, VCWRP; Ginger Laird – Assistant Water System Superintendent, VCWRP; Jerry Pressley – Water System Superintendent, VCWRP; Laly Joseph – Environmental Program Manager, Ft. Worth Water Department; Prasad Vattakunnel – I.T. Business Systems Coordinator, VCWRP; Ron Nason – Operator - Training Specialist, VCWRP; Rick Herling – Control Room Operator, VCWRP; Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor); Jose Valdez – Land Application Supervisor, REI (contractor); Miguel Luna – Truck Driver, REI (contractor); Marco Luna – Contract Laborer, REI (contractor); Coy Nall – Biosolids using farmer and landowner.
- Reviewed new maintenance management system implementation (MAXIMO).
- Field visit to land application site at one of Coy Nall’s farms in Johnson County (JCCN1).
- Review of land application site map of one of William Mitchell’s land application sites in Johnson County (JCWM2).
- Review REI Field Book containing land application site directions and all relevant SOPs for land application
- Reviewed TELETRACK vehicle data position on-line monitoring equipment system
Element 14. Nonconformances: Preventive and Corrective Action

- Interviews with Steven Nutter – Biosolids Manager/EMS Manager, VCWRP; Magan Lersch – Senior Environmental Specialist, VCWRP; Ana Pena-Tijerina – Engineering Manager, VCWRP; Jerry Pressley – Water System Superintendent, VCWRP; Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor)
- Corrective Action Notice (CAN) – Master List for non-conformance issues identified in 2015 and 2016.
- Reviewed corrective actions from 2014 external third party interim BMP audit.

Element 15. Periodic Biosolids Program and EMS Performance Report

- Interviews with Steven Nutter – Biosolids Manager/EMS Manager, VCWRP, Magan Lersch – Senior Environmental Specialist, VCWRP, and Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor)

Element 16. Internal EMS Audit

- Interviews with Steven Nutter – Biosolids Manager/EMS Manager, VCWRP, Magan Lersch – Senior Environmental Specialist, VCWRP, and Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor)

Element 17. Periodic Management Review of Performance

- Interviews with Sebastian “Buster” Fichera – Assistant Water Director of Wastewater Treatment; Steven Nutter – Biosolids Manager/EMS Manager, VCWRP, Magan Lersch – Senior Environmental Specialist, VCWRP, and Ben Davis – Biosolids Manager, Renda Environmental, Inc. (REI) (contractor)