

**NATIONAL BIOSOLIDS PARTNERSHIP  
NINTH INTERIM AUDIT REPORT**

**City of Grand Rapids  
Environmental Protection Services Department  
Grand Rapids, Michigan**

**Grand Rapids, Michigan**

**Audit conducted by**

**NSF-International Strategic Registrations**

**William R. Hancuff, Lead Auditor**

**References:**

**National Biosolids Partnership (NBP) BMP Elements  
NBP Third Party Verification Auditor Guidance – November 2001  
(Latest Revision August 2011)  
NBP Code of Good Practice  
City of Grand Rapids  
Environmental Services Department  
Biosolids Management Program Manual  
Last Revised October 2015**

**Final Report – December 27, 2015**

## **INTRODUCTION**

The purpose of the Biosolids Management Program (BMP) interim audit is to verify through regular reviews the program's health and effectiveness between verification audits. The third party on-site interim audits provide independent reviews and supports credibility between verification and re-verification audits. The scope of the interim audit is to collect and evaluate objective evidence to demonstrate continuous improvement of the management system and to review a portion of the BMP such that over the course of the four interim audits conducted between verification audits all 17 elements are covered.

Continuous improvement is evaluated in each interim audit through assessment of the organization's progress toward goals and objectives, BMP outcomes, actions taken to correct minor nonconformances, the management review process, corrective action requests and responses and preventive action requests.

The audits determine whether the City of Grand Rapids BMP is functioning as intended, that practices and procedures are conducted as documented, and that the BMP as implemented conforms to the NBP's Code of Good Practice and BMP objectives.

## **RECOMMENDATION**

The results of the Grand Rapids' ninth interim audit of their BMP and review of corrective actions are positive, and it is the recommendation of the audit team that the City of Grand Rapids Environmental Protection Services BMP maintain its Platinum Level "Certification" status.

## **AUDIT SCOPE**

The NSF-International Strategic Registrations, Ltd. (NSF-ISR) conducted a third party interim audit of the City of Grand Rapids Environmental Services Department Wastewater Treatment Facility's BMP from October 15, 2015 through and including October 16, 2015. The on-site interim audit team consisted of Dr. William R. Hancuff, Lead Auditor.

The overarching scope included review of the following activities related to the identified core element requirements:

- The organization's progress toward goals and objectives (Element 5),
- BMS outcomes (environmental performance, regulatory compliance, interested party relations, and quality practices) (Element 5),
- Actions taken to correct minor non-conformances (Element 14),
- Management review process (Element 17), and
- Corrective and preventive action requests and responses (Element 14).

Because other system elements interact with the above specific requirements the interim audit also included partial auditing of activities found in elements 1, 2, 4, 6, 9, 15, and 16.

Since the NBP allows that any individual interim audit cover a portion of the BMP, but requires that over the course of the four interim audits conducted between verification and re-verification audits the entire BMP (i.e. all 17 elements) must be covered, the following elements were audited in their entirety as part of this third interim audit:

- Element 2 – Biosolids Management Policy
- Element 4 – Legal and Other Requirements
- Element 7 – Roles and Responsibilities
- Element 11 – Emergency Preparedness and Response

Auditing these elements involved document review, interviews, and activity evaluations.

In general terms, the 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 included in the interim audit and visited during the audit included the administration building, primary settling facilities, secondary treatment section, storage building, maintenance shop, service building, stock room, new WAS low energy/low shear volute thickener, centrifuges, the Ottawa County Farms Sanitary Landfill in Coopersville, Michigan, supplies a power generation facility, which recovers and uses biosolids/landfill gas.

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

Mike Lunn – Environmental Services Department (ESD) Manager  
William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent  
David Harris – Operations and Maintenance Supervisor  
Andrew Meyer – Wastewater Operation and Maintenance Supervisor  
Kolene Allen – Office Assistant IV  
Debby Nurmi – Environmental Manager – Ottawa County Farms – Republic, Coopersville, MI  
Dave Schipper – Senior Environmental Quality Analyst, Grand Rapids District, Water Resources Division, Michigan Department of Environmental Quality  
Todd Williams – Operator I  
Ed Howland – Maintenance Mechanic II  
Charlie Cordes – Owner and Operator – Cordes Trucking, Inc.

## **INTERIM AUDIT FINDINGS**

The interim audit identified 1 positive observation, no major non-conformance, 6 minor non-conformances and 6 opportunities for improvement.

The following is a review of the positive observation made during the interim audit. Minor non-conformances and opportunities for improvement follow and are listed in accordance with the numbers associated with the minimum conformance standards contained in the Third Party Verification Auditor Guidance document.

### **Positive Observations**

The Environmental Protection Services Department's Wastewater Treatment Plant personnel involved in biosolids management should be recognized for their outstanding achievements, and the exceptional features of their Biosolids Management Program. The following was found to be noteworthy during this audit.

The new Biosolids Management Program (BMP) coordinator has an excellent understanding of the BMP and has an exceptional comprehension of its use as a management tool.

Additionally, the hard work and dedication of the BMP management team must be acknowledged. While maintaining the BMP certification goal is obviously a team effort the leadership provided by the Environmental Services Department Manager assured maintenance of this common goal.

### **Minor Nonconformances**

Requirement 3.5 – The new WAS low energy/low shear volute thickener became fully operational several months ago but formal notification of the third party auditor of this additional critical control point was not made.

Requirement 5.1 – The Table 5.1 – Goals and Objectives for 2015 was not completed. Also, Table 5.1 – Goals and Objectives found in the Grand Rapids BMP manual presented the 2014 Goals and Objectives instead of a blank Table, as intended.

Requirement 9.5 – Relevant information about biosolids management activities must be communicated to employees. Goals and Objectives, Action Plans and Progress Reports (required in Element 5 procedures) are not regularly communicated with appropriate employees at the monthly Operations Maintenance Group (OMG) meetings. Similarly, tracking status in completing corrective actions (required in Element 14.6) are not communicated at the monthly OMG meetings.

Requirement 10.1 – Standard Operating Procedures for startup, shut down and troubleshooting have not been prepared for the new WAS low energy/low shear volute thickener. While SOP 3350 and SOP 3351 are identified as startup and shut down procedures they are blank holding places for two of the required documents.

Requirement 11.2 – The organization is required to review and evaluate the effectiveness of emergency preparedness and response procedures. Element 11 – Emergency Preparedness and Response does not adequately address “spill drills” nor has the effectiveness of the procedures been evaluated.

Requirement 14.2 – Although required by the BMP procedure, Table 14.2 – Nonconformance Investigation Worksheet was not used for tracking nonconformances in 2014.

### **Opportunities for Improvement**

Requirement 1.2 – Consider including in the list of references at the end of Element 2: Biosolids Management Policy procedure, the commitment to the Code of Good Practice included in the December 17, 2004 letter from the Mayor of the City of Grand Rapids.

Requirement 5.1 – Consider developing a list of “Potential Future Goals and Objectives” for inclusion in a table in Element 5: Goals and Objectives.

Requirement 5.6 – Consider developing an attachment or Appendix to Element 5 – Goals and Objectives procedure to track current and past goals and objectives to update the current progress or status, and/or record the history of past accomplishments.

Requirement 8.2 – Consider having the BMP Coordinator attend a 36-hour ISO 14001 lead auditor-training course.

Requirement 14.4 – the preventive and corrective action program was not implemented for problems identified during routine monitoring and maintenance, i.e. operational problems that require significant resources, such as parts, equipment, contracts, personnel or labor.

Requirement 14.6 – Consider developing a summary table of corrective actions that can be used to track status of preventive/corrective actions.

In order to address the above minor non-conformances, the City of Grand Rapids, Michigan Environmental Services Department has prepared a non-conformance investigation report and will implement corrective actions according to their procedures to provide continual improvement to their BMP.

### **CITY OF GRAND RAPIDS ENVIRONMENTAL SERVICES DEPARTMENT COMMENTS**

The City of Grand Rapids is again grateful for the opportunity to have our BMP reviewed by Mr. William Hancuff. Mr. Hancuff’s insight continues to enhance our program helping the City to achieve continuous improvement.

The City has continued to streamline this program and at the same time has strived to increase pertinent training of personnel, refine goal setting, and continue public outreach. This year’s audit has shown that the proper use of Preventative and Corrective Action Plans will assist in achieving positive results for many of our future goals and objectives as well maintenance and operation opportunities.

The City looks forward to next year's re-verification audit, and will continue to take actions to improve the current program.

## **OUTCOMES MATTER**

The City of Grand Rapids Environmental Services Department (ESD) has made several improvements in its goals and objectives over the past few years and has continued to simplify and streamline its program through 2015. The internal BMP team dropped several goals and objectives and modified others to reflect changes in the system. Continuing with the evolution will involve the addition and/or removal of goals and objectives as needed on a quarterly basis.

The modified goals and objectives were developed recognizing the need to optimize performance of solids processing and improve operation and maintenance to reduce the financial burden on taxpayers. Overall the goals and objectives are anticipated to result in substantial gains in biosolids management and reduction in cost of operation.

The ESD Biosolids Management Program (BMP) established goals and objectives consistent with the required NBP outcome areas. The goals and objectives for 2015 were reduced to two with the intention of developing wholly new additions in 2016, such as the reduction of dry tons of biosolids generation through implementing real time control of ammonia and reduction of the concentration of total suspended solids in the centrate at the new TWAS, thus reducing solids returned to the plant. The 2015 goals were developed for the most part using Specific, Measurable, Achievable, Relevant, and Time-bound (SMART) criteria through input from the internal BMP Team and consideration of public concerns. The goals were established cognizant of 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 accomplish all objectives established, it is a critical part of the system to make progress towards the overall goals. The Department's performance relative to each of the above groups is addressed below and the outcome groups affected by the goals and/or objectives are addressed at the end of each discussion.

### **CY 2015 – Reduce The Amount of Ferrous Chloride Feed by 15% in 2015 versus 2014 Without Lowering the Final Effluent Quality Below Permit Limits.**

This goal is a follow-on goal to the long-term goal from 2010 – 2013 of improving wastewater processes resulting from the North Plant Modification Project. The 2014 objective of this goal was to reduce the quantity of ferrous chemical added for phosphate

removal by 25% on a quarter-by-quarter basis, while maintaining the effluent quality below the 1.0 mg/l discharge limit. The variation on a quarter-by-quarter basis historically has been significant and the controls implemented to attain the desired results were ineffective going from 2013 to 2014. The quantity of ferrous chloride usage increased from an average of 84,637 gallons per quarter in 2013 to 107,174 gallons per quarter in 2014 – an increase of 26%. It was clear a major adjustment to this goal was needed.

A process change was implemented to optimize the biological removal of phosphorus and thereby reduce the quantity of ferrous required for that activity. A conservative objective of reducing the ferrous chloride year over year by 15% was established. The changes implemented in the last quarter of 2014 and carried over into the first quarter of 2015 resulted in ferrous usage 43% below the annual objective. The second quarter resulted in usage 88% below the annual objective. Although the third quarter showed an increase above the second quarter it was still below the annual objective. Based on the process changes made it is now possible to eliminate all of the ferrous usage for phosphorus removal, except for occasional emergency situations and its use as a backup for odor control. This goal and objective has proven to be very successful and results in positive outcomes in environmental performance, regulatory compliance, relations with interested parties (cost savings) and quality biosolids management practices.

#### **CY 2015 – Reduce the GVRBA Recycle Total Solids by 5% in 2015**

This Increase goal and objective is a carryover from 2014 when it was described as reducing the GVRBA Centrate Quality by 10%, which was to be measured as the reduction of total suspended solids (TSS) concentration in the recycle stream of the centrifuge. The controls associated with this goal and objective proved to be ineffective and the total suspended solids increased from 2013 to 2014 by 40% instead of decreasing by 10%. Therefore, a more modest goal and objective was established to reduce the recycled total solids by 5% in 2015; however the controls were still not well defined in the action plan to control or measure the accomplishments. (Note: the operations of the GVRBA equipment were severely affected by multiple large-scale issues, including broken welds on the feed tubes into the centrifuges.)

Because of the significant malfunctioning of the equipment the entire year of 2014 should be considered an aberration and in order to measure improvements associated with identified controls in the action plan the 5% reduction in TSS should be compared to a more stabilized year such as 2013. Reviewing the data for 2015 compared with 2013 shows a very slight increase in efficiency more in line with the projected reduction of 5%. This goal is being revisited in 2016 to determine if the measurement of concentration is more important than the total loading of TSS, which includes flow as well as concentration.

This goal results in positive outcomes in environmental performance, relations with interested parties (cost savings) and quality biosolids management practices.

As was noted the City continued efforts in all of the major outcome areas by focusing on specific goals and objectives in 2015. It is anticipated that at least two or three new SMART goals will be developed in 2016.

## CONCLUSIONS AND RECOMMENDATIONS

The results of the ninth interim audit are positive. The review and approval of the corrective action plans for each of the non-conformances identified during the interim audit has been completed. The full implementation of the corrective actions for the minor non-conformances must be completed in accordance with their proposed schedules and closure will be verified during the next third party external audit.

As was mentioned previously, a BMP is a continuous 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.

Discussions between the Department's BMP Coordinator and the third party auditor resulted in the following tentative agreement regarding the interim audit schedule:

Year 6 (internal) – Elements 5, 6, 9, 14, 16 (completed)

Year 7 (third party) – Elements 1, 10, 12, 13 (completed)

Year 8 (third party) – Elements 3, 8, 15, 17 (completed)

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

Year 10 – Re-verification Audit (third party)

## **Attachment 1**

### **Documents and Other Object Evidence Reviewed During The Interim Audit**

#### Element 1. BMP Manual

- City of Grand Rapids, Michigan Environmental Services Department Biosolids Management Program Manual – Updated October 2015.
- BMP Index
- Element 1 – Documentation of Biosolids Management Plan, Version 6.0, effective 10/7/15.
- Table 1.1 BMP Elements
- Interview with William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent
- Document Management System – Policy Number: 1110, version 8.3, effective 12/19/2014.
- Appendix A: Glossary and Supplementary Definitions
- Appendix B: Tables, Figures, Forms.
- Appendix C: Index
- Introduction (including narrative description of wastewater treatment plant and aerial view of facilities.
- Figure 1.1 – Letter of Understanding – NBP to City of Grand Rapids dated December 17, 2004.
- Commitment to the Code of Good Practice in letter dated December 17, 2004 signed by the Mayor of the City of Grand Rapids.
- Element 2 – Biosolids Management Policy, Version 6.0, effective 10/8/2015 (containing Biosolids Mission Statement and Code of Good Practice).

#### Element 2. Biosolids Management Policy

- Element 2 – Biosolids Management Policy, Version 6.0, effective 10/8/2015 (containing Biosolids Mission Statement and Code of Good Practice).
- Interviews with Mike Lunn – Environmental Services Department (ESD) Manager; William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent; and David Harris – Operations and Maintenance Supervisor.
- Commitment to the Code of Good Practice in letter dated December 17, 2004 signed by the Mayor of the City of Grand Rapids.

#### Element 3. Critical Control Points

- Element 3 – Critical Control Points, Version 7.0, effective 10/8/2015.
- Figure 3.1 CCP Periodic Review
- Table 3.1 Critical Control Points – with column headings of biosolids value chain, critical control points, operational controls (SOPs), environmental impacts, and monitoring and measurements.

- Interviews with William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent; David Harris – Operations and Maintenance Supervisor; Andrew Meyer – Wastewater Operation and Maintenance Supervisor; Todd Williams – Operator I; Ed Howland – Maintenance Mechanic II; Charlie Cordes – Owner and Operator – Cordes Trucking, Inc. and Kolene Allen – Office Assistant IV.
- Field review of various critical control points, including primary settling facilities, secondary treatment section, solids storage tanks, centrifuges, TWAS thickener and the Republic Sanitary Landfill in Coopersville, Michigan.
- Spot check operations controls and monitoring and measurement in SOPs.

#### Element 4. Legal and Other Requirements

- Element 4 – Legal and Other Requirements, version 7.0, effective 10/8/15.
- Table 4.1 Legal and Other Requirements, including applicable requirements, document location, governing agency and areas of influence within biosolids value chain.
- Interviews with William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent; David Harris – Operations and Maintenance Supervisor, and Andrew Meyer – Wastewater Operation and Maintenance Supervisor.
- Interview with State regulator - Dave Schipper – Senior Environmental Quality Analyst, Grand Rapids District, Water Resources Division, Michigan Department of Environmental Quality.
- Figure 4.1 – Annual Legal and Other Requirements Document Review form.

#### Element 5. Goals and Objectives

- Element 5: Goals and Objectives, version 10.0, effective 10/8/2015.
- Interviews with Mike Lunn – Environmental Services Department (ESD) Manager; William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent; David Harris – Operations and Maintenance Supervisor, and Andrew Meyer – Wastewater Operation and Maintenance Supervisor.
- Table 5.1 – Biosolids Goals and Objectives (dynamic template completed for 2014 – but not 2015).
- Figure 5.1 – Action Plan Status Worksheets (form for Goals and Objectives).
- Figure 5.1 – Action Plan Status Worksheets (completed for ¾ of 2015).
- Form 5.1 – Goals and Objectives Annual Review (form).
- Form 5.2 Public Participation – Annual Goals and Objectives Selection (form).
- Form 5.3 SMART Goals Assessment Worksheet (form).
- Request for 2015 BMP Goals and Objectives input from interested parties – letter dated December 21, 2014.
- Reviewed quarterly progress reports for each goal and objective action plan for part of 2015.
- Assessment of outcomes in the four critical areas.
- Access and evaluation of website.

## Element 6. Public Participation in Planning

- Element 6: Public Participation in Planning, version 6.0, effective 10/8/2015.
- Interviews with William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent; David Harris – Operations and Maintenance Supervisor, and Andrew Meyer – Wastewater Operation and Maintenance Supervisor.
- Interview with Dave Schipper – Senior Environmental Quality Analyst, Grand Rapids District, Water Resources Division, Michigan Department of Environmental Quality
- Table 6.2 Interested Parties Contact Information (contact data spreadsheet).
- Table 6.3 – Public participation in planning worksheet (form)
- 2014 Periodic Biosolids Program Performance Report. Issued February 2015.
- City of Grand Rapids Website – Wastewater and Biosolids sections.

## Element 7. Roles and Responsibilities

- Element 7: Roles and Responsibilities, version 8.0, effective 10/8/2015.
- Table 7.1 – Roles and Responsibilities – Internal BMP Team.
- Table 7.2 – Roles and Responsibilities grouped by Biosolids Value Chain Component.
- Table 7.3 – Internal BMP Team – Name and Contact Information.
- Figure 7.2 – Schedule of Annual Biosolids Activities.
- Environmental Services Organization Chart – October 2015.
- Interviews with Mike Lunn – Environmental Services Department (ESD) Manager; William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent; David Harris – Operations and Maintenance Supervisor; Andrew Meyer – Wastewater Operation and Maintenance Supervisor; Kolene Allen – Office Assistant IV; Todd Williams – Operator I; and Ed Howland – Maintenance Mechanic II.

## Element 8. Training

- Element 8: Training, version 6.0, effective 10/8/2015.
- Figure 8.1 – Employee General Awareness Training (29 PowerPoint slides)
- Figure 8.2 – Employee General Awareness Training Attendance Sheet (form)
- Reviewed ESD employee list for general awareness training: sign-in sheet for 8/4/2015.
- Reviewed sharepoint records that identify all employees training status – June 2015.
- Interviews with William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent; David Harris – Operations and Maintenance Supervisor; Andrew Meyer – Wastewater Operation and Maintenance Supervisor; Kolene Allen – Office Assistant IV; Todd Williams – Operator I; and Ed Howland – Maintenance Mechanic II.

## Element 9. Communications

- Element 9: Communication and Public Outreach, version 8.0, effective 10/8/2015.
- Figure 9.1 Public Request for Information Form.
- Interviews with William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent; David Harris – Operations and Maintenance Supervisor;
- Interview with Dave Schipper – Senior Environmental Quality Analyst, Grand Rapids District, Water Resources Division, Michigan Department of Environmental Quality
- Table 6.2 Interested Parties Contact Information (contact data spreadsheet).
- 2014 Periodic Biosolids Program Performance Report. Issued February 2015.
- City of Grand Rapids Website – Wastewater and Biosolids sections.

## Element 10. Operational Control of Critical Control Points

- Element 10: Operational Control of Critical Control Points, version 6.0, effective 10/8/2015.
- Form 10.1 – Annual Operational Controls Review.
- Form 10.2 – Contractor Compliance Inspection.
- Interviews with William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent; David Harris – Operations and Maintenance Supervisor; Andrew Meyer – Wastewater Operation and Maintenance Supervisor; Todd Williams – Operator I; and Ed Howland – Maintenance Mechanic II.
- Table 3.1 Biosolids Critical Control Points – lists operational controls related to each critical control point.
- Reviewed Cordes Biosolids Truck Loading Procedure, effective 7/14/2009.
- Reviewed Cordes Biosolids Safety Plan, rev 1, effective 10/20/2010.

## Element 11. Emergency Preparedness and Response

- Element 11 – Emergency Preparedness and Response, version 6.0, effective 10/8/2015.
- Table 11.1 – Emergency Response Information
- Table 11.2 – Emergency Equipment Inventory
- Checked emergency response equipment inventory in Fisher Building (warehouse).
- Reviewed work order tracking from Maximo for monthly inventory of spill kit for 2014/15.
- Interviews with William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent; David Harris – Operations and Maintenance Supervisor, and Andrew Meyer – Wastewater Operation and Maintenance Supervisor.
- Release Containment Plan for WWTP, version 1.4, effective 12/12/2014.
- Interview with Charlie Cordes – Owner and Operator – Cordes Trucking, Inc.
- Reviewed Cordes Biosolids Spill Plan 7/14/2009.

## Element 12. BMP Documentation and Document Control

- Document Management System – Policy Number: 1110, version 8.3, effective 12/19/2014.
- Element 12 – BMP Documentation and Document Control, version 6.0, effective 10/8/2015.
- Table 12.1 – Record Documentation System, which identifies SharePoint, report files, CMMS – Maximo, CMMS – Cityworks, employee training files, and safety equipment inspection files.
- Table 12.2 – BMP Related Documentation and Retention
- Interviews with William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent; David Harris – Operations and Maintenance Supervisor, and Andrew Meyer – Wastewater Operation and Maintenance Supervisor.
- Interview with Charlie Cordes – Owner and Operator – Cordes Trucking, Inc.
- Review EMS Manual revisions and change logs.
- Review SharePoint document management system.
- Reviewed random Operations SOPs, Maintenance SOPs and contractor SOPs.

## Element 13. Monitoring and Measurement

- Element 13: Monitoring and Measurement version 6.0, effective 10/8/2015.
- Table 13.1 – Action Plan – Quarterly Progress Report (form).
- Table 13.2 – Action Plan (form for planning goals and objectives)
- Reviewed completed Table 13.1 – Action Plan – Quarterly Reports completed for  $\frac{3}{4}$  of 2015.
- Figure 5.1 – Action Plan Status Worksheets (completed for  $\frac{3}{4}$  of 2015)
- Interviews with William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent; David Harris – Operations and Maintenance Supervisor, and Andrew Meyer – Wastewater Operation and Maintenance Supervisor.
- Reviewed randomly selected monitoring and measurement requirements in SOPs for plant operations.
- Reviewed quarterly progress reports used for tracking goals and objectives.

## Element 14. Nonconformances: Preventive and Corrective Action

- Element 14: Nonconformances: Preventive and Corrective Action, version 7.0, effective 10/8/2015.
- Table 14.2 Nonconformance Investigation Worksheet.
- Figure 14.1 – Corrective Action Plan (form).
- Interviews with William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent and David Harris – Operations and Maintenance Supervisor.
- Reviewed Table 14.2 – Nonconformance Investigation Worksheets for nonconformances for 2014 interim audit.

#### Element 15. Biosolids Management Program Report

- Element 15: Periodic Biosolids Program Performance Report, version 6.0, effective 10/8/2015.
- Interviews with William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent and David Harris – Operations and Maintenance Supervisor.
- 2014 Periodic Biosolids Program Performance Report. Issued February 2015.

#### Element 16. Internal BMP Audit

- Element 16: Internal BMP Audit, version 7.0, effective 10/8/2015.
- Table 16.1 – Internal Auditor’s Worksheet (including internal auditor’s minimum question checklist.)
- Contractor Compliance Inspection form 10.2 completed 6/17/2015.
- Interviews with William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent and David Harris – Operations and Maintenance Supervisor.
- 2015 Annual Internal Audit Report covering 2014 BMP activities.

#### Element 17. Management Review

- Element 17: Periodic Management Review of Performance, version 6.0, effective 10/8/2015.
- Table 17.1 – Periodic Management Review of Performance Report (template)
- Figure 17.1 – EMS Review Frequency (Memo dated February 27, 2009).
- Interviews with Mike Lunn – Environmental Services Department (ESD) Manager and William R. Kaiser – BMP Coordinator/Wastewater Plant Superintendent.
- 2014 Periodic Biosolids Program Performance Report. Issued February 2015.
- Completed Table 17.1 – Periodic Management Review of Performance Report performed on 3/30/2015, signed on 4/10/2015.