NATIONAL BIOSOLIDS PARTNERSHIP
INTERIM AUDIT REPORT

St. Cloud Public Utilities
Wastewater Treatment Facility
St. Cloud, Minnesota

Audit conducted by

NSF-International Strategic Registrations

William R. Hancuff, Lead Auditor

References:
National Biosolids Partnership (NBP) *EMS Elements*
NBP *Third Party Verification Auditor Guidance – November 2001*
(Latest Revision August 2011)
NBP *Code of Good Practice*
City of St. Cloud, Minnesota
Wastewater Treatment Facility
Biosolids Management Program
Environmental Management System
Manual 2015

Final Report – June 28, 2016

INTRODUCTION

The purpose of the Biosolids Management Program (BMP) interim audits are 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 support credibility between re-verification audits. The goal of the audit is to collect and evaluate objective evidence related to a portion of the BMP such that over the course of the four interim audits conducted between verification audits all 17 elements are addressed.

The goal of the audit is to determine whether the St. Cloud Public Utilities Wastewater Treatment Facility's Biosolids Management Program (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 the BMP requirements of the National Biosolids Partnership (NBP) program objectives.

RECOMMENDATION

The results of the St. Cloud interim audit and review of the corrective action plans are positive, and it is the recommendation of the audit team that the St. Cloud Wastewater Treatment Facility BMP maintain its the platinum level recognition certification status. Maintaining certification is not the end, but rather part of a continuum of a continuously improving biosolids management program.

AUDIT SCOPE

The (NSF-ISR) conducted a third party interim audit of the St. Cloud Wastewater Treatment Facility BMP from May 31 through June 1, 2016. The on-site audit team consisted of Dr. William R. Hancuff, Lead Auditor.

The primary objective of the annual interim audit is to ensure the biosolids management program's health by reviewing:

- Progress toward goals and objectives,
- Corrective and preventive action requests and responses.
- Actions taken to correct minor non-conformances,
- Management review process, and
- BMP outcomes (environmental performance, regulatory compliance, interested party relations, and quality practices)

The first four items identified above involved reviewing procedures, activities, processes and products that have general requirements found in the NBP standard elements 5, 14, 15, 16 and 17. The fifth item, BMP outcomes, had the potential of

involving other NBP standard elements, namely: 1, 2, 4, 6, 9, 10 and 13. In addition the scope specifically included review and verification of individual EMS Elements 5, 6, 9, 14 and 16. Work involved document review, interviews, and field visits.

In general terms, the scope of the third party interim audit encompasses the entire biosolids value chain (pretreatment, collection and treatment, solids processing through final end use or disposal) with special attention on those practices and management activities that directly support solids and biosolids-related operations, processes, and activities within the wastewater treatment plant's functions.

The physical biosolids facilities included in the audit and visited during the interim audit were the St. Cloud wastewater treatment facilities, including the gravity belt thickening operations, blower operations, solids storage tanks, tanker trucks, tractor and two land application farm sites: Byron Gerhke's field A-49 in Sterns County near Fairhaven (63 acres); and the City owned 100 acre land application site – fields H & G 20 in Lynden Township, MN.

The following individuals were interviewed or otherwise participated in meetings as part of the audit process:

- Patrick Shea – Public Services Director
- Tracy Hodel – Assistant Public Utilities Director
- Chris Plautz – Wastewater Services Superintendent
- Emma Larson – Environmental Compliance, EMS Coordinator
- Brian Schoenecker – Utilities Maintenance Mechanic
- David H. Wire – Wastewater Services Manager
- Wayne Ethen – Equipment Operations
- Byron Gerhke – Farmer and biosolids land application user
- Sherry Bock – Biosolids Coordinator – Resource Management and Assistance Division, Minnesota Pollution Control Agency

INTERIM AUDIT FINDINGS

The interim audit included review of the latest version of the St. Cloud Biosolids Environmental Management System Manual updated March 5, 2015 containing the current element procedures, and utilized the most recent version of the NBP Third Party Verification Auditor Guidance dated August 2011. The interim audit found no major non-conformances, 3 minor non-conformances and 1 opportunity for improvement, as well as 3 commendations or positive observations.

The following is a review of the positive observations made during the audit process. Minor non-conformances and opportunities for improvement follow and are presented in the sequence of the NBP standard elements listed by requirement number. These numbers correspond to the Element minimum conformance requirements.

Positive Observation

All of the positive observations were made in the Communications area (Element 9)

- The plant does an excellent job in portraying the high quality nature of its biosolids, which are land applied to local farms, by transporting the product in immaculately clean stainless steel trucks, similar to milk truck, that carry the St. Cloud logo "Biosolids Management Program".

- During a recent highly volatile situation involving erroneous public information related to water wells in Lynden Township, Sterns County the City staff performed admirably in presenting factual scientific information regarding its exemplary quality biosolids product used to enhance healthy farm land production.

- The City has developed a unique approach to providing both internal and external communication on their biosolids management program by using an Electronic Bulletin Boards. These bulletin boards are located at the City Hall, the wastewater treatment plant, the water treatment plant, and the central maintenance facility. These large screens display are used to present relevant information regarding all City programs and have been particularly effective in presenting biosolids information.

Minor Non-conformances

Requirement 5.5 – The standard requires the organization to develop goals and objectives using SMART criteria (Specific, Measureable, Achievable, Relevant and Time-bounded). Not all of the goals and objectives met the criteria for measurability; i.e. quantifiable accomplishments measured such as numbers, tons, gallons, milligrams per liter, percent solids, dimensions, units of measure, etc.

Requirement 5.7 – The standard requires the organization establish an action plan that describes those improvement activities it is pursuing to achieve biosolids program goals and objectives. These action plans must designated schedules, milestones, and responsibilities for achieving biosolids program goals and objectives. The St Cloud Element 5 procedure does not address this requirement and action plans were not developed for all of the goals and objectives.

Element 14 – Several of the requirements contained in the St. Cloud Element 14 procedure for Non-conformances: Preventive Action and Corrective Action were not implemented according to the identified procedure, such as completing corrective action plans in response to findings of internal audits and completing root cause analyses as appropriate.

Opportunities for Improvement

Element 14 – It was reported that St. Cloud is considering simplifying and streamlining its Element 14 procedure for Non-conformances: Preventive Action and Corrective Action and combining the required contents of Attachment 14.2 and Attachment 14.3. Consider reviewing the details of the minimum conformance requirement of the NBP standard for this element to ensure that each requirement is addressed in the procedure.

Summary and Closure

The hard work and dedication of the BMP Team must be recognized. While maintaining BMP certification obviously a team effort, the hard work and dedication of Emma Larson, Chris Plautz, Wayne Ethen and Brian Schoenecker must be acknowledged. Also, the encouragement, support and active participation of Patrick Shea, Public Services Director and Tracy Hodel, Assistant Public Utilities Director ensure the continued success of this program.

For the non-conformances, the St. Cloud BMP Team will prepare Corrective Action/Improvement Forms and implement corrective actions according to their BMP procedures to provide continual improvements to their biosolids program. The corrective action/Improvement Forms will be presented to the lead auditor within 30 days.

All corrective actions for minor nonconformities must be corrected within 30 days of the audit, or within the extensions beyond 30 days found to be acceptable and approved by the lead auditor.

As a further measure to demonstrate continual improvement the opportunities for improvement will be addressed to the maximum extent possible.

The final report and recommendation for continued recognition at the platinum level of certification will be submitted to NBP within two weeks following approval of the corrective actions for the minor nonconformities submitted to the lead auditor.

CITY OF ST. CLOUD WASTEWATER TREATMENT FACILITY COMMENTS

The City of St. Cloud Biosolids Management Program staff agrees with the findings of the audit and believes it reflects the current status of the program. With the continued dedication of the EMS team, Public Utilities staff and support of City Management, the goal to maintain and improve a very high standard that has been met. The City recognizes the value of the EMS program and the EMS Program was instrumental in the response to recent negative publicity. This negative publicity helped demonstrate the benefits and strengths of the program.

OUTCOMES MATTER

The City of St. Cloud's Wastewater Treatment Facility Biosolids Management Program established a new approach to formulating its goals in 2013 with longer-term time-bound targets. They continued to use this approach through 2015. St. Cloud either established new goals or carried forward six goals with fourteen related objectives. Some of the objectives were actually action plans associated with the goals and objectives and several did not clearly establish measurable criteria upon which to evaluate progress or accomplishment.

The EMS Coordinator and the EMS Team in consideration of potential public concerns developed goals and objectives in 2015. The goals and supporting objectives were partially developed using Specific, Measurable, Achievable, Relevant, and Time-bound (SMART) criteria and established cognizant of each of the four NBP required outcome areas listed below:

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

While it is not a requirement to accomplish all objectives established, it is a critical component of the system to make progress towards achieving the majority of the goals. The facility's performance relative to each of the above outcome groups is addressed beneath each of the goals and objectives identified below.

Some of the discussion of the goals and objectives for 2015 resulted in a further clarification of broader longer-term goals that were actually the focus of the goals listed. Those overarching goals were:

- REDUCE THE VOLUME OF BIOSOLIDS TRANSPORTED FROM THE PLANT FROM 2300 LOADS TO 1500 LOADS BY 2020.
- REDUCE THE CONCENTRATION OF PHOSPHORUS IN BIOSOLIDS FROM 7.25 % TO 2.5 % BY 2020
- PRODUCE 1700 DRY TONS PER YEAR OF CLASS A BIOSOLIDS BY 2020

The following presents a review of the 2015 goals and objectives along with expansion and clarification as discussed during the interim audit.

Goal 1: Optimization of Gravity Belt Thickener (GBT) to Improve Overall Quality of l. This goal was initially established in 2013 had three objectives: namely, to obtain an annual average of 9% total solids cake at the end of the gravity belt table. Keeping the GBT operating at 9% +/- 1% optimizes the performance of the system and maintains the desired quality of the product. Generating a minimum concentration of 9% product will ensure

adequate storage capacity during non-land application periods, but producing concentrations above 10% causes pumping issues.

Objective 1.1 – Obtain average of 9.0 percent TS cake at end of GBT. This objective is to maintain the GBT product to between 8.5 % and 9.5% for 100% of the time throughout 2013. Considerable progress was made on this objective although the target of operating within the above range 100% of the time may not have been completely attained.

Objective 1.2 (action plan) – Install and Use Second GBT by June 2014. The installation and operation of a second GBT provides redundancy in the process, reducing operational down time and guaranteeing consistent quality while meeting potential future demands for the product. This action plan was implemented by 2014.

Objective 1.3 (action plan) - Fine-tune the continuous operation of the GBT. This action plan is associated with the accomplishment of Objective 1.1. By using a total solids analyzer the fluctuation of the solids concentration can be determined on an hourly basis throughout the pumping cycle and adjustments can be made to operational controls quickly. The evaluation of this degree of control was commenced in July 2013 and data collection was completed resulting in the frequency of operational checking is being optimized.

A review of the operational data for the entire year of 2015 indicated the average of all measurements for the year was 9.1% solids and that 6.4 percent of the measurements were below the lower target level of 8.0% solids.

On further discussion with the EMS team it was determined that this goal had been accomplished and would be moved to a standard operating procedure goal.

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

Goal 2 – Technical Evaluation of Future Biosolids Management Program Alternatives by 2020. This goal had three objectives for 2013 and another three for 2014, with one additional objective (product) added in 2015.

The objectives 2.1 – 2.3 (action plan activities) involved completing the research stage for development of a biosolids road map; conducting technical evaluation of future biosolids management alternatives; and selecting at least one of the recommended options for further refinement through a pilot study. These three action plan activities were accomplished by 2014. An additional objective (product) was added to this goal in 2015, which was the completion of the R2E2 Master Plan.

Based on discussions with the EMS Team it was determined that the following objectives listed within Goal 2 would be more appropriately identified as action plans to accomplish the goal described above as:

REDUCE THE VOLUME OF BIOSOLIDS TRANSPORTED FROM THE PLANT FROM 2,300 LOADS TO 1,500 LOADS BY 2020.

Objective 2.4 (action plan) – Complete at least one dewatering pilot project and report. In August 2014 two screw presses were being evaluated for dewatering with the intention of selecting one for installation. Data collected included Total Solids decrease, Total Phosphorus removal, and Nitrogen reduction.

Objective 2.5 (action plan) – Complete one dewatering pilot investigation of returning supernatant to the head end of the plant. Note that if dewatering is to be properly evaluated the impact of returning supernatant to the head end of the plant must be researched because of the potentially negative impact on the biosolids value chain processes. One of the processes being evaluated includes phosphorus removal using a harvesting process. The preliminary evaluations were completed in late 2014.

Objective 2.6 (action plan) – Design and construct biosolids management process improvements, based on the above results. (Status – request for proposal scheduled for January 2018)

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

Goal 3 – Maintain and improve training of all employees who impact the biosolids EMS.

This goal and its objectives were originally established in 2013 and accomplished by late 2014. The ultimate goal was to achieve and maintain at least 70% of biosolids employees qualified in Type 4 training. (Note: The regulations in the state of Minnesota require Type IV Waste Disposal Operator or Inspector Certificate for land application of biosolids.) There are three objectives identified within this goal, the first two of which are actually action plan activities.

Objective 3.1 (action plan) – Develop and implement a new record form to track new employees and staff members re-assigned to the biosolids management program to be used to ensure the completion of biosolids related training during the employee's probationary period.

Objective 3.2 (action plan) - Establish an annual review method (similar to one currently used for laboratory SOPs and safety updates) to keep all staff up to date on biosolids management program procedures.

Objective 3.3 - The ultimate objective of this goal is to maintain at least 70% of the biosolids employees qualified by type IV training.

This goal was accomplished and made part of the EMS training procedure as a continuing SOP.

Objective 3.4 - A new objective established in 2015 under this goal heading was to create slides that provides Biosolids related information and post at least one each month on the Electronic Bulletin Board for one year.

This goal was reported to have been accomplished with a more frequent posting since March 2016.

This goal may now be moved to the EMS Communication procedure to address this as a standard operating procedure into the future for both internal and external communication

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

Goal 4 – Implement On-line Maintenance Program in the ER Portal Program by December 2015. This goal was originally developed in 2014. The initial measurable objective was to ensure that preventive maintenance is performed on the existing 1800 assets. A second measurable objective goal was to establish a preventive maintenance to corrective maintenance ratio, estimated to be 60/40, to optimize performance and minimize costs.

The action plan steps are actually identified as objectives, as follows:

Objective 4.1 (action plan) – List 50% of the WWTP assets into the ER Portal by December 31, 2015. This action was accomplished by entering at least 900 of the 1800 assets into the system. Progress has continued and, as of June 1, 2016, 1200 assets have been entered. The action plan has been modified to have 100% or 1,800 assets entered by December 31, 2016 along with all new assets entered as they are identified.

Objective 4.2 (action plan) – Provide ER Training to two groups of ER Portal users, managers and operators. Although it was reported that 100 percent of the users have had initial training by December 31, 2015; there is a continuing need to provide supplemental training as implementation of the ER Portal evolves.

Objective 4.3 (action plan) – Implement ER Portal functionality by December 31, 2016. Progress is being made on this as the assets are entered.

Objective 4.4 (action plan) – Use the ER Portal for EMS auditing by March 31, 2016. It is not clear how if this were an objective it would meet the SMART criteria.

Objective 4.5 (action plan) – supplement to “objective 4.1” action plan discussed above.

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

Goal 5 – Improve communications with all interested parties or those affected by the City's biosolids management activities. This goal was not developed using SMART criteria but there were some positive results from the actions identified. Specifically, the name of the publicly available annual report was changed to Biosolids Digester." A survey was developed to be distributed after public tours, so that results from the survey could be used to improve public involvement in annual goal setting. And lastly, biosolids awareness was to be added to at least one citywide event/program each year.

Goal 6 – Continuously improve operations of equipment and processes to generate the most cost effective, highest quality product possible. This goal is general in nature and does not meet the SMART criteria. However, objective 6.1 as rewritten does.

Objective 6.1 – By October 31, 2015 improve the functionality of the 2-meter gravity belt table to be able to accept a lower waste rate of 50 gpm (from its current low rate of 100 gpm) without process interruption. Dilution water was added under simulated low flow conditions and it was observed that lower waste rate of 50 gpm could be accepted and meet the criteria of having no process interruption.

Outcome Areas Impacted: Environmental Performance and Quality Biosolids Management Practices.

CONCLUSIONS AND RECOMMENDATIONS

The results of the third interim audit show the St. Cloud Wastewater Treatment Facility has a strong Biosolids Environmental Management Program. The NSF lead auditor reviewed and approved the corrective action plans for each of the minor non-conformances identified during the audit. Therefore it is recommended that the Wastewater Treatment Facilities Biosolids Management Program (BMP), St. Cloud, Minnesota maintain its platinum level recognition certification by the NBP. The full implementation of the corrective actions for the minor non-conformances will be accomplished according to the schedule proposed in the corrective action worksheets. It is expected that the opportunities for improvement will each be addressed although they do not require formal closure.

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.

Each internal or interim audit will include a review of: the organization's progress toward goals and objectives; EMP 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, all of the elements will be audited individually over the four-year interim period between certification audits, such that all elements are addressed.

Based on discussions between the Biosolids Coordinator (BMP Coordinator) and the third party auditor the following tentative interim audit schedule was established to maintain platinum recognition status over the intervening years between certification audits:

Year 1 (third party) –Elements 3, 10, 12, 13 (completed)

Year 2 (internal) – Elements 1, 8, 15, 17 (completed)

Year 3 (third party) – Elements 5, 6, 9, 14, 16 (completed)

Year 4 (internal) – Elements 2, 4, 7, 11 (internal)

Attachment 1

Documents and Other Objective Evidence Reviewed During the Interim Audit

Element 1. BMP Manual

- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- EMS Manual – Version 4 – March 5 2015
- Biosolids Master Calendar for 2015

Element 2. Biosolids Management Policy

- Interview with Patrick Shea – Public Services Director
- Interview with Tracy Hodel – Assistant Public Utilities Director
- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Brian Schoemaker – Utilities Maintenance Mechanic
- Element 2: Biosolids Management Policy, Version 2, dated 7/28/14
- Attachment 2.1: NBP Code of Good Practice

Element 3. Critical Control Points

- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Shane Lund – Water Quality Coordinator
- Interview with Brian Schoemaker – Utilities Maintenance Mechanic
- New High Strength Waste Storage Tank

Element 4. Legal and Other Requirements

- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Brian Schoemaker – Utilities Maintenance Mechanic
- Interview with Byron Gerhke – Farmer and biosolids land application user
- Interview with Sherry Bock – Biosolids Coordinator – Resource Management and Assistance Division, Minnesota Pollution Control Agency

Element 5. Goals and Objectives

- Interview with Patrick Shea – Public Services Director
- Interview with Tracy Hodel – Assistant Public Utilities Director
- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Brian Schoemaker – Utilities Maintenance Mechanic

- Interview with Wayne Ethen – Equipment Operations
- Element 5:Goals and Objectives for Continual Improvement, Version 3, dated 7/21/14
- Table 5.1 - Goals and Objectives Template
- 2015 and 2016 Biosolids Management System Goals and Objectives
- Reviewed Action Plans contained in Goals and Objectives for 2015.
- Reviewed Summary sheet for 2015 Goals and Objectives for 2015

Element 6. Public Participation in Planning

- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Brian Schoemaker – Utilities Maintenance Mechanic
- Interview with Byron Gerhke – Farmer and biosolids land application user
- Interview with Sherry Bock – Biosolids Coordinator – Resource Management and Assistance Division, Minnesota Pollution Control Agency
- Element 6: Public Participation in Planning, Version 4, dated 7/28/14
- Attachment 6.1 - Table 6.1 City of St. Cloud Biosolids Management Program Public Participation Mechanisms
- Attachment 6.2 Letter to interested parties – open invitation to observe verification audit.
- St. Cloud Public Utilities Website (http://www.ci.stcloud.mn.us/index.aspx)
- Public invitation to attend interim audit on May 31 and June 1, 2016 - http://www.ci.stcloud.mn.us/332/Biosolids-Management-Program
- Letter from Minnesota Department of Health dated February 24, 2016 expressing concern with water quality in wells in Lynden Township, MN
- Discussion with MPCA regarding results of testing 17 water wells in the area of concern in Lynden Township – demonstrating

Element 7. Roles and Responsibilities

- Interview with Patrick Shea – Public Services Director
- Interview with Tracy Hodel – Assistant Public Utilities Director
- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Brian Schoemaker – Utilities Maintenance Mechanic
- Element 7: Roles and Responsibilities, Version 4, dated 3/23/15

Element 8. Training

- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Brian Schoemaker – Utilities Maintenance Mechanic
- Interview with Wayne Ethen – Equipment Operations
- Element 8:Training, Version 3, dated 7/21/14
- Attachment 8.1 Employee Capability Sheet

- Attachment 8.2 St. Cloud Biosolids Management Program Training Requirement Matrix

Element 9. Communications

- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Brian Schoemaker – Utilities Maintenance Mechanic
- Interview with Byron Gerhke – Farmer and biosolids land application user
- Interview with Sherry Bock – Biosolids Coordinator – Resource Management and Assistance Division, Minnesota Pollution Control Agency
- Element 9: Communication, Version 4, dated 3/16/15
- St. Cloud Public Utilities Website (http://www.ci.stcloud.mn.us/index.aspx)
- Biosolids Management Program Performance Report for 2015.
- City of St. Cloud – Biosolids Digester newsletter – Annual Report for 2015
- Discussion on St. Cloud Electronic Bulletin Boards used to display biosolids information along with other important items of interest. (Note: locations include: 1 at City Hall, 4 at wastewater treatment plant, 2 at water treatment plant, and 2 at central maintenance.)
- Reviewed records of wastewater treatment plant tours and other publications related to wastewater treatment and biosolids

Element 10. Operational Control of Critical Control Points

- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Brian Schoemaker – Utilities Maintenance Mechanic
- Interview with Wayne Ethen – Equipment Operations
- St. Cloud Wastewater Treatment Facilities, Process Flow and Biosolids Diagram.
- Element 10: Operational Controls, Version 3, dated 7/21/14
- Element 3 – Process Control Points, Version 4, dated 10/1/14
- Table 3.1: Process Control Points, Operational Controls, SOPs, Monitoring/Measurements and Potential Significant Impacts
- Gravity Belt Thickener Operations EOS, Rev 1, August 2014
- Blower Operations EOS, Rev 0, March 2014
- Sample of Operations Weekly Report BNR 2, 3 & 4 for May 8 – 19, 2016

Element 11. Emergency Preparedness and Response

- Not evaluated

Element 12. BMP Documentation and Document Control

- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Brian Schoemaker – Utilities Maintenance Mechanic

- Interview with Wayne Ethen – Equipment Operations
- Element 12: Documentation, Document Control and Record Keeping, Version 4, dated 3/5/15
- Element 1: City of St. Cloud Biosolids EMS Manual, Revision 4, dated 3/5/15
- Element 2: Biosolids Management Policy, Version 2, dated 7/28/14
- Attachment 2.1: NBP Code of Good Practice
- Policy incorporating the Code of Good Practice City of St. Cloud and Resolution Adopting the NBP Code of Good Practice for the City's Biosolids Management Program – January 7, 2013

Element 13. Monitoring and Measurement

- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Brian Schoemaker – Utilities Maintenance Mechanic
- Interview with Wayne Ethen – Equipment Operations
- Interview with Byron Gerhke – Farmer and biosolids land application user
- Interview with Sherry Bock – Biosolids Coordinator – Resource Management and Assistance Division, Minnesota Pollution Control Agency
- St. Cloud Wastewater Treatment Facilities, Process Flow and Biosolids Diagram.
- Element 13 – Monitoring and Measurement, Version 2, dated 7/11/14
- Element 10: Operational Controls, Version 3, dated 7/21/14
- Element 3 – Process Control Points, Version 4, dated 10/1/14
- Table 3.1: Process Control Points, Operational Controls, SOPs, Monitoring/Measurements and Potential Significant Impacts
- Gravity Belt Thickener Operations EOS, Rev 1, August 2014
- Blower Operations EOS, Rev 0, March 2014
- Field observations of wastewater treatment plant and land application site farm
- Reviewed sample of Operations Weekly Report BNR 2,3,& 4 for May 8 – 19, 2016
- Reviewed eRPortal Software for preventive and corrective maintenance
- Reviewed eRPortal Software training agenda – October 20 & 21, 2015

Element 14. Nonconformances: Preventive and Corrective Action

- Interview with Brian Schoemaker – Utilities Maintenance Mechanic, Internal Lead Auditor
- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Wayne Ethen – Equipment Operations
- Element 14:Nonconformance: Preventive Action and Corrective Action, Version 3, dated 7/24/14
- Attachment 14.1 – Corrective Action/Preventive Action Forms
- Attachment 14.2 – Corrective Action Plan Template
- Reviewed Internal audit agenda – February 24, 2016.

- Reviewed internal auditor training – "How to be an effective auditor"
- Reviewed NBP EMS Internal Audit Report for 2016 for audit conducted on February 24, 2016
- Reviewed completed corrective action plan form for year 2 internal audit; audit conducted 3/9/15, plan dated 3/18/15
- Reviewed completed corrective action plan form for year 3 internal audit; audit conducted 2/24/16, plan dated 3/28/16

Element 15. Biosolids Management Program Report

- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Brian Schoemaker – Utilities Maintenance Mechanic
- Interview with Wayne Ethen – Equipment Operations
- Element 15 – Biosolids Management Report, Version 3, dated 7/28/14
- City of St. Cloud Biosolids Management Report for 2015
- Reviewed 2016 Biosolids Facility Plan – Executive Summary
- Biosolids Management Program – Annual Cropping Year 2015 – report submitted to the State of Minnesota
- St. Cloud – Biosolids Digester – Summary report on Biosolids management for 2015
- 2015 Public Services Annual Report for St. Cloud Greater Public Utilities, which includes Biosolids section.

Element 16. Internal BMP Audit

- Interview with Patrick Shea – Public Services Director
- Interview with Tracy Hodel – Assistant Public Utilities Director
- Interview with Brian Schoemaker – Utilities Maintenance Mechanic, Internal Lead Auditor
- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Wayne Ethen – Equipment Operations
- Element 16: Internal Biosolids Management Program Audit, Version 4, dated 3/3/15
- Attachment 16.1 – Internal Audit Team Details, Lead Auditors Qualifications, Training and Responsibilities.
- Attachment 16.2 – Corrective Action Table Template
- Attachment 16.3 –Internal EMS Audit Schedule
- Reviewed Internal audit agenda – February 24, 2016.
- Reviewed internal auditor training – "How to be an effective auditor"
- Reviewed NBP EMS Internal Audit Report for 2016 for audit conducted on February 24, 2016
- Reviewed completed corrective action plan form for year 2 internal audit; audit conducted 3/9/15, plan dated 3/18/15

- Reviewed completed corrective action plan form for year 3 internal audit; audit conducted 2/24/16, plan dated 3/28/16
- Internal audit report for 2015 - http://www.ci.stcloud.mn.us/DocumentCenter/View/8685

Element 17. Management Review

- Interview with Patrick Shea – Public Services Director
- Interview with Tracy Hodel – Assistant Public Utilities Director
- Interview with Chris Plautz – Wastewater Services Superintendent
- Interview with Emma Larson – Environmental Compliance, EMS Coordinator
- Element 17: Management Review, Version 3, dated 7/21/14
- Attachment 17.1 – St. Cloud Biosolids Management Program, Management Review Agenda
- Attachment 17.2 - St. Cloud Biosolids Management Program, Management Review Report
- Attachment 17.3 – Biosolids Management Program Weekly Status Report