

**NATIONAL BIOSOLIDS PARTNERSHIP  
SEVENTH 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 Protection Services*  
*Biosolids Management Program Manual – July 2005*  
(*Latest Revisions Approved October 2013*)**

**Final Report – November 8, 2013**

## **INTRODUCTION**

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

## **AUDIT SCOPE**

The primary objective of the seventh interim audit was to ensure the BMP 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
- EMS 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, EMS outcomes, had the potential of involving other NBP standard elements, namely: 1, 2, 4, 6, 9, 10 and 13.

In addition to evaluation of the minimum required elements specified above and those other elements that could be related to outcomes, the present interim audit scope included the review and verification of the maintenance and implementation of the Grand Rapids BMP relative to NBP Standard Elements 1, 10, 12 and 13.

The NSF- International Strategic Registrations, Ltd. (NSF-ISR) conducted the third party interim audit of the Grand Rapids Biosolids Management Program. The on-site audit team consisted of Dr. William R. Hancuff, Lead Auditor and was conducted from October 28 through and including October 29, 2013.

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, solids storage tanks, centrifuges, truck loading facilities, the Republic – Coopersville landfill site, and the Granger electric power generation facility, which recovers and uses biosolids/landfill gas.

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

Chuck Schroeder – Assistant ESD Manager  
David Harris – Acting Wastewater Plant Superintendent/BMP Coordinator  
Kathie Kuzawa – Stormwater/Wastewater Maintenance Supervisor  
Patricia Chapman – Environmental Assessment Supervisor  
Edward Rumbergs – Operations and Maintenance Supervisor  
Timothy Dryer – Wastewater Operation and Maintenance Supervisor  
William Smith – Utility Maintenance Supervisor  
Kurt Anderson – Water Pollution Control Officer (pretreatment program)  
James Soper – Inspector (pretreatment program)  
Sherry L. Zomerhuis – Office Assistant IV  
Rachael Nagorsen – Intern  
Katrice Graves – Intern  
Robert Carr – Republic – Coopersville landfill manager  
Mike Worm – Assistant District Supervisor, Grand Rapids District, Water Resources Division, Michigan Department of Environmental Quality  
Thomas Schaub – Chemist  
Charlie Dickinsen – laboratory technician I  
Jared Gabinski – Operator II  
Jan Goosmann – Operator II  
Nick Klug – Operator II  
Andrew Meyer – Operator II  
Ray Gabinski – Maintenance Mechanic II  
Jason Neumann – Electrician I

## **INTERIM AUDIT FINDINGS**

The third interim audit generally addressed elements 5, 14, 15, 16 and 17, as well as outcome related elements 1, 2, 4, 6, 9, 10 and 13. In addition the audit specifically included the review and verification of the maintenance and implementation of the Grand Rapids Biosolids EMS relative to standard elements 3, 10, and 13.

The audit included review of the latest versions of the EMS elements as contained in the Grand Rapids EMS Manual with revisions as recently as October 2009 and employed the most recent version of the NBP *Third Party Verification Auditor Guidance* dated

August 2007. The interim audit found no major non-conformance, 2 minor non-conformances and 7 opportunities for improvement. There were also 4 commendations or positive findings.

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

### **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.

All personnel interviewed had an excellent knowledge and understanding of the biosolids management program.

And finally, the hard work and dedication of the EMS management team must be acknowledged. While maintaining the EMS verification goal is obviously a team effort the effectiveness of guidance provided by the Assistant Director assured maintenance of this common goal.

### **Minor Nonconformances**

Requirement 5.5 – In Form 5.3 – SMART Goals and Assessment Worksheet the criteria are not properly identified as Specific, Measureable, Achievable, Relevant, and Time-bounded. Additionally the examples provided for those criteria do not accurately reflect the intent for application to criteria for the Biosolids Management Program.

Requirement 5.5 – The goal and objective to procure and hire three operator/maintainer positions does not identify in sufficient detail each of the SMART criteria associated with this goal.

Requirement 5.5 and 5.7 – The goal and objective associated with the amalgam separators in dental offices did not defined the specific goal and objective or the measureable criteria to determine improvement. Additionally a step by step action plan describing the improvement activities was not prepared.

Requirement 5.5 – The goal and objective associated with improving BOD, nitrification/denitrification and phosphorus removal did not clearly identify that the specific goal was to reduce the amount of ferrous used without lowering the water quality discharged below the permit limits. Also the measurements in 2013 were not related to this specific objective.

Requirement 5.5 – The goal and objective associated with monitoring the product from the centrifuge for 503 Regulations did not identify that the specific objective was to ensure that the product meets the metal concentration for exemplary quality (EQ) for potential land application.

Requirement 5.5 - The goal and objective associated with reducing the number of industries in significant noncompliance (SNC) did not accurately reflect the improvement year over year due to possible double counting.

Requirement 5.5 – The goal and objective associated with producing an environmental tip brochure associated with a “critical control point” in the BMP was entitled “Adopt a Drain” which is not a critical control point in the BMP.

Requirement 12.2 – The document control procedures do not ensure that documents are properly marked with the version number, effective date(s), and approved by authorized personnel. The Element procedures and some of the SOPs do not have revision numbers on the documents, have the original effective dates as opposed to the most recent version’s effective date, and are approved by the person who first created the document as opposed to the personnel authorized to approve the document at the time the most recent revision was made. (Note: consider whether the creator of the revision should be identified on the document, in addition to the individual who is authorized to approve it.)

Requirement 12.2 – SOP 1110 does not define who has authority for evaluating and approving recommendations for SOP changes. It was observed that each of the sections of this procedure may have different and/or multiple authorized individuals.

### **Opportunities for Improvement**

Overall – Consider encouraging the use of the terms “solids” and “biosolids” in place of the term “sludge.”

Requirement 5.3 – Per staff recommendation consider establishing a goal and objective for centrate clarity from the new centrifuges.

Requirement 5.5 – The BMP takes no credit for cost savings attributable to improved operations resulting from the accomplishment of biosolids goals and objectives.

Requirement 5.6 – Consider clarifying in Element 5 procedure for Goals and Objectives that in addition to the minimum requirement of establishing goals annually by the first of the year, additional goals and objectives may be added at any time to allow programs and action plans to be developed quickly and ensure a dynamic program of accomplishments.

Requirement 5.6 – The goal and objective to provide commendable customer service by maintaining a 75% satisfaction rating has been consistently accomplished over the past two years with a performance in the 95% satisfaction range. Consider declaring this goal

accomplished and moving it to a procedure to be continued in either Element 6 or Element 9.

Element 9 – Review Element 9 (and 6) procedure to update its contents and specifically define how the City will increase public involvement in determining biosolids goals and objective.

Requirement 10.5 – The contractor, Cordes Trucking Inc’s Vehicle Inspection Plan – 2009-1 does not include the truck inspection log sheet as a figure or table as part of the procedure (plan).

Element 12 – Element 12 procedure related to document control does not clearly indicate that the EMS Document Revision History as it appears in each document is no longer used to record document changes but instead SharePoint automatically records the history of changes to each document. Consider including in the last revision history entry to all element documents entered on 3/28/2008 that this is the last entry in this format and all future document revision histories will be documented in SharePoint. Additionally some of the description of changes recorded in the SharePoint revision history is not described in sufficient detail. Also consider specifically identifying in the history of revisions those document changes that result from audit findings.

Requirement 13.1 – Consider purchasing a Nasal Ranger or other olfactometer to scientifically monitor odors associated with solids and/or biosolids at critical control points to establish baseline and variability of odors. Results may be used to establish future goals and objectives.

Requirement 14.6 – Consider referencing Table 14.1 – Nonconformance Summary and Response Time as a template in Element 14 procedure and employing it separately from the Element 14 procedure to track finding closures.

Element 15 – Consider including costs and savings associated with biosolids operations and the BMP in the periodic biosolids program performance report.

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, Michigan Environmental Services Department established our Biosolids Management Program (BMP) approximately 8 years ago. Our program has had many changes and improvements since its inception. It is maturing into a productive healthy program and it makes us better at what we do.

It was apparent a few years back that training was an area that we were lacking in. The

BMP taught us the importance of training. The work force is quite familiar with the program due to the increased level of training as well as engaging staff at all levels. It seems that every time we audit ourselves or have an external audit, we find ways to improve our program by doing things more efficiently and effectively.

This audit showed that we are a little weak in our goal setting and could use to improve in public outreach. We intend on making those two areas a focal point as we move forward and into 2014 and beyond.

The City of Grand Rapids is grateful to be able to have our program checked for proper health. The third party audit process provides us with the tools we need to consistently improve our program. The feedback we get through this process assists us greatly in our goal for continuous improvement. We look forward to strengthening our Biosolids Management Program in 2014 and beyond. Dr. Hancuff has given us many good opportunities for improvement and we look forward to getting those improvements in place.

## **OUTCOMES MATTER**

The City of Grand Rapids, Michigan Environmental Services Department Wastewater Biosolids Program established four major groups of BMP goals and objectives for 2012 and 2013 consistent with the required NBP outcome areas. The goals and objectives for 2012 were identical to those established for the previous two years, but in 2013 some modifications were made to the old goals, while new additions were made to the list. These goals and objectives were developed through input from the internal BMP Team and consideration of public concerns. As was mentioned the City's Wastewater Biosolids goals for its BMP 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 attain 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.

In the Environmental Performance area, the Department established several goals and objectives for 2012, most of which were carried over from earlier years, either the same or with some modification.

One of the early goals was to have the City maintain wastewater plant equipment in top operating condition, specifically to maintain a 75% or greater ratio of preventive maintenance versus corrective maintenance. The original objective was to apply to three individual skilled trades (maintenance, electricians, and technicians.)

These ratios were tracked using the plant Computer Maintenance Management System (CMMS) to maximize proactive maintenance practices geared toward minimizing equipment downtime. The intent was to improve performance of assets by maintaining high maintenance systems and/or equipment through better utilization of the CMMS programs reporting functions to track man-hour utilization. This early goal evolved to specifically maintain a monthly average of 120 man-hours per person reported for the job classifications of Plant Assistant I, Plant Assistant II, Utility Crew Leader, UMM I, UMM II, UMM III, Electrician I, Electrician II and Instrument Technician.

Proper equipment operation results in lower potential for process upsets, which can decrease the quality of the biosolids product and lower effluent quality. Below optimum biosolids production can increase the fuel consumption associated with the transportation of biosolids to the landfills and the resultant inefficient use of natural resources. Additionally, plant upsets result in lower effluent quality and more contaminants being discharged to the receiving waters.

The City was approaching a ratio of 90%, although certain individual job classifications did not meet this overall goal. The goal was determined to be successfully met and removed as a goal and objective in 2013.

Another similar and somewhat related objective included upgrading the “Computer Maintenance Management Program to (CMMS) in 2011 and improving its utility throughout 2012 and 2013. The initial objective was to obtain reliable data on the variables through upgrading the computer software (upgrade to Maximo 7.1), which was accomplished. The next goal was to provide greater focused on costs, including equipment, material and labor. It was observed that the data was only 40% reliable and improvements were needed. The goal further evolved in 2013 to capture spare parts inventory to reduce repair times at critical control points.

A long term goal established in 2010 was to implement a comprehensive sanitary sewer cleaning program; i.e. routine cleaning of all sewers 15-inches and smaller once every five years. Because of the success of this program it was expanded the following year to include all sewers 24-inches and smaller and the frequency reduced to once every four years. The program reduces both the accumulation of inorganic materials in the sewer lines as well as removing insoluble organic materials that cause fats, oils and grease blockages and eliminating foul materials from reaching the treatment facilities, where it causes odors and reduction in biosolids quality. As a result of this program the number of citizens calling in complaints after normal business hours from sewer blockages has decreased from once a night to fewer than once per week. Additionally the sanitary sewer overflows (SSOs) have decreased in number by 90% and in volume by 80%. The cleaning program was found to be so successful that it was accomplished in record time and is being considered for inclusion as a routine procedure in the biosolids management program. As an aside, this goal and objective can equally well be applied in quality management practices, regulatory compliance, and relations with interested parties outcome areas.



In the Regulatory Compliance area, the City established a comprehensive sanitary sewer cleaning program from 2010 through 2013 as was discussed above. This goal and objective not only improves the removal of solids from the collection system but also reduces sewer system backups attributable to blockages, and substantially decreasing the number and volume of SSOs.

A goal for 2011 that has been carried over into 2012 and 2013 is to perform quarterly heavy metals analyses on the final biosolids product and comparing the results to the heavy metal concentration standards contained in the Section 503 regulations governing land application of biosolids, should that ever become one of the options implemented by the City. All analyses have demonstrated that most of the metals are routinely 90% to 95% below the exceptional quality (EQ) pollutant concentrations standards, with the exception of Zinc and Copper which typically are 80% and 85% below the limits, respectively.

A new goal established for 2013 is to change to an alternative approved method for analyzing wastewater samples for chloride that does not generate any hazardous waste. This goal is substantially accomplished with the purchase of new testing equipment and development of standard operating laboratory procedures is all that remains for implementation of the change. This is scheduled to be completed before 2014.

Another new goal established for 2013 in this outcome area is to ensure compliance with new regulations related to amalgam separator installation at dental offices. The goal is to have 100% compliance with this requirement and the action plan is to track all dental offices that require such installations to ensure the required separators are installed. To date 149 dental offices have been contacted; of those approximately 94 are required to have the amalgam separators and only 10 have not, but intend on doing so.

And a final new goal for 2013 in this outcome area is the reduction of significant noncompliance incidents by 25% in 2013. The number of incidents maintained for EPA records are a rolling average and typically in the range of 6. Based on the method of tracking this goal it is unclear if it has been or will be met.

In the Relations with Interested Parties area, the City established an objective for 2010 to provide commendable customer service by maintaining a 75% satisfaction rating among those citizens receiving service by the city sewer maintenance department associated with sanitary sewer “service requests.” This was expanded in 2011 to include those persons who have participated in the “footing drain disconnection program” and the “ sump pump” program in 2012 and it was carried over into 2013. The measurement employed for this goal is based on surveying a minimum of 10% of all reported “service requests.” For example, if there were 700 such services in a quarter, 10 percent, or 70, would be contacted by telephone and requested to participate in a satisfaction survey. The goal was to maintain greater than 75% satisfaction of those who responded to the survey. The results for the last three quarters of 2012 and the first three quarters of 2013 were: 100%, 94%, 94%, 93%, 95% and 100%. This feedback far exceeds the established goal and is considered a success.

Another goal established for 2011 in this outcome area was to produce one “Environmental Tip” flyer on biosolids, similar to four similar documents that have been published over the past few years. This is a quarter page hand-out that the City uses as an insert in all of the water/wastewater bills mailed. This goal was carried over into 2012 and 2013. The three new Tips published included: Environmental Protection Tip # 5 – Report it don’t ignore it (English & Spanish), Environmental Protection Tip # 6 – Did you know we never close (English & Spanish), and Environmental Protection Tip # 7 – Maintain the drain (English & Spanish).

In the Quality Biosolids Management Practices area, the City established a new goals and objectives in 2013 to create a new labor category and hire three employees to fill this new position. The new position title combines operations responsibilities with maintenance responsibilities and is entitled operator/maintainer. This new position will require personnel to have both operational expertise as well as maintainer experience, which will improve the efficiency of the operations and maintenance at the critical control points. All of the steps to creating this new position have been accomplished and approved by the human resources office of the City. The three new positions are anticipated to be filled from within by January 2014.

A goal established in 2010 and carried forward through 2013 because of the long term nature of construction is to improve BOD removal, nitrification/denitrification and phosphorus removal as a result of the North Plant Modification Project. Improvements in biological removal of nutrients should result in eliminating the addition of ferrous chloride for that purpose. This will not only eliminate the iron contamination of the solids and biosolids but also completely eliminate the variety of heavy metals that accompany the treatment chemicals. This process change will substantially reduce chemical and energy costs and improve the biosolids quality. Although construction completion was scheduled for October 2012 it was completed a year late. Beginning in November 2013 biological phosphorus will commence in earnest.

Another goal and objective for 2011, 2012 and 2013, related to quality management practices, was mentioned in the regulatory compliance outcome area and dealt with performing quarterly monitoring of the “503” heavy metals content of the final biosolids product to ensure a safe product should land application or composting ever become a alternative to the currently used landfill gas enrichment program.

As was noted the City continued efforts all of the major outcome areas by expanding their goals and objectives for 2013. And it is anticipated that new SMART goals will be again developed in 2014.

## **CONCLUSIONS AND RECOMMENDATIONS**

The results of the seventh 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, an EMS 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 (internal/third party) – Elements 3, 8, 15, 17

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

Year 10 – Re-verification Audit (third party)

(Note: the third party auditor must conduct one of the next two interim audits, i.e. either 8 or 9.)

## **Attachment 1**

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

#### Element 1. BMP Manual

- City of Grand Rapids, Michigan Environmental Services Department Biosolids Management Program Manual – Updated October 2013.
- Interviews with David Harris and Kathie Kuzawa
- Document Management System – Policy Number: 1110.
- Appendix B: Tables, Figures, Forms.
- Biosolids Introduction and Process Description.
- Element 1 – Documentation of Biosolids Management Plan.
- Element 2 – Biosolids Management Policy.
- Element 3 – Critical Control Points.
- Element 4 – Legal and Other Requirements.
- Element 5 – Goals and Objectives.
- Element 6 – Public Participation in Planning.
- Element 7 – Roles and Responsibilities.
- Element 8 – Training.
- Element 9 – Communication and Public Outreach.
- Element 10 – Operational Controls of Critical Control Points.
- Element 11 – Emergency Preparedness and Response.
- Element 12 – BMP Documentation and Document Control.
- Element 13 – Monitoring and Measurement.
- Element 14 – Nonconformances: Preventive and Corrective Action.
- Element 15 – Periodic Biosolids Program Performance Report.
- Element 16 – Internal BMP Audit.
- Element 17 – Periodic Management Review of Performance.
- EMS Element 2 – Biosolids Management Policy containing Biosolids Mission Statement and Code of Good Practice.
- Joint Biosolids Management Project Agreement – Grand Valley Regional Biosolids Authority (GVRBA), City of Grand Rapids, Michigan and City of Wyoming, Michigan – July 1, 2009.

#### Element 2. Biosolids Management Policy

- Element 2 – Biosolids Management Policy, containing Biosolids Mission Statement and Code of Good Practice.
- Interviews with Chuck Schroeder, David Harris, and Kathie Kuzawa.

### Element 3. Critical Control Points

- Element 3 – Critical Control Points.
- Wastewater Treatment Plant Layout from Grand Rapids Comprehensive Master Plan.
- Introductory overview material entitled Biosolids Environmental Management System providing a narrative and pictorial presentation on each of the critical control points.
- Table 3.1 Biosolids Critical Control Points – lists operational controls (SOPs), environmental impacts, and monitoring and measurements related to each critical control point.
- Interviews with Chuck Schroeder, David Harris, Kathie Kuzawa, Patricia Chapman, Edward Rumbergs, Timothy Dryer, William Smith, Kurt Anderson, James Soper, Thomas Schaub, Charlie Dickinsen, Jared Gabinski, Jan Goosmann, Nick Klug, Andrew Meyer, Ray Gabinski, and Jason Neumann.
- Field review of various critical control points.
- Spot check operations controls and monitoring and measurement in SOPs.

### Element 4. Legal and Other Requirements

- Element 4 – Legal and Other Requirements.
- Table 4.1 Legal and Other Requirements, including applicable requirements, document location, governing agency and areas of influence within biosolids value chain.
- Interviews with regulatory staff – Patricia Chapman – Environmental Assessment Supervisor, Kurt Anderson – Water Pollution Control Officer and James Soper – Inspector.
- Interview with State regulators - Mike Worm – Assistant District Supervisor, 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.
- Interviews with Chuck Schroeder, David Harris, Kathie Kuzawa, Patricia Chapman, Kurt Anderson and James Soper.
- Table 5.1 – Biosolids Goals and Objectives (dynamic template completed for 2013).
- Figure 5.1 – Action Plan Status Worksheets (form for Goals and Objectives).
- 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).
- Reviewed quarterly progress reports for each goal and objective action plan for 2012 and 2013.
- Assessment of outcomes in the four critical areas.

- Access and evaluation of website.
- Reviewed A3 lean process for establishing goal and objectives (outside BMP).
- (Note: this is a root cause process developed for Toyota to improve performance.)

#### Element 6. Public Participation in Planning

- Element 6: Public Participation in Planning.
- Interviews with Chuck Schroeder, David Harris, and Kathie Kuzawa.
- Table 6.2 Interested Parties Contact Information (contact data spreadsheet).
- Table 6.3 – Public participation in planning worksheet (form)
- Environmental Protection Tip # 1 – Proper grease disposal (English & Spanish)
- Environmental Protection Tip # 2 – Proper medicine disposal (English & Spanish)
- Environmental Protection Tip # 3 – Disposable not flushable (English & Spanish)
- Environmental Protection Tip # 4 – Rainwater is not wastewater (English & Spanish)
- Environmental Protection Tip # 5 – Report it don't ignore it (English & Spanish)
- Environmental Protection Tip # 6 – Did you know we never close (English & Spanish)
- Environmental Protection Tip # 7 – Maintain the drain (English & Spanish)
- Take Back Meds – Free Residential Medicine Disposal (Western Michigan flier)
- Mercury Awareness for Grand Rapids Area Citizens – information sheet.
- Drug Free Drains (WEF flier).
- Sustainability starts at your sink (WEF flier).
- 2011 Periodic Biosolids Program Performance Report. Issued March 2012.
- 2012 Periodic Biosolids Program Performance Report. Issued March 2013.

#### Element 7. Roles and Responsibilities

- Element 7: Roles and Responsibilities.
- Table 7.1 – Roles and Responsibilities – Internal EMS Team.
- Table 7.2 – Roles and Responsibilities grouped by Biosolids Value Chain Component.
- Table 7.3 – Internal EMS Team – Name and Contact Information.
- Figure 7.2 – Schedule of Annual Biosolids Activities.
- Environmental Services Organization Chart – October 23, 2013.
- Interviews with Chuck Schroeder, David Harris, Kathie Kuzawa, Patricia Chapman, Edward Rumbergs, Timothy Dryer, William Smith, Kurt Anderson, and James Soper.
- Joint Biosolids Management Project Agreement – Grand Valley Regional Biosolids Authority, City of Grand Rapids, Michigan and City of Wyoming, Michigan – July 1, 2009.

#### Element 8. Training

- Element 8: Training.
- Figure 8.1 – Employee General Awareness Training (30 PowerPoint slides)

- Figure 8.2 – Employee General Awareness Training Attendance Sheet (form)
- Reviewed all BMP awareness training records.
- Reviewed training process for 18 job classifications using BLR (on-line training program) – tracked through Vista software program.
- Interviews with Chuck Schroeder, David Harris, Kathie Kuzawa, Patricia Chapman, Edward Rumbergs, Timothy Dryer, William Smith, Kurt Anderson, James Soper, Thomas Schaub, Charlie Dickinsen, Jared Gabinski, Jan Goosmann, Nick Klug, Andrew Meyer, Ray Gabinski, and Jason Neumann.

#### Element 9. Communications

- Element 9: Communication and Public Outreach.
- Figure 9.1 Public Request for Information Form.
- Interviews with Chuck Schroeder, David Harris, Kathie Kuzawa, Kurt Anderson and Patricia Chapman.
- Environmental Protection Tip # 1 – Proper grease disposal (English & Spanish)
- Environmental Protection Tip # 2 – Proper medicine disposal (English & Spanish)
- Environmental Protection Tip # 3 – Disposable not flushable (English & Spanish)
- Environmental Protection Tip # 4 – Rainwater is not wastewater (English & Spanish)
- Environmental Protection Tip # 5 – Report it don't ignore it (English & Spanish)
- Environmental Protection Tip # 6 – Did you know we never close (English & Spanish)
- Environmental Protection Tip # 7 – Maintain the drain (English & Spanish)
- Mercury Awareness for Grand Rapids Area Citizens – information sheet.
- Take Back Meds – Free Residential Medicine Disposal (Western Michigan flier)
- Drug Free Drains (WEF flier).
- Sustainability starts at your sink (WEF flier).
- 2011 Periodic Biosolids Program Performance Report. Issued March 2012.
- 2012 Periodic Biosolids Program Performance Report. Issued March 2013.

#### Element 10. Operational Control of Critical Control Points

- Element 10: Operational Control of Critical Control Points.
- Form 10.1 – Annual Operational Controls Review.
- Form 10.2 – Contractor Compliance Inspection.
- Interviews with operational staff - David Harris, Edward Rumbergs, Timothy Dryer, William Smith, Jared Gabinski, Jan Goosmann, Nick Klug, Andrew Meyer, Ray Gabinski, and Jason Neumann.
- Interviews with regulatory staff - Patricia Chapman, Kurt Anderson, James Soper,
- Interviews with laboratory staff - Thomas Schaub and Charlie Dickinsen.
- Table 3.1 Biosolids Critical Control Points – lists operational controls related to each critical control point.

#### Element 11. Emergency Preparedness and Response

- Element 11 – Emergency Preparedness and Response.
- Reviewed organization chart for emergency response.
- Interview with David Harris.

#### Element 12. BMP Documentation and Document Control

- Document Management System – Policy Number: 1110.
- Element 12 – BMP Documentation and Document Control.
- 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 Retention
- Review EMS Manual revisions and change logs.
- Review SharePoint document management system.
- Reviewed random Operations SOPs, Maintenance SOPs, Laboratory SOPs and contractor SOPs.
- Interviews with David Harris and Kathie Kuzawa

#### Element 13. Monitoring and Measurement

- Element 13: Monitoring and Measurement.
- Table 13.1 – Action Plan – Quarterly Progress Report (form).
- Table 13.2 – Action Plan (form for planning goals and objectives)
- Reviewed Table 13.1 – Action Plan – Quarterly Reports completed for 2012 and 2013.
- Reviewed 2012 Quarterly GVRBA Biosolids Monitoring Cake Centrifuge samples for 503 metals.
- Interviews with operational staff - David Harris, Edward Rumbergs, Timothy Dryer, William Smith, Jared Gabinski, Jan Goosmann, Nick Klug, Andrew Meyer, Ray Gabinski, and Jason Neumann.
- Interviews with regulatory staff - Patricia Chapman, Kurt Anderson, James Soper,
- Interviews with laboratory staff - Thomas Schaub and Charlie Dickinsen.
- 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.
- Table 14.1 – Nonconformance Summary and Response Time (real time continuously updated form)
- Table 14.2 Nonconformance Investigation Worksheet.
- Figure 14.1 – Corrective Action Plan (form).



- Table 16.1 – Internal Auditor’s Worksheet (including internal auditor’s minimum question checklist.)
- Interviews with David Harris and Kathie Kuzawa
- Reviewed Table 14.2 – Nonconformance Investigation Worksheets for nonconformances for 2012 internal audit.
- Reviewed Table 14.2 – Nonconformance Investigation Worksheets for the status of all nonconformances identified from 2011 through 2013 (including external third party audit.)

#### Element 15. Biosolids Management Program Report

- Element 15: Periodic Biosolids Program Performance Report.
- Interviews with David Harris and Kathie Kuzawa
- 2011 Periodic Biosolids Program Performance Report. Issued March 2012
- 2012 Periodic Biosolids Program Performance Report. Issued March 2013.

#### Element 16. Internal BMP Audit

- Element 16: Internal BMP Audit.
- Table 14.1 – Nonconformance Summary and Response Time (real time continuously updated form)
- Figure 14.1 – Corrective Action Plan (form)
- Table 16.1 – Internal Auditor’s Worksheet (including internal auditor’s minimum question checklist.)
- Interviews with David Harris and Kathie Kuzawa.
- 2012 internal audit team –Gary DeKoch, Patricia Chapman and David Harris
- Reviewed EMS completed checklists for internal audit (covering all 17 elements) performed March 2012.
- 2012 Internal Audit Report – issued April 2, 2012.
- 2013 Internal Audit Report – issued April 1, 2013.

#### Element 17. Management Review

- Element 17: Periodic Management Review of Performance.
- Table 17.1 – Periodic Management Review of Performance Report
- Interviews with Chuck Schroeder, David Harris, and Kathie Kuzawa
- 2011 Periodic Biosolids Program Performance Report. Issued March 2012
- 2012 Periodic Biosolids Program Performance Report. Issued March 2013.
- Table 17.1 – Periodic Management Review of Performance Report performed on 3/5/2012.
- Table 17.1 – Periodic Management Review of Performance Report performed on 5/31/2013.

## Attachment 2

### National Biosolids Partnership Appeals Process

To obtain Gold-level Recognition or Platinum-level Certification by the National Biosolids Partnership (NBP) Biosolids Management Program (BMP), biosolids organizations are required to undergo a BMP verification audit by an independent, third party auditor and yearly interim audits. The purpose of the audit is to determine whether or not the organization's BMP conforms to the NBP program, as defined in the BMP Elements. The spirit of these requirements includes a well-documented program and meaningful opportunities for interested party involvement.

The NBP provides an appeals process for biosolids organizations and interested parties that disagree with the findings of a third party BMP audit. The verification appeals process involves an Appeals Board; representing a balance of biosolids management interested parties and wastewater industry professionals.

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

To submit an appeal, petitioners must fill out and submit the standardized appeals petition form that is available on the NBP website at <http://www.wef.org/biosolids>. A notice of intent to appeal must be submitted within 30 days, and a formal appeal must be submitted within 60 days, of the public release of the third party audit report containing the verification decision or interim audit decision by the audit company.

The Appeals Board's Administrative Officer receives all appeals petitions on behalf of the Board and conducts a basic completeness check. Upon completion of this check, the petition is either forwarded to Appeals Board members or back to the petitioner with incomplete areas documented. Petitions should be sent via certified, return receipt requested mail to: The NBP Appeals Board, Attention: Board Administrative Officer, c/o Water Environment Federation, 601 Wythe Street, Alexandria, VA 22314.

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

Appeal of minor nonconformances is through the third party audit company's internal appeals process. To place a minor nonconformance appeal the organization should provide the audit company with documentation or other objective evidence explaining why the finding at issue does not exist. These appeals are reviewed and resolved by an audit company representative who was not part of the third party audit team.

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