

Appendix A

Glossary

Audit Criteria - Policies, practices, procedures, or requirements against which the auditor compares collected audit evidence about the subject matter. (Note: Requirements may include but are not limited to standards, guidelines, specified organizational requirements, and legislative or regulatory requirements.)

Audit Findings - Results of the evaluation of the collected audit evidence compared with the agreed audit criteria.

Biosolids - Solid organic matter recovered from a wastewater treatment process and used especially as fertilizer - usually used in plural.

Biosolids Management Activities - A wide range of activities that impact the quality of wastewater solids and biosolids, including pretreatment activities, wastewater treatment processes, solids stabilization processes, conditioning and dewatering processes, transportation, storage, and beneficial use or disposal.

Biosolids Management Policy - Statement by an organization committing it to the principles set forth in the NBP *Code of Good Practice* with respect to biosolids management and any other overall environmental goals voluntarily adopted by the organization.

Biosolids Management Program - A comprehensive program covering all aspects of the organization's biosolids activities throughout the biosolids value chain, including management processes for all critical control points in order to mitigate environmental impacts, meet legal and other requirements, and execute action plans to achieve biosolids program goals and objectives.

Biosolids Program Goal(s) - Environmental performance improvement goals that are consistent with an organization's biosolids management policy to ensure biosolids activities comply with applicable laws and regulations, meet quality and public acceptance requirements, and prevent other unregulated adverse environmental and public health impacts by effectively managing all critical control points. Biosolids program goals may include but are not limited to compliance with specific regulatory requirements, expanding beneficial use, improving biosolids quality, improving public acceptance, and reducing or eliminating direct/indirect negative environmental impacts.

Biosolids Program Objective(s) - A detailed environmental performance improvement requirement, quantified wherever possible, based on a biosolids program goal. One or more objectives usually must be met for the underlying goal to be achieved.

Biosolids Public Acceptance Requirements - Biosolids physical, chemical, biological, and aesthetic characteristics and management methods that must be met consistently and reliably to achieve public acceptance of the organization's selected biosolids management method(s).

Biosolids Quality Requirements - Biosolids physical, chemical, biological, and aesthetic characteristics that must be met consistently and reliably to apply the organization's selected biosolids management method(s).

Biosolids Value Chain – Sequence of activities from wastewater pretreatment, discharge, and collection through wastewater treatment, solids treatment, and handling, storage, transportation, and disposal or beneficial use of biosolids that impact the quality and stability of biosolids and their suitability for the selected management method.

Changing Circumstances – Internal and external changes that affect the organization’s EMS, including changes in legislation, varying expectations of interested parties, changes in the organization’s products or activities, technological advances, consumer interests, and feedback from environmental incidents.

Continual Improvement – EMS process for systematically improving the overall management of biosolids to achieve the organization’s biosolids program goals and objectives set forth in the organization’s biosolids management policy and the National Biosolids Partnership *Code of Good Practice*.

Corrective Action – Specific actions and steps taken to correct an organization’s nonconformance(s) to policies, procedures, and other legal, quality, and public-acceptance requirements, and to mitigate any resulting negative impacts on the environment.

Critical Control Points – Those locations, unit processes, events, and activities throughout the biosolids value chain under the organization’s direct control or influence that require effective policies, programs, procedures, practices, monitoring, and measurements to ensure the biosolids activities meet legal, quality, and public acceptance requirements and do not have undesirable environmental impacts. Critical control points include all biosolids management activities that are covered under applicable legal and other requirements.

Document Control – Procedures and practices to ensure that biosolids EMS documentation and documents are available and can be located easily, created following established document creation protocols, kept up to date through periodic reviews and revisions, properly marked with version number, effective date(s), and references to replaced or superseded versions; and approved by authorized personnel.

Elements of an EMS for Biosolids – These Elements are the standards or benchmarks by which your EMS should be developed and by which your program will be judged.

Emergency Preparedness – A structured emergency planning process to ensure that plausible emergency situations that can affect appropriate biosolids management have been identified, response plans and procedures have been developed, and trained emergency response personnel and equipment are available and in a state of readiness.

Emergency Response – Specific emergency plans and activities that are initiated to contain an emergency situation and bring it under control to minimize environmental impacts.

EMS Action Plans – Action plans designate schedules, milestones, resources, and responsibilities for achieving biosolids program goals and objectives.

EMS Audit – A systematic and documented verification process of objectively obtaining and evaluating evidence to determine whether an organization’s environmental management system conforms to the environmental management system audit criteria set by the organization, and for communicating the results of this process to management.

EMS Audit (Internal) - A systematic and documented internal audit process for objectively evaluating whether an organization's environmental management system for biosolids conforms with the requirements of the NBP *Code of Good Practice*, the organization's biosolids policy, and the 17 EMS Elements.

EMS Audit (Third-Party Verification) - A systematic, structured, and documented audit of the organization's biosolids EMS performed by a qualified independent third-party auditor using a standardized protocol to verify conformance with the requirements of the *Code of Good Practice*, the organization's biosolids policy, and the 17 EMS Elements.

EMS Coordinator - The person with overall responsibility and authority to organize and lead the group that will develop and play a key role in implementing the EMS.

EMS Demonstration Program - The focus of the demonstration program is to roll out and test the EMS documents and to select the features of the independent, third-party verification program.

EMS Documents - Various documents that collectively compose the biosolids environmental management system documentation, including the biosolids management policy, procedures, practices, operating instructions, and other supporting documents required by the environmental management system and applicable biosolids laws and regulations.

EMS Guidance Manual - A detailed manual with useful step-by-step guidance on how to implement the EMS Elements.

EMS Implementation Plan - Plan that outlines action items necessary to close any gaps, strengthen weaker procedures, reinforce good practices, and develop new procedures where necessary – all to establish the Elements of the organization's biosolids EMS.

EMS Implementation Planning Visit - Visit by a technical assistant to help the organization define its starting point on the path to identifying, consistently implementing, and continuously improving best management practices and environmental management systems.

EMS Records - Various records or reports of biosolids management activities required by the environmental management system and applicable biosolids laws and regulations, including but not limited to records or reports of monitoring, measurement, laboratory testing, inspections, operating logs, emergency response incidents, outside party inquiries, public participation meetings, audits, corrective actions, management reviews, and periodic performance reports. Records describe the results of specific biosolids management activities for a prescribed event, activity, or period of time.

EMS Team - Group representing all major operational and decisionmaking areas related to biosolids, tasked with developing, implementing, and maintaining the EMS.

Environmental Impacts - Any change to the environment (positive or negative), including public health, public nuisances, and odor problems, that wholly or partially result directly or indirectly from the organization's activities, products, or services, including those activities associated with biosolids management, and those activities that alter (positively or negatively) the acceptable disposal or use method or create public nuisance and public health risks.

Environmental Management System for Biosolids (EMS) – An organized management system that meets the requirements of the EMS Elements for achieving the biosolids management policy requirements and for developing, implementing, reviewing, and maintaining effective biosolids management programs, procedures, and practices. The EMS needs to manage all critical control points associated with biosolids activities where there is a potential to create significant negative environmental impacts.

Environmental Performance – measurable results of the environmental management system based on its biosolids management policy and goals and objectives.

Interested Parties – Individuals, groups, or other public or private organizations interested in, involved with, or otherwise affected by the organization’s biosolids management activities, including customers, farmers, regulators, and other local or state governmental officials, community residents, the media, environmental and public interest groups, university professors, and the general public.

Knowledge – To recognize, be familiar with, or understand information, activities, and actions based on experience or association; acquaintance with a science, art, or technique.

Legal Requirements – The environmental federal, state, and local laws and regulations that are applicable to an organization’s biosolids management program activities.

Measurement – A systematic method for estimating, testing, or otherwise evaluating key parameters and characteristics of an organization’s biosolids management activities to determine compliance with a specific standard, regulatory, or other performance requirement, or to measure progress toward its biosolids program goals and objectives.

Monitoring – A systematic process of watching, checking, observing, inspecting, keeping track of, regulating, or otherwise controlling key parameters and characteristics of an organization’s biosolids management activities to determine compliance with a specific standard, regulatory, or other performance requirement, or to measure progress toward its biosolids program goals and objectives.

National Manual of Good Practice – A detailed set of documents that provide guidance on identifying critical control points and selecting appropriate management practices.

Noncompliance – A deviation from federal, state, or local laws, regulations or other compliance requirements applicable to the organization’s biosolids management activities.

Nonconformance – A deviation in an organization’s established biosolids management policy and environmental management system from the NBP *Code of Good Practice* principles or the requirements of the EMS Elements. Nonconformances include circumstances that have the potential to create a noncompliance situation or significant environmental impacts.

Objective Evidence – Policies, ordinances, procedures, manuals, inspection checklists, operating logs, annual reports, various other documents, and various records, such as monitoring, inspection, enforcement, and training records, that objectively document conformance with the EMS Elements requirements.

Operational Controls – Ordinances, regulations, standard operating procedures, practices, technology, instrumentation, and process controls, monitoring and other criteria developed, implemented, and maintained by an organization to ensure effective management of all critical control points associated with its biosolids management activities, including

conformance with biosolids management policy requirements, and achievement of biosolids program goals and objectives.

Organization – Enterprise, authority, or institution, or part thereof, responsible for individual or a combination of, biosolids management activities.

Other Requirements – Other binding biosolids management practices and environmental requirements to which an organization voluntarily subscribes as part of its environmental management system. Examples include binding agreements with customers, suppliers, and public organizations and commitments to “beyond-compliance” performance.

Preventive Action – Specific actions and steps taken to identify, analyze, and eliminate the root causes of noncompliance(s) and nonconformance(s) and to put in place permanent solutions that will prevent a recurrence.

Procedure – Documented protocol for meeting the requirements of an EMS Element that defines the purpose, terms, detailed actions, responsible persons, and supporting documentation relevant to that Element.

Public (Interested Parties) – Same as the definition of interested parties.

Public Education – Systematic public communication program for educating interested parties and other stakeholders on an organization’s biosolids management activities.

Public Participation – Specific approach(es) and action(s) taken by an organization to involve interested parties and the general public in its biosolids management program, including establishing improvement goals and objectives.

Responsibility(ies) – The specific task(s) a group or individual carries out in a lead or supporting role that accomplishes or supports operational or strategic goals and objectives.

Role(s) – The purpose(s) of the activity(ies) a group or individual performs with respect to the biosolids value chain, the biosolids management program, and the biosolids EMS.

Service Agreement(s) – Contractual or other legally binding agreements that define the roles and responsibilities of contractors and other groups in supporting the organization’s EMS for biosolids.

Skills – The ability to use knowledge effectively and readily in execution or performance of tasks and activities; a developed aptitude or ability; the ability to do something competently.

Third-Party Verification – The process of having an EMS verified by an independent qualified party provided by the NBP.

Total Quality Management – Both a philosophy and a set of guiding principles that represent the foundation of a continuously improving organization. TQM is the application of quantitative methods and human resources to improve the material and services supplied to an organization, all the processes within an organization, and the degree to which the needs of the customer are met, now and in the future.

Training – Teaching to make fit, qualified, or proficient; preparation for a test of skill or knowledge; instruction in disciplines and techniques.

Appendix A - Supplementary Definitions

Antfarm – A term used to describe the City of Grand Rapids Intranet.

CCP – Critical Control Point

Cityworks – A CMMS system integrated with the City GIS system and used for preventive maintenance activities related to the collection system.

CMMS – Computerized Maintenance Management System – A electronic system designed to schedule and record maintenance related activities.

CMP – Comprehensive Master Plan – A planning document governing future plant expansion and capacity requirements.

GIS – Geographical Information System – A computer based electronic mapping system used to manage City infrastructure including sanitary sewers and lift stations.

GVRBA – Grand Valley Regional Biosolids Authority – A regional authority managing future Biosolids activities on a regional basis with an adjacent community (City of Wyoming).

HP – Horse Power

Intranet – Internal web access system available to all City employees with a valid City user account which is commonly referred to as the “Antfarm”.

IPP – Industrial Pretreatment Program

MGD – Million Gallons per Day

MDEQ – Michigan Department of Environmental Quality – State of Michigan regulators authorized by US EPA.

NPDES – National Pollutant Discharge Elimination System – permit governing authorized discharges of treated wastewater.

PERB – Primary Effluent Retention Basin – A 10 MGD basin located at the wastewater treatment plant.

PMP – Pollutant Minimization Program – A requirement of the City’s NPDES permit stipulating activities the City must accomplish regarding reduction of Mercury in the Wastewater Plant Influent and Effluent.

SOP – Standard Operating Procedure – Detailed procedures utilized at the wastewater treatment plant to manage processes.

UV – Ultra Violet disinfection – Disinfection process used to destroy pathogens in treated wastewater.