

Neuse River Wastewater Treatment Plant Closing Meeting - Environmental Management System Audit February 28, 2014



Review – Audit Purpose, Criteria, Scope

■ Audit Purposes

ISO-14001 Stage 1

- Review EMS Documentation; determine readiness for Stage 2

ISO-14001 Stage 2

- Verify the Wastewater Environmental System (WEMS) is functioning effectively & conforms with audit criteria
- Help improve EMS effectiveness

Biosolids Mgmt Program Interim

- Verify continuing conformance with NBP BMP Elements

Review – Audit Purpose, Criteria, Scope

■ **Audit Criteria:** Requirements of

- ISO-14001:2004
- NBP BMP Elements
- NRWTP WEMS

■ **Certification Location & Scope**

Location: *Neuse River Wastewater Treatment Plant, Raleigh NC*

Scope: *The collection and treatment of wastewater and the control and return of treated water and biosolids to the environment.*

Review – Audit Activities

- WEMS Documentation Review
- Process Audits
- Closure of open nonconformities
- Interested Party Interviews
- Examination of Outcomes

Summary of Audit Results

Findings

All open nonconformities from previous DEKRA audits are now closed

- 0** Major Nonconformities
- 4** Minor Nonconformities
- 8** Opportunities (for improvement)

Summary of Audit Results

Audit Conclusion

DEKRA has verified that the NRWTP WEMS meets requirements of ISO-14001 and continues to meet requirements of the NBP BMP Elements.

Certification to ISO-14001 will be recommended

Continuing Certification by NBP will be recommended

Congratulations !

Audit Findings – Major Nonconformities

■ Major Nonconformity

- Requirements not met; systemic problem; corrective action is required
- Must be closed before certification

No Major Nonconformities found during this audit

Outcomes

Environmental Performance

Three subsurface constructed wetlands were installed at NRWTP to help reduce N discharge to the Neuse River.

Planting and harvesting energy crops on city-owned fields allows for use as biodiesel fuel.

Relations with Interested Parties

Reviews with contractors confirmed they are more aware of expected performance and seeking ways to improve.

Management of change being used more frequently allowing better planning and communication for projects involving various groups (e.g. alternative carbon source, reuse tank cleaning).

Outcomes

Regulatory Compliance

NRWWTP has resumed biosolids application on city-owned land. DENR has permitted that application. Public opposition has lessened significantly in large part due to open communication by NRWWTP.

Quality Practices

Much improved plant controls, organization and public acceptance in the past decade were recognized in an expert consultant's analysis of NRWWTP operations in 2013

NRWWTP has undergone several organizational changes in the past year. The EMS provided a structure to rely on during those changes.

Audit Findings – Minor Nonconformities

■ Minor Nonconformity

- Isolated, non-systemic departure from requirements
- Corrective action required; send CA Plan to DEKRA Lead Auditor for approval
- Verify effective correction during next Third Party Audit

5 Minor Nonconformities found during this audit

Audit Findings – Minor Nonconformities

Minor Nonconformity JS/C/14-01/4.3.1 ISO-14001 requires the organization to identify the environmental aspects within the defined scope of the EMS that it can control or influence.

Greenhouse gas emission is considered to have an environmental impact (beneficial) associated with agricultural use of biosolids and managers consider that impact to be significant. This aspect was not included in the environmental aspect analysis or determination of significant aspects.

Audit Findings – Minor Nonconformities

Minor Nonconformity JS/C/14-02/4.3.3 ISO-14001 requires the organization to take into account its significant environmental aspects when establishing and reviewing its objectives and targets.

Energy use and odor are significant environmental aspects and while objectives and targets for 2014 include an indirect relationship to these aspects, the actual improvement objectives / targets do not have a direct connection to either aspect / impact.

Audit Findings – Minor Nonconformities

Minor Nonconformity JS/C/14-03/4.4.2 ISO-14001 requires the organization to establish procedure(s) to make persons working for it or on its behalf aware of the importance of conformity with the environmental policy.

The WEMS Training Program does not use the current Environmental Policy or describe how employees are expected to conform to commitments in that Policy.

Audit Findings – Minor Nonconformities

Minor Nonconformity JS/C/14-04/4.4.7 ISO-14001 requires the organization to periodically review and, where necessary, revise its emergency preparedness and response procedures, in particular after accidents or emergency situations.

Records are not available for the plant evacuation in September 2013 or results of the evaluation of that evacuation.

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Audit Findings – Opportunities (for improvement)

Opportunity - Suggestion for improving system effectiveness; no obligation to take any action

1. The description of environmental aspects could be stated in a way that allows clearer understanding of the cause of the related impact.
2. Written Department Operating Procedures (DOPs) could include or reference environmental aspects, regulatory requirements, product quality, relations with interested parties and safety hazards that led to the need for the DOP.

Audit Findings – Opportunities (for improvement)

3. Findings from internal audits could state the requirement and evidence and then state the finding related to the requirement.
4. Consider developing Management Review as a process with different levels of review for the purpose of finding and implementing improvement opportunities
5. The Management of Change procedure could include consideration of the need to review environmental impacts and safety hazards.

Audit Findings – Opportunities (for improvement)

6. Emergency Plans in place for NRWWTP could be more direct and practical if developed by knowledgeable CORPUD personnel.
7. Results of testing by NRWWTP lab for groundwater monitoring wells could be verified periodically by a different certified lab.
8. Contractors asked to dispose of hazardous and nonhazardous waste could certify that the disposal occurred as intended.

Audit Findings – Strengths

- **Strength** - Best practice or significant improvement
 - The EMS Team approach is getting several management personnel involved in the EMS
 - Good understanding of energy costs / benefits
 - Core competencies for Maintenance personnel are well defined

Next Steps

- **Corrective Action Plans**
 - Send CA Plans for each nonconformity to DEKRA (reportseast@dekra.com)
 - Corrective Action Verification Audit before 8/28/14 (+1/2 day offsite)
- **Certification** – following approval of CA Plans
- **Reporting** – Audit report to CORPUD within 30 days
- **Next Audits**
 - ISO-14001 Surveillance + BMP Interim Audit week January 19. Arrange through DEKRA office.

Questions?



Buildings and Facilities



Machinery and Plant Safety



Health, Safety and Environment (HSE)



Energy and Process Industries



Systems Certification



Product Testing and Certification