

US EPA ARCHIVE DOCUMENT

**State Innovation Grant Project
Narragansett Bay Commission
Progress Report - 2
January 1, 2009 – March 31, 2009**

Project Title: Sustainable Energy Management Practices for Wastewater Treatment Facilities

Part 1 – Synopsis of Accomplishments

During the current Project Reporting Period January 1st through March 31st, 2009 the following activities took place: the Project Partners (NBC, RIDEM, URI and RIMES) and EPA met and conducted conference calls on a variety of occasions to discuss and plan activities associated with project development and implementation, a final QAPP was completed and signed by NBC and RIDEM and submitted to EPA for signatures, a meeting of the EF-EMS Steering Committee was held on February 13th 2009, an EF-EMS Project Kick-Off Meeting was held on February 25th 2009, an Energy Use Assessment was conducted of a participating WWTF on March 19, 2009, an EPA Energy Guidebook Workshop was scheduled and organized, and the FOG-ERP Compliance and BMP checklist was completed and finalized. Please see the attached Project Milestone Table for a more detailed summary of project activities.

Part 2 – Narrative Discussion

Quality Assurance Project Plan (QAPP) – On March 27th NBC received notice from EPA that the revised QAPP has been reviewed and accepted for final approval. The finalized QAPP was subsequently signed and submitted to EPA.

Included in the revised QAPP was a modification to the originally planned base line data collection process associated with the FOG-ERP Project. Initial plans called for the entire NBC population of restaurants and food service facilities to be inspected by NBC Pretreatment staff using the FOG-ERP BMP checklist before any educational efforts were commenced. The process now uses a randomly selected sample population of 200 restaurants (out of the total of 600 restaurants permitted by the NBC) for the baseline performance analysis. These facilities were selected by URI and RIDEM using an Excel random number selector application. NBC Pretreatment staff will begin inspecting these facilities in April 2009 with a goal of completing all 200 by the end of July 2009. This methodology will allow the project to proceed more quickly and corresponds better with a standard ERP approach. Once the sample population of 200 facilities has been inspected and the baseline data collected NBC Pretreatment staff will continue to inspect and complete the FOG-ERP BMP checklist for the remaining 400 restaurants while URI begins education and outreach efforts.

I. WWTF Energy Focused Environmental Management System Project

Management System Steering Committee – The EF-EMS Steering Committee continued to meet throughout the second Project Reporting Period. The committee currently consists of the following individuals:

- James McCaughey, NBC

- Barry Wenskowicz, NBC
- David Aucoin, NBC
- Richard Enander PhD., RIDEM
- Gene Park, PhD., URI
- John Gilheeny, RIMES
- Beth Termini, EPA
- Gina Snyder, EPA
- Bill Patenaude, RIDEM
- Bill Harritos, QDC – NWPCA
- Dennis Colberg, QDC – NWPCA
- Peter Eldridge, West Warwick WWTF – NWPCA

In addition to the above noted Steering Committee members the following individuals are kept informed of on-going project planning activities and are invited to all Steering Committee meetings:

- Anne Leiby, EPA - New England, Region 1
- Jeff Dunham, National Grid
- Brent Herring, Untied Water - NWPCA
- Andy Dzykewicz, Rhode Island Office of Energy Resources
- Nick Ucci, RIPUC
- Tom Simbro, Wright-Pierce – NWPCA
- Medline Snow, EMS Service Program – UMASS

The EF-EMS Steering Committee met on February 13th, 2009 at the RIMES office in Providence to discuss plans for the February 25th Project Kick-Off Meeting. Participants included: Beth Termini, Anne Leiby, and Gina Snyder, (all via telephone conference call) Gene Park, John Gilheeny, Rich Enander, Barry Wenskowicz, Jim McCaughey and Tom Simbro from Wright-Pierce and representing the NWPCA. Major issues of discussion included:

EF-EMS Project

- NBC will submit copies of the Kick-Off Meeting invitation letters and agenda to EPA
- A Guide Book Workshop will be scheduled for April 1, 2009 – NBC will get a list of potential locations
- NBC will make arrangements with Jason Turgeon to conduct Portfolio Manager Training in Rhode Island

FOG-ERP Project

- NBC, RIDEM and URI will look into issues regarding a FOG Sampling Plan
- NBC, RIDEM and URI will look into determining how well GRUs are working
- NBC, URI and RIDEM will investigate ways of incorporating sampling into ERP project
- NBC, RIDEM and URI will investigate the possibility of conducting analysis for volatile fatty acids in the FOG waste streams
- URI and RIDEM will look into confidence levels associated project data collection
- RIDEM will look into using a stratified sample population

- NBC should first conduct a full Baseline Analysis before conducting technical assistance efforts

Energy Focused Environmental Management System Training Program for WWTFs – Utilizing EPA’s Energy Guidebook - During this Project Reporting Period RIMES completed a finalized Power Point presentation on “Ensuring a Sustainable Future: Energy Management for Wastewater Treatment Facilities.” See Attachment 2 for a copy of this presentation.

Project Kick-Off Meeting/Workshop – Throughout the current Project Period NBC, URI and RIDEM collected contact information and conducted outreach efforts to each of Rhode Island’s 19 WWTFs in order to encourage attendance at the planned Project Kick-Off meeting. On February 25th a Sustainable Energy Management Systems for WWTFs Project Kick-Off Meeting was held in the NBC’s Corporate Office Building in Providence. Approximately 30 representatives from fifteen Rhode Island WWTFs were in attendance along with representatives from NBC, RIDEM, National Grid and Synagro. During this meeting Dr. Gene Park from URI, Dr. Rich Enander from RIDEM, Gina Snyder from EPA, Jim McCaughey from the NBC and John Gilheeny from RIMES presented information on project plans and goals. Each WWTF in attendance signed on to attend an Energy Management Planning Workshop scheduled for April 1st. See Attachment – 3 for a list of attendees and meeting hand-outs.

EPA Energy Guidebook Training Workshop for Participating WWTFs – NBC made arrangements to hold a Guidebook Training Workshop at URI’s Narragansett Bay Campus scheduled on April 1st 2009. During the Project Reporting Period a workshop agenda was developed, workshop invitation and registration forms were sent to all 19 WWTFs, copies of the Guidebook were printed and arrangements were finalized with the URI Bay Campus. The Guidebook training is scheduled to take place from 8:30 AM to 12:00 PM followed by a working lunch period which will include a demonstration of the EPA Energy Star Portfolio Manager Tool. See Attachment 4 - Guidebook Workshop Information.

Energy Use Baseline for Participating WWTF – Throughout the current project period plans were made for offering a Portfolio Training Session in cooperation with EPA. A date of April 29th was selected and plans are proceeding to offer training at a centralized location. Barry Wenskowicz, NBC’s Pollution Prevention Engineer developed a presentation on the use of the Portfolio Manager for the upcoming Guidebook workshop. See Attachment 5 – Portfolio Manager Presentation.

EF-EMS Roundtable – On March 24th, 2009 NBC’s Pollution Prevention Engineer attended a meeting of the Massachusetts Energy Management Roundtable for Water and Wastewater Utilities. This Roundtable consisting of about 14 individual water/wastewater utilities throughout central and western Massachusetts meet on a quarterly basis to discuss their on-going energy management projects and programs. Attendance at these meetings is helping with the development of ideas for the Rhode Island WWTF EF-EMS Roundtable. During the current project period dates and locations for the first Rhode Island Roundtable Meeting were investigated – no final decision on the date and location for the first meeting was made as of March 31, 2009.

WWTF Energy Use Assessments – On January 14th NBC staff met with a representative of RISE to find out more about their energy management services and to see if they would be interested in

participating in the WWTF EF-EMS Project. RISE, a division of Thielsch Engineering, located in Cranston Rhode Island, works in conjunction/cooperation with National Grid to perform and/or coordinate energy conservation assessments. RISE will conduct, free of charge, Energy Management Assessments of office facilities, looking at the use of both electricity and natural gas, and will make suggestions on equipment and procedural improvements that take advantage of the various incentive programs offered by National Grid. RISE can also coordinate an industrial Energy Management Assessment of industrial site with its engineering division.

On Wednesday, February 18, 2009, NBC staff participated in a teleconference with Jeff Dunham and Mark Dipetrillo of National Grid to discuss National Grid's involvement in the overall project. Based on these discussions National grid will attend the Kick-Off Meeting.

On February 19th 2009 NBC staff met with a representative of RISE, a division of Thielsch Engineering to discuss RISE's Industrial Energy Audit Program.

On March 15th, an Energy Use Audit of the Bristol Wastewater Treatment Facility was conducted by an EF-EMS Energy Assessment Team consisting of representatives of NBC, URI, RIMES, RISE and Action Energy, an energy management consultant. An Energy Assessment Report is being prepared.

II. FOG Environmental Results Program Project

FOG-ERP Steering Committee During the current Project Reporting Period the Project Partners identified the following potential FOG-ERP Steering Committee members:

- James McCaughey, NBC
- Kerry Britt, NBC
- Abigail Sweeney, NBC
- Barry Wenskowicz, NBC
- David Aucoin, NBC
- Richard Enander PhD., RIDEM
- Gene Park, PhD., URI
- Beth Termini, EPA
- Gina Snyder, EPA
- Anne Leiby, EPA - New England, Region 1
- Dale Venture, Rhode Island Hospitality Association

These individuals will be invited to participate in a FOG-ERP Project Steering Committee Meeting to be held during the next Project Reporting Period.

Identification of Industry Sector Universe – A review of NBC permit files and records has identified 400 restaurants/food service facilities in the Field's Point servicing district and 200 restaurants/food service facilities in the Bucklin Point Serving District. All identified restaurants/food service facilities will be participating in the project. As mention above under the QAPP Section during the current Project Reporting Period URI and RIDEM selected a random sampling of 200 various restaurants/food service facilities for baseline data collection using the

finalized FOG BMP. Baseline data collection will be conducted by NBC Pretreatment staff and is scheduled to take place between the months of April and July 2009.

FOG Management Checklist and set of Best Management Practice (BMP) Factsheets – During the current Project Reporting Period NBC, URI, RIDEM and EPA finalized a combined regulatory compliance and FOG BMP checklist. See Attachment 6 - FOG Management Checklist.

Trial Checklist Runs On November 13th 2008 the Project Partners accompanied NBC Pretreatment Technicians on site visits of three food service establishments located in the City of Pawtucket in order to perform a trial run of the FOG Checklist and the overall FOG ERP Assessment process. As a result of these trial runs and subsequent discussions with EPA several modifications were made to the checklist including: elimination of redundant questions, clarification on questions regarding the management of the two identified FOG waste streams (i.e. Brown Grease vs. Yellow Grease), and collection of quantitative data on the amounts of fresh oil being used by those restaurants that utilize fryers. No additional Trial Runs were deemed necessary during the current reporting period.

Kick-Off Workshop - This workshop will be held after initial baseline data collection has been collected. No action taken during the current Project Reporting Period.

ERP Assessments – Scheduled to begin in April 2009

ERP Certification – No action taken

Statistical Analysis – No action taken

Part 3 – Summary of Accomplishment - Second Project Quarter

I. WWTF Energy Focused Environmental Management System Project

- Finalize QAPP – Completed – March 2009
- Project Kick-Off Meeting – Completed - Meeting held on February 25, 2009
- Steering Committee Meeting – Completed - Meeting held on February 13, 2009
- Energy Use Audits – First Audit conducted on March 19, 2009
- EPA Energy Guidebook Training Workshop – Workshop scheduled for April 1, 2009
- Portfolio Manager Training – Scheduled for April 29th

II. FOG Environmental Results Program Project

- Compliance/BMP Checklist – Completed – March 2009
- FOG-ERP Steering Committee– Postponed until baseline data collection is complete

- ERP Assessments – Assessments (base line data collection) scheduled to begin in April 2009
- ERP Certification – Postponed until base line data collection is initiated

Part 4 – Projection of Activities, Accomplishments, and Major Expenditures for Next Quarter Report

I. WWTF Energy Focused Environmental Management System Project

- EPA Energy Guidebook Training Workshop – Hold workshop on April 1, 2009
- Portfolio Manager Training Workshop – Hold workshop on April 29, 2009

II. FOG Environmental Results Program Project

- FOG-ERP Steering Committee – Form Steering Committee and schedule first meeting
- ERP Assessments – Initiate baseline data collection assessments in April 2009
- ERP Certification – Develop Certification procedures by June 30th, 2009

Part 5 – Financial Report

Project expenditures for all of the Project Partners have not been fully tabulated at this time. A summary of estimated of grant related expenses to-date are as follows:

	Salary	Fringe	Total Personnel	Other	Match Funds	Grant Funds
NBC	\$6,400	\$3,500	\$9,900 ^a	\$0.00	\$4,950	\$4,950
RIDEM						
RIMES			\$7,500 ^b			\$7,500
URI						

a) Estimate

b) Actual

Attachments:

1. Project Milestone Summary Table
2. RIMES Presentation
3. EMS Kick-Off meeting Material
4. Guidebook Workshop Information
5. Portfolio Manager Presentation
6. FOG Management Checklist