Appendix E: Post-Installation Report Outline

ATTACHMENT J-9

POST-INSTALLATION REPORT OUTLINE

Contract #/Task Order#/Task #/Modification #: (include as appropriate)

Post-Acceptance Performance Period Dates Covered: _____ to_____

J-9.1 EXECUTIVE SUMMARY

J-9.1.1 Project Background - Provide an overview of project background, including:

A. Contract #/Task Order #/Task #/Modification # (as appropriate)

B. Dates of relevant contract modifications

C. Post-acceptance performance period dates covered

D. Project acceptance date (actual or expected)

J-9.1.2 Brief Project and ECM Descriptions

A. Provide an overview what was done and how savings are generated.

B. Note any changes in project scope between the final proposal (including any relevant contract modifications) and as-built conditions.

J-9.1.3 Proposed and expected energy and cost savings for Year 1 of the post-acceptance performance period

A. Include Section J-9.1.3 C, Table 1 - Proposed Annual Savings Overview.

B. Compare expected savings for first performance year to first year guaranteed cost savings. State whether guarantee is expected to be fulfilled for first year.

Note: Expected savings are prediction for first year based on post-installation M&V activities. Verified savings for first year of post-acceptance performance period will be documented in annual report. The proposed savings for each ECM are included in TO-4 of the contract.

C. Table 1 - Proposed Annual Savings Overview

[Include all applicable fuels/commodities for project, e.g., electric energy, electric demand, natural gas, fuel oil, coal, water, etc.]

ECM	Total energy savings (MBtu/yr)	Electric energy savings (kWh/yr)	Electric demand savings (kW/yr)*	Natural gas savings (MBtu/yr)**	Water savings (gallons/yr)	Other energy savings (MBtu/yr)**	Total energy and water cost savings, Year 1 ($/yr)	Other energy-related O&M cost savings, Year 1 ($/yr)	Total cost savings, Year 1 ($/yr)
Total savings									

Notes
MBtu=10^6 Btu.
*Annual electric demand savings (kW/yr) is the sum of the monthly demand savings.
**If energy is reported in units other than MBtu, provide a conversion factor to MBtu for link to cost schedules (e.g., 0.003413 MBtu/kWh).

D. Table 2 - Expected Savings Overview for 1st Performance Year

[Include all applicable fuels/commodities for project, e.g., electric energy, electric demand, natural gas, fuel oil, coal, water, etc.]

ECM	Total energy savings (MBtu/yr)	Electric energy savings (kWh/yr)	Electric demand savings (kW/yr)*	Natural gas savings (MBtu/yr)**	Water savings (gallons/yr)	Other energy savings (MBtu/yr)**	Total energy and water cost savings, Year 1 ($/yr)	Other energy-related O&M cost savings, Year 1 ($/yr)	Total cost savings, Year 1 ($/yr)
Total savings									

Notes
MBtu=10^6 Btu.
*Annual electric demand savings (kW/yr) is the sum of the monthly demand savings.
**If energy is reported in units other than MBtu, provide a conversion factor to MBtu for link to cost schedules (e.g., 0.003413 MBtu/kWh).

E. Table 3 - Guaranteed Cost Savings for First Performance Year

[Note: Guaranteed cost savings are defined in schedule TO-1 (final)]

First Year Guaranteed Cost Savings:	$

J-9.1.4 Energy, Water, and O&M Rate Data

A. Detail energy and water rates used to calculate cost savings for this period.

B. Provide post-acceptance performance period rate adjustment factors for energy, water, and O&M cost savings, if used.

C. Report actual energy and water rates at site for same period (optional).

J-9.1.5 Savings Adjustments

A. Provide summary of any energy and/or cost savings adjustments required between final proposal (including any relevant contract modifications) and as-built conditions.

B. Describe the impact in changes between the final proposal (including any relevant contract modifications) and as-built conditions based on post-installation M&V results.

J-9.1.6 Construction Period Savings

A. Provide a summary of construction period savings, if applicable.

B. Provide overview of how construction period savings are calculated.

J-9.1.7 Status of Rebates - Include if applicable.

A. Provide a summary of the source of any third-party rebates or incentives provided on this project.

B. Provide status of any third-party rebates or incentives.

J-9.2 ECM-SPECIFIC M&V ACTIVITIES AND EXPECTED FIRST YEAR SAVINGS

Develop section for each ECM.

J-9.2.1 Overview of ECM, M&V Plan, and Savings Calculation for ECM

A. Summarize the scope of work, location, and how cost savings are generated. Describe source of all savings including energy, water, O&M, and other (if applicable).

B. Provide an overview of M&V activities for ECM. Explain the intent of M&V plan, including what is being verified.

C. Provide an overview of Savings Calculation Methods for ECM. Provide a general description of analysis methods used for savings calculations.

J-9.2.2 Installation Verification

A. Detail any changes between final proposal (including any relevant contract modifications) and as-built conditions.

B. Provide details of energy and cost savings impact from changes between final proposal (including any relevant contract modifications) and as-built conditions based on post-installation M&V results. Include Section J-9.2.2.C, Table 4 - Impact to Energy and Cost Savings from Changes between Final Proposal and As-built Conditions for each ECM.

C. Table 4 - Impact to Energy and Cost Savings from Changes between Final Proposal and As-built Conditions for Each ECM

	Total energy savings (MBtu/yr)	Electric energy savings (kWh/yr)	Electric energy cost savings, Year 1 ($/yr)	Electric demand savings* (kW/yr)	Electric demand cost savings, Year 1 ($/yr)	Natural gas savings (MBtu/yr)**	Natural gas cost savings, Year 1 ($/yr)	Water savings (gallons/yr)	Water cost savings, Year 1 ($/yr)	Other energy savings (MBtu/yr)**	Other energy cost savings, Year 1 ($/yr)	Other energy-related O&M cost savings, Year 1 ($/yr)	Total cost savings, Year 1 ($/yr)
Proposed													
Expected													
Variance													

Notes
MBtu = 10^6 Btu.
*Annual electric demand savings (kW/yr) is the sum of the monthly demand savings.
**If energy is reported in units other than MBtu, provide a conversion factor to MBtu for link to cost schedules (e.g., 0.003413 MBtu/kWh).

Note: Expected savings are prediction for first year based on post-installation M&V activities. Verified savings for first year of post-acceptance performance period will be documented in the annual M&V report. The proposed savings for each ECM are included in TO-4 of the contract.

D. Describe construction period savings (if applicable). Include date ECM was in effect, and reference acceptance documentation.

E. Detail savings calculations for construction period savings.

J-9.2.3 Post-Installation M&V Activities Conducted - Detail measurements, monitoring, and inspections conducted in accordance with M&V plan (include all that apply for each one):

A. Measurement equipment used.

B. Equipment calibration documentation.

C. Dates/times of data collection or inspections, names of personnel, and documentation of Government witnessing.

D. Details to confirm adherence to sampling plan.

E. Include all post-installation measured values. Include periods of monitoring and durations and frequency of measurements. (Use appendix and electronic format as necessary). Include description of data format (headings, units, etc.).

F. Describe how performance criteria have been met.

G. Detail any performance deficiencies that need to be addressed by ESCO or agency.

H. Note impact of performance deficiencies or enhancements on generation of savings.

J-9.2.4 Expected Savings Calculations and Methodology

A. Provide detailed description of analysis methodology used. Describe any data manipulation or analysis that was conducted prior to applying savings calculations.

B. Detail all assumptions and sources of data, including all stipulated values used in calculations.

C. Include equations and technical details of all calculations made. (Use appendix and electronic format as necessary.) Include description of data format (headings, units, etc.).

D. Details of any baseline or savings adjustments made.

E. Detail energy and water rates used to calculate cost savings.

1. Provide post-acceptance performance period energy and water rate adjustment factors, if used.
2. Report actual energy and water rates at site for same period (optional).

F. Detail expected savings for this energy conservation measure for first year. Include J-9.2.6.D, Table 5 - Expected Year 1 Savings for ECM.

J-9.2.5 Details of O&M Savings (if applicable)

A. Describe source of savings.

B. Describe verification activities.

C. Provide post-acceptance performance period O&M cost savings adjustment factors, if applicable.

J-9.2.6 Details of other savings (if applicable)

A. Describe source of savings.

B. Describe verification activities.

C. Provide post-acceptance performance period adjustment factors, if applicable.

Note: Expected savings are prediction for first year based on post-installation M&V activities. Verified savings for first year of post-acceptance performance period will be documented in the annual report. The proposed savings for each ECM are included in Schedule TO-4 of the contract.

D. Table 5 - Expected Year 1 Savings for ECM

[Include all applicable fuels/commodities for project, e.g., electric energy, electric demand, natural gas, fuel oil, coal, water, etc.]

	Total energy use (MBtu/yr)	Electric energy use (kWh/yr)	Electric energy cost ($/yr)	Electric demand* (kW/yr)	Electric demand cost ($/yr)	Natural gas use (MBtu/yr)**	Natural gas cost ($/yr)	Water use (gallons/yr)	Water cost ($/yr)	Other energy use (MBtu/yr) **	Other energy cost ($/yr)	Other energy-related O&M costs ($/yr)	Total costs ($/yr)
Baseline use													
Post-installation use													
Savings													

Notes
MBtu = 10^6 Btu.
*Annual electric demand savings (kW/yr) is the sum of the monthly demand savings.
**If energy is reported in units other than MBtu, provide a conversion factor to MBtu for link to cost schedules (e.g., 0.003413 MBtu/kWh).