

## Memorandum

To John Kelly, Town Administrator  
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CC Betsy Shreve, AICP, AECOM Project Director  
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Subject **Town of Orleans, MA**  
**Water Quality and Wastewater Planning**  
**Task Number 2 – Tri-Town Transition Requirements**  
**Deliverable 2.c.2 – Final Technical Memorandum on the Design for Demolition of the Facility – Design for Demolition and Operating Costs During Decommissioning**

Project Number 60476644

From Thomas Parece, P.E., AECOM Project Manager

Date 02/04/16

### 1. Background

- a. A component of the Water Quality and Planning effort currently on-going with the Town of Orleans includes evaluating transition options for the existing Tri-Town Septage Treatment Facility (“Facility”). Task 2.c was originally intended to better define the design and specification requirements associated with the complete demolition of the facility.
- b. Town representatives have requested that this Task be expanded to include the evaluation of “mothballing” portions of the facility that are likely to have future value for a conventional WWTF, the possibility of transitioning the existing facility to a septage transfer station, options for maintaining operation of the facility in the event of the loss of facility staff, and confirmation of previous closure cost estimates prepared for the town.

### 2. Introduction

- a. AECOM has previously submitted Technical Memoranda on the costs associated with keeping the facility operational through December 2021; the construction costs to decommission and demolish the facility at the end of the current permit cycle in December 2016; and the costs of partial mothballing and/or conversion to a septage receiving facility. Recent discussions with Orleans officials indicate that the three towns that make up the District have not approved the funding necessary to keep the facility operational. Additionally, converting the facility to a septage transfer station does not appear to be financially sustainable. It is therefore likely that the facility will be either completely demolished, or partially demolished and mothballed prior to the end of December 2016. Retention of facility staff to keep the facility operational through the October 2016 and to decommission it prior to the end of year has been identified as a concern.

In order to facilitate funding appropriation from three towns that comprise the District, the Town has requested that AECOM confirm or revise as necessary previous estimates<sup>1</sup> prepared for the Town for permitting assistance, detailed procedures, specifications, and bid documents for the demolition of the facility. In addition, the Town has requested that previous estimates of O&M closure costs be confirmed and/or updated.

**3. Description and Discussion of Costs**

- a. Item 1 - Cost of Operating Facility During Closure: The previous report estimated \$80,000 in costs during the closure/decommissioning of the facility, however exactly what is and is not included in this line item is not readily apparent. AECOM assumes that the intent here is to cover “one-time” expenses of operating the facility during the decommissioning period. The bulk of these expenses would involve disposal of residuals that cannot be processed through the normal treatment train. The estimated sum of \$80,000 appears to be adequate for one-time expenses. Normal operating costs such as utilities and labor would not be covered by the \$80,000 estimate, which could be relevant in light of the loss of revenue during this period. Lastly, if oversight/technical assistance by AECOM is desired, this would be an additional cost. In order to avoid ambiguity, the estimated costs for operating the facility during decommissioning can be itemized as follows.

- Special, “one-time” costs during closure: \$80,000
- Utility and maintenance<sup>2</sup> costs during 3-month closure period: \$45,000
- AECOM oversight (if desired): \$40,000

Again, these costs do not include O&M labor, whether provided by existing or contract O&M staff.

- b. Item 2 - Cost of Permitting, Design, and Bid Phase Engineering Services: A description of AECOM’s proposed scope of work is broken down generally as follows.

Environmental Permitting

Because of the potential for protracted approval cycles, permitting should be addressed early on in the design process. Environmental Permitting for this Project may require coordination with at least four permitting agencies including the Environmental Protection Agency (EPA), National Pollutant Discharge Elimination System (NPDES) stormwater program, the Orleans Conservation Commission, the Massachusetts Department of Environmental Protection (MassDEP) and the Natural Heritage Endangered Species Program (NHESP).

The NPDES stormwater program requires projects proposing clearing, grading, and excavating activities that disturb one acre or more to obtain coverage under a NPDES permit for stormwater discharge. It is expected that the proposed demolition Project will exceed this threshold, and thus a NPDES permit would be required prior to Project construction.

A review of the available online mapping resources provided by the MassGIS Oliver Program indicates the Project may be located within the jurisdiction limits of one or more wetland resource areas regulated by MassDEP under the Massachusetts Wetlands Protection Act (WPA) and the Town Conservation Commission under the Orleans Wetlands Protection Bylaw. To ensure compliance with wetlands protection regulations, consultation will be performed with the Town of Orleans Conservation Commission and an onsite biological assessment will be performed by a wetland scientist. If determined the site activity will result in disturbances to locations regulated under the WPA and/or the Town of Orleans Wetlands Protection Bylaw, the appropriate permits will be obtained prior to the initiation of site activity.

<sup>1</sup> “Tri-Town Septage Treatment Facility Decommissioning Action Plan”, Stantec Consulting Services, Oct 2013

<sup>2</sup> It is assumed, that maintenance costs will be minimized to the bare needs of systems needed to run down facility septage and residuals inventory.

The project site is partially located within a Priority Habitat mapped for state-listed species and thus is subject to the jurisdiction of Massachusetts Endangered Species Act (MESA) regulations (321 CMR 10.00) as promulgated by the Massachusetts Division of Fisheries and Wildlife (Division) and administered by the NHESP. MESA establishes a regulatory review process whereby the NHESP determines if proposed activities may result in “take” to state-listed species. If it is determined a “take” may occur then the Project may be redesigned or conditioned to avoid a “take”. However, if a “take” cannot be avoided through project redesign then the Project requires compliance with performance standards for issuance of a Conservation and Management Permit under MESA (321 CMR 10.23) from the NHESP.

The MESA regulations also identify several exemptions for some types of activities within Priority Habitat (321 CMR 10.14). If the Project can be designed to meet this threshold then compliance with the MESA regulations may not be required. Through consultation with NHESP written confirmation will be obtained to determine if the Project meets the conditions for exemption under the MESA regulations. If it is determined the Project is not exempt from MESA, then preparation and submittal of a MESA Project Review Checklist to the NHESP will likely be necessary.

To ensure compliance under Section 106 of the National Historic Preservation Act of 1966 (NHPA), consultation with the Massachusetts Historical Commission (MHC) will be performed prior to the initiation of site activity.

In summary, it is difficult to say with certainty what requirements will be triggered until the process has been started, however AECOM has made conservative assumptions regarding the level of effort that will be required to fully comply with all environmental permitting requirements.

#### Hazardous Materials Assessment

AECOM will perform a comprehensive survey of the structure at the project site for compliance with USEPA’s National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations. The survey will be conducted for the purpose of identifying visible, accessible suspect Asbestos Containing Materials (“ACM”) and identify materials that may be required to be abated prior to proposed demolition activities. Identified suspect ACM will be sampled. The onsite inspection work will result in minimal damage to some interior and exterior components and hard enclosures. AECOM will not be responsible for repairing such damage, but will attempt to minimize it to the extent possible. Roofing materials will be included in the survey; however AECOM will not be responsible for patching roof cuts. Again, AECOM will attempt to obtain samples from areas that will not result in subsequent damage to the facility.

The facility survey for ACM will generally consist of the following items:

- Visual observations of friable and non-friable ACM,
- Physical assessment of suspected friable materials,
- Bulk sampling,
- Laboratory analysis; and
- Written report documenting findings, recommendations and conclusions.

AECOM anticipates the collection of approximately 85 bulk material samples. Additional sample analysis, if needed, will be billed at an additional cost based on requested laboratory turn-around-time. The samples will be billed at unit rate costs and the Town will not be billed for samples not analyzed and/or collected.

In addition, AECOM will visually inspect for the presence of regulated materials such as: PCB-containing light ballast's, PCB-containing oils, fluorescent light bulbs, mercury switches, and refrigerants. The survey will only include aboveground investigations. No sampling of suspect chemical or PCB-containing materials is included in the Scope of Work pricing for this project.

AECOM will also perform a preliminary Lead-Based Paint (LBP) determination of representative interior and exterior painted building components. The lead determination will be limited to those areas of the buildings, which are accessible at the time of the survey. Samples will be collected from wallboard, concrete wall, metal door frames, etc., to confirm the presence of lead. AECOM will collect up to 15 paint chip samples and submit them to a certified laboratory for lead in paint analysis.

Upon completion of site activities, AECOM will prepare a hazardous materials survey report, which will include an inventory/quantification of ACMs, LBP and laboratory results, and locations of ACMs identified within the building. The report and findings will be used as needed in the development of specifications and procedures for the demolition of the structure and disposal of the debris piles in accordance with applicable regulations.

#### Environmental Site Assessment (ESA)

The primary purpose of this assessment is to identify, to the extent feasible Recognized Environmental Conditions ("RECs") in connection with the site. A REC is "the presence or likely presence of ANY hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. It does not include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The following provides a more detailed description of the scope of services:

- Visual inspection of the site building(s), if present, and grounds to identify potential for on-site petroleum or hazardous material release(s);
- Review of readily available state and federal regulatory records related to on-site activities and to potential off-site activities to identify sources of petroleum or hazardous material contamination to the site. AECOM's scope assumes the review of up to 5 previously prepared reports;
- Review of readily available historical information to assess for potential on-site and off-site sources of petroleum or hazardous material contamination to the site;
- Review of readily available local records related to historical site ownership, usage, and development. This includes obtaining information from local environmental authorities to identify complaints, violations, citations, inspections, environmental liens, activity and use limitations (AULs), or institutional and engineering controls related to the site;
- Review of readily available documents and other resources for the site and site vicinity to evaluate current and historical development and renovation activities; and
- Preparation of an ESA report.

It is assumed the site visit will take up to two days, and that a person knowledgeable about current and historic operations at the site will be made available to the assessment team. Additionally, it is assumed that the assessment is limited to the boundary limits of the existing septage treatment facility, and not the entire 26 acre parcel. It is not anticipated that any RECs will be identified, however, should this not be the case, there may be a requirement for an expanded ASTM Phase II ESA, which is not included in AECOM's scope and price.

Decommissioning SOP

AECOM will spend up to two days on site with facility staff to develop a detailed decommissioning protocol (i.e. SOP) for the closure of the facility. The SOP will be developed to minimize the requirements for off-site disposal of material, while maintain compliance with the facility's DEP Groundwater Discharge Permit (GWDP). The deliverable will be a clear, easy to follow procedure for facility staff to use during decommissioning. On-site technical assistance during decommissioning is not included in this scope, however it is offered as a separate line item in Item 1 of this TM.

Equipment Inventory

The previous report identified several options for equipment salvage. AECOM concurs with the reports recommendation that the value of salvaged equipment be built into the demolition contractors bid price. In order to provide bidders with a means of estimating this value, AECOM will spend up to two days on site as well as additional office time developing an itemized list of major process equipment as well as an assessment of its condition for inclusion into the bid documents.

Detailed Demo Plan, Bid Specs, and Bidding Services

AECOM will prepare technical abatement and demolition specifications for the Site utilizing the hazardous materials reports and analytical data collected during the initial phases of the project. In general, the specifications will include the following sections:

## Division 1 Specifications – General Requirements

- Section 01 11 00 Summary of Work
- Section 01 14 00 Work Restrictions
- Section 01 26 00 Contract Modifications
- Section 01 27 00 Measurement and Payment
- Section 01 29 00 Payment Procedures
- Section 01 31 00 Project Management and Coordination
- Section 01 32 00 Construction Progress Documentation
- Section 01 33 00 Submittal Procedures
- Section 01 41 00 Regulatory Requirements
- Section 01 41 50 Health and Safety Requirements
- Section 01 50 00 Temporary Facilities and Controls
- Section 01 57 00 Erosion and Sediment Control
- Section 01 58 00 Environmental Monitoring and Controls
- Section 01 77 00 Closeout Procedures

## Division 2 Specifications – Site Work

- Section 02 06 00 Decontamination
- Section 02 11 14 Stockpiling
- Section 02 11 60 Demolition and Earthworks
- Section 02 81 00 Transportation and Disposal
- Section 32 31 13 Restoration

AECOM will prepare a bid package and provide a final copy of the bid package to the Town in order to solicit competitive bids from qualified contractors. The bid packages will consist of the following:

- Bid Form;
- Specifications;
- Form of Agreement/Contract Terms; and
- Addenda (as needed).

AECOM will attend one pre-bid meeting at the Site in the company of one or more representatives from the Town to provide technical guidance as needed during the pre-bid. Additionally, AECOM will also provide responses to technical questions during the bidding process in the form of one addendum, with one round of comprehensive comments and questions from prospective construction contractors.

AECOM will assist the Town in reviewing the bid proposals from the prospective contractors for conformance with the bid documents and applicable regulations, tabulate the bids, and provide recommendations (in memorandum format) to the Town on the award of the demolition contractor. Our scope is based on one bidding cycle and assumes bids will be solicited from a maximum of six (6) contractors, determined by AECOM. All documents will be supplied electronically to bidders for reference.

In summary, this scope for Permitting, Design, and Bid Phase Engineering Services is intended to bring the Town through the Bid process. Engineering services during construction, LSP services, and Asbestos Monitoring (if required) are specifically excluded. AECOM’s fee for these services is \$130,000 which includes other direct costs, environmental application fees, and contingency.

**4. Summary**

In that there is some ambiguity in the previous report in terms of what is included in the \$80,000 cost to keep the facility operational during decommissioning; AECOM has itemized line items as follows.

- Special, “one-time” costs during closure: \$80,000
- Utility and maintenance<sup>3</sup> costs during 3-month closure period: \$45,000
- AECOM oversight (if desired): \$40,000

The above estimates do not include the cost of either facility or contract O&M labor during this period, which has been addressed under separate cover.

AECOM can provide Permitting, Design, and Bid Phase Engineering Services at the cost of \$130,000, which includes permitting fees and contingency. This assumes that no major environmental concerns are identified in either the Hazardous Material or Environmental Site Assessments. While AECOM does not anticipate any such issues arising, it is impossible to assess the impact to the overall design process if any environmental issues are identified until such time as the initial assessments have been completed.

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<sup>3</sup> It is assumed, that maintenance costs will be minimized to the bare needs of systems needed to run down facility septage and residuals inventory.