



May 13, 2022

Mayor Shaunna O'Connell
Office of the Mayor
City of Taunton
15 Summer Street
Taunton, MA 02780
Attention: Mayor Shaunna O'Connell

RE: Third Party MEPA Review of Proposed Aries Biosolids Project

Dear Mayor O'Connell:

Tetra Tech, Inc. (Tetra Tech) is pleased to present this letter report to the City of Taunton (Taunton) documenting our review of the Aries Clean Technology Taunton Biosolids (Aries) Draft Environmental Impact Report (DEIR) prepared to meet requirements of the Massachusetts Environmental Policy Act (MEPA). Aries is proposing to construct and operate a new biosolids gasification facility at the southern end of the Taunton landfill on East Britannia Street. The facility will turn wet biosolids cake (a solid waste from municipal wastewater treatment plants) into biochar (a product for use in concrete, as a soil amendment, as a filtering agent, or as an ingredient in rubber, plastic, and other materials). Tetra Tech reviewed the MEPA requirements, and the technical and regulatory aspects of the air quality, environmental justice (EJ), and noise impacts from the project.

The following Scope of Work was performed for this review.

- An administrative completeness review of the DEIR with respect to MEPA requirements, including responsiveness to the Environmental Notification Form (ENF) conditions, EJ obligations, and public comments received.
- A detailed technical review of the air quality assessment, including per- and polyfluoroalkyl substances (PFAS) emissions and impacts.
- A detailed technical review of the noise impact assessment.

This letter report documents the results of our review and provides proposed comments to be submitted to MEPA on behalf of the city. Our review also identifies potential impacts from the project that may be of concern to the city. Overall, the DEIR shows that the Project will mitigate environmental impacts. However, Tetra Tech recommends the questions and comments raised in our evaluation be addressed in the Final Environmental Impact Report (FEIR).

EXECUTIVE SUMMARY

The Aries biosolids gasification project provides an alternative to the current procedures for handling and processing wastewater biosolids. The DEIR provides information on the environmental benefits and impacts of the Project. The DEIR also documents the facility

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operations, alternative sites, and alternative methods for handling wastewater biosolids. The Project is proposing state-of-the-art emissions control technology. Tetra Tech's review of the Aries Biosolids DEIR review shows the analyses presented are largely complete, but additional information is needed for specific technical areas that should be included in the FEIR. Specifically, our review indicates that the project likely to achieve the environmental objectives, but the additional info requested is important to solidify the finding, particularly with respect to PFAS.

The DEIR also provides a comparison of the environmental impacts of gasification versus other options for handling wastewater biosolids including incineration, landfilling, thermal drying, anaerobic digestion, and composting. The DEIR also evaluated current methods for disposing wastewater biosolids used by the City of Taunton as well as those used by other municipalities such as the thermal drying process proposed for Parallel Products in New Bedford. Gasification was determined to be the most sustainable option based on end product use, energy use, and reduced transportation.

MEPA HIGH-LEVEL REVIEW / ENVIRONMENTAL JUSTICE REVIEW

Tetra Tech conducted a high-level administrative completeness review of the DEIR to assess whether the report addresses all MEPA requirements, adheres to, and addresses issues outlined in the Environmental Notification Form (ENF) Certificate, and adequately responds to comments received on the ENF and during the site walk.

The project site is located within one mile of a designated EJ area. MEPA has promulgated regulations and guidance for addressing impacts in EJ communities. Under this task, Tetra Tech also reviewed the EJ analysis prepared in the DEIR to assess whether it addresses the requirements specified in the MEPA regulations and guidance. Tetra Tech also reviewed projected impacts for the EJ community.

MEPA Completeness Review

The proposed biosolids facility will use fluidized bed gasification to convert wet biosolids generated by municipal wastewater treatment plants into synthesis gas. The facility will reuse the synthesis gas in a closed loop drying system. The Project will process 470 tons per day of municipal biosolids which would otherwise be disposed of in landfills and incinerators, while minimizing land application and reducing the use of fossil fuels. The gasifier produces biochar, a beneficial product that can be used in multiple applications including as an ingredient in concrete (as a replacement for fly ash). Aries filed its ENF with the MEPA Office on December 30, 2020. The Secretary of the Executive Office of Environmental Affairs (EEA) issued a certificate (EEA Number 16311) on February 12, 2021. The Certificate required the Project to submit a Draft Environmental Impact (DEIR). A DEIR for the Project was submitted on February 15, 2022.

Tetra Tech finds the DEIR is a comprehensive document which complies with the MEPA Scope and provides a satisfactory basis for assessing project impacts. In general, the DEIR demonstrates that the project will avoid, minimize, and mitigate damage to the environment to the maximum extent practicable through project alternatives and design. The DEIR meets the MEPA administrative requirements. A summary of MEPA elements reviewed are provided in Attachment



1 to this letter. General comments on the DEIR are provided below. Additional technical comments are provided by subject matter in later sections of this letter.

Comments

Tetra Tech has the following general comments on the DEIR, which are recommended to be addressed in the FEIR, as follows:

1. The DEIR follows the outline of the MEPA Scope, which is generally consistent with Section 11.07 of the MEPA regulations. The DEIR title page should provide the specific project location in Taunton.
2. The MEPA regulations at 11.07(6) specify a summary section as well as a separate section addressing the existing environment. Characterization of the existing environment is embedded in specific impact sections. While not mentioned in the project-specific MEPA Scope, a lay-friendly summary would be helpful to reviewers.
3. In Section 1.0 of the DEIR, impervious areas are stated to be shown on the project plans. The locations of the impervious areas are not readily identifiable when reviewing the figures.
4. The DEIR does not use traditional appendices (at the end of the main body); the DEIR instead uses Attachments at the end of each technical section to provide additional technical details in support of the main body of the report. This lays out all the details in one place for individual technical reviewers. Various attachments then have their own appendices which in some cases have their own attachments which gets a bit unwieldy for review. This format also makes it more challenging to keep track of where a reviewer might be in the overall document. Numbering each page in each major Attachment would be helpful (e.g., Attachment 7-1, page 1 of xx) and will make the document more user friendly.
5. In Section 3.0 (Solid Waste), truck loading and unloading areas are shown on the plans, and potential truck movements can be inferred, but these movements are not specifically identified as specified in the MEPA Scope.
6. Section 3.0 of the DEIR is not specific on the conditions on when dried biosolids might be transported offsite and sold. Section 6.0 of the DEIR provides a more specific response indicating either gasifier downtime *or* an oversupply of contracted biosolids could result in offsite sale of dried biosolids. The text in Sections 3.0 and 6.0 should be consistent. The offsite disposal has PFAS implications.
7. The ENF Certificate stated that the DEIR should distinguish between air emissions associated with the biosolids drying and gasification processes. While the dryer emissions and gasifier emissions end up at the thermal oxidizer, the DEIR does not address the distinction between dryer and gasifier emissions on the inlet side of the oxidizer, particularly with respect to PFAS emissions.



8. The Proponent states in the DEIR that they will process municipal biosolids from municipal wastewater treatment plants. If the facility opts to process industrial wastewater, additional analyses should be required.
9. Information from potential biochar customers confirming suitability of biochar as a concrete additive would be appropriate to include in the DEIR (and likewise for any other anticipated end uses).

Environmental Justice

The proposed project exceeds MEPA EIR thresholds for wastewater discharge (100,000 gallons per day or more discharged to a sewer system of sewage, industrial wastewater, or untreated stormwater) and is located within one mile of an EJ population. Therefore, the proposed project is subject to the EEA EJ Policy and requirements for enhanced public participation and enhanced analysis of impacts and mitigation. EJ impacts for the Project were evaluated using MEPA's 2017 Environmental Justice Policy and the December 2021 *MEPA Interim Protocol for Analysis of Project Impacts on Environmental Justice Populations*. The Project conducted enhanced outreach and an enhanced EJ analysis as required by the ENF Certificate and the MEPA 2017 and 2021 EJ analysis protocols.

Enhanced outreach for the project included scheduling and holding multiple public meetings; preparing and posting a project fact sheet in English, Spanish, and Portuguese; developing a project web site providing project information and a link to the DEIR and posting frequently asked questions about the Project and its technology. As part of the enhanced outreach, the Proponent was required to conduct at least one well-publicized public meeting during the DEIR comment period at a time convenient for the public, particularly for low-income or working households with limited availability during business hours. One public meeting was held on March 24, 2022, from 5 PM to 8 PM at Bristol Community College.

In addition to enhanced outreach, the ENF Certificate specified the DEIR should include a comprehensive analysis to demonstrate that the project and its impacts, together with historical or existing sources of environmental pollution, will not have a disproportionate impact on EJ populations. The analysis was to include a review of baseline conditions that may reflect the cumulative impact of historical sources of pollution affecting the EJ community, including baseline public health data for the nearby EJ population and surrounding neighborhoods in the vicinity of the project and a description of how the project may exacerbate or contribute to baseline conditions. The ENF Certificate further specified that the DEIR should provide an analysis of how the specific impacts of the project could contribute to or further exacerbate baseline conditions, particularly in the areas of air and water quality, including providing the results of dispersion modeling and assessing whether the air emissions from the Project make a significant contribution to conditions in the community. The analysis should recommend mitigation measures where appropriate.

The EJ analysis evaluated whether the Taunton EJ area within a mile of the site is experiencing unfair or inequitable environmental burdens. Evaluation of baseline conditions is important because in communities with high existing burdens, even small additional impacts could create disproportionate adverse effects to an EJ population. The analysis used the Massachusetts



Department of Public Health (DPH) vulnerable health criteria including rates of heart attacks, childhood lead blood level indicator, low birth rate indicator, and the childhood asthma indicator.

The results of this baseline DPH evaluation revealed that one or more of the Taunton EJ blocks evaluated meets the vulnerable health criteria for heart attack and low birth weight, meaning the EJ community is vulnerable and subject to existing environmental burdens.

The Proponent also evaluated EJ impacts using the United States Environmental Protection Agency (USEPA) Environmental Justice Screening Tool (EJ Screen). This tool evaluates the baseline conditions of the EJ community. The USEPA EJ Screen tool was run for the census tracts immediately within one mile of the designated geographic area and compared the results to the state average. Any parameter within the 80th percentile of the state average may indicate a burden of pollution.

The results of the EJ Screen for the block groups evaluated indicate that exposure to ozone, lead paint, traffic proximity, RMP sites, and wastewater discharge are the five environmental indicators that rank in the 80th percentile or above for one or more EJ block groups evaluated and may indicate a burden of pollution.

A key aspect of the enhanced EJ analysis is the impact of the Project on the identified EJ population. The EJ analysis references the dispersion modeling analysis documented in Section 4 and states that the magnitude of the impact is very small. A comparison of impacts in EJ versus non-EJ areas is presented in Table 9-8 of the DEIR. Odor impacts were also modeled and were determined to be lower in EJ areas than non-EJ areas due to the proximity of non-EJ areas to the Project.

The overall conclusion in the DEIR is that the Project will not disproportionately affect the EJ community within one mile of the Project. Tetra Tech has the following comments on the EJ analysis presented in the DEIR, which are recommended to be addressed in the FEIR for the Project. The comments provided on the EJ analysis are expected to result in responses that provide a better demonstration that the Project and its impacts, together with historical or existing sources of environmental pollution, will not have a disproportionate impact on EJ populations.

Comments

1. One public outreach session has been held since issuance of the DEIR. It is recommended that one or more additional meetings be held prior to issuance of the FEIR due to public interest concerning the Project's impacts.
2. Figure 9-1 illustrates the Project location relative to the EJ areas located within one mile of the proposed biosolids facility. This figure (or a new figure) should include the specific receptors modeled in the EJ areas for air quality and odor.
3. The significant impact area (SIA) identified in Section 4 is 0.8 km (0.5 miles) for 1-hour NO₂, 0.71 km (0.44 miles) for 24-hour PM_{2.5}, and 0.64 km (0.40 miles) for annual PM_{2.5}. The DEIR should identify whether any of the EJ areas evaluated overlap these SIAs. The DEIR should also identify if any of those receptors are located within the significant impact areas for 1-hour NO₂, 24-hour PM_{2.5}, and annual PM_{2.5}.



4. Table 9-8 presents the results of the dispersion modeling at receptors located in the EJ area. The report should clarify whether these impacts are from the project alone or if these impacts cumulatively include the MM Taunton facility and Cleary Flood Station. If the presented impacts are for the project alone, the cumulative impacts including nearby sources and ambient background concentrations in the EJ community should also be presented.
5. The report should clarify whether PFAS impacts were evaluated at the closest EJ receptor.
6. The acronym DGA is used repeatedly in the EJ section, but the acronym (designated geographic area) has not been defined in the DEIR.
7. PFAS concentrations in drinking water should be documented for the EJ analysis.
8. The ENF Certificate also specified additional potential impacts the DEIR should evaluate for potential disproportionate impacts to the nearby EJ population. Most of these were addressed in the analysis. Three items identified in the Certificate warrant additional evaluation under EJ and should be presented in the EJ section:
 - a. Decreased capacity in the sewer system and potential for increased surcharging of the sewer system;
 - b. Potential for decreased water quality through increased wastewater discharges attributable to the project; and
 - c. Release of PFAS in air emissions, wastewater and solids produced by the project in a manner that may disproportionately impact the EJ population.

AIR QUALITY REVIEW

Tetra Tech performed a technical review of the air quality section of the DEIR. Content reviewed included stationary and mobile source emissions calculations, proposed control technology for minimizing emissions, the air quality modeling analysis, and PFAS emissions and risk assessment. The results of our review show that the Project will meet state and federal air quality requirements. The proposed comments will clarify the Project emissions and impacts.

The city has indicated that project PFAS emissions and impacts are a key issue for the public. PFAS are associated with wastewater sludge and could potentially be released to the air. Tetra Tech's air quality review includes a separate section focused on the PFAS emissions, dispersion modeling, and human health and ecological risk assessments presented in the DEIR. PFAS is an emerging issue, and more study is underway by MassDEP and USEPA.

General Air Quality Comments

1. Table 4-3 references applicable and nonapplicable air quality requirements. The table references the wrong sections – 5.1-5.14. This should be 4.1.5.1-4.1.5.14. Section 5 is the noise analysis.
2. Section 4.1.5.5 states that National Emissions Standards for Hazardous Air Pollutants (NESHAP) is not applicable to the Project. 40 CFR 61 Subpart E National Emissions



Standard for Mercury is applicable to those stationary sources which process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge. An applicability analysis for Subpart E should be provided.

3. The DEIR states that the three (3) drum dryers in the biosolids building are exempt from the air plan approval process because the fuel burning capacity for each is rated below the 10 MMBtu/hour threshold for inclusion in the program. However, the DEIR should address plan approval applicability for non-combustion emissions from the dryers.
4. The Aries Linden facility in New Jersey completed construction late last fall. The FEIR should provide additional data on operations, emissions or control technologies that has become available for the New Jersey facility can be applied to the Aries Taunton project.
5. The USEPA issued an advance notice of proposed rulemaking (ANPRM) on September 8, 2021, to solicit information and request comments to assist in the potential development of regulations for pyrolysis and gasification units that are used to convert solid or semi-solid feedstocks, including solid waste (e.g., municipal solid waste, commercial and industrial waste, hospital/medical/infectious waste, sewage sludge, other solid waste), biomass, plastics, tires, and organic contaminants in soils and oily sludges to useful products such as energy, fuels and chemical commodities (86 FR 50296) with comments requested to be received on or before November 8, 2021. This deadline was subsequently extended to December 23, 2021 (86 FR 61102). The solicitation resulted in the receipt of 172 responses, including one response from Aries and another from the Conservation Law Foundation (CLF) that specifically identified the proposed Taunton facility in connection with EJ issues. The responses submitted to USEPA should be reviewed and addressed by Aries in the FEIR.

Gasification Technology and Emissions

The Project will process up to 500 tons per day (tpd) and an average of 470 tpd of dewatered biosolids cake with a solids content range of about 18% to 25% by weight. The biosolids will be delivered in sealed bottom dump trailers each with a capacity of 30-32 tons of cake, about 17 incoming trucks per day. The receiving bins are located in an enclosed below-grade vault. The bins are only opened for the duration that it takes to unload a truck, approximately 15 to 20 minutes each hour. After a truck is unloaded, the receiving bins are immediately closed, and the odors are contained. Vents from the receiving bins and the process are routed to and discharge into a thermal oxidizer which is incorporated in the project design to significantly reduce air emissions including those that cause odors. According to the Proponent, odors will only be present in the immediate area of the receiving bins located in the enclosed below grade vault. The totally enclosed receiving building will be under negative air pressure and will not allow odors to escape the building in most cases. Some odors may escape from the receiving building when the roll-up bay door or doors are opened (there are two doors), despite the negative pressure in the building. According to Section 4.1.4.4, 2 percent of the odors were released with one garage door open and 5 percent with two doors open. The garage doors would be open for a total of 5 minutes each hour during normal delivery hours.



The biosolids are transferred by a conveyor to two completely enclosed, nitrogen blanketed storage tanks. The storage tanks are completely enclosed tanks with sealed connections for receiving the incoming wet biosolids cake, and include a nitrogen purge line, a vented line, and a sealed bottom. Negative air pressure is created to capture odors and nitrogen is used to displace air to prevent the build-up of gases. The odors, displaced gases, and nitrogen from the storage tanks are vented to the thermal oxidizer.

The biosolids are transferred from the storage tanks into a pug mill for processing and subsequently to a horizontal drum dryer where the biosolids are dried to 90% solids. Heat for drying is supplied by heating the air separated and recovered from the dryer cyclone. The exhaust air from the dryer is recycled using a closed-loop system through a series of heat exchangers to re-heat the exhaust air to return to heat the dryer. The thermal oxidizer provides heat to the heat exchangers for the dryers.

The biosolids are converted to molecules of methane (CH₄), carbon monoxide (CO), nitrogen (N₂), and hydrogen (H₂) in the gasifier thereby forming a low energy fuel gas (producer gas) used for the thermal oxidizer. The thermal oxidizer is equipped with a dual burner with injection ports for both producer gas from the gasifier and pipeline natural gas. The thermal oxidizer can operate with either producer gas or pipeline natural gas and can co-fire both gases.

The DEIR discussed the benefits of the Project for the City of Taunton including:

- Processing the biosolids at the proposed Aries Clean Technology facility will reduce the round-trip trucking distance from about 300 miles (the distance to the incinerator located in Naugatuck, Connecticut) to about 8 miles, reducing GHG emissions incurred during the transport of waste.
- Mitigating potential PFAS contamination associated with landfilling of biosolids (with or without drying). The Aries technology will destroy PFAS during the production of its biochar product.
- Reducing the volume of solid waste produced while also providing climate benefits. The biochar product can only be land applied, which improves the carbon sequestration capacity of soils, or be incorporated into concrete as a beneficial additive which reduces GHG emissions during the concrete production process. The DEIR also noted the biochar can also be used as a filtering agent, or as an ingredient in rubber, plastic, and other materials. These specific applications of biochar were not expanded on in the DEIR.

Emissions Control Technology Review

The DEIR presented a Best Available Control Technology (BACT) Analysis to control odor and emissions of various pollutants. The exhaust gases are vented to an air quality control system that includes the thermal oxidizer, dry sorbent injection, followed by ammonia injection which is followed by a ceramic filter with embedded catalyst. This system provides for control of air emissions of nitrogen oxides (NO_x), acid gases (hydrochloric acid [HCl] and hydrogen fluoride [HF]), sulfur dioxide (SO₂) and particulate matter (PM). The thermal oxidizer will also control volatile organic compounds (VOC), carbon monoxide (CO) and PFAS. The control equipment will



exhaust through an induced draft fan to a vertical stack. A backup odor control system for the cake receiving area will use carbon adsorption when the thermal oxidizer is not operating.

The proposed air pollution control system meets BACT requirements. However, Tetra Tech has some comments relative to specific parts of the analysis. These comments do not recommend changes to the proposed control technology but do request clarification of these controls in the FEIR. Following are Tetra Tech's comments on the control technology analysis:

Comments

1. This application presents BACT analyses for NO_x, CO, PM (PM₁₀/PM_{2.5}), SO₂, and greenhouse gases (GHGs) as CO₂e. The Proponent states that a BACT analysis was not conducted for VOC because potential VOC and halogenated organic compounds (HOCs) emissions are less than 18 tons per year and no single organic material HAP is more than 10 tpy. The 18 tpy VOC threshold is based on MassDEP guidance from 2011. In recent conversations with MassDEP on other projects, the Department stated that it no longer considers <18 tpy VOC as BACT. While the thermal oxidizer will meet VOC BACT requirements, a BACT analysis for VOC should be documented in the FEIR.
2. Section 4.4.4.2 – Sulfur Dioxide BACT lists the SO₂ BACT emission rate as 1.39 lb/hour and 6% control. Table 4-12 and Attachment 4-6 however list the SO₂ BACT emission rate as 11 lb/hour, 48.3 tpy and 96% control (a 228 tpy reduction). This discrepancy should be corrected.
3. The BACT analysis documents SO₂ control before the exhaust is emitted to the atmosphere. Did the Project consider the feasibility of sulfur removal prior to the thermal oxidizer? The FEIR should evaluate the feasibility of controlling SO₂ prior to the thermal oxidizer.
4. Section 4.2.4.3 CO BACT lists a BACT emissions rate of 1.05 lb/hour and 4.6 tpy. Attachment 4-6 lists the CO BACT emission rate as 3 lb/hour and 13.1 tpy. This discrepancy should be corrected.
5. The Linden, N.J., Aries project has a lower CO emission permitted limit than the proposed Taunton project (0.34 pounds per hour CO for Linden; 1.05 lb/hour for Taunton). The Proponent states the reason for not adopting Linden's CO emission rate was that it had not yet been demonstrated in practice. The Proponent states that the final proposed CO emission limit for Aries Taunton will have to be approved by MassDEP during the Air Plan Approval review process.
6. A BACT analysis was not conducted for HCl. Uncontrolled HCL emissions are 26 tpy. A BACT analysis should be conducted for HCl (a HAP).
7. Information on the back up carbon system should be provided including but not limited to the following: pollutant removal efficiency (including specific odor-causing compounds), the number of canisters placed in series, and the areas of the plant that require control when the thermal oxidizer is not operational.



Dispersion Modeling and Impacts Review

USEPA's AERMOD dispersion model was selected to perform an analysis of ambient air quality impacts. AERMOD results were compared to National Ambient Air Quality Standards (NAAQS) and MassDEP guidelines for ambient air toxics levels. Additionally, AERMOD was used to estimate the deposition rates of PFAS for the purposes of risk assessment evaluation and to quantify potential odor impacts. Both stationary and mobile sources were evaluated. In general, the implementation of AERMOD conforms with USEPA and MassDEP guidance and compliance with NAAQS and other metrics is demonstrated.

Following are Tetra Tech's comments on the dispersion modeling analysis:

Comments

1. The meteorological data input to AERMOD were processed using an outdated version of the meteorological data processor, AERMET, and consideration should be given to update the meteorological data set accordingly.
2. The PFAS assessment utilized AERMOD's "Method 2" for particle deposition calculations. The Method 2 option is available in the model for use when the particle size distribution of the emissions is not well known and when less than 10 percent of the mass of particles is in particles with a diameter of 10 μm or larger. Additional documentation should be provided to justify the use of the Method 2 approach. The Method 1 approach is preferred, and consideration should be given to identify the particle size distribution of emissions either through a literature review or with the performance of emissions testing at a similarly configured facility.
3. No discussion is provided in the risk assessment for mercury deposition parameters, nor is supporting information provided to address the proportion of mercury assigned to the elemental gaseous and particle-bound divalent states. Citation should be provided to support these assumptions.
4. Electronic files for AERMOD and related tools should be provided to confirm the inputs are configured as stated and outputs are correctly transcribed to the report.

Mobile Source Emissions Review

USEPA's MOVES3 software tool was used to estimate motor vehicle tailpipe emission rates from trucks and passenger cars associated with facility operation. While detailed MOVES3 inputs and outputs were not available for evaluation, the description of how MOVES3 was implemented is appropriate as are citations to guidance, and the tabulated emission factors are within the expected range.

The MOVES3 emission factors are applied to vehicular traffic assumptions based on traffic study information and assumed idle times. These traffic assumptions are generally reasonable. The assessment does assume full compliance with MassDEP idling requirements (no more than 5 minutes of idling time per vehicle). However, compliance with this requirement can be difficult to enforce and using a more conservative duration of idling time would be appropriate for dispersion



modeling purposes to demonstrate that ambient air quality standards can still be met with extended idling times.

Electronic files for MOVES3 should be provided to confirm the inputs are configured as stated and outputs are correctly transcribed to the report.

PFAS Air Emissions Review

PFAS air emissions calculations are provided in both Attachment 4-2 and Attachment 4-4. Attachment 4-2 provides emissions calculations for 24-hour and annual durations. Attachment 4-4 provides emissions calculations based only on the annual duration. In both attachments, the annual duration calculations are based on a 100 ton per day dried biosolids feed rate to the gasifier with a 100 ppb ($\mu\text{g}/\text{kg}$) concentration of PFAS in the dried biosolids. The resulting annual average PFAS feed rate to the gasifier is $8.33\text{E-}04$ lb/hr. In the case of the 24-hour duration calculation, the dried biosolids feed rate to the gasifier is based on 100 tons per day with a 200 ppb concentration of PFAS in the dried biosolids. The resulting 24-hour average PFAS feed rate to the gasifier is $1.67\text{E-}03$ lb/hr which is double the annual average rate.

The PFAS concentration in dried biosolids was based on data provided by MassDEP that indicated an average PFAS concentration of 25 ppb in “treated biosolids residuals”. Because treatment could affect PFAS concentrations, the DEIR assessment assumed the PFAS concentration would be higher than that (i.e., 100 ppb and 200 ppb) in the dried biosolids fed to the gasifier. No information is provided that would indicate the variability of the PFAS concentrations in the dried biosolids and no information is provided to indicate what the PFAS concentrations might be in the biosolids fed to the dryer. Thus, the appropriateness of the 100 ppb and 200 ppb assignments is difficult to confirm. Additional discussion in the FEIR would be helpful to put this uncertainty into perspective.

As further detailed in the following bullets, the fate of PFAS through the production of dried biosolids and biochar (i.e., the dryers and gasifier) should more carefully scrutinize the relied upon test data for the Australian Loganholme facility and additional data would be helpful to address the uncertainty in the assessment. The Proponent indicates a more detailed analysis will be provided in the air permit application that is “likely” to be filed for the facility. Considering the filing of an air permit application is not listed as a certainty in a response to comment, the detailed analysis should be provided in the FEIR.

Comments

1. Attachment 4-2 of the DEIR (Page 2 of 23) shows 0% removal of PFAS by the gasifier. All identified PFAS removal is due to the air pollution control equipment in this attachment. In contrast, Attachment 4-4 relies on test data showing removal of PFAS from biosolids but does not rely on air pollution control levels. The fate of PFAS through the system should be better characterized and should be applied consistently in these attachments.
2. The PFAS emissions table in Attachment 4-2 lists 99.9% destruction efficiency for PFAS using Air Pollution Control. The basis for the 99.9% destruction efficiency should be clearly based on citations (explaining why other similar facilities have lower destruction efficiencies) or test data obtained for a similarly configured facility (such as the Linden



facility). The Loganholme gasification facility includes a thermal oxidizer and claims overall 94% destruction efficiency for various PFAS, illustrating the need to explain why the proposed Taunton facility will have better performance.

3. In Attachment 4-4, the Proponent states that they assumed a 90% destruction removal efficiency (DRE) for the following PFAS congeners: perfluoroheptanoic acid (PFHpA), perfluorooctanoic acid (PFOA) and perfluorononanoic acid (PFNA); and 99% for the following PFAS congeners perfluorooctanesulfonic acid (PFOS), perfluorohexane sulfonate (PFHxS) and perfluorodecanoic acid (PFDA) in the thermal oxidizer. The Loganholme facility shows a destruction efficiency of 91% for PFOS, not 99%. Additionally, data from the Loganholme facility addresses the presence of other PFAS congeners not identified in MassDEP samples; the FEIR should consider the possible presence of other congeners.

Further, the DREs assumed in the DEIR are based on the Loganholme report's calculation of DRE based on the presence of PFAS in biochar relative to biosolids which addresses only the gasifier's removal of PFAS from the solid material. In several cases, emissions of PFAS congeners are reported at the stack outlet showing that the PFAS are volatilized rather than destroyed, and data suggest that the DRE of the oxidizer itself may not be achieving 99.9% (although this may be due to calculation artifacts resulting from the use of results that use reported detection limits). The DREs should be further evaluated to identify whether the stated DREs are adequately represented through to the stack emissions. Last, the Loganholme report indicates PFAS removal by the scrubbers, and that should be addressed in the FEIR with respect to the collection and disposal of spent sorbent.

4. The PFAS removal efficiency of the carbon canisters should be identified for those situations when the thermal oxidizer is not operating. The basis for the removal efficiency should be clearly based on citations or test data obtained for a similarly configured facility.
5. Have the biosolids from the Taunton wastewater treatment plant been tested for PFAS concentration?
6. Section 6.0 of the DEIR does review the regulatory and permitting requirements associated with the sale of dried biosolids for land application, as well as Massachusetts PFAS testing requirements for dried biosolids. However, the DEIR does not address in much detail the PFAS content of dried biosolids nor the potential for PFAS to be released from dried biosolids to the environment. A review of available data on the fate of PFAS in the biosolids driers and in land-applied dried biosolids is recommended.
7. The ENF Certificate states that the DEIR should analyze the PFAS regulatory requirements, including testing and monitoring that may apply to the production of biochar and dried biosolids for sale and should address how the Proponent will comply with such regulatory requirements. In Section 12, the DEIR states only that Aries will perform testing if subject. Aries should clearly state that testing would be performed for both biochar and dried biosolids as applicable and in consideration of both existing and future regulatory requirements.



8. A more comprehensive review of available data on the fate of PFAS at the proposed temperatures and conditions in the sludge drying and gasification process would be an appropriate addition to the FEIR. Supporting data should be provided for the assertions that PFAS will not reenter the environment from use of biochar as a concrete additive or chemical feedstock. Supporting data should also be provided for other potential end uses, such as the use as a soil amendment.
9. Additional discussion in the FEIR of the uncertainty of the biosolids PFAS content and the PFAS emissions estimates is appropriate. The uncertainty assessment should address additional congeners of PFAS and should also address the appropriateness of the assumed PFAS concentrations in biosolids. Additional discussion of PFAS properties and the usefulness of USEPA and other citations on the remedies for PFAS-contaminated soils should be included. These additional citations can provide further information on the temperature levels needed for destruction, for example.
10. The Proponent should include a discussion of MassDEP's recent requirements for PFAS residuals in the FEIR.

Human Health Risk Assessment Review

The DEIR included a public health and ecological risk assessment to evaluate impacts from six PFAS congeners (PFAS6) and mercury to estimate impacts to human and ecological receptors in the vicinity of the proposed facility. The risk assessment was conducted using air dispersion and deposition modeling results along with anticipated concentrations of mercury and PFAS in biosolids obtained from the New England Biosolids and Residuals Association and MassDEP. The analysis assumed that the reasonably maximally exposed individual was an adolescent female presumed to eat fish exclusively from Prospect Hill Pond, which is approximately 1 mile northwest of the proposed facility. Inhalation and fish ingestion pathways were evaluated at worst-case exposure locations for both PFAS6 and mercury with the exception of the adjacent cemetery and landfill. Additionally, impact to the pond complex from which Taunton and New Bedford obtain their drinking water were evaluated.

The text describes the reasonably maximally exposed individual as a 16-year-old female who is exposed via inhalation and fish consumption; exposure via incidental ingestion of soil should be evaluated as well. USEPA's *Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities* (HHRAP) also suggests evaluating sensitive receptors. A receptor with the highest long-term average air concentration in the surrounding residential community should be identified and quantitatively evaluated for exposure via inhalation, incidental ingestion of soil, and ingestion of homegrown produce. The risk assessment did not address receptors in the nearby cemetery, landfill, or neighborhoods.

The risk assessment concluded that no incremental hazards associated with emissions from the proposed facility were above acceptable risk levels. The report stated that nearby EJ communities were anticipated to have fewer incremental risks relative to the more affluent areas located closer to the proposed facility. The analysis did not specifically evaluate the PFAS risks in the EJ community which is to the west and southwest of the proposed facility. Prospect Hill Pond is



located to the northwest of the facility. A review of concentration isopleths provided in Figure 1 of Attachment 4-4 show that predicted concentrations decrease to the south and west of the facility.

The report lacks a discussion of the uncertainty surrounding the evolving nature of PFAS toxicity information. MassDEP recognizes a probable link between PFAS exposure and cancers, yet no toxicity criteria currently exist to evaluate carcinogenic risk associated with PFAS exposure. Additionally, only a reference dose (RfD), which is a health-based reference value for oral exposure, exists for PFAS; no reference concentration (RfC), which is a health-based reference value for inhalation exposure, exists.

Tetra Tech has the following comments on the risk assessment presented in the DEIR, which are recommended to be addressed in the FEIR for the Project. In some cases, additional risk evaluation closer to the Project is recommended. However, based on the level of predicted impacts shown in Figure 1 of Attachment 4-4, the conclusions of the risk assessment are unlikely to change.

1. The risk assessment should include an introductory paragraph providing the regulatory framework and guidance used to conduct the risk assessment. Without this information, the methodology used is not reproducible and cannot be adequately evaluated. Any software used should be referenced and supporting equations (such as intake estimates) and calculations should be provided as well.
2. The data used to determine the concentrations of individual PFAS6 congeners should be provided.
3. The locations with highest long-term average air concentrations in the cemetery and the landfill should be evaluated in the risk assessment. While this area is not currently residential, there are workers, visitors, and trespassers that may be exposed at these locations. Evaluating these locations with a residential receptor would provide a conservative estimate of worker, visitor, and trespasser exposures.
4. Please clarify what exposure pathways and receptors are quantitatively evaluated in this risk assessment. The text mentions inhalation and fish ingestion, however incidental ingestion of soil and ingestion of homegrown produce pathways should be evaluated for residents and anglers as well. Additionally, exposure factors such as exposure duration and frequency should be provided.
5. Tetra Tech recommends quantitatively evaluating risks for the maximally exposed residential receptor near the facility.
6. Receptor locations should be depicted on a figure.
7. The text compares PFAS daily inhalation intake to the PFAS6 RfD, which is specific to dietary exposure estimated by MassDEP; this approach is not appropriate for inhalation exposure. While daily intakes may be calculated, no reference concentration (RfC) for inhalation exposure of PFAS6 exists. This should be noted and discussed in the uncertainty section.



8. Hazards are presented as individual hazard quotients for each analyte class and exposure pathway. A hazard index providing cumulative hazards for all analytes and exposure pathways (i.e., sum of mercury and PFAS hazards from inhalation, fish ingestion, etc.) should be provided for each receptor to assess cumulative effects from exposure.
9. The risk assessment section should include a discussion about uncertainties related to the evolving nature of PFAS toxicity criteria. For example, while a RfD is available for the PFAS6, no inhalation RfC is currently available to assess non-cancer hazards associated with breathing particulate bound PFAS. Additionally, no carcinogenic toxicity criteria are currently available even though California Office of Environmental Health and Hazard Assessment (OEHHA) recognizes PFOA and PFOS as carcinogens. Toxicity criteria for several PFAS are currently under development by the USEPA Integrated Risk Information System (IRIS) program. MassDEP is assessing these cancer data as a part of a three-year review. As additional information becomes available, it is likely that toxicity criteria will become more conservative.
10. This risk assessment only evaluates risk related to air dispersion and deposition. The uncertainty section should be revised to discuss the omission of potential risks related to PFAS and/or mercury in wastewater, dried biosolids and biochar, and other production byproducts. Additionally, only PFAS and mercury are evaluated in this risk assessment. Other hazardous air pollutants, such as heavy metals (chromium) and hydrogen sulfide, may have negligible individual risks or hazards but could contribute to a significant cumulative impact. The omission of these compounds should be acknowledged in the uncertainty section if they are not quantitatively evaluated in the risk assessment.

NOISE REVIEW

Tetra Tech performed a technical review of the noise section of the DEIR including the ambient sound survey, the operational acoustic modeling analysis, and noise mitigation options under consideration. A regulatory overview was given, detailing noise requirements relevant to the Project, which included the Massachusetts noise regulations (also referred to as the MassDEP Noise Policy) prescribed in 310 CMR 7.10. The City of Taunton issued a new noise ordinance in Fall 2021, which includes numerical decibel limits for daytime and nighttime hours by district. Since the DEIR did not include the new City of Taunton noise ordinance, for reference purposes the limits are given in Table 1.

Table 1. City of Taunton Noise Ordinance Limits

Duration of Sound	7:00 am to 6:00 pm (all districts)	6:00 pm to 10:00 pm (residential districts)	6:00 pm and 7:00 am (all other districts)	10:00 pm and 7:00 am (residential districts)
Less than 10 minutes	75 dB	70 dB	70 dB	60 dB
Between 10 minutes and 2 hours	70 dB	60 dB	60 dB	50 dB
In excess of 2 hours	60 dB	50 dB	50 dB	40 dB

An ambient sound survey was conducted to characterize the existing acoustic environment. Measurements were collected by Epsilon and the survey included two long-term (7-day) ambient sound measurements and four short-term (20 minute) ambient sound measurements during both daytime (1:00 – 4:00 pm) and nighttime (1:00 am – 4:00 am) conditions. The ambient sound survey monitoring locations were positioned on the eastern property line of the Project site and in proximity to nearby potential noise sensitive receptors (NSRs; i.e., residences). Various sound metrics were logged during the survey including the residual sound level, or sound level exceeded 90 percent of the time, (L_{90}), which is the appropriate metric to describe ambient sound levels in accordance with the MassDEP Noise Policy. At short-term ambient sound monitoring location M4 an existing pure tone was identified at the 1,000 Hertz (Hz) octave band frequency.

An operational acoustic modeling analysis was also conducted, and the first step was to identify all of the relevant sound sources to be incorporated into the model. Sound sources are located inside and/or outside of the Main Building and include but are not limited to a cooling tower, exhaust/ventilation fans, gasifier blower, thermal oxidizer blower, startup burner compressor, Tri-Mer Scope vibrators, Tri-Mer Scope waste rotary air lock and Tri-Mer Scope pulse valve array. To minimize potential offsite noise impacts, noise controls included a combination of selecting low-noise equipment and implementation of noise mitigation such as silencers, louvers, enclosures, etc.

Modeling was completed using DataKustik’s CadnaA acoustic modeling software, which conforms to the International Organization for Standardization (ISO) 9613, Part 2: “Attenuation of Sound during Propagation Outdoors”. The engineering methods specified in this standard consist of full octave band sound frequency algorithms and were adjusted to account for site-specific ground, topography, and propagation for standard day meteorological conditions. The Project modeling methodology appears to have used site-specific information where available and standard engineering practices in developing the model inputs.

Modeling results were given for the continuous sound sources alone and in conjunction with the intermittent sound sources (i.e., Tri-Mer Scope pulse valve array). The addition of the intermittent sound sources appeared to have an essentially negligible impact on the received sound levels at the eleven identified NSRs. Received sound level modeling results at NSRs were presented as



absolute sound levels, incremental increases in sound levels relative to ambient, and in terms of octave band frequency sound levels to evaluate the potential for pure tones. Compliance with the MassDEP 10 dBA incremental increase criterion was evaluated at all NSRs and compliance was successfully demonstrated at all residential receptors. The new City of Taunton noise ordinance limits were not evaluated in the DEIR. However, a review of the results demonstrates that noise levels at NSRs were in compliance with the 40 dBA nighttime residential limit.

Three of the receptors evaluated in the assessment are cemeteries, and they are predicted to experience elevated received sound levels in some cases in excess of the 10 dBA MassDEP incremental increase criterion during nighttime hours; however, because cemeteries are considered receptors limited to daytime use, demonstration of compliance is only required during daytime hours, which was attained. In addition, the three cemeteries were in compliance with the City of Taunton noise requirements for non-residential districts.

The assessment also included the Taunton Rifle & Pistol Club as a receptor, which is predicted to have significant exceedances of the City of Taunton noise requirements and the 10 dBA MassDEP incremental increase criterion during both daytime (24 dBA) and nighttime (32 dBA) hours due to its proximity to the Project. Apparently, the Taunton Rifle & Pistol Club has provided a letter (dated August 19, 2021) to the EEA indicating they do not expect sound from the Project would unreasonably interfere with the use of their property or the conduct of their business.

Feasibility of applying further noise mitigation measures was evaluated; however, these measures were determined to not be effective. Commitments Aries has made regarding noise mitigation is listed in Section 5.8 of the DEIR, which appears to correlate well with the noise mitigation measures incorporated into the acoustic modeling analysis and given in tables 5-5, 5-7, and 5-8 of the DEIR.

Summary

Overall, the Acoustic Assessment prepared by Epsilon in support of permitting the Aries Biosolids Project was conducted well; completing all the necessary steps to evaluate compliance with the MassDEP Noise Policy. An ambient sound survey was completed, and the L_{90} ambient sound level metric was used as a basis for evaluating compliance relative to the 10 dBA incremental increase criterion. The acoustic modeling analysis used CadnaA, an industry standard modeling software program, and used reasonable inputs and assumptions to predict offsite noise impacts at NSRs. Noise mitigation was considered and incorporated into the acoustic modeling analysis to minimize offsite noise impacts at NSRs.

Comments

Based on Tetra Tech's review of the Project Acoustic Assessment we have the following comments/recommendations:

1. The assessment stated that the sound level data used to model the equipment associated with the Tri-Mer Scope-of-Supply (including the 3-inch pulse valves) were based on other measurements performed by Epsilon. If possible, it would be helpful to append additional information regarding those measurements to the acoustic assessment. In addition,



further details should be provided regarding how those measurement data were applied and used to calibrate the model for the Aries Biosolids Project.

2. Table 5-4 should be clarified to indicate whether the sound level values given for each piece of modeled equipment represents the sound power level.
3. It would be helpful to the reader if the distance from the receptor to the Project site in Tables 5-10 through 5-20 was provided.
4. The FEIR should include compliance with the City of Taunton 2021 noise ordinance.
5. Due to the significant exceedances of the City of Taunton noise requirements and MassDEP 10 dBA incremental increase criterion at the Taunton Rifle & Pistol Club, it is recommended that the City of Taunton obtain a copy of the letter the Club sent to the EEA for their internal records.

SUMMARY OF REVIEW

The Aries biosolids gasification project provides an alternative to the current procedures for handling and processing wastewater biosolids. The DEIR documents the facility operations, alternative sites, alternative methods for handling wastewater biosolids, air emissions, proposed emissions controls, climate change impacts, and impacts on the nearby EJ community. The Project is proposing state-of-the-art emissions control technology. The overall analysis presented in the DEIR meets most of the requirements specified in the MEPA regulations and ENF Certificate, but additional details and analyses are warranted to be included in the FEIR to conclusively demonstrate the Project will comply with environmental requirements including emerging issues such as PFAS.

Tetra Tech appreciates your business and looks forward to working with the City of Taunton. If you have any questions, please feel free to call me at (978) 303-7126.

Sincerely,

A handwritten signature in black ink that reads "Lysa Modica".

Lysa Modica

Senior Air Quality Scientist

Attachment

Attachment 1
MEPA Checklist Summary

MEPA Scope Section	MEPA Scope Item	DEIR Content and Comments
General	The DEIR should follow Section 11.07 of the MEPA regulations for outline and content and provide the information and analyses required in this Scope. It should clearly demonstrate that the Proponent will avoid, minimize, and mitigate Damage to the Environment to the maximum extent practicable through project alternatives and design.	The DEIR follows the outline of the MEPA Scope, which is generally consistent with Section 11.07 of the MEPA regulations. Comments on specific content are provided in the letter report.
Project Description and Permitting (DEIR Section 1.0)	The DEIR should include updated site plans for existing and post-development conditions at a legible scale. Conceptual plans should be provided at a legible scale and clearly identify buildings, public areas, impervious areas, pedestrian and bicycle accommodations, and stormwater and utility infrastructure.	The DEIR does include legible plans for existing and post-development conditions. Buildings and stormwater and utility infrastructure are shown. The DEIR has a satisfactory note on public access and pedestrian and bicycle accommodations. A comment regarding how impervious areas is addressed in figures is provided in the letter report.
	The DEIR should provide a much more detailed description of the project and processes, including delivery, transfer, storage, drying, gasification, loading and transport of biosolids and biochar. It should describe the gasification process and how it differs from incineration.	The DEIR provides a satisfactory description of the project and processes and meets the MEPA DEIR Scope requirements.
	The DEIR should identify any changes since the filing of the ENF.	The DEIR notes there are no substantive changes to the Project since filing the ENF
	The DEIR should identify and describe State, federal and local permitting and review requirements associated with the project and provide an update on the status of each of these pending actions.	The DEIR provides a description of the State, federal and local permitting and review requirements associated with the project. The DEIR notes that no other environmental applications have been filed to date. A general filing schedule plan is discussed. Additional Comments concerning regulatory applicability are provided in the Air Quality Section of the letter report.
	The information and analyses identified in this Scope should be addressed within the main body of the DEIR and not in appendices. In general, appendices should be used only to provide raw data, such as drainage calculations, traffic counts, capacity analyses and energy modelling, which are otherwise adequately summarized with text, tables, and figures within the main body of the DEIR. Information provided in appendices should be indexed with page numbers and separated by tabs, or, if provided in electronic format, include links to individual sections. Any references in the DEIR to materials provided in an appendix should include specific page numbers to facilitate review.	The DEIR did address all scope items in the main body of the report. Traditional appendices (at the end of the main body) are not used; the DEIR uses Attachments at the end of each technical section to provide additional technical details in support of the main body of the report. This format provides the required information but is more difficult to and keep track of where you might be in the overall document. Numbering each page in each major Attachment would be helpful (e.g., Attachment 7-1, page 1 of xx).

Alternatives (DEIR Section 2.0)	<p>The DEIR should provide an expanded alternatives analysis. It should provide a comprehensive comparison of the proposed location and the Devens site with respect to site suitability criteria and permitting standards, including any variances that may be required, and potential impacts to EJ communities. The DEIR should also review any other sites that may have been explored or are feasible given ownership constraints of the Proponent and compare the environmental impacts of any such alternative site(s).</p>	<p>Section 2.0 of the DEIR provides a comprehensive comparison of the proposed (Taunton) location and the Devens site with respect to site suitability criteria and permitting standards. The DEIR notes that no detailed evaluation has been conducted for any other Massachusetts sites.</p>
	<p>The DEIR should also review a No Build Alternative, as required by the MEPA regulations at 301 CMR 11.07(6). The No Build Alternative should analyze how the biosolids would be processed in the absence of the Preferred Alternative and document potential environmental impacts of each alternative, including the assertion made in the ENF that the Preferred Alternative will reduce overall GHG emissions as compared to standard biosolids drying processes. The No Build Alternative should incorporate existing and proposed biosolids facilities in the region including the MRF and the proposed Parallel Products facility in New Bedford currently undergoing MEPA review (EEA# 15990).</p>	<p>Section 2.0 of the DEIR generally provides a satisfactory analysis of the No Build alternative, with a quantitative comparison of relative GHG emissions. The MEPA Scope item concerning the proposed Material Recycling Facility (MRF) and how this MRF and its handling of biosolids would compare to the proposed project was not addressed.</p>
Solid Waste (DEIR Section 3.0)	<p>The DEIR should include a narrative that describes how the biosolids will be delivered, transferred from vehicles, processed into dried biosolids and biochar, and shipped-off site. It should include a description and supporting plans that describe the movement of empty and full trucks on the site. The DEIR should clarify the circumstances under which dried biosolids will be transported off site and sold; the ENF was unclear about whether this would occur when the gasifier is not operational, when the volume of biosolids exceeds the capacity of the gasifier, or both.</p>	<p>Section 3.0 of the DEIR notes that Section 1.0 of the DEIR describes delivery of biosolids, processing, and loading/transport of biochar. Comments regarding the detail provided in the DEIR are listed in the letter report.</p>
	<p>According to the ENF, the Proponent will relocate the recycling drop off facility that operated at the project site. The DEIR should identify where the facility will be located and describe environmental conditions and potential impacts. If no location has been identified, the DEIR should review potential locations for the recycling drop off facility.</p>	<p>Section 3.0 of the DEIR satisfactorily address this scope requirement. The DEIR states that the City of Taunton intends to relocate the drop-off center to an area to the west of the Aries project site near the existing eastern entrance to the Landfill.</p>
	<p>The DEIR should provide a review of the project's conformance with all applicable siting criteria listed in the Solid Waste Regulations at 310 CMR 16.40. These criteria are necessary to assess the compatibility of the facility with surrounding public health, environmental, land use, transportation, and other conditions. I encourage the Proponent to review these criteria at a level of detail consistent with the requirements of the Site Suitability Report that must be filed with MassDEP. According to</p>	<p>Section 3.0 of the DEIR provides a comprehensive review of the applicable siting criteria in conformance with the MEPA Scope. The DEIR specifically shows the site constraints relative to the 100' setback criteria.</p>

Solid Waste (continued) (DEIR Section 3.0)	the ENF, the Proponent will request a waiver from the siting requirement that the waste handling area be at least 100 ft from the facilities property line. The DEIR should provide an analysis demonstrating the need for a waiver. It should clearly delineate all waste handling areas associated with the facility, including the entire receiving building, the drying and gasification areas and biosolids conveyance structures between the receiving building and the drying and gasification areas. The Proponent should consult with MassDEP prior to preparing this analysis to ensure that all waste handling areas at the proposed facility are identified. The DEIR should include a plan showing all waste handling areas and setback distances defined by the Site Suitability criteria.	
	The DEIR should describe the chemical and physical properties of biochar and review potential uses of biochar produced by the project. It should provide documentation and analyses in support of the proposed uses, including analytical data from the Proponent's existing gasification facility. The DEIR should analyze what measures will be taken to monitor and test for the presence of per- and poly-fluoralkyl substances (PFAS) in the biochar product and what, if any, pathways exist for discharges of PFAS from the biochar into air, soil, and water resources. The DEIR should analyze what regulatory requirements, including testing and monitoring, may be applicable to PFAS as related to the production of biochar and dried biosolids for sale, and address how the Proponent will comply with such regulatory requirements.	Section 3.0 of the DEIR provides an overview of the chemical and physical properties of biochar. While the DEIR states that the Linden facility is still in commissioning and analytical data are not yet available, it seems pilot test data in some form should be available for biochar. Additional comments are provided in the letter report.
Air Quality (DEIR Section 4.0)	The ENF asserted that the high operating temperature maintained in the gasification process will destroy PFAS in air emissions; the DEIR should provide an analysis, including available test data, to document that the process will destroy PFAS.	Attachment 4-2 of the DEIR (Page 2 of 23) shows 0% removal of PFAS by the gasifier. All identified PFAS removal is due to the air pollution control equipment in this attachment. In contrast, Attachment 4-4 relies on test data showing removal of PFAS from biosolids but does not rely on air pollution control levels. The fate of PFAS through the system should be better characterized and should be applied consistently in these attachments. Additional comments are provided in the letter report under Air Quality.
	The DEIR should identify all potential air contaminants generated by the project and concentrations of each contaminant.	This information is provided in Attachment 4-2. Comments are provided in the letter report under Air Quality.
	The DEIR should include a Best Available Control Technology (BACT) analysis of emissions control measures that will be incorporated into the project design.	Section 4.2 of the DEIR provides a BACT analysis. The BACT analysis should include VOC and HCl. Additional comments are provided in the letter report under Air Quality.
	The DEIR should include results of air dispersion modeling to determine ambient impacts of pollutants generated by the project and compare modeled pollutant levels to the National Ambient Air Quality Standards (NAAQS) and MassDEP's Allowable	Section 4.1.6 provides the air quality analysis methodology and results. A risk assessment for PFAS and mercury is also provided in

<p>Air Quality (continued)</p> <p>(DEIR Section 4.0)</p>	<p>Ambient Limits (AALs) and Threshold Effects Exposure Limits (TELEs).</p>	<p>Attachment 4-4 of the DEIR. Comments are provided in the letter report under Air Quality.</p>
	<p>In calculating total emissions, the DEIR should distinguish between air emissions associated with the biosolids drying and gasification processes.</p>	<p>Ultimately the dryer emissions and gasifier emissions end up at the thermal oxidizer. The DEIR does not address the distinction between dryer and gasifier emissions on the inlet side of the oxidizer, particularly with respect to PFAS emissions.</p>
	<p>The DEIR should include a No Build analysis that compares impacts, including air emissions, associated with this gasification facility as compared to existing biosolids drying facilities that could process the biosolids in the absence of this project.</p>	<p>Section 4.2.4.6 GHG BACT compares GHG lifecycle emissions for the no build and build alternatives.</p>
	<p>The DEIR should model odors from the facility, determine odor concentrations at receptors and identify mitigation measures.</p>	<p>Odor modeling is provided in Section 4.1.6.2 of the DEIR. The modeling conforms with MassDEP guidelines.</p>
<p>Noise</p> <p>(DEIR Section 5.0)</p>	<p>The DEIR should include a comprehensive noise analysis to determine the increase in noise levels caused by operation of the proposed facility. It should describe existing noise levels, identify all noise-generating activities and components of the project and model noise levels under proposed conditions and evaluate the project's consistency with MassDEP's Noise Policy (DAQC Policy 90-001). The DEIR should include commitments to use sound suppression measures that result in the lowest sound level increase above background and that are technologically and economically feasible. According to MassDEP, a 10 decibel (dBA) increase over background is the maximum that can be approved by MassDEP; however, feasible measures resulting in quieter operations will be required. The DEIR should demonstrate that the project will avoid unnecessary emissions of sound that may cause or contribute to noise.</p>	<p>Section 5.0 of the DEIR presents the results of a comprehensive noise analysis, which has been conducted in conformance with the MEPA Scope. Of note is the noise impact results for the property of the Taunton Rifle & Pistol Club, which is predicted to have significant exceedances of the MassDEP Noise Policy criteria due to its proximity to the Project. Additional comments are provided in the text of the letter report.</p>
<p>Wastewater and Water</p> <p>(DEIR Section 6.0)</p>	<p>According to the ENF, the project may transport and sell dried biosolids when the gasifier is not in operation and/or when the volume of biosolids exceeds the capacity of the gasifier. The DEIR should clarify under what conditions and how frequently this may occur and provide an estimate of the volume of dried biosolids that may be sold.</p>	<p>Section 6.0 of the DEIR addresses this issue but indicates that specific quantities and frequencies cannot be estimated at this time.</p> <p>This is understandable given the status of the project at this time. Additional information should be provided in the FEIR particularly with respect to PFAS thresholds.</p>

<p>Wastewater and Water (continued)</p> <p>(DEIR Section 6.0)</p>	<p>As noted above, the DEIR should review the regulatory and permitting requirements associated with the sale of biosolids for land application, including any requirements for handling, testing, and transporting the material, and potential restrictions on its use. As described above, the DEIR should address the potential for PFAS to be released from dried biosolids to the environment and any testing and regulatory requirements related to PFAS.</p>	<p>Section 6.0 of the DEIR does review the regulatory and permitting requirements associated with the sale of biosolids for land application, as well as Massachusetts PFAS testing requirements for dried biosolids. However, the DEIR does not address in much detail the potential for PFAS to be released from dried biosolids to the environment. A detailed technical review of wastewater and water supply were not conducted as part of this Scope of Work.</p>
	<p>The DEIR should describe the location and condition of the City's sewer and water distribution systems in the vicinity of the project site and the project's proposed connection to the sewer system. It should provide an analysis of the capacity of the system to accept the 100,000 gpd of wastewater generated by the project and describe proposed mitigation measures, including I/I reduction. The DEIR should review the City's recently completed Comprehensive Wastewater Management Plan (CWMP) and identify any changes to the plan that may be necessary due to the added flows from the proposed facility. It should identify the discharge locations for the City's wastewater system and clearly demonstrate that the increased flows from this project will not result in any changes to permitted discharge volumes under the City's discharge permits or otherwise result in degradation of water quality for the receiving waterbodies. This analysis should describe whether the nearby EJ population may be carrying a disproportionate burden of environmental pollution under baseline conditions, including as shown through water quality indicators, and whether the project will contribute to or exacerbate such baseline conditions through wastewater discharges.</p>	<p>Sections 6.0, 6.1, and Attachment 6-1 of the DEIR satisfactorily address all the MEPA DEIR Scope items for wastewater. A comprehensive report prepared by Civil & Environmental Consultants (CEC) Inc. addresses the design of the sewer connector and project wastewater impacts. A detailed technical review of Wastewater was not conducted as part of this Scope of Work.</p>
	<p>The DEIR should describe the City's water distribution system, confirm that there is adequate capacity to serve the project, describe the project's connection to the water main and identify any potential mitigation measures that may be necessary.</p>	<p>Section 6.2 and Attachment 6-1 of the DEIR satisfactorily addresses the MEPA DEIR Scope for water supply. The comprehensive report prepared by Civil & Environmental Consultants (CEC) Inc. also addresses water supply. A detailed technical review of water supply was not conducted as part of this Scope of Work.</p>

<p>Stormwater (DEIR Section 7.0)</p>	<p>The DEIR should describe the stormwater management system and how it will be designed to meet the Stormwater Management Standards (SMS) to improve water quality and maintain pre-development peak discharge rates and volumes. It should include a plan showing the location of Best Management Practices (BMP) and low-impact design (LID) measures. As indicated below, the DEIR should provide analysis of the capacity of the stormwater management system under future climate conditions.</p>	<p>Section 7.0 and Attachment 7-1 of the DEIR satisfactorily addresses the MEPA DEIR Scope for stormwater. A comprehensive report prepared by Civil & Environmental Consultants (CEC) Inc. addresses stormwater management and provides detailed documentation of runoff calculations. A detailed technical review of stormwater was not conducted as part of this Scope of Work.</p>
<p>Traffic and Transportation (DEIR Section 8.0)</p>	<p>The DEIR should include a traffic study prepared consistent with the EEA/MassDOT Transportation Impact Assessment (TIA) Guidelines issued in March 2014, the Site Suitability Criteria at 310 CMR 16.40(4)(b) and this Scope. The Site Suitability Criteria require an evaluation of potential traffic impacts from facility operations that would constitute a danger to public health, safety or the environment based on traffic congestion, pedestrian and vehicular safety, road configurations alternate routes and vehicle emissions. The Proponent should consult with the MEPA Office and MassDEP prior to filing the DEIR to ensure that the study area and scope of the traffic analysis are adequate.</p> <p>For each intersection, the DEIR should provide capacity analyses for the weekday and weekend peak periods for all scenarios and any intersections where mitigation is proposed. For all analysis scenarios, the DEIR should a tabular summary of the results of the intersection operations analysis, including volume-to-capacity ratios (V/C) and average delays. The level-of-service (LOS) for each lane group/turning movement should be clearly indicated for each condition.</p> <p>The DEIR should include a safety analysis for all intersections and roadway segments within the study area. The analysis should calculate crash rates using MassDOT data for the most recent continuous five-year period. The DEIR should determine if any study area intersections are listed in the Highway Safety Improvement Program (HSIP), document crash rates and identify appropriate mitigation for any locations exceeding the State and/or District 5 averages. The DEIR should include a Transportation Demand Management Plan designed to minimize the number of single-occupancy vehicle (SOV) trips to the site by both employees and visitors and evaluate the expected trip reduction of each. It should include a Transportation Monitoring Program that provides data to evaluate the assumptions made in the traffic study and the adequacy of the transportation mitigation measures, including the TDM program, and to track compliance with designated truck routes.</p>	<p>Section 8.0 and Attachment 8-1 of the DEIR addressed the MEPA DEIR Scope items for traffic and transportation. A report was prepared by MDM Transportation Consultants Inc. documenting the traffic impact analyses conducted. Capacity analyses indicate that project will not result in any consequential changes in intersection operations compared to No-Build conditions. A detailed technical review of traffic Impacts was not reviewed as part of this Scope of Work.</p>

	<p>The DEIR should provide a detailed public outreach plan for EJ populations, including any outreach efforts and public meetings conducted after the issuance of this Certificate. Because of the significant level of detail about the project anticipated to be included in the DEIR, the Proponent should conduct at least one well-publicized public meeting during the DEIR comment period at a time convenient for the public, particularly, for low-income or working households with limited availability during business hours. If conditions related to the COVID-19 pandemic permit an in-person meeting, it should be held in the neighborhood where the EJ population resides. I encourage the Proponent to request an extended comment period for the DEIR to provide additional time for public review of the project. The Proponent should utilize collaborative approaches to problem-solving, including public deliberation and consensus building where appropriate, to address public concerns.</p>	<p>The enhanced public outreach plan is documented in the DEIR. An in person public meeting was held at Bristol Community College on March 24, 2022.</p>
<p>Environmental Justice – <i>Enhanced Outreach</i> (DEIR Section 9.0)</p>	<p>The public outreach plan should address the following as appropriate:</p> <ul style="list-style-type: none"> • Notification of public meetings and/or filings of the DEIR and permit applications at non-traditional information repositories, such as houses of worship, community centers, community web sites, environmental and community justice organizations, as well as traditional repositories, including libraries and government offices; • Use of alternative and/or community-specific media outlets to provide public notice, including local public broadcasting stations, social media and community newspapers; • Engaging EJ organizations directly for assistance in outreach efforts; • Public education efforts regarding the technical aspects of the project, such as fact sheets with visuals that include a summary of the Project and associated technologies and industrial processes along with a description of potential impacts of similar facilities, using terms that are easily understood in an effort to ensure the community understands the potential impacts of the Project and can provide meaningful input; • Scheduling public meetings at locations and times convenient for neighborhood stakeholders, and in consideration of public transportation availability; and • Establishing a local information repository that is convenient and accessible for the EJ Population, as well as providing such information on-line. 	<p>Ultimately the dryer emissions and gasifier emissions end up at the thermal oxidizer, but I do think it helpful to understand the distinction between dryer and gasifier emissions on the inlet side of the oxidizer.</p>

<p>Environmental Justice – Enhanced Analysis (continued)</p> <p>(DEIR Section 9.0)</p>	<p>The DEIR should include a comprehensive analysis to demonstrate that the project and its impacts, together with historical or existing sources of environmental pollution, will not have a disproportionate impact on EJ populations. The analysis should include a review of baseline conditions that may reflect the cumulative impact of historical sources of pollution affecting the community and a description of how the project may exacerbate or contribute to such baseline conditions. In particular, the DEIR should provide baseline public health data for the nearby EJ population and surrounding neighborhoods in the vicinity of the project. Public health data for census tracts and schools within surrounding communities are available on the Department of Public Health’s Environmental Public Health Tracking website at https://matracking.ehs.state.ma.us/.</p> <p>The analysis should include a comparison of public health conditions to the statewide average or other factors that may suggest that the EJ population may currently bear a disproportionate burden of environmental pollution. The DEIR should review other available metrics of existing air and water quality affecting surrounding communities, including but not limited to drinking water data, TMDLs, and regional NAAQS, and provide a comparison of these metrics to statewide averages or other factors that may suggest such a disproportionate burden. The DEIR should review climate data applicable to the project, including the best available data on precipitation and heat island effect, to determine whether future climate conditions during the useful life of the project may impact EJ populations in a disproportionate manner.</p>	<p>The EJ analysis evaluated whether the Taunton EJ area within a mile of the site is experiencing unfair or inequitable environmental burdens. The results of this baseline evaluation revealed that one or more of the Taunton EJ blocks evaluated meets the vulnerable health criteria for heart attack and low birth weight, meaning the EJ community is vulnerable and subject to existing environmental burdens. A key aspect of the enhanced EJ analysis is the impact of the Project on the identified EJ population. The overall conclusion is that the Project will not disproportionately the EJ community within one mile of the Project. Detailed technical comments on the facility’s impact on the nearby EJ community is provided in the letter report.</p>
	<p>In the context of baseline conditions, the DEIR should provide an analysis of how the specific impacts of the project could contribute to or further exacerbate baseline conditions, particularly in the areas of air and water quality. It should provide the results of the air dispersion modeling required above and analyze whether the incremental air emissions from the project are likely to make a significant contribution to baseline conditions</p>	

	<p>as surveyed above, and if so, what mitigation measures may be appropriate. It should analyze technological, site planning, and operational alternatives to reduce impacts, and propose on-site and off-site mitigation measures to reduce multiple impacts and increase environmental and energy benefits for the affected EJ population.</p>	
<p>Environmental Justice – <i>Enhanced Analysis</i> (continued) (DEIR Section 9.0)</p>	<p>The DEIR should evaluate the following potential impacts in light of potential disproportionate impacts to the nearby EJ population:</p> <ul style="list-style-type: none"> • Decreased capacity in the sewer system and potential for increased surcharging of the sewer system; • Potential for decreased water quality through increased wastewater discharges attributable to the project; • Nuisance odors; • Increased noise levels; • Increased truck traffic and/or impacted traffic operations, including the potential for the addition of air pollutants; • Effect of climate conditions, including increased precipitation and heat island effect, that may affect the EJ population disproportionately; and • Release of PFAS in air emissions, wastewater and solids produced by the project in a manner that may disproportionately impact the EJ population 	<p>Three items identified in the Certificate warrants additional evaluation under EJ:</p> <ol style="list-style-type: none"> 1. Decreased capacity in the sewer system and potential for increased surcharging of the sewer system; 2. Potential for decreased water quality through increased wastewater discharges attributable to the project; 3. Release of PFAS in air emissions, wastewater and solids produced by the project in a manner that may disproportionately impact the EJ population.
	<p>The DEIR should evaluate the potential need for monitoring of air and water quality parameters considering the above analysis, including the potential for ongoing modeling of the cumulative concentration of contaminants affecting sensitive receptors and the method by which the data will be made available to the public in language that is easily understood by non-experts. It should propose a system for the public to log odor, noise and dust complaints associated with the operation of the facility and describe response measures and mitigation that will be implemented by the Proponent in response to such complaints. I recommend that the Proponent consult with DPH, MassDEP, and the MEPA office prior to preparing the enhanced analysis outlined in the paragraphs above.</p>	<p>The DEIR noted that monitoring will be implemented as required by permits and regulations. Specific monitoring proposals for air quality and water quality were not proposed in the DEIR.</p> <p>The DEIR did provide a form for the public to log odor, noise and dust complaints associated with the operation of the facility.</p>

<p>Climate Change - <i>Adaptation and Resiliency</i></p> <p>(DEIR Section 10.0)</p>	<p>The DEIR should discuss potential effects of climate change to the project site and describe features incorporated into the designs of the projects that will increase the resiliency of the site to likely climate change impacts. I encourage the Proponent to consult the data prepared by the city in connection with its MVP planning grant and the resilientMA.org website to develop climate change scenarios for the site and identify potential adaptation measures. The Massachusetts State Hazard Mitigation & Climate Adaptation Plan (2018) may provide additional resources to assist in this analysis. In particular, the DEIR should provide a narrative identifying the useful life of the project and describing the criticality of project assets relative to the populations affected by loss or inoperability of the project; the length of time the project can be inoperable without consequence; whether the project is located within or serves environmental justice/vulnerable populations; and the nature and severity of impacts if the project becomes inoperable. The DEIR should identify any key risks and vulnerabilities of the project under current and projected climate conditions and identify any project components that are likely impacted by those risks and/or will be designed to adapt to such risks.</p>	<p>Section 10.1 of the DEIR satisfactorily addresses all the MEPA DEIR Scope for climate change adaptation and resiliency. The DEIR addresses useful project life, the criticality of project assets, project operability issues, and the service of environmental justice and vulnerable populations.</p>
	<p>The DEIR should consider site elements that should be designed to minimize impacts associated with more frequent and intense storms and extreme heat waves including, but not limited to: • Ecosystem-based adaptation measures to reduce heat island effect and mitigate stormwater runoff, such as integration of tree canopy cover, rain gardens and LID stormwater management techniques; • Stormwater management system design that will accommodate rainfall under projected climate conditions; • Use of on-site renewable energy systems that may provide added resiliency during periods of power loss during storms; • Protection of emergency generator fuel supplies from effects of extreme weather and flood-proofing; • Elevation of critical infrastructure above projected base flood elevations taking into account the effects of climate change; and, • Expansion of the size of emergency generators to allow for select common areas and other emergency and life safety systems to remain operational for a period of time beyond code requirements, specifically in residential buildings.</p>	<p>Section 10.1 of the DEIR satisfactorily addresses all the MEPA DEIR Scope for climate change adaptation and resiliency. The DEIR addresses project design issues relative to climate change adaptation measures.</p>
	<p>The DEIR should review potential risks and vulnerabilities of the site and identify design measures intended to increase the project's resiliency to these risks and vulnerabilities. I note that increasing landscaped open space may help minimize urban heat island effects and flood damage. In the DEIR, the Proponent should describe any additional design features that</p>	<p>Section 10.1 of the DEIR satisfactorily addresses all the MEPA DEIR Scope for climate change adaptation and resiliency. The DEIR addresses project design issues relative to resiliency and vulnerability to climate change. The DEIR provides the output of the Resilient Massachusetts Action Team (RMAT) tool that supports the conclusions of the DEIR with respect to climate change resiliency.</p>

<p>Climate Change - <i>Adaptation and Resiliency</i> (continued)</p> <p>(DEIR Section 10.0)</p>	<p>may provide resiliency and support adaptation under future climate scenarios. The Proponent should demonstrate use of best available climate projections and data in designing project elements, including stormwater management systems and other applicable features, and, if the project (including supporting infrastructure) will not be designed to meet specifications based on climate projections, provide an explanation of the reasons and a description of whether and how the project will be able to take further steps to adapt to climate conditions at a later stage. At a minimum, rainfall data from NOAA Atlas 14 should be consulted when designing stormwater management and other applicable systems; such data increased by a factor that considers the probability of storm events under high-emissions scenarios during the useful life of the project.</p>	
<p>Climate Change - <i>Greenhouse Gas (GHG) Emissions</i></p> <p>(DEIR Section 10.0)</p>	<p>The DEIR should describe and quantify energy use of all industrial systems and building uses, identify the sources of energy used at the facility and calculate total GHG emissions for these stationary sources. The DEIR should include a detailed explanation of how the project will reduce “overall GHG emissions” as stated in the ENF. It should describe a No Build condition representing biosolids handling, transport and disposal under typical conditions and handling the same volume of biosolids proposed for this project and compare the GHG emissions of the No Build to emissions associated with the project (Build condition).</p>	<p>GHG emissions were calculated for Project sources and quantified GHG emissions for both the build and no build alternatives.</p>
	<p>For any conditioned space at the facility, the DEIR should include an analysis that calculates and compares GHG emissions associated with 1) a Base Case that conforms to the 9th Edition of the Massachusetts Building Code, which references the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 90.1-2013 and the International Energy Conservation Code (IECC) 2015 and 2) a Design Case that achieves greater reductions in GHG emissions. The DEIR should identify the model used to analyze GHG emissions, clearly state modeling assumptions and explicitly note which GHG reduction measures have been modeled. The DEIR should include the modeling printouts for each alternative and emission tables that compare base case emissions in tons per year (tpy) with the Design Case showing the anticipated reduction in tpy and percentage by emissions source.</p>	<p>Sections 10.2.2 and 10.2.3 of the DEIR satisfactorily address the MEPA DEIR Scope items for analysis of conditioned spaces. The DEIR indicates that MEPA has agreed to consider the small amount of conditioned space associated with the project as “de minimis” and that building energy modeling is not needed. The DEIR adequately summarizes all the building related energy conservation measures that will be incorporated and/or considered for the project.</p>
	<p>At a minimum, the DEIR should consider the following GHG mitigation measures: • Above-Code continuous roof and wall insulation and avoiding glass curtain wall assemblies to minimize heat loss and uncontrolled infiltration through the building</p>	

	<p>envelope; • Electric space heating and water heating using air source heat pumps (ASHP), variable refrigerant flow (VRF), ground source heat pumps (GSHP) and/or solar thermal systems; • High-albedo roofing materials, external shading and windows with improved solar heat gain coefficient (SHGC) • Energy recovery ventilation and wastewater systems; • Rooftop solar PV systems and/or solar-ready roofs; and, • LED lighting, both exterior and interior</p>	
<p>Climate Change – <i>Mobile Sources</i> (DEIR Section 10.0)</p>	<p>The GHG analysis should include an evaluation of potential GHG emissions associated with mobile emissions sources. The DEIR should follow the guidance provided in the GHG Policy for Indirect Emissions from Transportation to determine mobile emissions for Existing Conditions, Build Conditions, and Build Conditions with Mitigation. The Proponent should thoroughly explore means to reduce overall single occupancy vehicle trips. The DEIR should also review measures to promote the use of low-emissions vehicles, including installing electric vehicle (EV) charging stations and EV-ready infrastructure at parking spaces. More information on electric vehicle infrastructure can be obtained from the MassEVolves program at www.massevolves.org. The Build with Mitigation model should incorporate TDM measures, and any roadway improvements implemented by the project, and document the reductions in GHG emissions associated with the mitigation. The DEIR should explain how TDM measures will be monitored and adjusted over time, and provide a methodology for quantifying emission reductions impacts rather than an assumed percentage reduction</p>	<p>GHG emissions were calculated for project mobile sources and quantified GHG emissions for both the build and no build alternatives.</p>
<p>Climate Change – <i>Mitigation</i> (DEIR Section 10.0)</p>	<p>The DEIR should include a commitment to provide a self-certification to the MEPA Office upon construction of the project. It should be signed by an appropriate professional (e.g., engineer, architect, transportation planner, general contractor) indicating that all the GHG mitigation measures, or equivalent measures that are designed to collectively achieve identified reductions in stationary source GHG emission and transportation-related measures, have been incorporated into the project. If equivalent measures are adopted, the project should commit to achieving the same level of GHG emissions (i.e., “carbon footprint”) identified in the Mitigation Alternative expressed in volumetric terms (tpy) and should commit to specific energy efficiency measures as described in MEPA filings to the extent feasible.</p>	<p>Section 10.4.2 of the DEIR provides a commitment to providing the specified self-certification of compliance with proposed GHG mitigation measures.</p>

	<p>The DEIR should identify the schedule for construction of various elements and phases. It should identify construction-period impacts and mitigation relative to noise, air quality, water quality, and traffic, including pedestrians, bicyclists, and transit riders. The Proponent should consult the comment letter provided by MassDEP regarding regulatory requirements and potential mitigation measures for the construction period activities. The DEIR should confirm that the project will require its construction contractors to use Ultra Low Sulfur Diesel fuel, and discuss the use of after-engine emissions controls, such as oxidation catalysts or diesel particulate filters. More information regarding construction-period diesel emission mitigation may be found on MassDEP's web site at http://www.mass.gov/dep/air/diesel/conetro.pdf.</p>	<p>Sections 11.1 and 11.2 of the DEIR present the construction schedule and discuss impact mitigation measures to be used for noise, air, and traffic impacts during construction. The DEIR satisfies the MEPA Scope for these items.</p>
<p>Construction Period (DEIR Section 11.0)</p>	<p>The DEIR should provide more information regarding the project's generation, handling, recycling, and disposal of construction and demolition debris (C&D) and identify measures to reduce solid waste generated by the project. I encourage the Proponent to commit to C&D recycling activities as a sustainable measure for the project. Demolition of any structures must comply with the MassDEP Asbestos Regulations (310 CMR 7.15) that require a pre-demolition and post-abatement survey and inspection by a licensed asbestos monitor and identify regulatory requirements and potential mitigation measures for the removal, handling, and disposal of asbestos containing material (ACM) and other demolition debris. The Proponent is reminded that any contaminated material encountered during construction must be managed in accordance with the MCP and with prior notification to MassDEP</p>	<p>Sections 11.3 and 11.4 of the DEIR discuss construction solid waste handling during construction and the handling of contaminated material. The DEIR notes that no significant demolition wastes are expected. The DEIR satisfies the MEPA Scope for these items.</p>
	<p>The project will be required to develop a Stormwater Pollution Prevention Plan (SWPP) in accordance with its NPDES CGP to manage stormwater during the construction period. The DEIR should describe stormwater management measures that will be implemented during construction.</p>	<p>Section 11.5 of the DEIR discusses mitigation measures for stormwater during construction and commits to compliance with the EPA's Construction General Permit and the preparation of a SWPPP. The DEIR satisfies the MEPA Scope for these items.</p>

<p>Mitigation and Draft Section 61 Findings</p> <p>(DEIR Section 12.0)</p>	<p>The DEIR should include a separate chapter summarizing all proposed mitigation measures, including construction-period measures. This chapter should also include draft Section 61 Findings for each permit to be issued by State Agencies. The DEIR should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and a schedule for implementation. The DEIR should clearly indicate which mitigation measures will be constructed or implemented based upon project phasing, either tying mitigation commitments to overall project square footage/phase or environmental impact thresholds, to ensure that adequate measures are in place to mitigate impacts associated with each development phase</p>	<p>Section 12.0 of the DEIR provides Draft Section 61 Findings for each agency and a full listing of proposed mitigation measures in tabular form. The general time frame for each mitigation measure is indicated (typically during construction or operation). The cost is generally indicated as “included in overall project costs,” which is not uncommon for MEPA DEIR mitigation summaries.</p> <p>The DEIR indicates that monitoring, recordkeeping, and reporting will be required as part of the MassDEP and City of Taunton approvals.</p>
<p>Responses to Comments</p> <p>(DEIR Section 13.0)</p>	<p>The DEIR should contain a copy of this Certificate and a copy of each comment letter received. It should include a comprehensive response to comments on the ENF that specifically address each issue raised in the comment letter; references to a chapter or sections of the DEIR alone are not adequate and should only be used, with reference to specific page numbers, to support a direct response. This directive is not intended to, and shall not be construed to, enlarge the Scope of the DEIR beyond what has been expressly identified in this certificate.</p>	<p>Section 13.0 of the DEIR provides a copy of the MEPA Certificate on the ENF and a copy of each ENF comment letter or email. Comments are numbered, and a response is provided for each comment.</p>
<p>Circulation</p>	<p>The Proponent should circulate the DEIR to those parties who commented on the ENF, to any State Agencies from which the Proponent will seek permits or approvals, and to any parties specified in section 11.16 of the MEPA regulations. The Proponent should consult with the MEPA Office prior to filing the DEIR to determine whether additional distributions or outreach may be warranted to the surrounding community. Per 301 CMR 11.16(5), the Proponent may circulate copies of the EIR to commenters in CD-ROM format or by directing commenters to a project website address. However, the Proponent must make a reasonable number of hard copies available to accommodate those without convenient access to a computer and distribute these upon request on a first-come, first-served basis. The Proponent should send correspondence accompanying the CD-ROM or website address indicating that hard copies are available upon request, noting relevant comment deadlines, and appropriate addresses for submission of comments. The DEIR submitted to the MEPA office should include a digital copy of the complete document. A copy of the DEIR should be made available for review at the Taunton Public Library.</p>	<p>Section 14.0 of the DEIR provides a circulation list in conformance with the MEPA Scope.</p>