

FINDINGS AND STATEMENT OF OVERRIDING CONSIDERATIONS

FOR

Hyperion Treatment Plant (HTP) Digester Gas Utilization Project (DGUP)

Power and Steam Generation

Final Environmental Impact Report
State Clearinghouse Number 2011041032

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1 INTRODUCTION

Section 21081 of the California Public Resources Code (PRC) and Section 15091 of the California Environmental Quality Act (CEQA) Guidelines require a public agency, prior to approving a project, to identify significant impacts of the project and make one or more written findings for each such impact. The findings reported in the following pages summarize the discussions and conclusions regarding the significant or potentially significant environmental impacts of the Hyperion Treatment Plant (HTP) Digester Gas Utilization Project (DGUP), as presented in the Environmental Impact Report (EIR) for the project.

This Findings and Statement of Overriding Considerations document is divided into five major sections. The Introduction provides background information regarding the purpose of the document. The Project Description describes the City's objectives and the proposed project. The Findings Regarding Environmental Effects section presents the effects associated with the proposed project. The Alternatives Considered section describes alternatives developed and considered for the DGUP, the reasons for selection of the preferred alternative, and the reasons for rejection of the remaining alternatives. Finally, the Statement of Overriding Considerations section is provided for those adverse effects that cannot be avoided, even with proposed mitigation measures.

Specifically, the Findings Regarding Environmental Effects section discusses the following for each significant or potentially significant impact associated with the project:

- 1) Descriptions of the Significant or Potentially Significant Effects – Specific descriptions of the environmental effects (Significant, Potentially Significant, and Not Significant) are identified in the EIR.
- 2) Mitigation Measures – Potential mitigation measures for the identified significant or potentially significant impacts.
- 3) Findings – The findings made are those allowed by Section 21081 of the PRC. One of three findings is made for each significant or potentially significant impact, following Section 15091 of the CEQA Guidelines:
 - i. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.
 - ii. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been

adopted by such other agency or can and should be adopted by such other agency.

- iii. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.

A judgment is then provided regarding the significance of the environmental impacts after mitigation.

- 4) References – A notation on the specific section in the EIR which supports the findings.

This Findings and Statement of Overriding Considerations document describes only those impacts anticipated to be significant or potentially significant. For information regarding the impacts that were determined not to be significant, please see the Final EIR for the DGUP.

The mitigation measures identified in the Mitigation Monitoring and Reporting Plan for the DGUP, which is provided under separate cover, are those identified within this Findings and Statement of Overriding Considerations document.

The documents and other materials that constitute the record of proceedings upon which the decision of the Los Angeles City Council is based are located in the Office of the City Clerk, and in the Department of Public Works in the custody of the Regulatory Affairs Division, Bureau of Sanitation, at 1149 S. Broadway, 10th Floor, Los Angeles, California.

The Final EIR and related documents for the proposed project are available at:
City of Los Angeles, Department of Public Works
Regulatory Affairs Division
Bureau of Sanitation
1149 S. Broadway Street, 10th Floor
Los Angeles, CA 90015

These documents can also be obtained by accessing the City's CEQA webpage at http://eng.lacity.org/techdocs/emg/hyperion_plant.htm.

2 PROJECT DESCRIPTION

2.1 Objectives, Purposes and Needs

Under a current agreement between the City of Los Angeles (City) Bureau of Sanitation (BOS) and Los Angeles Department of Water and Power (DWP), the HTP currently pipes its digester gas (digas) to Scattergood Generating Station (Scattergood or SGS). Scattergood utilizes the digester gas in combination with

natural gas to generate electricity for the DWP grid, and provides HTP with steam for plant use. HTP currently requires up to 22 megawatts (MW) of imported electricity to operate. Due to regulatory requirements, Scattergood must shut down and re-power Units #1 and 2, which currently utilize the digester gas. The City BOS understands that, under a biogas power exchange agreement between Scattergood and HTP, digester gas from HTP will continue to be used at Scattergood through December 31, 2016.

The intent of the BOS is to construct and place in operation a project that beneficially utilizes HTP's renewable digas that would otherwise be flared on-site. The purpose and need for the proposed project were described in the Initial Study/Notice of Preparation (IS/NOP):

1. Prevent flares from operating continuously to dispose of digas when it can no longer be sent to Scattergood (i.e., after the term of the biogas power exchange agreement ends);
2. Produce renewable energy from HTP's digas;
3. Provide all of HTP's electricity and process steam needs;
4. Allow HTP to operate without using external electrical power and to provide for two independent sources of power as required by HTP's National Pollutant Discharge Elimination System NPDES permit¹;
5. Allow the HTP to operate "off the grid," so in the case of an emergency (e.g., earthquake, blackouts), the facility can continue operating and flaring can be avoided;
6. Maintain the final output of Class A biosolids, even in the event of external power interruption.

2.2 The Proposed Project

The proposed project will consist of installing and operating a digester gas/natural gas-fueled combined cycle cogeneration system at HTP. The cogeneration system will include the combustion of digas (or digas/natural gas mixture) in three combustion turbine generators (combustion turbines or CTGs) to generate electricity, the recovery of heat to generate steam in three heat recovery steam generators (HRSGs), the generation of power from a steam turbine generator train (two steam generators or STGs), and the extraction of a portion of the steam to meet the steam demand of the digesters.

The proposed project will offer efficient utilization of the digester gas and improve operations for BOS. DGUP will consume all digester gas produced at HTP, address energy needs by providing up to 34 MW electrical generation, and provide up to 70,000 pounds per hour (lb/hr) steam.

¹ USEPA. Technical Bulletin. Design Criteria for Mechanical, Electric, and Fluid System and Component Reliability. Supplement to Federal Guidelines for Design, Operation, and Maintenance of Waste Water Treatment Facilities.

3 FINDINGS REGARDING ENVIRONMENTAL EFFECTS

This section discusses impacts and mitigation measures identified for the preferred alternative and makes findings for all impact areas. Significant or potentially significant impacts prior to the application of mitigation measures have been identified for the proposed project in the following areas: air quality and greenhouse gases.

3.1 Air Quality

This section discusses the significant or potentially significant air quality impacts related to the construction and operation of the preferred alternative.

3.1.1 Description of Potential Effects

Construction-related emissions of criteria pollutants do not exceed the AQMD applicable significance thresholds.

Operation-related cancer and non-cancer health risks do not exceed the AQMD applicable significance thresholds.

Operation-related emissions of nitrogen oxides (NO_x), volatile organic compounds (VOC), and particulate matter (PM₁₀ and PM_{2.5}) exceed the applicable mass daily significance thresholds. Incremental operation ambient air quality impacts are greater than the concentration thresholds for 24-hour average PM₁₀ and PM_{2.5}. The proposed project has the potential to generate significant adverse air quality impacts.

3.1.2 Mitigation Measures

The project operations are permissible under AQMD and federal requirements, which means that Best Available Control Technology (BACT) requirements have been met where required. The City reviewed similar projects and available guidelines to assess potential mitigation measures² that could be incorporated into this proposed project. Additional mitigation measures were suggested in the AQMD comment letter.

Several mitigation measures identified, including the minimization of flare days, are intrinsically included in the project objectives or are an existing practice at the facility, such as ridesharing and the use of electric vehicles and low VOC paint.

All mitigation measures identified were evaluated. Many of the mitigation measures reviewed were found by the City not to be applicable and/or feasible to the operations as indicated below:

² This AQMD guidance document identifies mitigation measures. SCAQMD. 2010. Mitigation Measures and Control Efficiencies. Available at: http://www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html. Accessed July 2013.

- a) Additional controls on the main stack to reduce normal operational emissions.
- The currently proposed controls are Best Available Control Technology/Lowest Achievable Emissions Rate (BACT/LAER), as will be required by the AQMD. No other potential controls were found.
- b) Measures to minimize the possibility of large flaring events that yield significant short term impacts.
- The Project is designed to meet this purpose: to minimize the use of flares and use the renewable fuel biogas to create electricity replacing the demand for up to 34 MW of fossil fuel generated electricity (DEIR Section 2.4). Note that the No Project Alternative would result in a large number of flaring events.
- c) Tier 4 on-site emergency black start diesel generators.
- The emergency diesel generators will be required to meet BACT/LAER under the New Source Review regulations. The permit application proposed BACT/LAER for this size engine as Tier 2. The PM₁₀ limit, as listed in examples from the USEPA BACT/LAER Clearinghouse, is 0.2 g/kW-hr (0.15 g/bhp-hr), which is consistent with a Tier 2 engine. The City reviewed the current USEPA engine certification website and note that this engine may not be available as certified to Interim Tier 4 standards. The City will discuss and clarify the BACT/LAER requirements and the applicability of an Interim Tier 4 engine and/or diesel particulate filters with the AQMD during the permitting process.
- d) Electric or alternative fueled vehicles for maintenance activities including field vehicles, and forklifts.
- The HTP uses electric and alternative fuel vehicles and equipment for these purposes on-site.
- e) Electric vehicle (EV) Charging Stations to offset emissions generated by new employee trips.
- There are only 10 new worker trips per day. On-road emissions from these trips are de minimus (<0.15 lbs NO_x/day) and an EV charging station is not cost effective for such small impacts.
- f) Rideshare program for employees.
- The City has a ride share program for employees.
- g) Use of 2010 or newer diesel haul trucks (e.g., goods/materials delivery trucks), or if not available, use trucks that meet USEPA 2007 model year NO_x emissions requirements.

- There are only 40 vendor truck trips per year; the emissions from these trucks are negligible (< 9 lbs NO_x/year or < 0.03 lbs NO_x/day on average). This measure would not be cost-effective or result in measureable emission reductions.
- h) Use of solar energy including solar panels; installing the maximum possible number of solar energy arrays on the building roofs and/or on the project site to generate solar energy for the facility.
- No new buildings are added to the project. In addition, the project is a renewable energy project that meets the facility's energy needs; thus there is no need to add any additional solar power components.
- i) Energy efficient lighting fixtures, including signage. Where feasible use solar powered lighting.
- More efficient lighting (e.g., LED) will be incorporated in the project.
- j) Use light colored paving and roofing materials.
- No new buildings or paving will be done for the project.
- k) Use of water-based or low VOC cleaning products at the project site.
- The City already uses these products as required under AQMD Regulation XI rules. Therefore, this practice is already followed and is not considered as an additional mitigation measure.

3.1.3 Findings

The City finds that the proposed project has specific economic, legal, social, technological, or other benefits that outweigh the proposed project's unavoidable adverse air quality effects. Those benefits are identified in Section 5 of this document.

3.1.4 References

The proposed project's air quality impacts and mitigation measures are discussed in Section 3.1 of the Draft EIR and the Final EIR.

3.2 Greenhouse Gases

This section discusses the significant or potentially cumulatively significant greenhouse gas impacts related to the construction and operation of the preferred alternative.

3.2.1 Description of Potential Effects

The analysis conservatively assumed that all construction-related emissions are from fossil-fuel combustion and thus represent an increase from the baseline non-biogenic greenhouse gas emissions.

Operations-related emissions result from direct combustion in the equipment and commuter trip emissions, and from indirect emissions associated with the water needs for the proposed project. The greatest source of greenhouse gas emissions from the proposed project is biogas-based emissions, which are considered to be biogenic and not a contributor to a net increase in atmospheric carbon dioxide (CO₂).^{3,4,5}

The City does not have a significance threshold for greenhouse gases; current guidance by AQMD and others is not definitive on whether biogenic greenhouse gases should be assessed in relation to significance thresholds. The non-biogenic emissions are less than the AQMD's cumulative significance threshold. If total greenhouse gas emissions are considered, the greenhouse gas impacts of the proposed project would likely be cumulatively considerable. For the purposes of this project, GHG impacts are considered potentially significant, and, per CEQA Guidelines, an EIR was prepared, and mitigation measures were assessed.

3.2.2 Mitigation Measures

The City reviewed the California Air Pollution Control Officer's Association (CAPCOA) document⁶ that the AQMD references for greenhouse gas mitigation measures to determine if any of the measures could be applied to the proposed project. The majority of the mitigation measures listed are not applicable to an industrial project; however, the proposed project inherently incorporates several of the mitigation measures as the objective is to produce renewable energy:

- AE-1: Establish onsite renewable or carbon-neutral energy systems
- AE-4: Utilize a combined heat and power system
- AE-6: Establish methane recovery in wastewater treatment plants

In addition, the Draft EIR identified a proposed greenhouse gas mitigation measure that specified that the natural gas supplement will be up to 10% of the total fuel combusted in the combustion turbines when possible. Actual digester gas flow levels depend on several operational factors (e.g., incoming untreated water flow levels) and the project must meet all of HTP's power and steam needs, which will vary over time. Thus, the actual fuel blend used at any given time is contingent upon HTP's operational needs but not over a 40/60 natural gas/digester gas blend (by volume). The greenhouse gas mitigation measure, MMGHG-1, is fully described in the Mitigation Monitoring and Reporting Plan (MMRP).

³ See http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf

⁴ See <http://www.epa.gov/climateleaders/documents/resources/stationarycombustionguidance.pdf>

⁵ See http://www.theclimateregistry.org/downloads/2013/03/TCR_GRP_Version_2.0.pdf

⁶ California Air Pollution Control Officer's Association (CAPCOA). 2010. Quantifying Greenhouse Gas Mitigation Measures. Available at: http://www.aqmd.gov/ceqa/handbook/mitigation/greenhouse_gases/CAPCOA-Quantification-Report-Final1.pdf. Accessed July 2013.

3.2.3 Findings

The City finds that mitigation measures have been incorporated into the proposed project, such as CAPCOA's AE-1, AE-4, and AE-6 discussed above, that will lessen the cumulative environmental impacts from greenhouse gases as identified in the EIR. These mitigation measures are within the responsibility of the City.

The total incremental change⁷ in non-biogenic (fossil fuel) greenhouse gas emissions is a net decrease of 50,872 MT CO₂e/yr.

When digas greenhouse gas emissions are considered, the incremental change (assuming a maximum fuel throughput of 9.6 MMscfd digas in the proposed project) is an increase of biogenic GHG emissions⁸ of 110,834 MT CO₂e/yr.

The maximum greenhouse gas incremental change would thus be 60,052 MT CO₂e/yr; Considered in the EIR as a new source the increase is solely due to biogenic GHG emissions, which do not contribute to a net increase in atmospheric CO₂.

3.2.4 References

Sections 3.4 and 3.5 of the Draft EIR and the Responses to Comments in the Final EIR discuss the proposed project's greenhouse gas impacts and mitigation measures.

3.3 Cumulative Impacts

This section discusses the significant or potentially significant cumulative impacts due to the construction or operation of the proposed project.

3.3.1 Description of Potential Effects

3.3.1.1 Less Than Significant Or No Impacts

As described in the Draft EIR, construction and operation of the proposed project will not result in cumulatively considerable impacts on the following areas:

- Aesthetics
- Agriculture and Forestry
- Biological Resources
- Cultural Resources
- Geology/Soils
- Hazards
- Hydrology/Water Quality

⁷ As shown in Table 3-19 of the Draft EIR using the baseline assumption that the electricity needs at HTP are met by off-site power generation.

⁸ Biogenic GHG are Carbon neutral which do not contribute to a net increase in atmospheric CO₂

- Land Use/Planning
- Mineral Resources
- Population/Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities/Service Systems

3.3.1.2 Potentially Significant Impacts

The City finds that the construction and/or operation of the proposed project and other development projects in the vicinity of the HTP could result in potentially significant cumulative impacts as summarized below.

Air Quality

Construction of the proposed project would result in less than significant impacts. Air quality impacts for the construction of the Scattergood re-powering project (less than one mile from HTP) were found to be significant (even after mitigation) and cumulatively significant. It is uncertain if actual construction of the Scattergood re-powering project would occur concurrently with the construction phases of the proposed project. Therefore, the proposed project could potentially result in cumulatively considerable impacts with respect to air quality during construction. No additional mitigation measures could reduce this potentially significant cumulative impact conclusively to less than significant.

As summarized in Sections 3.1 and 5.1.3 of the Draft EIR and Section 3.1.1 above, the operation of the proposed project would result in potentially significant impacts related to air quality and thus contribute to potential cumulatively considerable impacts.

Greenhouse Gas Emissions (cumulative impacts only)

As summarized in Sections 3.4 and 5.1.7 of the Draft EIR and Section 3.2.1 above, construction and operation of the proposed project could result in cumulatively considerable greenhouse gas emissions; therefore, the proposed project could contribute to cumulatively considerable impacts.

Noise (cumulative impacts only)

As summarized in Sections 3.3 and 5.1.12 of the Draft EIR, construction of the proposed project would result in less than significant impacts related to noise. Noise impacts of the construction of the Scattergood re-powering project (less than one mile from HTP) were found to be less than significant (after mitigation). It is uncertain if actual construction of the Scattergood re-powering project would

occur concurrently with the construction phases of the proposed project. Therefore, the proposed project could potentially result in cumulatively considerable impacts with respect to noise during construction. No additional mitigation measures could reduce this potentially significant cumulative impact conclusively to less than significant.

3.3.2 Mitigation Measures

There are no additional feasible and available mitigation measures that the City BOS could implement that would reduce the proposed project's potentially significant cumulative impacts on air quality and noise. Greenhouse gas emissions will be mitigated to the extent possible based on the mitigation measure listed in Section 3.2.2 above.

3.3.3 Findings

The City finds that the proposed project has specific economic, legal, social, technological, or other benefits that outweigh the proposed project's unavoidable cumulative adverse environmental effects. Those benefits are identified in Section 5 of this document.

3.3.4 References

The cumulative impacts due to the construction and operation of the proposed project are discussed in Section 5.1 of the Draft EIR.

4 ALTERNATIVES CONSIDERED

The City evaluated four alternatives for the proposed project. Detailed descriptions of the alternatives are contained in the Draft EIR and a comparison of their impacts is summarized in Table 4-13 of the Draft EIR. The City's reasons for not selecting the alternatives to the Preferred Alternative are described below. Note that based on the analyses detailed in the Draft EIR, none of the alternatives avoids the exceedance of all of the significance criteria identified for the proposed project and thus, none are clearly the "Environmentally Superior Alternative" per CEQA Guidelines §15126.6(e)(2).

4.1 Alternative 1 – No Project

This alternative considers the scenario in which neither the proposed project nor any alternative takes place. There would be no construction or demolition activities. The No Project alternative has the same equipment as the baseline scenario. All digester gas would be combusted on-site, because the digester gas would no longer be sent to Scattergood after December 31, 2016. Digester gas will be either combusted in the existing boilers and the remainder flared. There will be no electricity produced from the No Project alternative. Unlike the proposed project, there would be significant aesthetic impacts due to increased flaring compared to the 2011 baseline levels. Alternative 1 also does not meet the majority of the project objectives as it produces no power and does not minimize flaring of the digester gas.

4.2 Alternative 2 – Two Combustion Turbines

This alternative is very similar to the proposed project, except that there would only be two instead of three CTG/HSRG trains. This decrease in the number of process trains would result in a maximum possible 28MW of electricity produced instead of 34 MW without appreciably changing the impacts or reducing potentially significant impacts to less than significant.

4.3 Alternative 3 – Gas Sales

The Gas Sales alternative consists of building and operating a new boiler to provide steam to the HTP, and building and operating a digester gas cleaning system that will produce methane for shipment off-site by natural gas pipeline or potentially for on-site fueling of compressed natural gas (CNG) vehicles. This alternative only meets two of the six project objectives (to produce renewable energy and to minimize the amount of time that the flares operated continuously, flares would be utilized to dispose of reject gas). Thus, this alternative is eliminated from consideration due to CEQA Guidelines §15126.6(c): failure to meet most of the basic project objectives. See Section 4.2 of the Draft EIR for details.

4.4 Alternative 4 – Alternate Power Equipment

This alternative consists of installing and operating a system that uses alternate power equipment to generate electricity for the HTP (i.e., not turbine systems as the proposed project's CTG system). The equipment could consist of engines, fuel cells, or other similar power generating equipment, and the amount of digester gas to be handled would be the same as the proposed project. The amount of electricity produced under this alternative would be variable and dependent upon the specific type of equipment chosen. This alternative would not fully satisfy the project objective to provide all of HTP's electricity and steam needs. Also, this alternative does not meet the definition of feasible per CEQA Guidelines §15364 and is thus eliminated from consideration. See Section 4.2 of the Draft EIR for details.

5 STATEMENT OF OVERRIDING CONSIDERATIONS

The proposed DGUP project (three CTG/HSRG trains) would result in the following unavoidable significant adverse impacts after mitigation:

1. All air quality and health risk impacts to workers and residents are well below all significance thresholds
2. Air quality impacts are noted below;
 - a. Operation-related emissions of NO_x, VOC, and PM₁₀ and PM_{2.5} exceed the applicable mass daily significance thresholds.
 - b. The incremental operational ambient air quality impacts are greater than the AQMD's concentration thresholds for 24-hour average PM₁₀ and 24-hour average PM_{2.5}.

3. The CEQA analysis identifies the project emissions as a new source. The maximum total (biogenic and non-biogenic) greenhouse gas incremental change would be approximately 60,000 MT CO₂e/yr. The increase over current operations is solely due to an increase in biogenic greenhouse gas emissions, which are not a contributor to a net increase in atmospheric CO₂. Non-biogenic (fossil-fuel) greenhouse gas emissions would decrease by over 50,000 MT CO₂e/yr for those emissions associated with the import of 22MW of power. The AQMD has set a 10,000 MT CO₂e/yr cumulative significance threshold⁹ for industrial projects.
4. The proposed project could potentially result in cumulatively considerable impacts with respect to noise and air quality during construction if the Scattergood re-powering project or the other development projects in the vicinity of the HTP have construction phases concurrent with the proposed project.

The City finds that the proposed project has specific economic, legal, social, technological, or other benefits that outweigh the proposed project's unavoidable adverse environmental effects. The project's benefits include the following:

1. The proposed project will utilize all of the renewable energy from HTP's digester gas. The HTP will produce digester gas with or without the proposed project, but without the proposed project the digester gas will be flared, resulting in air quality and greenhouse gas contributions without the benefits of producing renewable energy and steam that can be used by HTP.
2. The proposed project minimizes flaring.
3. The proposed project will maintain the HTP's compliance with its NPDES permit, which requires that the facility have two independent sources of power. Without the proposed project, the City may be in violation of its NPDES requirements.
4. The proposed project will allow the HTP to operate "off the grid," so in the case of an emergency (e.g., earthquake, blackouts), the facility can continue operating and flaring can be avoided. Without the proposed project, in the event of an emergency, essential public service to the public could be disrupted.
5. Maintain the final output of Class A biosolids, even in the event of external power interruption, as opposed to the Class B biosolids that would likely result if not enough electricity and/or steam was available.

⁹ Regulatory agencies have not set a definitive policy concerning the exclusion of biogenic emissions that do not contribute to a net increase in atmospheric CO₂. In light of regulatory uncertainty, greenhouse gas cumulative impacts are considered as if they are significant for the proposed project;