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**THE PORT
OF LOS ANGELES**

Executive Director's
Report to the
Board of Harbor Commissioners

DATE: JUNE 29, 2011

FROM: PLANNING & ECONOMIC DEVELOPMENT DIVISION

SUBJECT: RESOLUTION NO. _____ - ISSUANCE OF A LEVEL II COASTAL DEVELOPMENT PERMIT (NO. 11-05) TO THE CITY OF LOS ANGELES, BUREAU OF SANITATION FOR THE TERMINAL ISLAND RENEWABLE ENERGY DEMONSTRATION PROJECT

SUMMARY:

The City of Los Angeles, Bureau of Sanitation (BOS) is seeking to extend their previously approved coastal development permit for the Terminal Island Renewable Energy (TIRE) Demonstration Project at the Terminal Island Wastewater Treatment Plant (TIWTP). The TIRE Project injects bio-solids underground with the goal of producing methane gas, a renewable energy source. Staff is recommending the Board of Harbor Commissioners (Board) approve Coastal Development Permit (CDP) No. 11-05, a Level II, appealable permit for the proposed project for a period of one year.

RECOMMENDATION:

It is recommended that the Board of Harbor Commissioners:

1. Hold a public hearing for the proposed Level II Coastal Development Permit;
2. Find that the proposed project is consistent with the Port Master Plan and the California Coastal Act of 1976, as amended, and find that this project will have no significant adverse environmental impacts as provided in the California Environmental Quality Act;
3. Authorize the Executive Director to approve the issuance of Coastal Development Permit No. 11-05 with a Special Condition that the permit is for a one-year extension of the TIRE Project; and
4. Adopt Resolution No. _____.

DATE: JUNE 29, 2011

PAGE 2 OF 5

SUBJECT: LEVEL II CDP NO. 11-05 TO L.A. CITY, BOS FOR THE TIRE PROJECT

DISCUSSION:

Background – The BOS is applying for a coastal development permit to extend the demonstration for the TIRE Project at the Terminal Island Wastewater Treatment Plant. After a public hearing where no public comments were received, Coastal Development Permit No. 06-02 for the TIRE Demonstration Project was approved by the Board on March 1, 2007. Special Condition No.1 of CDP No. 06-02 limited the term of the coastal development permit to three years from the beginning of operations for the demonstration project. The current coastal development permit will expire in August 2011. In April 2011, the BOS submitted a request to receive a subsequent coastal development permit for the continued operation of the TIRE Demonstration Project.

The purpose of the TIRE Project is to convert subsurface thermal biodegradation of bio-solids into the creation of renewable energy. Bio-solids, the treated organic material left after wastewater treatment, are injected into one of three interchangeable injection/monitoring wells to a depth of approximately 6,000 feet. This injection creates a plume in which the high temperature and pressure at this depth biodegrades the organic compounds and generates methane gas and carbon dioxide. The expectation is for the methane gas to be recovered and used as a fuel. The carbon dioxide is sequestered in a solution and permanently remains underground.

The TIRE Project currently processes 150 tons of bio-solids per day. Before the TIRE Project was implemented, the BOS trucked bio-solids from its Hyperion Treatment Plant and TIWTP to a facility in Kern County. The implementation of the TIRE Project has eliminated the two daily 270-mile truck round trips from TIWTP to the Kern County facility, and enabled the Hyperion Treatment Plant to greatly reduce truck miles traveled by replacing six daily 240-mile truck round trips to the Kern County facility with six daily 40-mile truck round trips to TIWTP. The BOS estimates that the reduction in truck miles traveled has reduced emissions by 84 tons of NOx and 13 tons of carbon monoxide annually, with fuel cost reductions that save the City of Los Angeles \$1.58 million per year.

When the TIRE Project was approved in 2006, the purpose of the project was to demonstrate the feasibility of subsurface bio-solid injection and generation of renewable energy. The BOS estimated that up to 504,000 standard cubic feet/day of methane gas would be generated from the project, providing approximately 3.5 megawatts of electricity. As of March 2011, the TIRE Project has injected over 100 million gallons of bio-slurry material, but no measurable results have been generated with regards to the capture of methane gas.

The TIRE project is currently injecting 200 tons of bio-solids per day into one well, while using two wells as monitoring instruments. When the project was first introduced, the

DATE: JUNE 29, 2011

PAGE 3 OF 5

SUBJECT: LEVEL II CDP NO. 11-05 TO L.A. CITY, BOS FOR THE TIRE PROJECT

BOS anticipated injecting 400 tons of bio-solids per day in order to achieve the proposed methane results, but has been unable to attain the maximum daily load because of infrastructure limitations. Because the maximum daily load of per-day bio-solid injection has not been achieved, the bio-solid plume has not spread far enough to be detected by the monitoring devices. The BOS is confident, due to the scientific studies that have been performed, that as the maximum load of 400 tons of bio-solids per day is reached, and the bio-solid plume increases, the TIRE Project will produce measureable results of methane.

To address the infrastructure limitations, the BOS is currently engaged in creating an Addendum to the Mitigated Negative Declaration (Addendum), which was certified in October 2006, in order to introduce a second injection well; four wells in total. This second injection well will enable the TIRE Project to achieve the 400 tons of bio-solids per day injected into the ground that was originally proposed. The Addendum will be available for public response in August 2011 and is scheduled to be certified by November 2011. Once the Addendum has been certified, the United States Environmental Protection Agency (EPA) will issue a permit for the construction and operation of the second injection well.

Staff is recommending a one-year extension for the TIRE Project until the EPA permit has been approved. Upon completion of the one-year extension, the BOS will submit a subsequent application to the Harbor Department in which staff will review the EPA permit and submit a recommendation to the Board to extend the length of the TIRE Project matching the timeline approved by the EPA permit.

In the past month, The BOS has engaged five local neighborhood councils throughout the San Pedro and Wilmington areas to educate the community on the benefits of the TIRE Project. This includes the Northwest West, Coastal, Central San Pedro, Wilmington and Harbor Gateway South Neighborhood Councils. To date, there has been no opposition raised regarding this project.

Coastal Permit Requirements – The proposed project, located in Master Planning Area 7, is a Level II, appealable project in accordance with the definitions set forth in the Guidelines for Implementation of the Port of Los Angeles Certified Port Master Plan. A Level II CDP is required for developments that pose potential minor changes in the density and/or intensity of land and/or water use, or developments that may have minor environmental impacts which can be mitigated.

The proposed project has been found to be consistent with the Port Master Plan as the proposed development is an institutional use, which is an allowable use in Master Planning Area 7. The proposed project has been found to be consistent with Chapter 8 policies of the California Coastal Act of 1976, as amended. Specifically, the

DATE: JUNE 29, 2011

PAGE 4 OF 5

SUBJECT: LEVEL II CDP NO. 11-05 TO L.A. CITY, BOS FOR THE TIRE PROJECT

improvements are consistent with Section 30708 that provides beneficial uses consistent with the public trust.

Under Section 30715 of the Coastal Act, coastal development permits issued by the Board of Harbor Commissioners are appealable if they involve a wastewater treatment facility. An appeal to the California Coastal Commission may be filed within ten working days of the closure of the Proposition 5 City Council review period. Should an appeal be filed, the Coastal Commission shall hear the appeal and approve, modify or deny the proposed project unless the Commission determines that no substantial issue exists as to conformity with the port master plan.

ENVIRONMENTAL ASSESSMENT:

The Board of Public Works adopted a Negative Declaration for the proposed project on November 27, 2006 and it was approved by the Los Angeles City Council on January 24, 2007. As such, the Director of Environmental Management has determined that the proposed activities are exempt from the requirements of CEQA in accordance with Article II, Section 2(i) of the Los Angeles City CEQA guidelines.

ECONOMIC BENEFITS:

This Board action will have no additional employment effect.

FINANCIAL IMPACT:

The proposed CDP seeks approval for extending the TIRE demonstration project for an additional one year period and is not expected to have a financial impact upon the Harbor Department. Construction for the TIRE Demonstration Project was borne by BOS in 2008 and no additional construction costs are expected. Ongoing operating and maintenance costs will continue to be borne by BOS.

CITY ATTORNEY:

The City Attorney's office has reviewed the Board Report and Coastal Development Permit and finds that they present no legal issues at this time.



DATE: JUNE 29, 2011

PAGE 5 OF 5

SUBJECT: LEVEL II CDP NO. 11-05 TO L.A. CITY, BOS FOR THE TIRE PROJECT

TRANSMITTALS:

1. Site Location Map
2. CDP No. 11-05
3. TIRE Project Diagram
4. Bio-solids Placement Safeguards
5. Public Notice

FIS: 
CA: 



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Director of Planning & Economic Development



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APPROVED:



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