CALIFORNIA ENERGY COMMISSION

REPORT OF CONVERSATION *Page 1 of 2*

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DATE June 30 2011
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Siting, Transmission and Environmental Protection Division

FILE: 09-AFC-1

PROJECT TITLE: Watson Cogeneration Steam and Electric Reliability Project

☒ **Telephone**		☐ **Meeting Location:**			
NAME:	Mark Lindley (PWA)	**DATE:**	6/30/11	**TIME:**	11:00 AM
WITH:	Joe Walters – West Basin Municipal Water District				
SUBJECT:	Recycled Water for BP Watson				

Mark Lindley contacted Joe Walters of the West Basin Municipal Water District (WBMWD) regarding the use of additional recycled water to replace freshwater use for the Watson Cogeneration Steam and Electric Reliability Project (BP Watson).

Mr. Walters indicated that the WBMWD receives secondary treated wastewater water from the Hyperion WWTP owned by the City of Los Angeles. The WBMWD further treats the wastewater to meet customers needs. The secondary treated wastewater is treated to tertiary standards in El Segundo at the Edward C. Little Water Recycling Facility. The WBMWD maintains 100s of miles of pipelines to deliver various levels of treated wastewater to its customers. For BP, WBMWD currently provides approximately 1,000 acre feet per year (AFY) of nitrified recycled water and 4,000 AFY of 1st Pass Reverse Osmosis (RO) recycled water produced at the Carson Regional Water Recycling Facility about 1.5 miles from the BP site.

Mr. Lindley explained that the BP Watson project proposes to expand the existing Watson Cogeneration Plan on the BP Refinery Site to increase water supply to the BP Refinery. BP Watson is proposing to continue to utilize up to 4,600 AFY of freshwater including groundwater and municipal water in perpetuity based up on an average of the previous 11 years of operation. BP Watson indicates that a primary objective of the project is to increase water supply to the refinery and that recycled water would be utilized for additional water supply.

Mr. Lindley indicated that the CEC would be interested in the potential to replace existing freshwater supplies with recycled water supplies to the extent that recycled water can be provided at a comparable cost to that of freshwater. Mr. Lindley also discussed the potential that groundwater pumping at BP Watson could be causing sea water intrusion impacts. About 25,000 AFY are pumped into barrier projects in the West Basin to address sea water intrusion resulting from pumping of about 44,000 AFY of groundwater. Water injected at the neighboring Dominguez Barrier Project to limit sea water intrusion may comprise the majority of groundwater pumped by BP Watson.

Mr. Walters indicated that the Water Replenishment District operates the Dominguez Barrier Replenishment Project. The WBMWD sells about 4,000 AFY of imported potable water to the WRD for injection at the Dominguez Barrier Project. All groundwater users within the West Basin pay $205 per AF pumped to cover the costs of the replenishment projects. However, WBMWD sells the imported potable at $964 per acre foot to the WRD. Thus, the groundwater pumped in the vicinity of the Dominguez Barrier Project is subsidized by the WRD. Mr. Walters suggested to contact Ted Johnson, Chief Hydrogeologist with the WRD to understand more about the ratio of replenishment water to groundwater pumped and in particular the ratio for BP's pumping given that the site borders the Dominguez Barrier Project.

Mr Walters indicated that WBMWD is currently in negotiations with BP for a project to increase their use

of recycled water by about 2,100 AFY including about 800 AFY of Nitrified water and 1,300 AFY of Recycled water. The project would expand the capacity of the existing micro-filtration system at the Carson Regional Water Recycling Facility to match the capacity of the existing 1st pass RO system. The WBMWD is also expanding nitrified capacity to serve an additional 9,000 AFY to the City of Los Angeles from the Carson facility. The expansion project would cost about $18.3 million of which a portion would be paid for by WBMWD, $2.4 million would be paid for via a grant from Cal Water, leaving $11.3 million in capital costs to pass through to BP. The capital costs would be financed either through a 6%, 25 year bond issue by WBMWD or via a 2.5%, 20 year financing package through the SWRCB. All capital costs would be subject to a 1.6 debt recovery ratio.

Recycled water rates for BP would include both capital costs and commodity costs. Current commodity costs include: $964/AF for potable water ($1,024/AF beginning Jan 2012), $1,003/AF for 1st pass RO recycled water, and $755 for nitrified recycled water. BP currently pays capital costs of $1,127/AF for 1st pass RO and $847/AF for nitrified water.

WBMWD could implement additional recycled water capacity within 24-30 months of executing an agreement with BP.

The recycled water provided by WBMWD is of much higher quality than BP Watson's current fresh water supplies. TDS is reduced from about 900 ppt to 60 ppt for first pass RO. In second pass RO, TDS is reduced to about 5 ppt. BP indicated that they pay up to $200/AF for onsite treatment, however, the WBMWD's consultants estimated that the costs of onsite treatment were likely as high as $400 - $500/AF.

For additional recycled water, WBMWD would need to add both additional micro-filtration and RO treatment. Also, between the additional capacity under negotiation with the City of LA and BP, the Carson Regional Water Recycling Facility would not be able to provide significant additional volumes of recycled water. For costs on a larger facility, Mr. Walters thought that the project at the Joint Wastewater Treatment Plant including the additional pipelines that was presented in the WBMWD's 2009 Capital Improvement Plans would be appropriate.

cc: Joe Walters - WBMWD	**Signed:**
	Name: Mark Lindley – Soil & Water Resources