Response to Comments

Sentinel Peak Resources California, LLC – Inglewood Oil Field
Tentative Time Schedule Order No. R4-2018-0021-AX
NPDES Permit No. CA0057827, CI No. 6240

#	Comment Summary	Response	Action Taken
Heal the Bay - Email Received on August 26, 2019			
1	**The time extension to reach compliance with total petroleum hydrocarbons (TPH) proposed in the Tentative TSO Amendment must be as short as possible.** The Tentative TSO Amendment states that "the established time schedule is as short as possible." However, the current deadline of March 31, 2023 provides an established time schedule that is as long as possible (not to exceed 5 years of the original TSO issuance in 2018). According to the schedule provided in the Tentative TSO Amendment, system updates are to be installed by October 1, 2019. However, the installation of side-by-side granular activated carbon (GAC) systems to address TPH specifically is not scheduled until October 1, 2021 for final compliance by March 31, 2023. GAC has been used for decades as an effective tool for water remediation[1]. Given the wealth of knowledge available concerning the use of GAC for remediation, and given that evaluation of various activated carbon products is to occur during the 2019-2020 storm season, identification and installation of an approved system can be completed by October 1, 2020, for final compliance by March 31, 2021. The time extension to reach compliance with TPH proposed in the Tentative TSO Amendment must be as short as possible. We	The requirement that the time schedule be as short as possible comes from Water Code section 13385 subdivision (j)(3)(C)(i): > The T.S.O. must establish "a time schedule for bringing the waste discharge into compliance with the effluent limitation that is as short as possible, taking into account the technological, operational, and economic factors that affect design, development and implementation of the control measures that are necessary to comply with the effluent limitation," (Water Code section 13385(j)(3)(C)(i); Because of the inconsistent supply of the stormwater runoff and the nature of the sediment (i.e., very fine grained) in the runoff, only field trials during or immediately after rainfall events can provide the necessary data to design the optimum treatment system. Since, the number of rainfall events fell short of what is required to conduct comprehensive treatment system testing and specification of a final system design that would provide repeatable results for TPH, more time is justified.	Not necessary.

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	therefore recommend that the final compliance date for this Tentative TSO Amendment be March 31, 2021. [1] Culver, Teresa B., and Gary W. Shenk. "Dynamic optimal ground water remediation by granular activated carbon." Journal of water resources planning and management 124.1 (1998): 59-64.	The additional time will be used to conduct performance tests during actual rainfall events in order to finalize the design and operational parameters of the treatment system. The final compliance date for this Tentative TSO Amendment is March 31, 2023. The Discharger is making diligent progress toward bringing its discharge into compliance with the final TPH effluent limitation in Order Number R4-2018-0020. In addition, the Discharger has demonstrated that the additional time in this TSO is necessary to comply with the effluent limitation for TPH. Specifically, this TSO provides the required time for the Discharger to investigate and implement any required upgrades to bring the Inglewood Oil Field into compliance with the final effluent limitation for TPH.	
2	**The permittee should consider nature-based solutions to address TPH contamination.** Nature-based solutions are often overlooked as an effective approach for stormwater remediation. However, nature-based infrastructure can effectively address water quality issues while also providing multiple additional benefits including energy efficiency, improved air quality, resilience to climate change, community livability, and public education[2]. The inclusion of biochar in the fill media used for nature-based solutions can provide similar effects as GAC, while also prolonging the life of the nature-based infrastructure installed[3]. Based on the potential environmental, social, and economic benefits of addressing TPH contamination through nature-based solutions that incorporate biochar, the evaluation of various activated carbon products must include consideration	Nature-based solutions are a viable option for a variety of stormwater applications. Regional Water Board staff, however, do not dictate any specific technology to Dischargers to comply with effluent limitations in an Order. Per the tentative TSO, the Discharger must evaluate various activated carbon products and perform side-by side tests to determine the optimal product and operational strategy. Due to the comment from Heal the Bay, the Discharger informed staff in a conference call on September 17, 2019, that they would check into the feasibility of applying nature-based solutions in addition to the activated carbon testing noted above. When the source identification analysis of TPH	Comments noted.

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	of biochar in nature-based solutions. We recommend that the permittee reach out to academic professionals[4] who have developed well-engineered green infrastructure for stormwater remediation to discuss site specific options for this project. 2 The Center for Neighborhood Technology. 2010. *The Value of Green Infrastructure: A Guide to Recognizing its Economic, Environmental and Social Benefits.* https://www.cnt.org/sites/default/files/publications/CNT_Value-of-Green-Infrastructure.pdf 3 UCLA Samueli News Room. 2017. *A Cleaner Water Supply Tanks to Waste Material and Fungi: UCLA environmental engineer Sanjay Mohanty adds iron filings and biochar to topsoil to facilitate natural water treatment.* https://samueli.ucla.edu/a-cleaner-water-supply-thanks-to-waste-materials-and-fungi/ 4 e.g., Dr. Sanjay Mohanty, UCLA.	concentrations in stormwater entering the site from adjacent properties is complete, the Discharger will also explore any viable nature-based solutions for that surface flow.	
3	**During the extension period proposed in this Tentative TSO Amendment, enforcement actions must be taken in response to interim limit exceedances.** The Tentative TSO Amendment states that "if an interim effluent limitation contained in this TSO is exceeded, the Discharger is subject to MMP for that particular exceedance as the waste discharge is not in compliance with a TSO pursuant to Water Code section 13385, subdivision (j)(3)." However, the Tentative TSO Amendment also states that there was a measurement of 1,850 microgram per liter (µg/L) for TPH on February 14, 2019, which is in exceedance of the 1,000 µg/L interim limit for the current TSO. No enforcement action has been taken in response to this interim limit exceedance. A TSO is meant to be an enforcement action that proves flexibility for the discharger to take necessary steps towards remediation. Numeric interim limits are set to protect public	The TPH exceedance which occurred on February 14, 2019 is currently under review by the Enforcement Unit. The Regional Water Board will take proper action. Any violation of the TSO or the TSO amendment will result in an enforcement action.	Comment noted.

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	and environmental health to the extent feasible during the time extension period provided by the TSO. Without enforcement of these interim limits, permittees are not held accountable for the discharge of polluted effluent and therefore the TSO is no longer a meaningful enforcement action. The Los Angeles Regional Water Quality Control Board (Regional Board) must take enforcement action in response to the interim limit exceedance on February 14, 2019. The Regional Board must also take immediate enforcement action in the event of an interim limit exceedance during the extension period proposed in this Tentative TSO Amendment.		
4	**Monitoring of the effluent water quality, the receiving water quality and the sediment quality must occur during every discharge event for all priority constituents.** Every storm event that causes a discharge to occur should be sampled to include visual observations, effluent water quality, receiving water quality, and sediment. We are concerned about the frequency of monitoring required for effluent discharges for chronic toxicity, and for many other non-conventional priority pollutants such as ammonia, nitrate, and nitrite. The Permit only requires an annual analysis of effluent discharges for chronic toxicity and many priority pollutants. Receiving waters and sediment monitoring are also only required once per year under the current Permit. Analyzing stormwater discharge for the stated constituents and receiving waters on an annual basis is insufficient to ensure the sampling results are truly representative of the discharge from the facility and its impacts to the receiving waterbody. Pollutant concentrations in stormwater runoff are highly variable with concentrations depending on several factors including intensity of the storm, the on-going activities at the facility prior to and during the storm, the time of sampling	The monitoring frequencies are included in the NPDES permit, not in the TSO or its proposed amendment. The adoption of the TSO amendment does not alter the monitoring frequency established in the permit (Order No. R4-2018-0020). Therefore, comments regarding the monitoring frequencies must be submitted during the renewal of the permit scheduled for 2023. However, since the comment was submitted, a brief summary of the monitoring protocol follows. The monitoring frequencies included in the permit are consistent with the frequencies routinely included in permits for storm water dischargers. Pollutants with effluent limitations are sampled once per discharge event. Historical data and applicable Total Maximum Daily Loads (TMDL) potential for these pollutants have provided the basis for establishing the limitations and the more frequent sampling. Other priority pollutants are monitored annually. Those provide five data points as the permit duration in five years to evaluate reasonable potential for those pollutants. The sampling frequency for sediment was	Not necessary.

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	relative to the beginning of the storm, and the time of sampling relative to the beginning of the wet season. This variability in pollutant concentrations cannot be captured by one sampling event per year. Monitoring the effluent discharge for all priority constituents should be conducted during every discharge, which would be consistent with frequency of other pollutants. Additionally, receiving waters and sediment should be sampled during every discharge. In addition, the Industrial General Stormwater Permit requires industrial facilities to monitor two storm events per year, with one of the samples collected during the first storm events of the season[5]. The Regional Board must not require less of an NPDES permitted facility than the IGP requires for even the smallest facilities. Considering the infrequent number of discharge events, requiring every discharge event to be sampled is not burdensome. The data garnered from such a collection effort would help the regulators, the regulated community, and the public better understand how the facility operations truly impact Ballona Creek, Centinela Creek and the Ballona Estuary. Therefore, we recommend that monitoring of the effluent water quality, the receiving water quality and the sediment quality occur during every discharge event for all priority constituents. Since this comment period applies only to the Tentative TSO Amendment, we urge the Regional Board to consider this recommendation during the 2023 permit renewal. [5] California State Water Resources Control Board. *National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Industrial Activities, Order No. CAS000001. Section X1.B. 2 and* Section XI.B.3. https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/industrial/2014indgenpermit/wqo2014_0057_dwq_revmar2015.pdf	implemented to be consistent with the Ballona Creek TMDL. The NPDES permit for the Inglewood Oil Field requires more frequent sampling than the IGP. The IGP only requires sampling during 2 storm events. This permit requires sampling each time there is a discharge. The monitoring frequency included in the permit provided the required data to evaluate potential impacts from discharges from Inglewood Oil field to the receiving water bodies.	

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5	**The permit must include numeric groundwater quality objectives and groundwater monitoring requirements.** There are no groundwater limitations stipulated in the permit. An active oil field with on-site injection facilities must have numeric groundwater quality objectives and groundwater monitoring requirements to protect public and environmental health by ensuring proper facility operation. We recommend that the Regional Board include numeric groundwater quality objectives and groundwater monitoring requirements during the 2023 permit renewal.	This comment addresses the NPDES permit Order no. R4-2018-0020. The permit regulates discharges of storm water runoff only. The collected storm water runoff is discharged from Discharge Point Nos. 001 and 003 to Centinela Creek and from Discharge Point Nos. 002, 004, 005, and 006 to Ballona Creek. The Inglewood Oil Field is an oil and gas field. Oil and gas exploration and production activities are ongoing. Those activities include extracting oil and gas from subsurface reservoirs and removal of water from the crude oil and liquids from the gas. Water treatment and injection facilities are part of the industrial activities that occur onsite. The groundwater injection operations are regulated by the Division of Oil, Gas and Geothermal Resources (DOGGR). Groundwater monitoring occurs per Baldwin Hill Community Standards District. Recently, Regional Water Board staff reviewed the data collected and provided comments on requested changes to the monitoring and reporting plan. Groundwater monitoring is ongoing and Regional Water Board staff and the public have access to their data.	Not necessary.