



CTEH Cumulative Water Sampling Summary

CTEH CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH

June 10, 2015

Coastline Water Sampling Summary Refugio Incident

Introduction

On May 20, 2015, Center for Toxicology and Environmental Health, LLC (CTEH®) initiated coastline water sampling in support of response operations for the Refugio Incident near Gaviota, CA. This sampling has been conducted under a Unified Command-approved sampling plan. For water samples collected from May 20, 2015 to June 7, 2015, this summary presents a comparison of the water sampling results to relevant health-based surface water screening levels.¹

General Summary of Water Sampling Operations and Preliminary Results

CTEH® is conducting daily water sampling along the coastline at locations east and west of the incident site. A map illustrating the locations of water sampling is provided in **Attachment A**. Collected water samples have been submitted to an accredited laboratory for analysis of volatile organic compounds (VOCs), metals, total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), and glutaraldehyde. Water sampling results were compared to surface water screening values that were compiled and approved by representatives of the Santa Barbara County Public Health Department and CTEH®, a contractor for Plains All American Pipeline.

Surface water screening values are a useful tool for evaluating the surface water results for chemicals potentially present in crude oil. Surface water screening values (Table 1) were derived by selecting the most conservative of (1) the USEPA human health benchmarks for crude oil-related chemicals, derived to protect the general population and sensitive populations, specifically child swimmers² or (2) the State of Florida-derived human health-based screening levels protective of a child beach visitor who swims in coastal waters.³ A comparison of the water sampling results to health-based surface water screening values is provided in **Table 1**.

Preliminary results of coastline water sampling:

- More than 200 water samples have been collected at locations along the coastline from May 20, 2015 to June 9, 2015.
- Results of water sampling indicate no exceedances of the health-based surface water screening values at any time. As such, these compounds do not pose a risk to human health as a result of the Refugio Incident.

¹ All water sampling laboratory results have been provided to members of the Refugio Incident Unified Command on a daily basis.
² USEPA. 2015. Human Health Benchmarks for Chemicals in Water: EPA Response to BP Spill in the Gulf of Mexico. Accessed at <http://www.epa.gov/press/health-benchmarks.html>
³ Florida. 2015. Human Health-Based Screening Levels for Petroleum Products Impacting Gulf Coastal Water and Beach Sediments. Updated. Accessed at <http://www.dep.state.fl.us/pressroom/press/11/110615mtrpweb.pdf>

Center for Toxicology and Environmental Health, LLC (CTEH®) summarizes the water sampling results that were initiated in support of response operations for the Refugio Incident near Gaviota, California. This sampling has been conducted under a Unified Command-approved sampling plan. For water samples collected from May 20, 2015 to June 7, 2015, this summary presents a comparison of the water sampling results to relevant health-based surface water screening levels.

For full report please click [here](#).