



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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March 4, 2013

Ms. Amy Kraham
City of Bellingham
210 Lottie Street
Bellingham, WA 98225

**Re: Petroleum Seep Interim Action
R.G. Haley International Site, Bellingham, WA**

Dear Ms. Kraham:

This letter addresses a petroleum fluid seep that developed recently at the R.G. Haley International Site (the Site). The Department of Ecology (Ecology) has determined that an interim action under the Model Toxics Control Act (MTCA) is the appropriate response to this seep, and is accepting the general approach proposed by the City of Bellingham for mitigating seepage risks.

Background

A petroleum fluid recently began to seep from the shoreline at the Site into the waters of Bellingham Bay. The seepage was first reported as a noticeable sheen on the water on December 12, 2012, and has been intermittently present since then, based on almost daily monitoring by the City of Bellingham (the City).¹ This is the first report of petroleum seepage into Bellingham Bay at the Site since 2006, when sheens were noted sporadically in the same general vicinity over a period of about six months. No action was taken at that time to address the seepage. This time, the City immediately deployed a boom and absorbent pads to prevent the sheen from spreading and to collect as much oil as possible. The boom and pads are still in place, and are currently being monitored on a weekly basis, and after storms. The City also began to evaluate means to address the seepage.

The petroleum seepage occurs in two discrete areas of discharge within the intertidal zone near the southern end of the Site. The sheen is most commonly present during a falling tide, but is also visible at other times. Although a chemical analysis of the seep fluid itself has not been conducted, extensive chemical data is available on petroleum fluid and hydrocarbon-contaminated ground water present in the upland area adjoining the seepage area. The chemical

¹ GeoEngineers. December 18, 2012. *Sheen Incident, December 12, 2012*. Memorandum by Dana Carlisle



data indicate the presence of diesel-range carrier oil, containing elevated concentrations of pentachlorophenol, dioxins/furans, carcinogenic PAHs, and other toxic contaminants.

The source and causes of the seepage were evaluated in a study by GeoEngineers.² The primary source of the seepage appears to be petroleum fluid movement on top of the water table from the upland towards the bay. Petroleum trapped within the beach sediment at near-saturation levels may also be contributing. However, the factor or factors that caused the petroleum fluid to begin migrating towards and discharging at the shoreline could not be determined. Factors evaluated included rainfall levels, tide variations, storm events, seismic activity, changes in petroleum fluid thickness and distribution in the upland area, and subsurface consolidation effects related to the new fill placed on the adjoining Cornwall Landfill Property. Because it could not be determined what started the seepage, a prediction could not be reliably made as to when it would stop.

Need for Interim Action

Ecology considers the petroleum seepage into Bellingham Bay at the Haley Site a situation requiring "immediate" action, rather than one that can wait for implementation of the final Site cleanup. The on-going petroleum seepage is likely to be highly toxic to aquatic and benthic life, and there does not appear to be a way to know when, or if, it will stop. Addressing the leak as soon as possible is important to prevent further potential harm to the aquatic environment.

MTCA provides a means for addressing this kind of situation, termed an interim action. An interim action only partially addresses the cleanup of a site, and is "*A remedial action that is technically necessary to reduce a threat to human health or the environment by eliminating or substantially reducing one or more pathways for exposure to a hazardous substance at a facility*" (WAC 173-340-430(1)(a)). Ecology believes that this provision of MTCA is applicable to the petroleum fluid seepage at the Site.

The first steps in an overall response to the petroleum seepage have already been taken. Initially, a boom and sorbent pads were deployed to prevent the spread of sheen, as described previously. Oil recovery efforts from nearby upland wells were also increased. Next, the hydrologic evaluation referenced earlier was conducted to determine the causes of the seepage. An engineering study was then completed, the purpose of which was to devise a temporary fix that could remain in effect until a final cleanup of the Site takes place, currently expected to begin in mid-2015.³

The last step remaining to be completed is for the City of Bellingham to design and implement the temporary fix as an interim action. Time is of the essence for this temporary fix, and Ecology will work with the City to expedite its' implementation.

² GeoEngineers. January 30, 2013. *Evaluation of Intertidal Zone Petroleum Sheen, R.G. Haley Site, Bellingham, Washington*. Technical memorandum by Steve Woodward, Dana Carlisle

³ GeoEngineers. February 20, 2013. *RG Haley Site, Interim Action Alternatives*. Memorandum by Dana Carlisle, Steve Woodward

Ms. Amy Kraham

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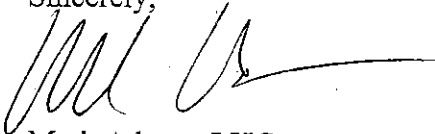
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Interim Action Concept

The February 20, 2013, GeoEngineers memorandum, referenced above outlines a proposed temporary fix, termed "localized sediment action". This approach would involve placing an absorbent mat over the beach area where seepage is occurring. The mat would remove oil and some dissolved constituents, while allowing water to pass through. The mat would be removed and disposed of as part of any final cleanup. Ecology is supportive of this concept, pending satisfactory resolution of design details.

If you have any questions, you may contact me at (425) 649-7107 or by email at mada461@ecy.wa.gov.

Sincerely,



Mark Adams, LHG
Site Manager

ecc: Kristie Elliot, Assistant Attorney General, Ecology Division
Lucy McInerney, Toxics Cleanup Program, Ecology
Bob Warren, Section Manager, Toxics Cleanup Program, Ecology
Brian Williams, Washington Department of Fish and Wildlife
Terry Carten, Washington Department of Natural Resources
Randel Perry, U.S. Army Corps of Engineers

