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Dept of Ecology
Central Regional Office

August 5, 2019

Mr. Doug Pettinger
Sr. Director Environmental Health and Safety
Darigold, Inc.
1130 Rainier Avenue South
Seattle, WA 98144

Re: Follow-up from Meetings Concerning Issues with Spike Loading from Darigold Leading to Upset Conditions in the Port's Industrial Wastewater Treatment Facility

Dear Doug:

This letter is in follow-up to our meetings with Darigold concerning the Port of Sunnyside's (Port) Industrial Wastewater Treatment Facility (IWWTF) and issues and concerns about occasional variances in influent loading and effects on treatment performance and compliance. We have had several meetings with Darigold on this subject since the beginning of the year. The purpose of this letter is to summarize background information on the issues and potential remedies discussed with Darigold and the Washington Department of Ecology (Ecology). The letter also discusses the Port's plans to amend the Darigold User Contract to include new daily maximum loading limits and associated surcharges.

Description of Conditions Leading to Process Upsets

Parametrix and the Port have analyzed industry monitoring data to ascertain the conditions leading to upsets in the anaerobic treatment system (ATS) performance. We have concluded that the cause is occasional, short-term spikes or slugs in influent organic loading (based on chemical oxygen demand) from the Darigold facility. The spikes generally last for approximately one day and introduce 1.5 times the peak design daily organic loads for the covered anaerobic lagoon (CAL). Spike loading can occur at all times of the year, but the most intense frequency has been in the fall and winter months, where daily spikes sometimes occur in successive days or weeks making it especially difficult for the ATS to recover. Based on discussions with Darigold, the spikes or slugs are likely from cleaning operations and/or discharge of concentrated off-spec product.

Resultant Effects on NPDES Compliance and Lagoon 4 Holding Capacity

The spike organic loading conditions described above are well in excess of the ATS peak design organic loading capacity. This creates diminishing performance in the CAL, which leads to upset conditions (i.e., poor sludge settling and sludge bulking conditions) in the sequencing batch reactors (SBRs). The total suspended solids (TSS) levels in the SBRs exceed Outfall 001 National Pollutant Discharge Elimination System (NPDES) limits, so the Port is forced to divert 100 percent of the ATS flows to the holding lagoon (Lagoon 4) until the upset conditions subside or otherwise face permit violation, violation fees, and third-party lawsuits as permitted under NPDES and Clean Water Act. During the last occurrence in which daily spike load from Darigold started in early November 2018 and continued almost weekly into January 2019, the Port had to divert and discharge approximately 40 days or 40 million gallons of flow to Lagoon 4. This consumed approximately 32 percent of the holding capacity of

Lagoon 4 which consumes valuable capacity that needs to be reserved for the other industries during periods when irrigation is prohibited by the State Waste Discharge Permit.

Because of the upset conditions and 40 days of diversion of flows described above, Lagoon 4 very nearly exceeded its winter storage capacity and came close to overtopping and overflowing its banks in early 2019. During winter months, land application is not permitted and there is no other permitted discharge outlet for flows. Therefore, upset conditions in the ALS potentially place the Port at risk of violating their NPDES permit with Ecology. Permit violations subject the Port to penalty fees and potential third-party lawsuits. It is important to note that spike organic loads may only last for a day or two; however, result in upsets to the ALS that may take a month or more to recover.

Potential Remedies

The Port, Parametrix, and Darigold have discussed potential solutions and remedies in several meetings over the course of the last 5 months. Potential remedies identified to date include constructing a new spike tank on Darigold property and diverting spike flows to Port holding lagoons. Also, during our meetings, Darigold has discussed steps that have or will be taken internally to improve operator training and communication to reduce occurrence of spike loads. There are several options available to Darigold. Our understanding is that Darigold is currently in the process of deciding on the best approach to take.

Coordination with Ecology

The background information above was summarized in a letter to Matthew Durkee, NPDES Permit Manager, Department of Ecology on March 20, 2019. This letter was also shared with Darigold and is included as an enclosure for reference. Matthew Durkee also attended a meeting on the subject with Darigold and the Port on May 7, 2019. Ecology is currently in the process of updating Darigold's NPDES pretreatment permit.

Amendment to Darigold User Contract

The Port is proposing an amendment to the Darigold User Contract establishing a new daily maximum organic load limit based on BOD/COD (Biochemical Oxygen Demand/Chemical Oxygen Demand) and setting a reasonable pounds-per-day limit to be consistent with CAL maximum design loading capacity and thereby reducing potential for upset conditions in the ALS. The current User Contract contains average monthly limits for BOD; however, does not include a daily maximum limit. Daily maximum limits for COD/BOD are needed to control spike or slug loads and upset conditions described in this letter. The Port would like this new limit to go into effect on November 1, 2019.

The Amendment would provide that discharges exceeding the new daily organic load limit will be assessed a surcharge equal to fifty percent (50%) of the hydraulic contract capacity charge ("capital charge") for the month in which the discharge occurs, but in any event not more than one such surcharge per day. This is consistent with previous surcharge for pH of less than or equal to 2 established in Amendment 16 to the User Contract, dated July 19, 2006. Discharges causing upsets to the ALS are not permitted under the NPDES permit. The Port is compelled to establish a limit and surcharge on daily spike loads to avoid violating their NPDES permit with Ecology and to cover potential losses resulting from permit violations and third-party lawsuits.

Conclusions

The Port will continue to work with Darigold on remedies to ensure future avoidance of upset conditions. The Port will be providing to Darigold a draft Amendment to User Contract which the Port would like to go into effect on November 1, 2019.

Sincerely,



Jay Hester
Executive Director

Enclosure

cc: Scott Burelson, Darigold
Matthew Durkee, Ecology
James Leier, Ecology