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Aug 9, 2023



McCain Foods USA, Inc.
100 Lee Street
Othello, WA 99344

August 9th, 2023

Amanda Maxwell, Executive Director and Secretary
Washington Utilities and Transportation Commission
P.O. Box 47250
Olympia, WA 98504-7250

Subject: Request for Exemption – WAC 480-93-015 Odorization of Gas

Dear Ms. Maxwell,

McCain Foods is applying for exemption from the requirements of WAC 480-93-015 Odorization of Gas.

Applicant information:

McCain Foods USA, Inc. (Operator)
100 Lee Street
Othello, WA 99344

McCain Plant Engineering Contact: Art Bolduc (509) 318-5342
McCain Technical Contact: Peter Cormier (920) 574-4271
EverLine Compliance Contact: Doug Erickson (719) 639-6639

The pipeline is located in the city of Othello, Adams County, WA.

McCain Foods Othello generates biogas from its anaerobic wastewater treatment system that contains levels of hydrogen sulfide in the range of 2000 to 4000 ppm on a continual basis. This is typical of an anaerobic wastewater treatment system that generates methane containing biogas. The facility “scrubs” the generated biogas with a multi-media scrubber treatment

system that will reduce hydrogen sulfide content to concentration levels between 1 to 200 ppm. The treated biogas is then either directed to the wastewater treatment flare stack for combustion or transported through the biogas pipeline to the McCain manufacturing steam boiler to utilize as a renewable fuel source.

Biogas has a natural occurring odor, however, breathing and or conducting a sniff test of biogas would pose a safety concern and risk to work personnel. Per OSHA “Worker Exposure Limits” <https://www.osha.gov/hydrogen-sulfide/hazards> intentionally breathing in concentrations of hydrogen sulfide would pose various risks to human health:

Hazards

Health Hazards

Hydrogen sulfide gas causes a wide range of health effects. Workers are primarily exposed to hydrogen sulfide by breathing it. The effects depend on how much hydrogen sulfide you breathe and for how long. Exposure to very high concentrations can quickly lead to death.

Short-term (also called acute) symptoms and effects are shown below:

| |
|---|
| Worker Exposure Limits |
| NIOSH REL (10-min. ceiling): 10 ppm |
| OSHA PELs: General Industry Ceiling Limit: 20 ppm General Industry Peak Limit: 50 ppm (up to 10 minutes if no other exposure during shift) Construction 8-hour Limit: 10 ppm Shipyard 8-hour limit: 10 ppm |
| NIOSH IDLH: 100 ppm |
| IDLH: immediately dangerous to life and health (level that interferes with the ability to escape) (NIOSH) |
| PEL: permissible exposure limit (enforceable) (OSHA) |
| ppm: parts per million |
| REL: recommended exposure limit (NIOSH) |

| Concentration (ppm) | Symptoms/Effects |
|----------------------------|---|
| 0.00011-0.00033 | Typical background concentrations |
| 0.01-1.5 | Odor threshold (when rotten egg smell is first noticeable to some). Odor becomes more offensive at 3-5 ppm. Above 30 ppm, odor described as sweet or sickeningly sweet. |
| 2-5 | Prolonged exposure may cause nausea, tearing of the eyes, headaches or loss of sleep. Airway problems (bronchial constriction) in some asthma patients. |
| 20 | Possible fatigue, loss of appetite, headache, irritability, poor memory, dizziness. |
| 50-100 | Slight conjunctivitis ("gas eye") and respiratory tract irritation after 1 hour. May cause digestive upset and loss of appetite. |
| 100 | Coughing, eye irritation, loss of smell after 2-15 minutes (olfactory fatigue). Altered breathing, drowsiness after 15-30 minutes. Throat irritation after 1 hour. Gradual increase in severity of symptoms over several hours. Death may occur after 48 hours. |
| 100-150 | Loss of smell (olfactory fatigue or paralysis). |
| 200-300 | Marked conjunctivitis and respiratory tract irritation after 1 hour. Pulmonary edema may occur from prolonged exposure. |

Table(s) from OSHA Website: <https://www.osha.gov/hydrogen-sulfide/hazards>

As per the aforementioned exemption request to WAC 480-93-015 Odorization of Gas; McCain proposes to not odorize the biogas and instead conduct a monthly leak inspection of the pipeline with a handheld gas detection instrument. This gas detection monitoring would conform with WAC 480-93-188 Subclause (3)(e) Gas Leak Surveys – Unodorized gas pipelines.

We humbly submit this exemption request to the UTC for review and consideration. Should you need any further information, please contact me at 920-574-4271 or peter.cormier@mccain.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Cormier". The signature is written in a cursive, flowing style.

Peter Cormier P. Eng.
McCain Foods USA, Inc.
Director of Engineering, Environmental & Sustainability