

## Project Summary: NOC 12301

LRI submitted Notice of Construction (NOC) permit application number 12301 on November 11, 2022, which requested approval for a temporary flare and a landfill gas sulfur removal system. The temporary flare was needed due to an increase in the amount of landfill gas that was collected by the landfill's gas collection system. Additionally, increased odors and monitoring of the landfill gas led LRI to discover increased concentrations of hydrogen sulfide (H<sub>2</sub>S) in landfill gas, which, when flared, increased the amount of sulfur dioxide (SO<sub>2</sub>) emitted by the facility. The increased sulfur in landfill gas was caused by the acceptance of gypsum wallboard waste by the landfill between approximately 2019 and 2022.

The Agency conducted an inspection of the facility on December 22, 2022, which resulted in Notice of Violation (NOV) issued on January 4, 2023 (#3-A000700) for operating above the capacity outlined in existing Order of Approval 8023 of 19.8 million tons. The Agency also issued NOV #3-A000731 to LRI for failure to obtain a Prevention of Significant Deterioration (PSD) permit prior to creating a major stationary source due to the SO<sub>2</sub> emissions that result from the increased sulfur content of the landfill gas that was caused by the acceptance of gypsum wallboard waste.

LRI then submitted an additional permit application (NOC 12369) for the addition of a permanent flare that would replace the temporary flare outlined in NOC application 12301. The Agency has decided to handle both flare additions under one application, since both flares are associated with the increase in landfill gas production that results from growth in the landfill's capacity beyond what was reviewed by the Agency in previous NOC applications.

While LRI sends much of its landfill gas to an attached gas-to-energy facility named Archaea Energy, LRI must be able to manage and flare all gas, in the event that Archaea no longer accepts their gas.

The Agency addressed the increase in waste capacity and the increase in sulfur dioxide emissions through NOC application 12301. The summary of changes reviewed by the Agency is outlined below:

- Emission increases associated with increasing waste capacity from 19.8 million tons to 34.6 million tons
- The addition of the 2,200 scfm temporary flare
- The addition of the 4,000 scfm permanent flare that will replace the 2,200 scfm temporary flare
- The SO<sub>2</sub> emissions caused by the acceptance of gypsum wallboard waste

The draft Order of Approval imposes the following requirements, and others, on the landfill:

- An emission cap that prevents the source from exceeding the PSD major modification thresholds for sulfur dioxide
- A requirement to treat all collected landfill gas to remove hydrogen sulfide/total reduced sulfur compounds, and to monitor the sulfur content of the landfill gas
- Performance testing requirements for the flares