

ENVIRONMENTAL HEALTH PROJECT

DEFENDING PUBLIC HEALTH SINCE 2012

environmentalhealthproject.org

January 20, 2023

Pennsylvania Department of Environmental Protection, Bureau of Waste Management
400 Waterfront Drive
Pittsburgh, PA 15222

Re: MAX Environmental Yukon Hazardous Waste Landfill No. 7

Introduction

The Environmental Health Project (EHP) is submitting this written comment to the Pennsylvania Department of Environmental Protection (DEP), Bureau of Waste Management, to express our grave concerns for the expansion of the MAX Environmental Hazardous Waste Landfill through the permitting of Landfill No. 7. because the proposed expansion at the MAX Environmental facility puts undue risk on community members as well as the environment, EHP recommends the permit not be approved in order to better protect public health and the lives of many impacted residents. However, if the permit is to be approved, EHP urges the DEP to adopt several recommendations for additions to this permit to better ensure residents health is protected and prioritized over industry profit.

EHP is a data-driven public health organization headquartered in McMurray, Pennsylvania, just south of Pittsburgh. EHP provides wide-ranging support to communities impacted by shale gas development (SGD), sometimes called *hydraulic fracturing* or *fracking*. This support includes health impact assessments, environmental and health monitoring, data research and interpretation, and public health guidance. We are a skilled group of health professionals, scientists, community educators, analysts, and policy and communications experts.

EHP has a decade of community science experience, working directly with frontline residents concerned about how their health has been, or may be, impacted by SGD, including both air and water contamination. We seek to support communities more broadly in understanding the exposures and risks generated by SGD and to engage in policy dialogues at the local, state, and federal levels regarding the public health implications of shale gas activities. We have become national leaders in the comprehensive understanding of, and approach to, the public health consequences of SGD.

At EHP, we are concerned with all aspects of shale gas development that can impact public health. This includes not just the process of drilling but also the transport, transfer, and treatment of waste from shale gas facilities. Over our tenure we have partnered with communities and organizations to understand the health impacts for those living near landfill facilities accepting this waste. It is with

all this experience that EHP writes to offer our knowledge and expertise around working with impacted communities, specifically those near landfills.

Problem

EHP has a number of concerns over the permitting of Proposed Hazardous Waste Landfill No. 7.

On page 104 of the permit application, the applicant, MAX Environmental Technologies, Inc., is asked, "Have you addressed community concerns that were identified?" In response to this question, the applicant selected "no" and said, "The Mountain Watershed Association has expressed opposition to the project. However, MAX continues to engage the Mountain Watershed Association and other community stakeholders and will address community concerns as they are identified."¹ Through our HealthWatch community program, EHP has been working with Mountain Watershed Association and the residents of Yukon for almost a year to help them monitor their air and understand the facilities' impact on their health. Throughout this partnership, EHP has listened to community members voicing their concerns with this facility, which existed prior to the proposal of expansion. EHP stands with the residents who are worried about their health and feel that the facility has a long way to go in addressing community concerns. The permit application makes it clear that MAX Environmental recognizes there is significant community opposition to the permit, but the application fails to detail what MAX Environmental will do to change this. EHP shares the community concerns and is troubled by the company's and the DEP's failure to engage the community in any meaningful way.

EHP is also concerned about the Yukon facility's expansive violation record and believes that should be a determinant in whether or not DEP approves the permit. The violations span from the opening of the Yukon facility to, most recently, 2022. While there are many serious violations, particularly concerning is the continued magnitude of the violations. To date, regulators have identified more than 300 violations at the Yukon site, including open burning, not controlling dust emissions, hazardous waste leaks, and failure to report chemical spills.² It is important to note that these 300 violations represent only what regulators have identified and not any others that may have occurred. With community members reporting continued health impacts, concerns are growing that there are additional violations that regulators have not identified and that Max Environmental has not reported. While all reported violations required the facility to adjust processes and/or pay fines, that has not decreased the number of violations occurring. Approving this permit could increase the potential for additional violations, which will directly impact the health of residents in the neighboring areas.

Another concern EHP has for the proposed expansion is the potential impact it may have on the area's wetlands. The current proposal shows the facility being built directly adjacent to, and in some cases surrounding, existing wetlands. While the facility is careful to never fully encroach into the wetlands, the proximity to them is of great concern. Wetlands provide numerous important benefits, such as improving and protecting water quality, providing a habitat for fish and wildlife, storage of floodwater, and maintaining the flow of surface water during dry periods.³ Specific to human health, wetlands are now understood to store carbon within the plants and soil as opposed

to it being released into the atmosphere as carbon dioxide, which helps to moderate global climate conditions. Wetlands are considered a vital component of a watershed, so protecting them is of utmost importance. Further, the proximity of the wetlands to the facility increases the severity of effects that would be seen from potential contamination issues. MAX Environmental already has a history of issues with rainwater running through the landfill and causing toxics to leak out into neighbors' yards and the community at large.⁴ The concern of this happening is only increased with the fact that the hazardous waste that would be placed in Landfill No. 7 would be untreated and therefore could be even more toxic to humans and the environment.⁵

Wetlands within the proposed project location fail to include a sufficient buffer adequate to protect the sensitive ecological areas. The proposed facility site boundary outlined on Module 9, Figure 3 (page 196) is drawn to exclude an existing 0.316-acre wetland that is otherwise contained within the larger facility site. While the applicant maintains that wetlands will be identified in the field with high visibility fencing, they do not propose any buffer zone around this wetland. There is also a tributary to Sewickley Creek identified near this wetland (Figure WDR-3A, page 345) that lacks an adequate buffer. This tributary and wetland are both located adjacent to the preliminary access route to the proposed hazardous waste Landfill No. 7, as depicted on Module 9, Figure 2 (page 195). With up to 55 truckloads of hazardous waste traversing this road daily, the tributary and wetlands will be susceptible to spills or accidental releases during transportation of hazardous waste.

EHP is equally concerned by the proximity of the proposed facility to Sewickley Creek, a major tributary of the Youghiogheny River. The proposed location of the facility, which was recently amended during this application process, overlaps with a historically mapped floodplain. Storing hazardous waste near the floodplain raises serious concerns about water quality and potential impacts to downstream water users. Flooding of the landfill could result in an environmental and human health catastrophe. Additionally, the application fails to define a flood of record and its impact on the location, which is concerning given the applicant's amendment to the historic floodplain.

Lastly, EHP is concerned that the proposed location of this expansion would situate it over top of two previous coal mine locations. The application states that the mines underneath the site were room and pillar mined. While that is true, the application fails to mention that the mines were later mined out by retreat mining, meaning the pillars were removed. This latter mining process indicates that both mines could be less stable and at risk for subsidence, a threat already made clear in the 2016 expansion application, in which the Community Engineering Corp wrote that there was "high risk" for subsidence. While EHP's work mainly concerns shale gas development, we believe thought needs to be given to previous industrial work that has occurred in the area and how that could impact already existing land masses or structures, such as the floodplains or potential erosion that could be seen in the area. Active subsidence could alter the hydrology of the floodplains and wetlands around Sewickley Creek and its tributaries, potentially leading to unanticipated flooding near the facility site.

Health Impacts

The shale gas industry produces a tremendous amount of toxic waste in liquid, sludge, and solid forms. The EPA estimates that on average 160,000 gallons of waste is produced each day in just the first five days after a fracturing job. While this amount can decrease over time, it is still estimated a well can produce 1,100 gallons of liquid waste every day for anywhere between 10-30 years.⁶ This waste is a public health concern because of its toxicity, radioactivity, and lack of government oversight. Wastes from the exploration and production of oil, gas, and geothermal energy are exempt from Resource Conservation and Recovery Act (RCRA's) definition of "hazardous waste," meaning that shale gas wastes are exempt from regulation despite their toxic components that would otherwise qualify under RCRA's strict requirements.⁷ Despite several amendments to RCRA, shale gas waste is still not considered hazardous waste. Because of this, EHP has noted several health concerns that are relevant to the proposed Landfill No. 7, since hazardous waste is being stored at this facility and not treated.

Leachate is formed in landfills as rainwater filters through the waste, and, in doing this, the liquid draws out and concentrates a variety of chemicals or other substances present in the waste.⁸ At the MAX Environmental facility, this is of particular concern because accepted oil and gas solid waste is known to contain radioactive materials that, in turn, can produce leachate that is also radioactive. Previous data has shown that leachate at landfills accepting this waste had frequent concentrations of radium-226 and radium-228 present that exceeded the maximum containment level.⁹

The presence of radium-226 and radium-228 are of great concern for individuals' health. The decay process of radium gives off unstable atoms in the form of alpha, beta, and gamma radiation. When ingested or inhaled, alpha, beta, and gamma particles have been linked to causing various types of cancers, such as lymphomas, leukemia, and bone cancer.¹⁰ Another concern with radium is that, because it has a half-life of 1,600 years, it persists in the human body as well as in the environment. In addition to radium, landfills emit radon as the radium decays into radon gas.¹¹ While radon has a much shorter half-life of 3.8 days, it can travel through air, settle on surface water, seep into groundwater, and collect in basements.¹² Exposure to radon, whether through inhalation or ingestion, is detrimental to human health. The EPA considers radon to be a human carcinogen, indicating that the more exposure someone has to radon the higher the chance they will develop cancer. Radon is the second leading cause of lung cancer in the United States, and it is estimated that radon is responsible for 20,000 lung cancer deaths every year.¹³ Exposure to radon by children can be especially harmful because children have smaller lungs and faster breathing rates, which leads to higher radiation doses inhaled in the lungs in comparison to adults. A 2022 study looking at acute lymphoblastic leukemia (ALL) examined water specifically as an exposure pathway and found that children living downstream within 2 km of a well had 1.94 times the odds of developing ALL.¹⁴

In addition to concerns with radon and radium, there could also be cause for concern with PFAS, or per- and polyfluoroalkyl substances. In 2020, it was discovered that PFAS, or substances that break down into PFAS, were being used in oil and gas drilling.¹⁵ Because of this use, PFAS could be present in the leachate or the dust coming off the landfill itself. PFAS have been linked to kidney and testicular cancers, increased cholesterol levels, changes in liver enzymes, increased risk of high

blood pressure or pre-eclampsia in pregnant individuals, small decreases in infant birth weights, and reduced effectiveness of vaccines in children.¹⁶

Recommendations

Due to potentially grave health and environmental impacts from the proposed Hazardous Waste Landfill No. 7, as well as MAX Environmental's particularly egregious violation record, EHP recommends the DEP not approve a permit for this proposed expansion. If the permit is to be approved, EHP urges that the following actions be reflected in the permitting:

- MAX Environmental and the DEP must conduct meaningful community engagement and allow the community members who are impacted by the facility to have a say in this process. Meaningful community engagement is something that should be defined in collaboration with the community, not imposed upon the community from outside.
- The DEP needs to consider how to ensure MAX Environmental is improving its violation record and not just committing more violations. First, EHP would suggest more inspections be done in the wake of any violations or complaints from the community. While the facility's air permit does not allow it to release any air emissions, complaints from the community about smells indicate there may, in fact, be emissions after all. The DEP maintains a process of fines for different violations, but a fine doesn't remedy the impact a violation had on the community. In fact, at this juncture, it does not appear that fines deter the facility from committing additional violations. The DEP needs to find a way to monitor violations and take actions to protect residents' health whenever possible.
- While EHP recognizes there is currently no ongoing air monitoring at the facility, since the DEP has not permitted the facility to release any emissions, we believe it would be a show of good faith for the facility to offer to do meaningful air monitoring in response to residents' concerns, specifically those related to different odors being consistently emitted from the facility. This monitoring would also help ensure timely and transparent documentation of potential upsets or fugitive emissions events at the facility. Meaningful monitoring would consist of 24/7 monitoring of emissions, including radioactive elements, measured in no longer than 15-minute intervals at locations near human habitation. All of this data should then be available to the public in real-time.
- Due to the proximity of the proposed facility to wetlands, watersheds, and the flood plain, EHP believes it is important for an extensive water testing plan to be in place, making either MAX Environmental or the DEP responsible for monitoring water quality around the facility. The DEP did not renew MAX's national pollutant discharge elimination system (NPDES) permit for over 15 years, even though the permit is supposed to be renewed every five years. It is not clear in this application if Landfill No. 7 will fall under the same NPDES permit and, if it does, how will regular renewals be enforced, since that has clearly been an issue in the past. It is the NPDES permit that spells out different water quality parameters, so without clarity on water testing in the application, it is unclear how the water and water discharges will be monitored.
- One of the main reasons EHP does not support the approval of the Landfill No. 7 permit is, due to its proximity to wetlands and the creek, the concern for contamination and risk to

the environment and human health is too great. If this permit is to move forward, setback distances and buffers between the facility and the water or wetlands should be increased. The one wetland that is inside the proposed facility and that will be fully surrounded needs greater buffers on all sides, and MAX Environmental needs to explain how it plans to protect that land. While 50 feet is considered standard for a buffer, EHP would like to see this buffer increased in order to protect the water supply and the environment in this area.

Conclusion

In addition to the above-mentioned concerns with this permit, several parts of the application for the Landfill No. 7 expansion were not completed at all or were completed incorrectly. For example, on page 106, one question reads, "Will your project, activity, or authorization have anything to do with a well related to oil or gas production, have construction within 200 feet of, affect an oil or gas well, involve the waste from such a well, or string power lines above an oil or gas well? If 'yes' respond to 3.1-3.3. If 'no,' skip to question 4.0."¹⁷ In its application, MAX Environmental said "no" and therefore skipped the subsequent section. This is clearly an inaccurate statement, since MAX Environmental's website very clearly states that the facility does in fact accept oil and gas waste. This is just one of the many examples of inaccurate information MAX Environmental provided on the application, and for this reason alone, the permit should not be approved.

This Landfill No. 7 expansion presents critical risks to public health. The DEP needs to assure the safety of residents exposed to harmful emissions through both normal activities and accidents. These safety considerations need to be comprehensive, transparent, and public.

Thank you for the opportunity to provide comments regarding the permit for the proposed Landfill No. 7 at MAX Environmental Facility in Yukon, PA. Feel free to reach out to me or EHP generally for more information or clarification.

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