

Thank you for your comments concerning the draft renewal permit for the Bridgeton Landfill, Missouri State Operating Permit MO-0112771. To add clarity to the Missouri Department of Natural Resources' responses, the following definitions are provided from Title 40, Part 445.2 of the Code of Federal Regulations (CFR):

- *Contaminated storm water* means storm water which comes in direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater.
- *Landfill wastewater* means all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated storm water, contaminated ground water, and wastewater from recovery pumping wells.
- *Non-contaminated storm water* means storm water which does not come in direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater.

The following are the Department's responses to comments received during the public notice period.

Comment #1: Please hold a public hearing for the draft stormwater permit, MO-0112771.

Response: A public hearing was held by the Department on October 11, 2017, at 5:30 p.m. at the Bridgeton Recreation Center. Additional public comments were collected during this meeting and the public comment period was extended to November 13, 2017.

Comment #2: The permit fails to address radionuclides, which are a pollutant of concern associated with the West Lake Landfill. Discharge from the West Lake Landfill commingles with the discharge from Bridgeton Landfill therefore the pollutants of concern should be monitored monthly in the stormwater discharges of Bridgeton Landfill. As the delegated authority to implement and enforce the National Pollution Discharge Elimination System (NPDES) permitting program in the State of Missouri, the Department clearly has the authority to regulate radioactive materials in stormwater permits, and historic testing for radioactivity in stormwater at the site is significantly lacking.

Response: Monthly radionuclide monitoring has been added at Outfalls #007 and #008 which discharge stormwater originating from portions of Areas 1 and 2 of Operable Unit (OU) 1. In addition to existing and proposed discharges in the public notice draft, new Outfall #009 has been added to the permit, which also includes monitoring for radionuclides.

Comment #3: Limits should be required on radionuclide discharges in the permit.

Response: Title 40, Part 122.44(d) of the CFR requires limitations for all pollutants which the Department determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality. Existing data for the Outfalls proposed in the permit show the discharges do not cause, or have reasonable potential to cause, or contribute to an excursion above state water quality standards for radionuclides. However, as noted in the previous comment response, monitoring and data reporting for radionuclides will be required at

Outfalls #007, #008, and #009. Under Special Condition #5, the permittee is required to register for electronic reporting within 90 days. Once enrolled, all monitoring data required by the permit will be publically accessible through the U.S. Environmental Protection Agency's (EPA) Enforcement and Compliance History Online at <https://echo.epa.gov/>.

Comment #4: Monitoring should be done in the receiving tributaries and streams to see if they are contaminated by radioactive runoff from the landfill.

Response: Existing data for the Outfalls proposed in the draft show the discharges do not cause, or have reasonable potential to cause, or contribute to an excursion above state water quality standards for radionuclides. Further, of the existing data for the proposed Outfalls, no sample has exceeded the water quality standards for radionuclides. At this time, although monitoring requirements at Outfalls #007, #008, and #009 have been added, additional monitoring in the receiving waterbodies is not supported.

Comment #5: Leachate spills are not addressed by the draft permit. Will any contaminated runoff be treated and removed from the site through the same treatment protocols as leachate?

Response: The discharge of landfill wastewater or contaminated stormwater to waters of the state is not authorized by this permit. These wastewaters must be managed in accordance with the provisions contained in the Landfill Operating Permit and Missouri Solid Waste Management Law and Regulations; and Hazardous Waste Program (if applicable). Bridgeton Landfill has an onsite wastewater treatment facility for treating these waste streams prior to final treatment at Metropolitan St. Louis Sewer District (MSD) – Bissell Point Plant.

Comment #6: The permit does not adequately address whether the Bridgeton Landfill will be penalized if they are found in violation of releasing contaminated runoff.

Response: Discharging contaminated stormwater is a violation of this permit. The discharge of non-contaminated stormwater, which does not meet effluent limitations listed in this permit, is also a violation. Both actions are subject to enforcement by the Department.

Comment #7: The permit doesn't adequately address remediation of the radionuclide contamination at the site.

Response: This comment is outside the scope of the permit. The permit authorizes discharge of non-contaminated stormwater from the Bridgeton Landfill. Remedial actions and discharges from Areas 1 and 2 of OU 1 are handled under the authority of the EPA's Superfund Program.

Comment #8: The radioactively impacted materials (RIM) should be excavated to ensure water safety and to correct contamination issues.

Response: This is outside the scope of the permit. See response to Comment #7.

Comment #9: The permit does not adequately address radioactive waste being discharged offsite, including into the sewer system and the drinking water supply.

Response: The permit regulates discharges of non-contaminated stormwater to waters of the state and is protective of the designated uses. Monthly radionuclide monitoring has been added at Outfalls #007, #008, and #009 which discharge stormwater originating from portions of Areas 1 and 2 of OU 1. Existing data for the Outfalls proposed in the permit show the discharges do not cause, or have reasonable potential to cause, or contribute to an excursion above state water quality standards for radionuclides. Other non-water quality related issues are outside the scope of the permit.

Comment #10: The draft permit does not address the April 30, 2017, historic precipitation and subsequent runoff event, which was sampled by the Department and showed an exceedance of the Gross Alpha parameter.

Response: The discharge which occurred on April 30, 2017, flowed outside of the exterior fence on the northeast boundary of OU 1, Area 1 of the West Lake Landfill, not from an existing or proposed Outfall under the permit. Discharges from OU 1, Area 1 are under the authority of EPA Superfund Program. The information collected by the Department was shared with EPA and the potentially responsible parties (PRPs) who responded to the event by upgrading Best Management Practices (BMPs) and engineering controls in proximity to the discharge. For more information on this event, please see the report at <https://dnr.mo.gov/bridgeton/docs/2017-08-16-west-lake-landfill-stormwater.pdf>.

Comment #11: The West Lake Superfund Site has contaminants in air and water moving off-site. In addition, the Superfund area and surrounding areas have never been thoroughly sampled and analyzed for further contaminants (both radiological and non-radiological contaminants of concern).

Response: This is outside the scope of the permit. See response to Comment #7.

Comment #12: Commenter suggests toxins from West Lake can be cycled from the water inexpensively with plants, in a process called phytoremediation. Commenter also suggests vegetated buffer zones be utilized to treat toxins.

Response: The Department appreciates the recommendation. A phytoremediation system is not being applied at this site.

Comment #13: Impact on the wildlife population in the area needs to be carefully evaluated before proceeding with the renewal.

Response: Where applicable, the permit contains numeric effluent limitations for those pollutants in the discharge that cause, or have reasonable potential to cause, or contribute to an excursion above state water quality standards. Missouri's water quality standards include use designation and criteria for the protection of livestock and wildlife.

Comment #14: The permit should be denied.

Response: The Department's responsibility is to protect waters of state and their designated uses through the administration of state and federal environmental laws and regulations. As required by state law, the Department must promptly review site-specific permit applications for compliance with laws and regulations and if met, issue the permit.

Comment #15: The commenter requests the Department review the Weldon Spring permit for consideration of suitable treatment of radioactive contaminants before release to Missouri watersheds. Historic permit conditions required monitoring of radioactive materials in stormwater at this site. The Weldon Spring permit shows the Department has the authority to regulate radionuclides in stormwater.

Response: Monthly radionuclide monitoring has been added at Outfalls #007, #008, and #009 of the permit to assess the need for future control or treatment of the discharges. The Department is familiar with the treatment utilized at the Weldon Spring Site, but avers that these systems were necessary due to the higher levels of radionuclides in the leachate and leachate-impacted groundwater being collected and treated at the Weldon Spring Site.

Comment #16: Volatile organic compounds (VOCs), toluene, benzene, radon gas, and radionuclides can vent out to the public, which is a possible contaminated air exposure for the public. This venting could also occur during the transport of treated leachate to MSD.

Response: This comment is outside the scope of the permit.

Comment #17: The permit does not address pollutants in groundwater, also known as OU-3. Barium, nickel, benzene, toluene, radionuclides, VOCs, and other contaminants of concern are found in wells on site in groundwater monitoring reports.

Response: Groundwater at this site is under the authority of EPA Superfund, and is designated as OU-3. Further, the Solid Waste Management Program (SWMP) is the lead program for the

Department on all aspects of groundwater studies, monitoring, and remediation associated with the permitted boundary for a solid waste disposal areas.

Comment #18: Barium is being discharged in the stormwater of Bridgeton Landfill.

Response: Bridgeton stated in their application, received December 28, 2015, that barium is believed absent in the discharge from the Outfalls at this facility; however, barium is a pollutant of concern associated with the West Lake Landfill. Quarterly monitoring of barium is added to Outfalls #007, #008, and #009.

Comment #19: The best professional judgment of the permit writer should require the same parameters, effluent limits, and benchmarks for Outfalls #008 as for Outfalls #003, #004, #005, and #007.

Response: The draft permit has been modified to include the same parameters, effluent limits, and benchmarks at Outfalls #008 and #009 as at the other Outfalls at the site.

Comment #20: The proposed draft permit would likely increase the amount of pollutants allowed to enter waters of the state, thus contributing to the impairment of water quality and the environment.

Response: The permit renewal conforms to anti-backsliding provisions under the Clean Water Act. Further, the permit contains limitations for all pollutants which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality. The Missouri River is the only impaired waterbody receiving discharges from Bridgeton Landfill. The Missouri River is impaired for polychlorinated biphenyl (PCB) and chlordane, neither of which is authorized to be discharged from permitted Outfalls at Bridgeton Landfill.

Comment #21: A sediment sample (SED-4) taken from the north slope of OU-1 Area 2 was designated as a RIM sample. This area may reasonably have stormwater conveyed to Outfall #007.

Response: Monthly radionuclide monitoring has been added at Outfalls #007, #008, and #009 which discharge stormwater originating from portions of Areas 1 and 2 of OU 1.

Comment #22: The Department should amend the permit to require monthly radioactive monitoring for the following parameters: gross alpha, gross beta, total uranium (U-234, U-235, and U-238), total thorium (Th-228, Th-230, and Th-232), and total radium (Ra-226 plus Ra-228). Individual analysis of the above mentioned isotopes.

Response: Monthly monitoring has been added at Outfalls #007, #008, and #009 for the following radionuclides: gross alpha, beta particle and photon radioactivity (gross beta), total uranium, total radium, radium-226, and radium-228. Last, additional isotopic analysis is required for thorium, conditional upon the concentration of the gross and total radionuclides. See the permit and fact sheet for more information on radionuclide monitoring.

Comment #23: Due to the compliance history of Bridgeton Landfill and the significant frequency of outbreaks of leachate from the facility, the draft permit should require monthly sampling of pollutants, including leachate indicators.

Response: The discharge of landfill wastewater or contaminated stormwater to waters of the state is not authorized by this permit. Non-compliance or limit exceedance is not justification to increase the frequency of sampling but rather monitoring must be representative of the permitted discharge. Due to changing site conditions and activities, as well as variability in discharges from the site, the monitoring frequency for Total Suspended Solids has been increased to monthly. Monthly sampling will provide more representative data on solids in the discharges. In addition, monthly sampling for solids will provide a good indication of other pollutants of concern in the discharges, as solids are closely linked to other pollutants in stormwater discharges from sanitary landfills.

Comment #24: The Department needs to be clear when describing the 'subsurface event.' Please replace 'subsurface event' with 'subsurface smoldering event.'

Response: The terminology has been changed to ‘subsurface smoldering event.’

Comment #25: The Department should not rely on EPA to complete stormwater monitoring for radionuclides at the site before they make a decision on monitoring, as they currently only have a draft stormwater plan in place. Changes are likely to occur before the finalization of the plan, and it is unclear what it will contain. The finalization of the plan could take a very long time, given the time to finalization of other EPA documents. The Department should require radionuclide monitoring regardless of a final decision by EPA.

Response: Monthly radionuclide monitoring has been added at Outfalls #007, #008, and #009 which discharge stormwater originating from portions of Areas 1 and 2 of OU 1.

Comment #26: The Department should extend the public notice period for the draft permit.

Response: The 30 day public notice required by statute was extended in response to this comment. The public comment period for this permit took place from June 9, 2017, to November 13, 2017.

Comment #27: The commenter requests the Department be transparent in the back-and-forth in comments regarding this permit with the EPA, and commenting on the EPA draft stormwater monitoring plan. They also request the stormwater monitoring plan comments be made available to the public.

Response: As a result of public comment, the Department has posted to the web the comments sent to EPA on the Draft Stormwater Monitoring Plan, West Lake Superfund Site OU 1. The comments can be found at the link below.

[https://dnr.mo.gov/env/hwp/fedfac/docs/20171005CommentLetterDNRtoEPARISW\\_5.pdf](https://dnr.mo.gov/env/hwp/fedfac/docs/20171005CommentLetterDNRtoEPARISW_5.pdf).

Comment #28: The State of Missouri should keep in mind the waste does not belong where it is, it doesn't belong near a drinking water source, and it needs to be removed. It doesn't belong in the community.

Response: This is outside the scope of the permit. See response to Comment #7.

Comment #29: What is the difference between the State of Missouri's thresholds for the pollutants being monitored and the EPA's thresholds for the same stormwater pollutants?

Response: Pollutant monitoring for discharges under a Missouri State Operating Permit is based on application materials, known pollutants of concern, water quality standards, and effluent limitation guidelines. Further, pollutant monitoring must be representative of the discharge. All discharges to waters of the state, even those under the oversight of federal agencies, must meet all Applicable or Relevant and Appropriate Requirements, which include, but not limited to, Missouri water quality standards and effluent limitations. Thus monitoring requirements, effluent limits, benchmarks, or “thresholds” under different regulatory authorities should be similar.

Comment #30: Where does the EPA's monitoring of the water leaving the site stop and the Department's monitoring begin? Is it when it drops into the storm sewer, or when it crosses the street?

Response: There is a map in the draft permit showing Bridgeton Landfill drainage areas and their designated Outfalls under the permit. Similarly, EPA's Stormwater Monitoring Plan contains a figure illustrating the Outfalls and monitoring locations. The permit can be viewed at <https://dnr.mo.gov/env/wpp/permits/index.html>. The draft plan is available at <https://www.epa.gov/mo/west-lake-landfill>.

Comment #31: The lines designating the extent of the RIM at West Lake seem arbitrary, and have changed over time.

Response: This is outside the scope of the permit. See response to Comment #7.

Comment #32: The commenter provided three photographs during the public meeting which document what appears to be a hose discharging water. The commenter asks the Department to explain how the photo factors into the stormwater permit.

Response: The hose in the photo was identified as belonging to the St. Louis Metropolitan Sewer District, who stated the hose was not discharging landfill related water of any sort; therefore, the hose in question has no bearing on the draft permit.

Comment #33: More should be done by the Department at this site. The community and natural resources deserve to be strongly protected without hindrance, interference, or influence from the landfill owner.

Response: Discharge of non-contaminated stormwater from the Bridgeton Landfill is the only activity authorized by the permit. The permit contains requirements necessary to protect water of the state and their designated uses. Other non-water quality related issues are outside the scope of the permit.

Comment #34: The permit isolates areas for EPA's jurisdiction versus the Department's jurisdiction. How would commingling of effluent between the West Lake Site and the Bridgeton Landfill be prevented? This site has a history of surface RIM. We know from previous characterizations back in the 1980s the RIM is windblown and moved around by water. There is not currently a thorough characterization of where the RIM is located on the site. Any area of this site and areas near the site may be contaminated. The permit should be extended to monitor areas which are currently covered by EPA. The entire site should be characterized for RIM.

Response: Monthly radionuclide monitoring has been added at Outfalls #007, #008, and #009 which discharge stormwater originating from portions of Areas 1 and 2 of OU 1. Other aspects of this comment are outside the scope of the permit. See response to Comment #7.

Comment #35: The permit should implement testing of downstream sediment and other locations where sediment may accumulate, as there's a chance impacted sediment could be accumulating off-site.

Response: This is outside the scope of the permit. See response to Comment #7.

Comment #36: The U.S. Army Corps of Engineers is the right agency to clean up West Lake's nuclear weapons waste. The EPA should remain responsible for non-radioactive waste contamination at West Lake.

Response: This is outside the scope of the permit. See response to Comment #7.

Comment #37: What kind of treatment does the leachate receive in the on-site wastewater pre-treatment plant prior to it being sent to MSD?

Response: The pre-treatment plant at the Bridgeton Landfill utilizes clarification, screening, chemical addition, ultra-filtration, aeration, and chemical sludge separation. Additional information on the leachate treatment system can be obtained at <http://dnr.mo.gov/bridgeton/docs/2015-01LeachateManagementPlan-FullOperationCEC.pdf>.

Comment #38: These are some of the most toxic compounds on the planet. There is a known cancer cluster in this area. The EPA has a poor track record in dealing with this site. Republic Services has a history of non-compliance with the standards. It is the responsibility of the Department to protect the health of the people of Missouri.

Response: Discharge of non-contaminated stormwater from the Bridgeton Landfill is the only activity authorized by the permit. The permit contains requirements necessary to protect water of the state and their designated uses. Other aspects of this comment are outside the scope of the permit. See response to Comment #7.

Comment #39: The location of Bridgeton Landfill is a horrible site for a landfill. It's in the floodplain in a metropolitan area. It is not an approved location to hold hazardous waste.

Response: This is outside the scope of the permit.

Comment #40: It is concerning the PRPs would be in charge of their own monitoring. The laboratory Bridgeton Landfill uses was convicted of falsifying information. The Department should sample the site to ensure it is done correctly and honestly.

Response: Permittees in the state of Missouri do their own monitoring and reporting, or contracts with a laboratory providing this service. Title 40, Part 122.41 of the CFR states that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method; or any person who knowingly makes any false statement, representation, or certification in any record or other document maintained or submitted under the permit shall, upon conviction, be punished by a fine or imprisonment. It is the obligation of the permittee, under law, to provide accurate and true results and documentation. As a result of public comment, the Department has added Special Condition #17 which requires the permittee to submit laboratory reports including data, quality assurance analysis, and chain of custody for all discharge monitoring conducted in accordance with the permit for the Department's review.



Comment #41: Commenter indicated an area on a provided map, and asked if the area was being monitoring for radionuclides and other pollutants (to the west of the West Lake Area OU-2 Inactive Sanitary Landfill).

Response: The Department is not aware of any monitoring being conducted in this area. This area is under the authority of EPA.

Comment #42: What is the timeline for the final remedy of the site?

Response: This is outside the scope of the permit. See response to Comment #7.

Comment #43: If monitoring is done and the levels are lethal, what does that mean? Do the residents need to evacuate or do we start drinking and showering with bottled water?

Response: If monitoring data indicates the surface water discharges cause, have reasonable potential to cause, or are contributing to exceedances of Missouri's Water Quality Standards at the facility Outfall, corrective actions through the Department or EPA will immediately commence to find the cause of the discharge, remedy any existing stormwater management issue, and modifies the permit as necessary. For residents served by a municipal drinking water supply, radionuclides in finish water, served to the public, are controlled through the Safe

Drinking Water Act and require additional water supply system sampling independent of the monitoring required by this permit. The Department will continue to oversee and respond to conditions at the site, including public notification where and when appropriate.

Comment #44: Will the Department consider a fate and transport study studying where radioactive particles go when they go off-site, at the Outfalls of the landfill? Please require off-site stormwater testing for rad waste in the permit.

Response: Title 40, Part 122.44(d), of the CFR requires limitations for all pollutants which the Department determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality. Existing data for the Outfalls proposed in the permit show the discharges do not cause, or have reasonable potential to cause, or contribute to an excursion above state water quality standards for radionuclides. Monthly radionuclide monitoring has been added at Outfalls #007, #008, and #009 which discharge stormwater originating from portions of Areas 1 and 2 of OU 1. Additional study or off-site testing is not required under the permit.

Comment #45: If the RIM waste belongs to EPA, why did the State test the recent sediment in runoff?

Response: The Department has a daily presence monitoring the perimeter of the Bridgeton Landfill for odors and site upsets. When the illegal discharge was noted, the Department responded to stormwater overflow concerns by assessing the situation and collecting a stormwater sample for analysis on April 30, 2017. For additional information on this sample and result, see response to Comment #10. The portions of the site containing RIM are handled under the authority of EPA Superfund Program.

Comment #46: The permit must address all of the wastewater leaving the site regardless of where the waste originates. Include lagoons and water retention areas.

Response: Monthly radionuclide monitoring has been added at Outfalls #007, #008, and #009 which discharge stormwater originating from portions of Areas 1 and 2 of OU 1. Further, the permit contains requirements for permitted Outfalls that are necessary to protect waters of the state and their designated uses. Other aspects of this comment are outside the scope of the permit. See response to Comment #7.

Comment #47: Can you explain in a basic way what treatment is done at the site to the water?

Response: The stormwater treatment at the site employs BMPs to treat and abate the discharge of pollutants. BMPs are measures or practices used to reduce the amount of pollution entering waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure. BMPs at Bridgeton Landfill include rock check dams, berms which redirect water, sediment settling ponds, inspections, and others. Wastewater treatment processes are listed above in response to Comment #37.

Comment #48: The boundaries between West Lake Landfill and Bridgeton Landfill are complicated and unclear. This makes it challenging for the public to know who is responsible for regulating portions of the site.

Response: The Department understands the oversight is somewhat complicated. Maps are provided online at the Bridgeton Landfill site (<https://dnr.mo.gov/bridgeton/>), in the draft permit, and were displayed during the public meeting. Further, the presentation given at the public meeting is also available at the website above. The Department has made a concerted effort in an attempt to facilitate understanding of the regulatory oversight. If you have any further questions about this permit or the site, please contact the Department by phone at 573-751-3443, email at [contact@dnr.mo.gov](mailto:contact@dnr.mo.gov), or by mail at Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, MO 65102-0176.

Comment #49: Leachate is allowed to drain into the storm sewer system. Pictures documenting this have been taken.

Response: The discharge of landfill wastewater or contaminated stormwater to waters of the state is not authorized by this permit. See response to Comment #5.

We appreciate your comments on the draft permit and hope this adequately responds to your concerns. If you have any further questions about this permit, please contact Ms. Amberly Schulz by phone at 573-751-8049, email at [amberly.schulz@dnr.mo.gov](mailto:amberly.schulz@dnr.mo.gov), or by mail at P.O. Box 176, Jefferson City, MO 65102-0176.

Sincerely,

WATER PROTECTION PROGRAM

A handwritten signature in black ink, appearing to read "Michael J. Abbott". The signature is written in a cursive, flowing style.

Michael J. Abbott, Chief  
Operating Permits Section