



Five Year Review Progress Report for Lowry Superfund Site: December 2021

In the 2007 and 2012 five-year reviews, the EPA found the remedy was “functioning as intended” and “protective of human health and the environment.” In the 2017 review, the EPA requested more information and data to determine protectiveness on nine specific items. Those issues were resolved and the EPA issued an addendum to the 2017 FYR in the summer of 2021 stating that the remedies at the site protect human health and the environment and there is no evidence of risk to the public from contamination at Lowry Landfill. Please see below for more detailed information on the nine issues for which additional technical review was required in the 2017 FYR review.

Issue	EPA Deadline	Status	Notable
Issue #1: Discontinue potable water injections to evaluate changes in the North Boundary Barrier Wall (NBBW) area to inform groundwater model and possible future alternative remedial actions to maintain containment	9/30/2020	Completed	Cessation pilot test and report completed and approved by EPA/CDPHE Data shows containment is being maintained without potable water injection. An amended Water Augmentation Plan that allows for replacement of water lost (consumed) during treatment was approved by the Colorado Water Court in March 2020. This amendment allows for long-term cessation of potable water injection immediately north of the NBBW while meeting downstream surface water rights holders.
Issue #2: Capacity upgrades to the Water Treatment Plant (WTP)	9/30/2020	Completed	A larger capacity pipeline between the onsite WTP and Aurora’s receiving sanitary sewer, and upgrades to the WTP were completed in 2019. Metro Wastewater Reclamation District issued a new discharge permit in Jan. 2020, that accommodates treatment and discharge of increased flows.
Issue #3: Conduct capture zone analysis (CZA) for groundwater extraction system on, and north of the Superfund Site	9/30/2020	Completed	A final plan to conduct a North Boundary Barrier Wall (NBBW) Containment System Evaluation (CSE) that meets the substantive requirements of a CZA was approved by EPA on 10/16/2020. A draft NBBW CSE and Effectiveness Evaluations for all of the other groundwater extraction systems were submitted to EPA and CDPHE in the early part of 2021 for review and comment. Both were approved by the EPA and CDPHE in June and posted for public comment and finalized in the fall of 2021.
Issue #4: Identify and sample off-site private wells in the vicinity of the plume 1,4-dioxane plume	9/30/2019	Completed 8/2/2018	Approved by EPA
Issue #5/6: Update the Groundwater Monitoring Plan to add 1,4-dioxane for perimeter wells, delete iron, and incorporate the most recent Colorado Basic Standards for Groundwater	9/30/2020	Completed 9/6/2018	Approved by EPA
Issue #7: Update plume map and conceptual site model and assess need for additional institutional controls (ICs)	9/2/2020	Completed	EPA agrees that the plume has been adequately characterized and that there are no unacceptable risks to human health or the environment. No additional ICs will be required. EPA’s risk assessment supporting “no unacceptable risk” has been appended to the WSDs Final North End Assessment Report. EPA completed an updated Conceptual Site Model in June and responded to public comments on the model in the fall of 2021.

Issue #8: Re-evaluate updated toxicity values	9/30/2018	Completed 8/2/2018	Approved by EPA.
Issue #9: Review vertical migration compliance wells north of the Site and evaluate the need for additional wells.	9/30/2019	Completed	WSDs proposed long-term monitoring of deep groundwater in the 1,4-dioxane plume north of the Superfund Site to demonstrate vertical migration is not a problem. A North end monitoring plan was approved by EPA on 10/16/20.