

Comments on draft ROD Amendment for NuHart Plastic site

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These comments are submitted at the request of the North Brooklyn Neighbors (NBN). Previously, I have served as a consultant for the NYS Superfund process, through a Technical Assistance Grant (TAG). Because of the timing of the process, these comments have not been reviewed by the NBN staff or Dr. Gardella, my partner on the TAG grant. As such, they represent only my observations.

Overview

In general, I think that the proposed In Situ Solidification (ISS) is sound and represents a good approach to addressing the remaining soil contamination. I am not sufficiently familiar with the recent regulatory and public engagement to comment on the timing of the ROD amendment process. My remaining comments are directed at some clarification of statements in the draft RA, and suggestions for additional information that would enhance public understanding and confidence in the updated remedy.

Extent of contamination

The draft RA states that “Vertical delineation of contamination confirmed the bulk of remaining contamination extends approximately 4 feet below base of excavation at a maximum depth of 25 feet bgs.” Please provide additional information about the confirmation sampling (number, type, and depth of samples). Were “clean” samples collected below 25 feet bgs? If so, how many, and what threshold was applied?

The original ROD indicated that excavation would address: “Soil which exceeds the protection of groundwater soil cleanup objectives (PGWSCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in the site groundwater above standards” (Table on page 12). In contrast, the amended ROD is expressed primarily in terms of “grossly contaminated soil”. This raises the possibility that soil left in place, either within the ISS zone or below it, could adversely affect groundwater. The argument (in several places) is that groundwater flow through problematic soil will be reduced; however, it will not be eliminated. Please comment, including an explanation for limiting the vertical extent of the ISS.

Effectiveness of Remedy

In the evaluation of threshold criterion #1 (Protection of public health and the environment), the RA states: “the proposed amended remedy will equally comply with this criterion with the addition of ISS to immobilize LNAPL source material remaining post-excavation.”

This statement could be viewed as problematic in several aspects:

- Leaving contamination in place, relative to removing all contaminated soil, cannot be considered “equal” in any meaningful sense.
- The apparent equivalence is dependent, in part, by shifting from criteria that include SCOs based on “protection of groundwater,” to a less stringent target that is based only on “grossly contaminated soil”.
- The RA is not clear regarding the expectation for groundwater that could flow beneath the ISS zone.

It is important to consider that ISS does not eliminate any impact to groundwater. Importantly, effective implementation should significantly reduce groundwater advection through the contaminated soil. However, solidified soil is still porous, and the pore fluid will be in contact with grossly contaminated material, raising its concentration. Thus, over time, the normal process of diffusion will result in the release of contaminated groundwater from the ISS zone, possible into areas of increased flow. It would be plausible to suggest that such a release would have a small effect on human health and the environment, but not zero. The RA should provide more detail to support this sort of argument and communicate its scientific foundation. Put differently, the implementation of ISS does not “turn off” all release of contaminant.

The above concerns should be addressed by an expanded analysis of criterion #1. The current RA provides only one sentence!

For criteria #2 (SCGs), the evaluation should state clearly that the SCGs have been modified and defend this decision.

Site Monitoring Plan

The original ROD and RA includes the development of a Site Management Plan, which includes a Monitoring Plan. Given the past trajectory of the remedy implementation, including multiple modifications and the discovery of unexpected contamination, it would be prudent and appropriate to present core elements of the Monitoring Plan NOW rather than at a future time. For example, how will sampling be conducted to assess the effectiveness of the ISS remedy? What steps will be taken if groundwater contamination is discovered? What would constitute an unacceptable level of groundwater contamination? How long will monitoring last?

Miscellaneous

- The opening section of the RA refers to the 10,000 mg/kg threshold for grossly contaminated soil. The statement in the text states: “This is the concentration at which non-aqueous phase liquid (NAPL) would be expected to be present”. However, this is only one of the criteria listed in DER-10, and it is not specific to the contaminant of concern, which has a very low aqueous solubility and may be present as NAPL at much lower soil concentrations.
- In Section 7.2, completed elements of the ROD are discussed, including the excavation in the eastern TCE source area, with reference to 27 endpoint samples. Were remedial goals met in this area? If not, what is the expectation for future impacts on groundwater?
- Please clarify the costs of the original remedy. The RA states that the extra cost of implementing the original ROD would be \$75M (page 16) or \$55M (page 17), versus \$40M already spent. Can these large estimates be substantiated?
- Have the results of the LNAPL pilot test been shared with stakeholders? How will the offsite recovery be affected by the ISS process?