

**Submission to the New York State Department of
Environmental Conservation
Comments on Operable Unit 1 of the Geddes Brook/Ninemile Creek
Site, Onondaga County, New York
Comments Prepared by Donald Hughes, Hughes Consulting Services on Behalf
Atlantic States Legal Foundation, Inc., January 2009**

These comments specifically address Operable Unit 1 in Geddes Brook/Ninemile Creek (GB/NMC), including the IRM for Geddes Brook.

Atlantic States Legal Foundation, Inc. (ASLF) applauds the efforts of the NYSDEC and Honeywell Inc. to clean up the extensive contamination that exists in Geddes Brook and Ninemile Creek. This cleanup effort is long overdue as these tributaries have suffered from decades of abuse from both the Wastebeds and discharges from the LCP facility. In addition, runoff from numerous landfills and other industrial operations combined with the above mentioned sources have resulted in extensive deposits of Solvay waste, extensive calcite precipitation, and contamination from a host of substances including hexachorobenzene, mercury and other toxic metals, PCBs, PAHs, and chlorinated dioxins and furans. The latter two groups of substances are among the most notoriously toxic substances known. The tributaries and wildlife that frequent them, and people who live near, drive by and recreate there have paid a terrible price for these many decades of abuse.

COMMENT 1. The SEDIMENT CONTAINMENT AREA (SCA) should be considered for disposal of contaminated sediments and soils removed as part of this project.

The Proposed Plan for OU-1 makes a comparison of two disposal options: an off-site landfill located in Rochester, NY, and the former LCP site. The Proposed Plan fails to consider the third option, namely disposal at the Sediment Containment Area (SCA) to be constructed on Wastebed 13. ASLF requests the NYSDEC, with the concurrence of the USEPA, to re-evaluate the Proposed Plan with disposal of excavated soils and sediments from OU-1 and the Geddes Brook IRM into the SCA. The total volume of material to be removed is:

OU-1 sediments + soils	59,000 – 73,000 cy
Geddes Brook IRM sediments	4,700 cy
Geddes Brook IRM soils	62,000 cy

Thus, the total volume is under 150,000 cy. This amount represents a miniscule amount in comparison to the estimated 2.65 million cubic yards of sediments to be dredged from Onondaga Lake. The hydraulically dredged lake sediments will occupy a considerably larger volume when discharged as a slurry into the SCA. Thus, the addition of Geddes Brook and Ninemile Creek soils and sediments would have negligible impact on the SCA design.

The SCA offers numerous advantages for disposal:

1. It is close by so transportation costs and environmental impacts will be minimal.
2. The site is already designed to contain sediments from Onondaga Lake. These sediments are similar to GB/NMC sediments (high calcite and Solvay waste content) and contain similar contaminants.
3. The SCA sits on top of an existing wastebed. Thus, no additional real estate is sacrificed for waste disposal.
4. The underlying Solvay Waste, on the order of 60 feet thick, serves as additional long-term protection against potential leakage of contaminants in the future.

ASLF recognizes that this facility is nearing the end of the design phase. With proper planning, it should be possible to coordinate sediment and soil removal activities with construction of the SCA. Consideration should be given to construction of an intermediate staging facility if the SCA is not ready in time to accept sediment and soils from this cleanup effort.

COMMENT 2: The former LCP chlor-alkali facility, despite its status as a remediated site, is NOT a suitable disposal site.

The sediments to be removed from Geddes Brook and Ninemile Creek contain numerous contaminants. In addition to total mercury, the sediments contain:

methyl mercury	up to 20 ppb
arsenic	up to 100 ppm
copper	up to 189 ppm
lead	up to 357 ppm
nickel	up to 109 ppm
hexachlorobenzene	up to 140,000 ppb
polyaromatic hydrocarbons (floodplain soils contain even higher concentrations of PAHs)	up to 55,000 ppb
PCBs	up to 2,000 ppb
chlorinated dioxins and furans	up to 218 ng/kg as TEQ for humans & mammals

This wide variety of toxic contaminants—none of which breakdown quickly if at all--needs to be handled with great care, and disposed of in a facility that is designed to completely contain them for the long term. Such as facility is being constructed on Wastebed 13 to contain sediments dredged from Onondaga Lake. These sediments contain a similar suite of chemicals. (see Comment 1 above.)

LCP site is not a permitted hazardous waste facility. It is a remediated chemical plant which still contains copious amounts of mercury, as well as residual PCBs in soils and sediments. It is *not* lined. Containment of environmental contaminants depends on a

slurry wall and continuously pumping and treating site groundwater indefinitely into the future. This is not a sustainable solution. It makes no sense from a policy or environmental engineering point of view to add contamination to this site. Not only would the selected remedy for OU-1 and the Geddes Brook IRM *increase* the amount of mercury and PCBs at the LCP site, it would also add contaminants not currently found at the LCP site, such as hexachlorobenzene and chlorinated dioxins and furans.

At the time that the Proposed Remedial Action Plan for the LCP Bridge St. subsite was proposed, David Coburn, Director of the Onondaga County Office of Environment offered the following comments on behalf of Onondaga County:

“The County does not believe the creation of a permanent mercury waste landfill on the shores of Onondaga Lake is desirable. While it is time for action, the County cautions that it would be foolhardy to assume that the proposed remedy represents a complete, final or lasting solution to the gross contamination at this site.”

Mr. Coburn went on to cite the New York State DEC’s reasons for rejecting, for a second time, Allied-Signal’s Remedial Investigation report:

“The Remedial Investigation Report is inadequate because of substantial deficiencies in its description of contamination at and near the Site and substantial deficiencies in its assessment of the risks to human health and the biological community posed by such contamination. The Remedial Investigation Report did not accurately and conservatively assess risks to human health, underestimated potential risks to the biological community, and did not provide adequate information for remedy selection and design.”

At the present time, to the best our knowledge, this lack of “adequate information for remedy selection and design” has never been corrected. Thus, the State, together with Allied-Signal (now Honeywell), relied on insufficient data on which to create a remediation plan. Reliance on a slurry wall, groundwater treatment, and a yet-to-be-constructed cap for permanent containment of mercury wastes is foolhardy indeed. To *add* contamination to this site adds insult to injury.

The Proposed Plan makes the claim that disposal at the LCP site would be compliant with “location-specific and action-specific ARARs.” *ASLF contends that this assertion is not true, and that therefore, this disposal option fails to meet the “threshold criteria” specified under CERCLA.*

As noted above, the LCP site is not lined, and therefore *does not* comply with the requirements for a landfill as provided in the NYSDEC Part 360 and Part 370 regulations. These regulations require a composite liner, leachate collection system, as well as an engineered cap. The cap is the only component which will be constructed at the LCP site.

As noted on the NYSDEC website:

“The liner required for an industrial/commercial waste monofill landfill is a double composite liner with primary and secondary leachate collection and removal

systems. Alternative liner system designs will be considered if the applicant demonstrates that the proposed alternative liner will prevent a negative impact on groundwater.”

Nowhere do NYSDEC regulations state that an *unlined landfill* is an appropriate method of managing industrial waste.

COMMENT 3. The complete removal of contaminated sediments and floodplain soils under the Geddes Brook IRM is completely appropriate.

ASLF endorses the proposed IRM as a means of eliminating contamination in and around Geddes brook. In addition, the restoration of meanders and creation of wetlands will be a positive step towards restoring this badly degraded waterway. ASLF recommends that the wetland creation be done in such a manner that the wetland habitat is permanently restored with native wetland plant species. Care should be taken to eliminate invasive species such as phragmites, not only within the project area, but also in adjacent areas. Failure to remove invasive species in a large contiguous area will only guarantee their return in the near future.

COMMENT 4. Uncorrected injuries to the environment must be addressed under Natural Resources Damage Assessment (NRDA).

The State and USEPA must recognize that this remediation effort will not correct many injuries inflicted on Geddes Brook and Ninemile Creek. In particular, meanders that were destroyed due to construction of Wastebeds 1-8, followed by Wastebeds 9-11, will not be restored under the proposed Remedy. While ASLF applauds the creation of habitat along Geddes Brook, this does not compensate for the loss of significant wetlands and stream sinuosity in Ninemile Creek. This loss should be compensated through the NRDA.

Comment 5. USEPA has established a water quality criterion of 0.3 ppm (mg/kg) mercury in fish tissue. This should be considered a specific cleanup objective.

The USEPA issued a unique water quality criterion for mercury and methylmercury — one which is based on the concentration of these substances in fish tissue. The Proposed Plan states that the preferred remedy is intended to achieve fish tissue mercury concentrations ranging from 0.1 (ecological goal) to 0.3 mg/kg (USEPA water quality criterion). It is not clear from the plan whether these targets are actually enforceable. ALSF recommends that these targets be established as enforceable goals for the cleanup of these two waterways.

Comment 6. The Preferred Remedy for OU-1 —Alternative 3 — appears to be a reasonable compromise in terms of environmental protection versus cost. However, ASLF cautions against several components of this Alternative.

a. There appears to be an overall assumption that cleanup of mercury will result in cleanup of other contaminants. While this may be true in many locations, the data indicate that it is not always true. Hexachlorobenzene (HCB) occurs at alarmingly high

concentrations in the sediments of both Geddes Brook and Ninemile Creek. HCB is above the Wildlife bioaccumulation criteria of 252 µg/kg in many cores, especially at depths greater than 75 cm (see Figure 5-10, GB/NMC RI; TAMS, July 2003). ***The human health criterion of 3.15 µg/kg is exceeded in every sample, at all depths. ASLF recommends that HCB be used, in addition to mercury, as a primary indicator of whether portions of the site are adequately cleaned up.***

b. There is too much reliance on capping. Capping should be used only as a last resort, because it is subject to erosion, and therefore requires maintenance. Additional data gathered during the Pre-design Investigation (PDI) should be used to determine where, for example, some additional dredging could be used to eliminate capping. It does not make sense to place a 2-foot thick cap if only 1-foot of contamination remains.

c. The use of 3-feet as a delimiting depth for the removal of floodplain soils appears to be based simply on the fact that deeper soils were not sampled. The depth of soil removal should not be fixed, but rather should vary depending on the results of the PDI.