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Dear Ms Sosa:

**RE: NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION  
CONTINGENCY PLAN; NATIONAL PRIORITIES LIST: DELETION OF THE  
HOOKER (HYDE PARK) SUPERFUND SITE – DOCKET ID NO. EPA-HQ-  
SFUND-1983-0002**

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We are counsel to Great Lakes United (“GLU”), a bi-national Canadian-U.S. coalition of approximately 100 non-government organizations based within the Great Lakes Basin. GLU has offices in Buffalo, New York, Ottawa, Ontario, and Montreal, Quebec. A list of the member organizations of GLU appears at Appendix A to these submissions. We have been instructed by GLU to make the following submissions opposing the Environmental Protection Agency (“EPA”) deletion of the Hooker Hyde Park Superfund Site (“Hyde Park”) from the National Priorities List (“NPL”).

### **Statutory Context**

The NPL is an appendix to the National Contingency Plan (“NCP”). The latter, originally prepared under federal water pollution control legislation, was revised pursuant to section 105 [§9605] of the *Comprehensive Environmental Response, Compensation, and Liability Act* (“CERCLA” or “Superfund”), 42 U.S.C. §9601 et seq. (1980), as amended. Section 105 authorized revision of the NCP in order to establish the NPL, a list of top-priority facilities presenting the greatest danger to health, welfare, or the environment arising from the release or threatened release of hazardous substances, pollutants, or contaminants. The NCP, in conjunction with other CERCLA authorities (e.g. section 104 [§9604], establish the ground rules for action by EPA in responding to releases or threatened releases of hazardous substances, and procedures for making cleanup decisions.

EPA can perform relatively simple cleanup steps, defined as “removal” actions under section 101(23) [§9601(23)] of *CERCLA* and, for example, 40 C.F.R. §300.415 of the NCP, at any site posing an immediate threat to human health or the environment. EPA is not precluded from acting if a site is not on the NPL. For example, being on the NPL is not a precondition to EPA’s ability to perform removal actions, such as removing leaking drums [See, for example, 40 C.F.R. §300.415(e)(7)].

EPA can also investigate the need for more extensive cleanup actions, and implement these more extensive cleanups at NPL sites. These more extensive cleanups are defined as “remedial actions” under section 101(24) [§9601(24)] of *CERCLA* and 40 C.F.R. §§300.420, 425, 430, 435 of the NCP. The Act defines “remedial action” in part as meaning “those actions consistent with permanent remedy taken instead of or in addition to removal actions...” NPL sites may be the subject of remedial actions financed by the Hazardous Substance Superfund (“Fund”), also established under *CERCLA*. In general, NPL-listing is a prerequisite with respect to EPA’s authority to implement long-term cleanup remedies, such as groundwater treatment, qualifying as remedial actions under section 101(24) of *CERCLA*. Sites deleted from the NPL still remain eligible for Fund-financed remedial actions, should future conditions warrant such actions. However, for a deleted site to be eligible for restoration to the NPL, there must be a “significant” release from the site, though the site may be restored to the NPL without application of the Hazard Ranking System (“HRS”) otherwise authorized under the Act [40 C.F.R. 300.425(e)(3)].

### **Site Background and History Leading to the Listing of Hyde Park on the NPL**

The August 20, 2012 *Federal Register* notice [77 Fed. Reg. 50,038 (2012) (“2012 FRN”)] issued by EPA, sets out the site background and history leading to the listing of Hyde Park on the NPL as follows:

- Hyde Park is a 15-acre site located in the northwest corner of the Town of Niagara, New York;
- The Niagara River, an international boundary, is located 2,000 feet to the northwest, down the Niagara Gorge which descends approximately 350 feet below the surface of the landfill;
- The Niagara River flows into Lake Ontario approximately 10 miles downstream of the site. Lake Ontario is a drinking-water source for millions of people [in the United States and Canada];
- The Bloody Run is a small drainage area flowing north from the landfill and considered part of the site. The stream flows under a neighbouring industry via a storm sewer, which emerges at the Niagara Gorge;
- The geology underlying Hyde Park is glacial overburden overlying fractured Lockport Dolomite bedrock;

- Groundwater in the vicinity of the landfill flows in both the overburden and the bedrock. Generally, the overburden is saturated at depths below ten feet;
- The groundwater movement from the landfill is both downward and horizontal. Some of this groundwater exits the Niagara Gorge Face in the form of seeps that flow into the Niagara River;
- Contaminants migrate from the landfill in two forms: (1) aqueous phase liquid (“APL” or contaminated groundwater) and (2) dense non-aqueous phase liquid (“NAPL”);
- Hooker Chemical (“Hooker”), now Occidental Chemical Corporation (“OCC”), disposed of approximately 80,000 tons of waste at Hyde Park from 1953 to 1975. These wastes were primarily chlorobenzenes, chlorotoluenes, halogenated aliphatics, and 2,4,5-trichlorophenol (“TCP”) still bottoms;
- An estimated 3,300 tons of TCP were disposed of at Hyde Park. TCP wastes are known to contain significant amounts of dioxin. EPA has estimated that approximately 0.7-1.6 tons of dioxin were associated with the TCP wastes at Hyde Park;
- Hyde Park was proposed for listing on the NPL in December 1982 and was listed on the NPL in September 1983.

### **Actions Leading to Selected Remedial Action for Hyde Park**

The 2012 FRN also summarizes the actions that led directly to the selected remedial action for Hyde Park as an NPL site:

- EPA sued Hooker in 1979 in federal district court seeking to require the company to remediate the site;
- A federal district court judge approved a settlement agreement between the parties in April 1982;
- An aquifer survey completed in 1983 by the company defined the extent of contamination in the overburden and bedrock, and assessed remedial alternatives and was used by the parties to agree on remedial actions to be performed at Hyde Park. The remedial actions were documented and approved by the court in 1986;
- During this period EPA also performed a risk assessment using worst case exposure scenarios that indicated that the greatest risk from Hyde Park was the consumption of fish contaminated with dioxin;
- Follow-up work also resulted in EPA issuing in 1985 an enforcement decision document (“EDD”) documenting the remedial action selected for the Hyde Park cleanup;

- EPA acknowledged that the APL and NAPL plumes would not be remediated to drinking water standards because of the persistent nature of NAPL. Therefore, the goal of the remedies selected in the EDD was to hydraulically contain contaminated groundwater (APL plume) in the vicinity of the site, while extracting as much NAPL as practicable;
- In May 2012, EPA clarified that the remedy selected for the site in the EDD is a containment remedy and not an aquifer restoration remedy intended to restore the aquifer to its best beneficial use (i.e. a source of drinking water) and that the goal of a containment remedy is to prevent migration of disposed waste and leachate along with affected groundwater from a landfill or site.

### **EPA Rationale for Deleting Hyde Park from the NPL**

The 2012 FRN also sets out EPA's rationale for deleting Hyde Park from the NPL. In summary, EPA states that:

“The NCP specifies that EPA may delete a site from the NPL if ‘all appropriate Fund-financed response under CERCLA has been implemented, and no further response action by responsible parties is appropriate’. 40 CFR 300.425(e)(1)(ii). EPA, with the concurrence of the State of New York, through NYSDEC, believes this criterion for deletion has been met because [the] landfill cap has decreased leachate generation and as a result, NAPL mobility has decreased. In addition, overburden and bedrock hydraulic containment is effective in containing both NAPL and APL plumes within the TI zone documented in the 2011 ESD and prevent contaminants from seeping into the Niagara River. Finally, ICs prevent disturbance of the landfill cap and consumption of contaminated water. Consequently, EPA is deleting this Site from the NPL. Documents supporting this action are available in the Site files” [77 Fed. Reg. 50,043 (2012)].

Among the particular points made by EPA in the 2012 FRN in support of the above conclusions include:

- The source control program, whose purpose is to reduce the amount of chemicals migrating down from the landfill by removing any mobile NAPL remaining in the landfill, has not yielded large amounts of NAPL due to either the remedial measures instituted, such as the landfill cap, or other factors set out in the 2012 FRN. To date, more than 300,000 gallons of NAPL have been removed and destroyed;
- Both APL (above MCLs) and NAPL were not observed in any of the overburden monitoring well locations after 1996, indicating that the overburden barrier collection system serves as an effective barrier to off-site NAPL migration;
- The APL plume containment system, consisting of three purge wells installed at the Niagara Gorge Face in 1994, contains and collects a significant portion of the APL

plume; the portion of the plume not collected by these wells is monitored by monitoring well and piezometer clusters;

- The APL is treated on-site at the leachate storage and treatment facility constructed by OCC in 1990;
- The entire landfill was capped in 1994, is routinely inspected for erosion, and is currently in excellent condition;
- Approximately 30,000 cubic yards of contaminated sediment was excavated from the Bloody Run drainage area, and other remedial work has been performed;
- The Niagara River Gorge Face has been remediated, and human access to the seeps is prevented by the installation of fences and the diversion of seeps to culverts;
- Institutional controls that run with the land, such as restrictive covenants and environmental easements, have been placed on the Hyde Park property so that the various remedial actions can be implemented, facilitated, and monitored;
- OCC undertook other remediation measures relating to on-site lagoons, area sewers, and hydrogeological studies of contaminant movement between rock formations;
- A bioaccumulation study of dioxin levels in Lake Ontario fish was undertaken, which indicated that dioxin was bioaccumulating in the tissues of various Lake Ontario fish species at a range of rates that overall was regarded as protective; and
- Detection levels (generally in the 1 part per billion range) for certain contaminants such as PCBs, pesticides, Mirex, were not exceeded and thus did not necessitate calculating possible impacts to the Niagara River Gorge. The detection level for dioxin (9.52 picograms per liter) also was not exceeded.

Overall, the 2012 FRN indicated that because the performance goal for the remedial action is containment of contaminated groundwater, EPA was satisfied after considering multiple lines of evidence that Hyde Park contamination is being hydraulically contained [77 Fed. Reg. 50,043 (2012)].

### **GLU Reasons for Opposing the Deletion of Hyde Park from the NPL**

Notwithstanding the above measures recorded by EPA in its 2012 FRN, GLU opposes deletion of Hyde Park from the NPL for the scientific, legal and policy reasons set out below.

#### **Scientific Reasons for Opposing Deletion of Hyde Park from the NPL**

GLU's scientific reasons for opposing the deletion of Hyde Park from the NPL originate with Canadian-U.S. citizen group intervention as friends of the court (*amici curiae*) in the federal district court litigation in Buffalo, New York. As noted above, approval by federal district court

of the settlement agreement between the parties in 1982 set in motion the requirements of the environmental remediation that has subsequently occurred at Hyde Park.

It was the overall scientific position of the *amici* (the Ecumenical Task Force of Buffalo, New York, Operation Clean-Niagara, Ontario, and Pollution Probe, Toronto, Ontario) at the time of the 1981 settlement hearings in federal district court that complete cleanup, removal, and destruction of the Hyde Park wastes was infinitely preferable and economically feasible in comparison to a strategy of on-site containment because, given the nature and quantity of the hazardous wastes present and the hydrogeological conditions at the site, containment would be necessary in perpetuity, and its effectiveness over the long-term would be highly uncertain, as it was expected only to capture 90 per cent of the contaminated groundwater derived from the waste buried at the site. Put another way, the containment strategy could result in continued migration to the Niagara River of a possible 10 per cent of the 80,000 tons of hazardous waste buried at Hyde Park, and that this would represent a significant impact to the Niagara River and Lake Ontario in the long term and result in the bioaccumulation of contaminants up the food chain. Furthermore, it was experts for the *amici* (Grant Anderson, hydrogeologist, and Dr. Doug Hallett, environmental chemist) testifying at the settlement hearing that predicted that contaminants could be, and were in fact, reaching the Niagara River from the Gorge Face, and that the Rochester Shale, beneath the Hyde Park landfill, did not form an impermeable barrier to groundwater moving downward. In effect, therefore, the Hyde Park landfill was like a box without a bottom. The particulars of that scientific position, as well as a full summary of the examinations in chief and cross-examinations of all witnesses, and oral and written arguments of counsel for the parties at the settlement hearing are set out in Appendix B to these submissions.

Despite the 1982 judicial approval of the hydraulic containment strategy of the parties (Hooker, the United States, and New York State), even federal district court noted during the course of its reasons for judgment that:

“The basic concern which underlies this lawsuit is not the presence of the chemicals in the Landfill itself but the fact that these chemicals will migrate away from the Landfill toward the Niagara River and Lake Ontario. Given the deadly toxicity of these chemicals in even minute dosages, the spectre of these wastes seeping into the Niagara River is indeed frightening” [*United States v. Hooker Chemicals and Plastics Corporation*, 540 F. Supp. 1067, 1073 (U.S. Dist. Ct., W.D.N.Y. 1982)].

Set against this background, GLU submits that all the EPA 2012 FRN does is confirm that the remediation strategy chosen (hydraulic containment) needs to be in place in perpetuity. Accordingly, there is no justification for deleting Hyde Park from the NPL given its hazardous contents. As the EPA 2012 FRN itself notes, Lake Ontario is a drinking-water source for millions. Indeed, Lake Ontario is the drinking water source for approximately 10-20 per cent of the population of Canada.

Moreover, the 2012 FRN leaves certain key scientific questions unanswered. For example, the detection level for certain indicator chemicals noted above, such as PCBs, pesticides, and Mirex, is stated to be generally in the 1 part per billion range as set out in the following Table 1:

**Table 1: Detection Levels for Certain Chemicals Identified in 2012 FRN**

<b>Chemical</b>	<b>Detection Level (in micrograms per litre - parts per billion)</b>
PCBs	0.20-0.098
Pesticides	0.050
Mirex	0.050

**Source: 77 Fed. Reg. 50,042-50,043 (2012)**

However, a 1993 study showed that wildlife species common to the Great Lakes (eggs of bald eagles, herring gulls, Caspian terns, double-crested cormorants, white leghorn chickens, and ranch mink) could be adversely impacted by water concentrations of PCBs in the 0.1 to 31 parts per quadrillion range, or *five orders of magnitude lower than the detection levels used by the parties in connection with Hyde Park*. The study authors concluded that:

“These toxic substances [PCBs and similar polychlorinated hydrocarbon – PCH – compounds, such as dioxins] will be active in the Great Lakes for many years. Because they cannot be removed effectively from the Great Lakes once released, extraordinary efforts should be made to minimize *any* further point source releases of these compounds and any other PCHs with similar modes of action to the Great Lakes” [emphasis in original]. The study appears at Appendix C to these submissions.

In the circumstances, it would not be prudent to delete Hyde Park from the NPL in part on the basis of detection levels that are not sufficiently robust to detect hazardous substances in water at levels where they may still cause injury to wildlife species common to the Great Lakes.

Finally, there is some scientific evidence that the western portion of Lake Ontario may be subject to earthquake activity. The authors of a 1998 study observed that seismic hazard may be underestimated in areas, such as that encompassing western Lake Ontario, that are devoid of documented large earthquakes. Factors examined in the study suggest that “it would not be unreasonable to expect a major earthquake in the western Lake Ontario area because” it is where “at least three regionally extensive linear zones converge”. The study reports that seismic activity “in the area of the study is most abundant adjacent to and beneath the western part of Lake Ontario (Figs. 16 and 17)”. Figures 16 and 17 include the Niagara River. The study authors conclude that arising from the foregoing “this particular region may have a greater potential for tectonic activity and large magnitude earthquakes than heretofore believed” (see Appendix D to these submissions). It is not clear whether EPA has considered this evidence and its implications for the integrity of the hydraulic containment system in place at Hyde Park. In the opinion of GLU, this information presents a further reason not to delete Hyde Park from the NPL.

### **Legal and Policy Reasons for Opposing Deletion of Hyde Park from the NPL**

There are at least four legal and policy reasons why GLU opposes deletion of Hyde Park from the NPL.



First, in establishing the concepts of removal and remedial actions in *CERCLA*, the Congress of the United States sought to ensure that the sites posing the gravest hazard to human health and the environment would be allocated the greatest resources to ensure cleanup. In general, therefore, it is our understanding that whether a cleanup activity is characterized as removal or remedial is of considerable significance because it affects not only the availability of Fund monies (i.e. for non-NPL sites), but also the thoroughness and the cost of the studies and reports that must be prepared, and the extent of the procedural requirements that must be satisfied, before cleanup can occur or continue. Hyde Park cleared the hurdle of becoming an NPL site 30 years ago. By delisting Hyde Park without solving the underlying problem that the wastes that made Hyde Park an NPL site three decades ago are still there in 2012, EPA erects a potential obstacle in its own path by needing to demonstrate that any future observed release from the site is “significant” before the site can be restored to the NPL. Indeed, the obstacle to restoring Hyde Park to the NPL posed by delisting may be even more onerous than that because EPA states in the 2012 FRN that the agency “may initiate further action to ensure continued protectiveness at a deleted site *if new information* becomes available that indicates it is appropriate” [77 Fed. Reg. 50,040 (2012)] (emphasis added). If the test for restoring Hyde Park to the NPL is the presence of “significant” and “new” information then this will only further hamper EPA remedial action efforts given what is already known about the site and its potential impacts.

Second, just as the Canadian-U.S. citizen groups that intervened in federal district court in 1981 were concerned that the court was approving a containment strategy that would have to be implemented in perpetuity, rather than a permanent solution that would end once and for all within a finite time period the problems posed by Hyde Park, it is our understanding that this very concern has been a much more widely recognized phenomenon in the United States under *CERCLA*. For example, in 1989 the Office of Technology Assessment (“OTA”) concluded that the failure of Congress to define more precisely what it meant by “permanent” in *CERCLA*’s preference for permanent remedies, allowed EPA too much flexibility to pursue impermanent remedies, which were often selected in order to reach settlements when potentially responsible persons (“PRPs”) or the government were unwilling to spend more money on remedial action. The OTA estimated that PRPs saved 50 percent (\$1 billion) in ultimate cleanup costs in fiscal year 1988 due to EPA’s willingness to agree to impermanent remedies. The OTA concern at the time was that the ultimate cost to clean up these sites would be far higher and take far longer as a result [See generally, Office of Technology Assessment, *Coming Clean: Superfund Problems Can be Solved*, (Washington, D.C.: OTA, 1989)]. In these circumstances, delisting Hyde Park from the NPL compounds the problem of the impermanent containment strategy that was approved for the site in the first place.

Third, any defects in the settlement agreement identified by *amici* in the 1981 settlement hearing (see Appendix B to these submissions) that were not corrected by subsequent remedial action can only be compounded by delisting Hyde Park from the NPL.

Fourth, as a matter of law GLU does not agree with EPA that conditions at Hyde Park meet the NCP criteria for deletion from the NPL. The NCP states in part that EPA may delete a site from the NPL if “all appropriate Fund-financed response under *CERCLA* has been implemented and no further response action by responsible parties is appropriate” [40 C.F.R. 300.425(e)(1)(ii)]. In fact, “further response action” will be required post-NPL deletion of Hyde Park. The 2012 FRN



itself notes the collection, treatment, maintenance, monitoring, sampling, pumping, inspection, and related activities that “OCC must perform” [77 Fed. Reg. 50,043 (2012)]. These further response actions are necessary components of the remedial action approved as a containment strategy that OCC, as the responsible party, must implement. These further response actions are also necessary because, as EPA admits in the 2012 FRN, “hazardous substances remain at the Site above levels that would allow for unlimited use with unrestricted exposure” [77 Fed. Reg. 50,043 (2012)]. That hazardous substances remain at the site is further confirmed by the 2012 FRN reference to section 121(c) [§9621(c)] of *CERCLA* that states that a five-year review of remedial action is necessary if a remedial action is selected “that results in any hazardous substances, pollutants, or contaminants remaining at the site...”. Accordingly, GLU submits that the NCP criteria for deleting Hyde Park from the NPL have not been met because “further response actions” are necessary.

### **GLU Concluding Comments**

Many of the key reasons that necessitated Hyde Park being listed on the NPL in the 1980s continue to exist today. The chemicals are still there, they are still hazardous and, because of the remedial action strategy chosen, they require robust environmental management essentially forever. For the foregoing reasons, GLU opposes the EPA deletion of Hyde Park from the NPL.

Yours truly,

**CANADIAN ENVIRONMENTAL LAW ASSOCIATION**



Joseph F. Castrilli  
Counsel

cc. Mr. John Jackson, Interim Executive Director, Great Lakes United

Encl.

Appendix A – List of member organizations of Great Lakes United

Appendix B – Canadian Environmental Law Association, Report to Environment Canada – The Hyde Park Landfill Case: Canadian Citizen Action in the U.S. Courts, (Toronto: CELA, 1982)

Appendix C – James P. Ludwig, et al, A Comparison of Water Quality Criteria for the Great Lakes Based on Human and Wildlife Health, (1993) *J. Great Lakes Res.* 19(4): 789-807

Appendix D – J.L. Wallach et al, Linear Zones, Seismicity, and the Possibility of a Major Earthquake in the Intraplate Western Lake Ontario area of Eastern North America, (1998) *Canadian Journal of Earth Sciences* 35(7): 762-786