

**Hudson River Sloop Clearwater  
Natural Resources Defense Council  
Riverkeeper  
Scenic Hudson  
Sierra Club, Atlantic Chapter**

September 28, 2015

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RE: Public Comments on GE's Draft *Phase 2 Sediment Processing Facility  
Demobilization and Restoration Plan*

Dear Mr. Klawinski:

Thank you for the opportunity to comment on the General Electric Company's ("GE") draft *Phase 2 Sediment Processing Facility Demobilization Plan* (the "Plan"), which marks the first significant step in the closure of the U.S. Environmental Protection Agency's ("EPA") only active in-river remedy addressing the millions of pounds of toxic PCBs that GE dumped in the Hudson River. These comments are submitted on behalf of Hudson River Sloop Clearwater, the Natural Resources Defense Council, Riverkeeper, Scenic Hudson, and the Sierra Club, Atlantic Chapter (collectively, "Commenters") and their tens of thousands of members in the state of New York, many of whom live, work, and recreate along the banks of the Hudson.

In brief, Commenters write to express their significant concerns regarding EPA's consideration of the Plan at a time when the protectiveness of the in-river remedy has been called into serious question by new information revealing that further cleanup may be necessary to ensure protection New Yorkers' health and the vitality of the Hudson River ecosystem. Because additional cleanup would necessitate the use of a sediment processing facility, demobilization or restoration of the current facility before earnest reassessment of the remedy is premature.

To the extent that EPA moves forward with review of the Plan at this time, serious consideration should be given to maintaining the current facility intact while state and other federal agencies are assessing the full measure of GE's legal liability under the Superfund Act. Specifically, the Hudson River Superfund Site Trustees ("Trustees")—the National Oceanic and Atmospheric Administration ("NOAA"), the U.S. Fish and Wildlife Service ("USFWS"), the New York Department of Environmental Conservation ("DEC")<sup>1</sup>— are currently calculating GE's

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<sup>1</sup> These agencies are acting as representatives of the U.S. Department of Commerce, the U.S. Department of Interior, and the State of New York respectively.

outstanding natural resource damage (“NRD”) liability, which may ultimately identify additional dredging and removal of PCB-contaminated sediments as required restoration of the river.

At a minimum, because of the importance and complexity of this issue, EPA should extend the comment period to allow additional participation by members of the public, as well as state and federal agencies—all of whom have a stake in the fate of the processing facility.

Commenters elaborate on these points as follows:

**I. Consideration or Approval of a Demobilization Plan Is Premature Because New Information Questions the Ability of the Current Cleanup to Meet EPA Targets for Health and Safety**

EPA’s consideration of the Plan is premature because new analysis released in May of this year by NOAA critically undercuts EPA’s operating assumption that the current cleanup, as designed, will meet the mandatory health and safety targets that the agency identified in 2002.

At the most general level, the threshold goal for all remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA,” also known as the “Superfund Act”) is that they “attain a degree of cleanup . . . which assures protection of human health and the environment.”<sup>2</sup> This mandate, in turn, is effectuated by the development of site-specific goals for each Superfund site, known as remedial action objectives or “RAOs.”<sup>3</sup>

EPA developed RAOs for the cleanup of Hudson River sediments when it first selected the current remedy in its 2002 Record of Decision (“ROD”). Because the “consumption of fish [wa]s the major pathway of concern” for both humans and wildlife within the Hudson Valley,<sup>4</sup> a fundamental component of the RAOs for the site was the reduction of PCBs in fish tissue. Although the ultimate objective for fish tissue was 0.05 mg/kg of PCBs—a level at which an adult could safely eat one half pound meal a week—the agency also established interim goals of 0.2 mg/kg (one half pound meal every month) and 0.4 mg/kg (one half pound meal every two months).<sup>5</sup>

EPA’s selected method for achieving these goals was simple: because “PCB concentrations in fish are controlled by PCB concentrations in both the sediment and the water column,”<sup>6</sup> GE would be required to dredge and permanently remove major deposits of PCB-contaminated sediments from the heavily polluted “Upper Hudson River”—defined as the roughly 40-mile segment of the river running from the contaminated GE plant sites down to the Federal Dam in

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<sup>2</sup> 42 U.S.C. § 9621(d)(1).

<sup>3</sup> See 40 C.F.R. § 300.430(e)(2)(i).

<sup>4</sup> EPA, *Hudson River PCBs Site, New York: Record of Decision*, 54 (Feb. 2002) [hereinafter, “ROD”] available at <http://www.epa.gov/hudson/RecordofDecision-text.pdf>.

<sup>5</sup> *Id.* at 50-51. To reduce risks to ecological receptors EPA also established fish tissue targets of 0.3 to 0.03 mg/kg PCBs for largemouth bass (protective of consumption by river otter) and 0.7 to 0.07 mg/kg for spottail shiner (protective of mink). Other RAOs included meeting applicable or relevant and appropriate requirements for concentration of PCBs in water, reducing the mass of PCBs in sediments that are or may be bioavailable, and minimizing downstream transport of PCBs.

<sup>6</sup> *Id.* at 54.

Troy, New York. For the remainder of the Superfund site—the roughly 150 miles of river from Troy down to the Battery in New York City—no dredging was ordered on the assumption that if remedial targets were achieved in the Upper Hudson, they would likewise be achieved downriver.

The new NOAA analysis does not challenge the efficacy of dredging generally, but does call into serious question the now decade-old assumptions as to *how much* removal of PCB-contaminated sediments is necessary to achieve the RAOs. These assumptions are based upon EPA computer modeling performed in advance of issuing the ROD that used the following inputs to predict long term trends of PCBs in Hudson River fish: (1) the amount of PCBs thought to be in Upper Hudson River sediments at the time; (2) the natural rate of decay of PCBs in the Upper Hudson; and (3) the amount of PCBs still entering the Upper Hudson from the contaminated GE plant sites. Using this modeling, EPA predicted that it would be necessary only to remove 65% of what it assumed was the total amount of PCBs in the Upper Hudson at the time in order to meet RAOs for fish tissue.

The NOAA analysis revisits these predictions by performing independent emulation of the pre-ROD modeling, but using updated and more accurate data gathered by GE and EPA after issuance of the ROD. The results undercut nearly every major assumption undergirding the conclusion that the current cleanup sufficiently protects human health and the environment. Specifically, the analysis finds:

- Underestimation of PCBs – Post-ROD sediment sampling shows that EPA initially underestimated the amount of PCBs in the Upper Hudson by a factor of 2-to-3 times and that, as a result, the amount of PCBs in Upper Hudson sediments after the cleanup is likely to exceed previous EPA estimates by a factor of *3-to-5 times*.<sup>7</sup>
- Overestimation of Natural Rate of Recovery – At the same time, EPA overestimated the average natural rate of recovery (or the rate of natural decay of PCBs) in the Upper Hudson by a factor of *roughly 6 times*—assuming the rate was 8% per year, when the actual average observed rate was only 1.3% per year.<sup>8</sup>
- Failure to Achieve RAOs – As a result, the initial EPA modeling was “overly optimistic,” and that “[a]dditional removal of PCB-contaminated sediment in the [Upper Hudson is] needed to achieve reductions in [Lower Hudson] fish PCBs anticipated in the ROD.”<sup>9</sup>

In a notable example, the new analysis finds that EPA’s prediction that white perch would be at the target of 0.4 mg/kg (again, the level at which an adult could safely eat a half pound meal every 2 months) almost immediately after completion of the remedy is incorrect. Instead, based upon the new information, this target is likely not achievable for *another 44 years*. A timeframe

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<sup>7</sup> Jay Field et al., *Revisiting Model Projections of Lower Hudson River Fish PCBs Using Model Emulation and Recent Data*, 9 (May 19, 2005) [hereinafter “NOAA Analysis”] available at [http://www.hudsonriver.org/download/seminars/HRF\\_Field.pdf](http://www.hudsonriver.org/download/seminars/HRF_Field.pdf). A presentation explaining the new NOAA Analysis is available [here](#).

<sup>8</sup> *Id.* at 10.

<sup>9</sup> *Id.* at 35.

this long to reach even the minimum interim RAOs is not only alarming, it is also similar to the one that EPA concluded was “not sufficiently protective of human health and the environment” in the ROD.<sup>10</sup>

In sum, this new information calls into serious question the ability of the present remedy, without additional cleanup of PCBs, to meet the minimum health and safety standards identified by EPA and as required by law. Further, even more doubts have been raised about the overall protectiveness of the current remedy by irregularities in the fish sampling methods employed by GE from 2004 to 2014<sup>11</sup> and by new information regarding the extremely harmful nature of PCBs even in lower chlorinated forms.<sup>12</sup>

Because deconstruction of the necessary cleanup infrastructure for the remediation of a hazardous substance is only appropriate where the cleanup is actually likely to meet RAOs, EPA should postpone consideration of the Plan until it has an opportunity to further examine the NOAA analysis and other new information.<sup>13</sup>

## **II. EPA Should Give Serious Consideration to Maintaining the Processing Facility Intact While GE’s NRD Liability Assessment Is Ongoing**

To the extent that EPA moves forward in its consideration of the Plan at this time, the agency should seriously contemplate GE’s maintaining the processing facility largely intact while the Trustees assess the company’s substantial NRD liability under CERCLA.

As you know, NRD awards are intended to cover the costs of restoration of a damaged resource after an EPA remedial action as well as provide compensation to the public for the “interim loss” of “ecological services” before the resource is restored. A recent and notable example of an NRD award is the more than 8 billion dollars that the BP Corporation has paid or agreed to pay

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<sup>10</sup> See ROD at 108 (finding that non-active remedy alternatives like monitored natural attenuation were “not sufficiently protective of human health and the environment,” because they “would result in a continuation of unacceptably elevated fish PCB concentrations at the Site . . . for at least several decades”).

<sup>11</sup> As revealed at the August 2015 EPA Community Advisory Group meeting, in 2004, GE unilaterally switched the methodology it was using to conduct its mandated ongoing fish sampling. The new methodology had the effect of lowering the reported levels in Hudson River fish *by as much as 75%*. Although, GE switched back to the correct methodology in 2014 after discovery by EPA, it is Commenters’ understanding that further investigation is currently being conducted as to whether the change in sampling methods affected conclusions at major milestones in the assessment of the cleanup, such as the Phase I Assessment and the 2012 Five Year Review.

<sup>12</sup> See, e.g., David O. Carpenter, *Exposure to and Health Effects of Volatile PCBs*, 30 Reviews on Env’tl. Health 81 (May 2015); Alexander V. Sergeev and David O. Carpenter, *Hospitalization Rates for Coronary Heart Disease in Relation to Residence Near Areas Contaminated with Persistent Organic Pollutants and Other Pollutants*, 113 Env’tl. Health Perspectives 756 (Jun. 2005). There is growing concern that PCBs, particularly lower-chlorinated forms that more easily “volatilize” or get into the air, when inhaled, can cause a wide range of illnesses, including cardiovascular disease, hypertension, diabetes, and reduced cognitive performance. This information is of particular relevance to the current remedy, because it targets only “Tri+” PCBs—those with three or more chlorine atoms. As such, additional research may be needed to determine whether remediation of lower chlorinated forms of PCBs is warranted.

<sup>13</sup> Indeed, to the extent that EPA agrees with the NOAA Analysis, the agency should consider whether there is sufficient “new information” to trigger reopening and expansion of the in-river remedy. See 2005/06 Consent Decree between GE and EPA at ¶ 100 available at [http://www.epa.gov/hudson/consent\\_decree/consent\\_decree.pdf](http://www.epa.gov/hudson/consent_decree/consent_decree.pdf).

for its responsibility for the Deepwater Horizon disaster in the Gulf of Mexico.<sup>14</sup> For a similarly large (and considerably older) NRD site, GE's ultimate NRD liability for the Hudson River Superfund Site may be, likewise, in the billions of dollars.

Restoration of an injured resource, however, is only possible where the toxic pollution is removed first. Along this line, the Trustees have stated that the significant amount of PCBs that the current remedy anticipates leaving in the Upper Hudson—the “equivalent to a series of Superfund-caliber sites”—may make restoration of the most badly damaged resources “infeasible.”<sup>15</sup> Accordingly, the Trustees have indicated that “restoration dredging of Upper Hudson PCB-contaminated sediments” is one of the restoration projects currently being considered.<sup>16</sup>

Because use of the processing facility would greatly facilitate any future restoration dredging and also reduce the additional work and expense of rebuilding infrastructure shortly after it has been demolished or carted-away, EPA should strongly consider maintenance of the processing facility in-tact while the Trustees assess GE's NRD liability.

### **III. EPA Should Provide Additional Time for Public Comment**

At minimum, because of the potential importance of the processing facility to satisfaction of GE's possible future remedial liability and outstanding NRD liability, and the complexity and length of the Plan, EPA should extend the comment period to allow for greater participation by the public and other interested agencies—in particular, the Trustees.

Additionally, Commenters note (not inconsequentially) that review of the Plan has been significantly hindered by the fact that it—along with the extensive library of other relevant cleanup documents formerly housed on the EPA website—has not been available online for the past several days.<sup>17</sup> Although Commenters were able to download a copy of the Plan before the web link became unavailable, many other interested members of the public may have been relying on online availability of the document to draft their own comments before the close of the comment period. Particularly on an issue where EPA has been criticized for not being fully

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<sup>14</sup> This figure includes the \$1 billion the company has already paid, the \$7.1 the company has agreed to pay over the next 15 years, and the \$232 million that it has set aside for damage to natural resources that has not been discovered yet. See Collin Eaton, *BP to settle Deepwater Horizon claims for \$18.7 billion*, Fuelfix (Jul. 2, 2015) available at <http://fuelfix.com/blog/2015/07/02/gulf-states-reach-18-7b-settlement-with-bp-over-oil-spill/#33996101=0>.

<sup>15</sup> Jay Field et al., *Hudson River Remedy: Unremediated PCBs and the Implications for Restoration* (2011) available at [http://www.fws.gov/contaminants/restorationplans/HudsonRiver/docs/Battelle1\\_Field.final1.pdf](http://www.fws.gov/contaminants/restorationplans/HudsonRiver/docs/Battelle1_Field.final1.pdf). See also Kathryn Jahn (USFWS) and Thomas Brosnan (NOAA), *GE's responsibility for PCBs isn't over*, Albany Times Union (Apr. 19, 2014) available at <http://1.usa.gov/1KNzH4Q> (“[T]he dredging and habitat reconstruction work under way by GE does not resolve GE's responsibility to restore natural resources harmed by PCBs. PCBs present a serious and long term threat to the health of the entire Hudson River ecosystem.”)

<sup>16</sup> Margaret Byrne, *Hudson River Natural Resource Damage Assessment and Restoration* (Mar. 31, 2014) available at <http://1.usa.gov/1WrzX0N>.

<sup>17</sup> See <http://www.epa.gov/hudson>, accessed on Sept. 28, 2015 at 10:00 A.M., displaying the following message: “Page Not Found / Website Improvements Underway / EPA is transforming our website so that you can find information faster and more easily. During this transition, links will break.” Indeed, many of the links Commenters have provided in these comments are not currently working.

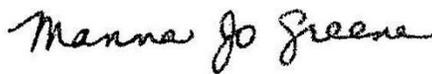
transparent,<sup>18</sup> the agency should extend the comment period to demonstrate that it is committed to public participation on this matter.

For these reasons, to the extent that EPA moves forward with consideration of the Plan, Commenters request extension of the comment period by 60 days to accommodate other interested agencies and members of the public.

#### IV. Conclusion

As discussed, due to new information questioning the sufficiency of the current remedy, consideration or approval of the Plan at this time would be inappropriate. Indeed, this information strongly suggests that the current cleanup does not protect public health and the environment in accordance with CERCLA. Accordingly, EPA should revisit its remedial assumptions and require all necessary additional protections. Commenters reserve their rights to challenge approval of the Plan and any agency actions that fail to comply with CERCLA.

Respectfully Submitted,



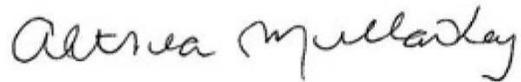
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<sup>18</sup> See Brian Nearing, *EPA Downplays Dismantling of PCB Plant*, Albany Times Union (Aug. 21, 2015) available at <http://www.timesunion.com/business/article/EPA-downplays-dismantling-of-PCB-plant-6458767.php>.