

U.S. Army Corps of Engineers
New York District
ATTN: Regulatory Branch
26 Federal Plaza
New York, NY 10278-0090

March 28, 2003

Re: St. Lawrence Cement (Hudson, NY) in-water port development permit application.

Summary

Clearwater strongly opposes issuance of St. Lawrence Cement's permit for a number of reasons.

1. Deep water ship traffic will harm the Hudson River estuary's physical and biological processes.
2. Dredged spoils in the proposed port will contain PCBs.
3. St. Lawrence Cement's proposed operations will drastically disrupt the region's economy.
4. The proposed site, directly in the middle of the "landscape that defined America," is remarkably inappropriate and out of scale.

Background

The sloop *Clearwater*, America's environmental flagship, has been sailing for 33 years. More than 400,000 schoolchildren and another 250,000 adults have participated directly in Clearwater's ship-board and land-based education programs. Members of this "Clearwater Generation" are active and informed – and they vote!

The organization built around the sailing vessel has been a leader in Hudson River advocacy outreach pre-dating the Clean Water Act, through a host of water quality, wildlife, toxics, and development issues, to the current struggles with a new wave of inappropriate riverfront development.

1. Deep Water Ship Traffic Will Cause Injury to Hudson River Physical and Biological Processes.

The HudsonMax vessels proposed for use by SLC are depth-limited to the 30-32' controlling depth of the Hudson River navigation channel. They are designed to carry the most cargo possible in a channel of that depth. Hence, their propellers will be turning near the bottom, raising clouds of sediment from the silty bottom of the river. Furthermore, the hydrodynamic action of a large ship traveling at high speeds near the bottom will in and of itself create turbulence and suction that will lift large quantities of sediment into resuspension. Hudson River sediment is composed of fine clay particles which stay in suspension for a long time – days, and possibly weeks, raising the real possibility of cumulative turbidity impacts as ship traffic adds more resuspended sediment day after day than is lost to settling or downstream transport.

There are almost 400 vessel voyages (one-way) proposed for commerce to and from the proposed SLC port facility in Hudson, NY. Each of these vessels will travel the length of the Hudson estuary from New York – New Jersey Harbor to Hudson, a distance of some 115 miles. Every inch of that estuary will be impacted. The root cause of the adverse impacts will be turbidity.

Increased turbidity – cloudiness in water that limits light penetration – inhibits light from reaching into the water column. The photic zone, as this lighted area is known, is the stratum of the aquatic ecosystem in which all aquatic photosynthetic activity occurs. It is, therefore, the home area for ecosystem productivity. This photic zone will be made considerably more shallow than it is today by the introduction of significant turbidity increases. Less area in the photic zone is correlated with reduced productivity among phytoplankton, which are the organisms that transform dissolved organic carbon into a source of energy that is usable by zooplankton and fish.

This photic zone is home to the biochemical transformations that create the foundation of the food web of the Hudson River aquatic ecosystem. Reducing its size and its productivity will have a profound effect on aquatic species at all levels, from the tiniest fish larvae to the economically-important striped bass and two species of sturgeon (one of which is a federally-listed endangered species).

The relationships between the photic zone and fresh-water productivity have become somewhat confused in recent years because of the introduction of the prolific zebra mussel, a filter feeder that has attached itself to virtually every inch of hard underwater substrate in the fresh-water regions of the estuary. Today, water clarity is greater than it would otherwise be due to the filtering action of billions of zebra mussels, but phytoplankton counts are very significantly *down*, not up as one might expect, because they are ingested during the mussels' feeding process.

Any further diminishment of resources needed for primary productivity – phytoplankton production – will bring the populations lower still, with possibly severe consequences for the entire estuary.

Phytoplankton biomass eventually becomes fish biomass. In the process of growing, phytoplankton consume and chemically transform carbon obtained from the water. The carbon occurs naturally, as a result of autochthonous inputs – primarily degrading plant materials – and allochthonous inputs, which are imported from the watershed by runoff and erosion. Phytoplankton are net oxygen producers, and waters that are rich in phytoplankton are generally rich in oxygen, creating a healthy environment for species diversity.

Phytoplankton also consume and transform phosphates and nitrates, which are chemically-necessary nutrient compounds. As they grow, the phytoplankton significantly lower the levels of these nutrients in the water column, and therefore leave less of the compounds available for algal production. The life cycle of algae growth, death, and decay is a net oxygen *consumer*, and dense algal production can reduce oxygen levels in water to the point at which zooplankton and fish life becomes untenable. Low levels of algae production can be tolerated and are normal in most aquatic ecosystems. High levels of algal production can virtually render whole bodies of water devoid of life but for the algae and the bacteria consuming them.

If the SLC HudsonMax vessels are allowed to operate, they could reduce the net primary productivity of the entire Hudson estuary, which will in turn make it more difficult for fish species to compete and thrive.

A second effect could also be expected. Reducing phytoplankton also reduces the consumption of phosphates and nitrates, leaving more of these nutrients to drift downriver into the oligo- and mesohaline (saline) areas which are already increasingly eutrophic (reduced oxygen levels). Heightened levels of downstream nutrient transport will lead to increased algal and bacterial production, which will in turn lead to reduced oxygen levels. The stage could be set for a very serious positive feedback cycle of oxygen reductions, increasing nutrient concentrations, and more algae.

The net effect of these combined impacts will be significantly fewer fish, less healthy fish, and a generally degraded ecosystem. Some of the Hudson River's fish species are *already* in trouble. Shad are near their lowest levels in recorded history. Tomcod are down. Taking of Atlantic and shortnose sturgeon is banned.

SLC's permit application therefore carries some very heavy baggage. The Hudson River is home to endangered shortnose sturgeon and other species of concern such as Atlantic sturgeon and shad. It is a vital nursery for billions of young fish every spawning season, and it also feeds non-aquatic species, such as a growing population of bald eagles. The eagles and other fish feeders such as osprey will find it more difficult to see fish beneath the surface of the water if the HudsonMax ships begin plying the estuary on a daily basis, and may be very seriously impacted.

It is our strong opinion that SLC's permit can and must be denied on these grounds.

2. Ship Exhaust and Oil Discharges Will Pollute Air, Water, and Tidal Wetlands.

The HudsonMax vessels that will serve the proposed SLC port facility are powered by very large diesel engines that run on fuel that is high in sulphur. In the normal course of operations thick clouds of diesel exhaust will trail behind the vessels, and will concentrate particularly in the vicinity of the port facility in Hudson. Depending on wind direction and other weather-related factors, this diesel exhaust will be clearly seen and smelled in the city of Hudson, impacting quality of life, economies, and possibly human health.

Furthermore, in the normal course of operations these ships will leak or pump overboard varying amounts of lubricating oils and other compounds. Most of this material will float at or near the surface until it photo-oxidizes and dissolves, a process that can take several days or weeks depending on temperature, sunlight and other factors.

Because the river is narrow and linear, these exhaust and oil discharges will never be more than a half-mile – and often within a few yards – of the Hudson’s shoreline. The shoreline of the tidal Hudson is home to twelve square miles of tidal habitat, including several National Estuarine Research Reserves and federally-protected wetlands that are critical to the health and viability of the Hudson River.

3. Port Dredged Spoils Will Contain PCBs and Must Be Processed.

Virtually all the sediment in the Hudson River contains PCBs, a toxic substance regulated under CERCLA and TSCA. Between 1949 and 1977 over one million pounds of the material was discharged into the river by two General Electric plants near Glens Falls. The farther north in the estuary, the higher the concentrations, as a general rule. The sediment accumulates PCBs unevenly, and hot spots are found as well as clean spots.

The sediment to be dredged for SLC’s port must be comprehensively tested with a robust spatial distribution – both vertical and horizontal – before any permit issuance can be contemplated. The people of the Hudson Valley have been doing battle with GE to get the PCBs removed for a quarter of a century, and they are acutely aware of this material and its presence in the valley. SLC cannot and will not be allowed to shrug off a rigorous and verifiable (peer-reviewed) testing program.

Disposal of PCB-contaminated sediment is a hotly-contested issue in the Hudson Valley. Local disposal cannot be considered because of the uprising that would occur instantly. The only options for SLC would be off-site disposal at a TSCA-approved landfill after a rigorously-controlled dredging process followed by airtight dewatering and processing, or treatment with one of several emerging decontamination technologies.

4. SLC Will Disrupt the Region's Painstaking Shift to a Sustainable and Diverse Economic Base.

The Hudson River Valley experienced an “industrial interlude” during the years 1840-1960 – just over one century. During that time the landscape was severely degraded; river water quality declined to the point at which life was untenable in many reaches of the river; groundwater was contaminated; air befouled such that whole towns and landscapes were uniformly covered with gray cement dust and ash; large numbers of immigrants were imported to work in the brickyards and cement plants and then abandoned; and tourism, which had been an early and very significant source of revenue in the valley, declined to virtually nothing. The forests were clearcut and erosion turned the river dark brown while cutting gullies across the valley's once-forested hillsides. Rivers of raw sewage and manufacturing effluent poured into the Hudson.

Heavy industry was not kind to the Hudson Valley. Even the architecture tells a tale. World-renowned architects were designing buildings in the Hudson Valley because of its cultural importance, and landscape architecture became particularly refined among the lands of the wealthy residents, a trend that accrued to the benefit of New York City dwellers in the design of Central Park and many other public grounds. But with the age of industry, architectural sophistication came to a sudden halt. The towns became filthy cities, and poverty ruled the streets, leaving the remaining taxpayers to feed, shelter, educate, and all too often incarcerate the former workers and their descendants who came on a promise and were eventually abandoned. Poverty and disadvantage still stamp the character of many cities in the valley, a social legacy directly attributable to the past dominance of resource-extraction industries in the Hudson Valley.

Extractive industries operate on tight profit margins, relying on the need for low-paying jobs and an occasional softball team sponsorship to sustain the communities upon which the industry relies for cheap labor. St. Lawrence Cement has been and will be no exception. Slight shifts in world economic conditions can and will result in layoffs and closures, and when the plant's life cycle is over, or new technologies render the plant obsolete in a decade or two, the towering structures of the proposed SLC plant, like all the others that dot our landscape, will be abandoned for our children and grandchildren to deal with.

But the Hudson Valley has been making a remarkable recovery – one that could be sustainable, allowing the region to remain healthy and keep its character. The water is cleaner than it has been in 150 years. People are building their homes upon its shores, and their windows look towards the water, a feature absent from homes built during the industrial interlude. Tourism brings billions of dollars into the region and keeps it here, employing thousands of people. Farming is struggling, but still offers the valley its open fields and orchards, a benefit for all. Recreation of all types, from boating to skiing, employs thousands. Light industry, locally owned, brings in revenues that extend their benefits throughout the community. Education and research institutions are flourishing, with room for more. Aesthetic and contemplative character adds to the region's sustainability at hundreds of public access points along the rivers, ridges, and mountains.

Retail, arts, and crafts are all thriving components of the local economy. Construction and restoration trades also employ thousands. Columbia County, home of the proposed SLC plant, currently enjoys near-100% employment.

Unfortunately, SLC will unravel the economic web we have spun in the post-industrial era of the Hudson Valley. With the plant towering higher above sea level than the tallest buildings in Albany, our region's tourism and aesthetic economies will be severely damaged. Retail, arts and crafts, which depend on a throughput of people with similar values will soon begin to close. Homeowners, watching their land values plummet, will suspend their plans for new construction and restoration. Hikers on the mountains overlooking the landscape that built America will see the SLC plant and look elsewhere for terrain to walk.

These economies are powerful, and they pump money into the local economy. SLC, on the other hand, intends to build recklessly and inappropriately, without regard for regional character, and to strip-mine the region's natural resources to feed the majority of its revenues into the coffers of foreign shareholders. During its glory years, the plant will pump millions of pound of pollutants into the air each year – pollutants that are known to be damaging to human health and terrestrial ecosystems. SLC will not have to pay hospital bills for downwind citizens who develop cancer and emphysema. Nor will SLC pay the funeral bills for people who die prematurely from cardio-pulmonary disease caused by respiration of contaminated air. Then, when the profits are gone and the plant closes, the region's residents will inherit the lifeless factory.

There is a nineteenth-century mind-set at work in the arguments put forth on behalf of the SLC plant. Just as all progress was good progress in the 1800's, the current applicant's industrial imperative seems to hold that all lands must be put in production or they are worthless, hence SLC is the highest and best use of the region's lands. Nothing could be farther from the truth.

This land is already in production. It is beginning to support a relatively large and growing population in an increasingly sustainable way that respects the land, the natural systems, and the region's character. Even land that appears to be "lying fallow" is contributing irreplaceable ecosystem services: biodiversity and habitat; groundwater aquifer recharge; stormwater retention and filtration, and many others.

There is no justification on economic grounds for approving SLC's permit applications. SLC will be a net loser for the people of the Hudson Valley, and could set our economic trajectory back one hundred years.

5. Regional Character is of Critical Importance to Our National Cultural and Environmental Heritage.

This area is known as "The Landscape That Defined America." That is more than a pretty title; it is simple fact. The landscape of this very region is the nexus of America's

environmental ethic and heritage; of its artistic and literary foundations; and of the economic base that literally built the nation. SLC couldn't have found a more inappropriate location for its mega-factory this side of the Washington Mall.

One day in 1811 Washington Irving was aboard a Hudson River sloop drifting northward, listening to the tall tales of a garrulous old Catskills trapper. As Irving listened to the trapper he realized that this “young” land needed to be peopled with a mythology discernible to the European-American residents, and he set out to create that mythology with characters like the headless horseman and Rip Van Winkle. That epiphany occurred in the river within a mile or two of the proposed SLC port facility.

James Fenimore Cooper spent many of his younger years in the Catskills and on the banks of the Hudson, and it was that landscape he invoked as he wrote the *Leatherstocking Tales*. By the time they were published, wholesale clear-cutting had already decimated most of his home forests in and around Cooperstown. He was composing parts of *The Pioneers*, in fact, from a lookout on the wall of the Catskills called the Escarpment, which directly overlooks Catskill, Hudson, and the site of the proposed SLC plant.

Cooper and Irving were the two seminal writers of the American Romantic Movement, and the “Cult of the Wilderness” that followed, selling millions of books at home and especially in Europe and establishing the American wilderness as a prized and cherished landscape.

Frederick Church made his home at Olana, a national historic landmark over which this proposed plant will loom. His paintings, along with the works of Thomas Cole and many others, became the visual record of this remarkable place for thousands of people who attended the traveling exhibitions of new American artworks. As engraving and printing technologies evolved, landscape artworks were printed in mass-market publications, and were seen by millions.

Artist's Rock is a waypoint along the Escarpment Trail, which follows the edge of the Catskills Escarpment. It is reached easily by parking at the North Lake Campground, and is visited by thousands each year. If one were to sight from Artist's Rock directly over the site of the proposed SLC plant, one would see among the distant Berkshires the distinctive shape of Monument Mountain. It was during a mid-summer thunderstorm one day in the mid-nineteenth century that Herman Melville and Nathaniel Hawthorne sat out the rain discussing their various works. Melville, who was unhappy with his current work, *Moby Dick*, spoke of his disenchantment with the simple narrative of a sea story. He was longing for something else. History does not record the actual conversation that ensued, but from that day forward *Moby Dick* became the transcendent meta-novel that forever changed American literature.

From the Escarpment Trail one also overlooks the first land preservation covenant in America, the Spirit Woods site along the Sawkill Creek that flows between Bard College and Montgomery Place.

These actions and these artistic works established the European-American nature ethic. They set the stage for Thoreau, Muir, Emerson, and many others who followed. Without the works of the Hudson River writers, artists, and homeowners, and without the aesthetic and economic preferences shown by the first eco-tourists who flooded the Hudson Valley during the nineteenth century, there could be no environmental preservation as we know it today. It is possible that the establishment of a national parks system would have been entirely different, or would have begun much later.

A number of visual simulations of the proposed SLC plant make it clear that both from the ground in Columbia County and from the ridgelines overlooking that landscape, the quality and character of the Landscape that Defined America will be forever degraded, altered, demeaned, and diminished.

Conclusion

In conclusion, we respectfully urge the USACE to deny SLC's permit applications outright. In the event that the applications are allowed to stand, or even granted – an outcome we would find extremely difficult to justify – we strongly urge the Corps to conduct a full environmental impact assessment per NEPA.

Thank you for this opportunity to participate in your permit review process. If you have any questions, please call or e-mail me.

Sincerely,

Andy Mele
Executive Director
andy@clearwater.org
845-454-7673 ext. 121

Andre Mele holds a master's degree in environmental science from Bard College, with a thesis in environmental economics. He is author of *Polluting for Pleasure* (W. W. Norton, 1993). He was a master shipwright and practicing naval architect for 18 years, with memberships in the Society of Naval Architects and Marine Engineers and the Society of Automotive Engineers. He is a Vietnam Veteran, having served in the U.S. Navy from 1968-1972.