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**Comments regarding
Lower Passaic River Restoration Project (LPRRP)
for U.S. Environmental Protection Agency
Contaminated Sediments Technical Advisory Group (CSTAG)**

Prepared by

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Diamond Alkali Superfund Site (Lower Passaic River and Newark Bay)**

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Insights about the Investigation to Date:

The sediments in the Lower Passaic River and Newark Bay are contaminated with persistent toxic substances such as dioxin and PCBs. This contamination has profound impacts on the ecology and economy of the New Jersey/New York region. For instance, most of the Lower Passaic River has not been dredged since the 1940s, primarily because of this contamination.¹ People can not use the river for commerce or transportation or recreation because of the excessive siltation. After decades of studying the causes and impacts of this contamination, it is time to take action to start restoring the Lower Passaic River and Newark Bay. Reports on the many studies done for the Diamond Alkali Superfund Site case, the Lower Passaic River Restoration Project (LPRRP) and the Contamination Assessment & Reduction Project (CARP)² find that removal of fine grained sediments from the Lower Passaic River by dredging and treatment of these sediments on land would provide the most long-term ecological and economic benefits for the region.

When the Passaic River Coalition (PRC) was founded in 1969, the Passaic River was considered one of the most polluted rivers in the United States. Much has been done to clean up the river since then, and the PRC has been actively involved in these efforts. However, the Lower Passaic River remains contaminated. Studies of the contamination in the Lower Passaic River, Newark Bay, and the New York-New Jersey Harbor Estuary have been going on for many years. Representatives of the PRC

¹ Malcolm Pirnie, Inc. 2007. Lower Passaic River Restoration Project, Draft Source Control Early Action Focused Feasibility Study. Prepared for US Environmental Protection Agency, US Army Corps of Engineers, New Jersey Department of Transportation. June 2007. Executive Summary, pages ii-iii. (FFS).

² HydroQual. 2007. Contamination Assessment & Reduction Project (CARP), Modeling for the Evaluation and Management of Contaminants of Concern in Water, Sediment, and Biota in the NY/NJ Harbor Estuary, Contaminant Fate & Transport & Bioaccumulation Sub-models. July 2007.

have been active public participants in the Diamond Alkali Superfund case, Harbor Estuary programs, and other efforts to remediate this contamination since 1993. The New York-New Jersey Harbor is one of the most contaminated estuarine systems in the United States.³ Since 1992, approximately 85% of the dredged material evaluated has been determined to be so contaminated that it is unsuitable for use at the Historical Areas Remediation Site (HARS) in the Atlantic Ocean. With few or appropriate, economically viable alternatives, the cost of disposal increased substantially.. The Contamination Assessment & Reduction Project (CARP) was first envisioned in 1994 to address the dredging crisis in the region. The Lower Passaic River Restoration Project (LPRRP) studies were initiated in 2003.⁴ During the course of these studies, “sediments in the lower eight miles of the river were identified as a major source of contamination to the 17-mile” tidal portion of the river and to Newark Bay.⁵ A Focused Feasibility Study (FFS) “was undertaken to evaluate a range of remedial alternatives that might be implemented as an early action to control that major source.”⁶

In 2004 the Passaic River Coalition was awarded a Technical Advisory grant from the U.S. Environmental Protection Agency (EPA). After a process established by EPA, a Technical Advisor regarding the Diamond Alkali Superfund Site was selected. Anne L. Kruger, Ph.D., has the scientific expertise that is required to understand and evaluate the interconnectedness of the many factors that impact the ecologic health and vitality of the Lower Passaic River Basin and New York Harbor estuary. For many years she has been involved in various ways in trying to clean up the environment of the New Jersey/New York area, with an emphasis on the reduction of pollution from hazardous wastes. Her doctoral dissertation was about a study of industrial waste generation and disposition in New Jersey. Of all the sites in New Jersey and New York polluted by industrial wastes which she has studied, she finds that development of cleanup plans for the Diamond Alkali Superfund Site to be most challenging. After reviewing the multitude of investigations done to date for the Lower Passaic River Restoration Project (LPRRP) and other projects, she found that there are sufficient data to justify implementation **now** of a clean up of the contaminated sediments in the Lower Passaic River.

Appropriate Remedial Alternatives:

In 2007, after a decade of study, reports on CARP findings were issued. The report on modeling for the evaluation and management of contaminants of concern in water, sediment, and biota in the NY/NJ Harbor Estuary lists the following implications for port and harbor management:⁷

- ◆ “Historical sources of most contaminants were much larger than current sources.” Most of the contaminants of greatest concern, such as dioxin and PCBs, are no longer getting into the river. Therefore, dredging and removing the contaminants from “legacy sources” that persist in sediments in the Lower Passaic River and Newark Bay should significantly reduce future risks.
- ◆ “Of the current sources of contamination, runoff and head-of-tide appear to be dominant for many of the contaminants.” The CARP analyses indicate that current contaminant inputs from Combined Sewer Overflows (CSOs) and permitted discharges are relatively low. Stormwater runoff does

³ <<http://www.carpweb.org/main.html>>

⁴ U.S. Army Corps of Engineers, New York District; U.S. Environmental Protection Agency, Region II; New Jersey Department of Transportation, Office of Maritime Resources. April 2003. Project Management Plan, Lower Passaic River, New Jersey, Investigation and Feasibility Study for Remediation and Ecosystem Restoration.

⁵ Malcolm Pirnie, Inc. 2007. Lower Passaic River Restoration Project, Draft Source Control Early Action Focused Feasibility Study. Prepared for US Environmental Protection Agency, US Army Corps of Engineers, New Jersey Department of Transportation. June 2007. (FFS). Executive Summary, page i.

⁶ FFS, Executive Summary, page i.

⁷ HydroQual. 2007. Contamination Assessment & Reduction Project (CARP), Modeling for the Evaluation and Management of Contaminants of Concern in Water, Sediment, and Biota in the NY/NJ Harbor Estuary, Contaminant Fate & Transport & Bioaccumulation Sub-models. July 2007. Page C-3.

contribute significant loadings of contaminants such as PAHs, and better management of stormwater runoff is needed throughout the region.

- ◆ “A HARS suitable Newark Bay, in terms of PCB and dioxin/furan levels of contamination in worms, may be attained in the future if ... a cleanup of the in-place sediments in the Passaic River is undertaken.” The CARP models predict that if most of the contaminated sediments in the Lower Passaic River were removed, then someday in the future sediments in Newark Bay might be clean enough for fish and crabs to thrive again, and for port channels to be dredged as needed.

The LPRRP Focused Feasibility Study (FFS) evaluated a range of remedial alternatives that might be implemented as an early action to control the contaminants in the sediments in the lower eight miles of the Passaic River.⁸ Based on the findings reported in this study and other studies, we made the following recommendations:

- ◆ Our preferred alternative for Early Action is “Alternative 1, Dredging” because it would be most effective at reducing risks to human health and the environment, and at helping to revitalize both the ecology and the economy of the Lower Passaic River and the New York-New Jersey Harbor Estuary.
- ◆ The Federal government should be considered a “responsible party” in the Diamond Alkali Superfund case.
- ◆ The navigational channels of the Lower Passaic River should be restored to their authorized depths by the U.S. Army Corps of Engineers under their congressionally mandated authority.
- ◆ A processing facility, which would store dredged sediments temporarily on land, and then treat them so that they could be used beneficially, should be developed in the Newark Bay area. Such a facility has long been needed so that harbors along the East Coast can be dredged and revitalized, and so that Brownfields can be reused to the economic benefit of the region.
- ◆ Funding for this project must reflect a practical division of responsibility as presented in the PRC statement on the FFS dated 15 August 2007, page 14.

Impacts of Dredging the Contaminated Sediments in the Lower Passaic River:

The CARP studies confirm that dredging the Lower Passaic River to remove the contaminated sediments and then treating them on land so that they can be used beneficially would greatly improve conditions in the NY/NJ Harbor Estuary. Economic benefits of such an Early Action project include:

- ☺ Reduction in illness and medical expenses from people ingesting contaminated fish.
- ☺ Reduction in losses and associated costs from flooding, which will be exacerbated by climate changes.
- ☺ Economic benefits from improvements in navigation in the Lower Passaic, Newark Bay, and the NY/NJ Harbor, the most important shipping center on the east coast of the US.
- ☺ Reinvigoration of the economy of the region by facing, fixing, and enjoying the Lower Passaic River and Newark Bay.

The primary concerns about implementation of this Early Action project focus on costs and who will pay these costs. There are also concerns about siting a dredged materials management facility on land, and the efficacy of treatment. These concerns need to be addressed as soon as possible with the aid of the CSTAG.

⁸ FFS, Executive Summary, page i.

Ideas about the Dissemination of Site Information and Public Involvement:

As Technical Advisors, we are to assist the public who are impacted by the Diamond Alkali Superfund Site to have meaningful input into the site decision-making processes by assisting in the evaluation of site activities, and by disseminating the information to the community. The governments of 14 municipalities along the Lower Passaic River have adopted resolutions calling for dredging the river. We shall continue to work with EPA, to communicate technical information to interested public, including the findings of the Contaminated Sediments Technical Advisory Group (CSTAG), and to meet with community leaders. This effort will help to generate wide-spread public support for the remediation of contaminated sediments in the Lower Passaic River.

Recommendations for Improvement:

There have been comments about the limitations of the site characterization data and modeling. It would be helpful for the Contaminated Sediments Technical Advisory Group (CSTAG) to comment on the adequacy of past studies, and the value of their recommendations. As noted in the guidance document for the CSTAG, a National Research Council report states: "Management decisions must be made, even when information is imperfect."⁹

The issue of dredged material management has not been adequately addressed to date. We are recommending that a processing facility, which would store dredged sediments temporarily on land, and then treat them so that they could be used beneficially, should be developed in the Newark Bay area. Without such a facility, disposition of the sediments cannot be achieved. The CSTAG might comment on this proposal.

Costs are a major concern. A special committee of public and private financial experts should be established to provide guidance on how costs should be handled. The PRC has submitted a recommendation of cost breakdowns related to stakeholders, but establishing economies within the process is also necessary. While it has taken years for the river to become contaminated, the costs associated with the clean-up continue to grow. Advice on technical ways to reduce clean up costs without reducing long-term protections is vital to the success of this project. To leave the resolution of this issue to the future is unacceptable.

A \$2 billion cost for the 8 mile stretch with no acceptable treatment facility is not in the public interest. In addition, studies on the remaining upstream portion of the Lower Passaic River will also show that dredging and remediation of contaminated sediments will be required. Programs exist today which could be applied to portions of this stretch of the Passaic River; however, a process to expedite such opportunities should be set up either through an organization like the Passaic River Coalition or project management. Suggestions from the CSTAG on how to remediate the contaminated sediments throughout the Lower Passaic River would be welcome.

We had suggested that the Lower Passaic River be designated as a special project area so that the private sector could be encouraged to participate through the use of economic incentives. Such a designation could also establish projects that could supplement the greater program. Other agencies of federal and state government should be encouraged to bring their programs and services to the region. Planning should not be limited to the environmental element. There would also be many economic and social benefits from a restored Passaic River.

⁹ US Environmental Protection Agency, Office of Solid Waste and Emergency Response. February 12, 2002. OSWER Directive 9285.6-08, Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites, page 6.