

## GENERAL SITE INFORMATION, CHARACTERISTICS, AND STATUS

<b>Project Name</b>	<b><u>HOOKER (102nd Street)</u></b>	<b>ProjectID:</b> 02-06
<b>Last Updated:</b>	08/13/04	
<b>City:</b>	Niagara Falls	
<b>County:</b>	Niagara	
<b>State:</b>	NY	
<b>Country:</b>	USA	
<b>Bodies of Water:</b>	Embayment in Niagara River	
<b>US EPA Region:</b>	II	
<b>Status (Active, Complete, or Monitoring Only):</b>	Complete	
<b>Date On NPL:</b>	1983	
<b>ROD/ESD Date:</b>	1990; 1995 (Amend.)	
<b>Operable Unit:</b>	OU-2	
<b>Areas of Concern (length or acres):</b>	25 acres in an embayment in the Niagara River.	
<b>Other Characteristics of Water Body:</b>	Perimeter away from shore line established as a "clean line" which defined the extent of contaminants above the survey level (100 ppb for organics, 200 ppb for mercury).	
<b>Contaminants of Concern:</b>	VOCs; heavy metals (including mercury)	
<b>Source of Contamination:</b>	(Source: Personal Communication with Olin in January 1999)	
	<p>"Contamination of river sediments may have occurred due to 1) surface runoff from the site, 2) migration of contaminated groundwater from the site, 3) discharge through a storm sewer located on the Olin portion of the site that drained the Love Canal area, and 4) in ~ 1969-70, Olin and Occidental Chemical began construction of a cofferdam in the river using contaminated material from the site to expand the site landfill capacity. The US ACE ordered the cofferdam removed, however some contaminated materials may have remained in the river following the removal operation."</p>	
	<p>The 1990 ROD and 1995 ROD Amendment indicate that the contamination of sediments in the Niagara River adjacent to the site may be the result of NAPL migration from the site. References A-402, A-403, A-404, and M-150 provide data that indicate much of the NAPL existing at the site is in the form of DNAPL and that its migration from the site is quite limited.</p>	
<b>Contaminated Area Physical Characteristics:</b>	<p>Embayment and river sediments. The 22.1 acre site, now an industrial landfill, is bounded to the south by a shallow embayment of the Niagara River. A stone-faced bulkhead, constructed in the early 1970s to minimize soil erosion to the Niagara River, ran along the length of the shoreline at the Site. The embayment lies at the upstream end of the Little Niagara River which flows around the north shore of Cayuga Island before discharging into the Niagara River approximately 1.5 miles downstream from the Site.</p>	
<b>Type of Regulatory Action:</b>	Superfund. Final.	
<b>Overall Status Summary:</b>	<p>Removed about 28,500 cy of sediments in 1996 and 1997; about 25,000 cy from an Embayment along the Site's 1700' water front, along with 3,500 cy removed from the Little Niagara as part of a voluntary removal action to improve channel navigation; a minimum removal depth of 2 feet was used, with some areas exceeding the 2 foot minimum removal depth as dictated by site characterization data; removed sediments were replaced with 1 foot of clean soil (to create a net gain in water depth of 1 foot in the area); no verification sampling was performed; sediments were disposed of in an onsite landfill and capped. No cost data are available.</p>	

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The site was officially deleted from the NPL on August 5, 2004.

***Remedial Action Planned:***                      ☒

***Risk Assessment:***                      ☒

***Remedial Action Implemented:***                      ☒

***Status of Dredging***                      ☐

***PRPs:***                      ☒

***Contacts:***                      ☒

***References:***                      ☒

***Modeling:***                      ☐

***Fishing Advisory:***                      ☐

***Key Conditions:***                      dedicated landfill or CDF, Great Lakes AOC

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<b>Last Updated:</b>	01/06/99	
<b>Target Sediment Cleanup Standards (TSCS):</b>	None. Based on extensive sediment sampling in the embayment, the RI concluded that the extent of site-specific indicator chemicals (SSIs) in the sediments was limited to an area within 300 feet from the shore. The "clean line" defined the extent of (SSIs) above the survey level (100 ppb for organics, 200 ppb for mercury) and was considered the extent to which site-related contamination existed.	
<b>How TSCS Established:</b>	Risk assessment. Human health cancer risk estimated at $2.2 \times 10^{-3}$ and "reasonable maximum" non-carcinogenic hazard index estimated at 4.3, with ingestion of fish the most important route of exposure in each instance. Ecological assessment identified chemical-specific sediment levels, the presence of which potentially led to exceedance of State Water Quality Standards (benzene 40 ppb, TCE 411 ppb, and PCBs 42.4 ppb). No site-specific ecological data were collected. The connection between these risk assessment findings and the targeted "clean line" is not clearly explained in the ROD.  (Source: Olin comment dated 12/30/98): Mercury level was based on upstream concentrations or background. Organics were based on the quantitation level (in current terminology) of the analysis.	
<b>Target Bank and Floodplain Cleanup Levels (if applicable):</b>	N/A	
<b>Other Target:</b>	N/A	
<b>Environmental Sample Data References:</b>	<ul style="list-style-type: none"><li>• <b>Sediment:</b></li><li>• <b>Water:</b></li><li>• <b>Fish:</b></li></ul>	
<b>Estimated Target Volume:</b>	4,600 cy at "hot spot" locations; 15,000 cy remaining sediments (based on dredging to "clean line" and a depth of 2 ft.)	
<b>Planned Disposal Method:</b>	1990 ROD required that contaminated sediment be incinerated; because of limited access to a permitted incineration unit and the high cost associated with incineration, ROD was amended in 1995 to recommend contaminated sediment be consolidated and disposed of within the dedicated on-site landfill and capped. This method of disposal was estimated to increase the volume of contaminants within the landfill approximately 1%.	
<b>Estimated Calendar Time to Implement Remedy:</b>	Dredge and incinerate "hot spot" sediments - 2.5 years; dredge and dispose of sediments on-site beneath cap - 18 months	
<b>Estimated Time to Implement Remedy:</b>	1996 and 1997.	
<b>Estimated Cost to Implement Remedy:</b>	Dredge and incinerate "hot spot" sediments - \$3.66 to 4.48 million Dredge and dispose sediments on-site beneath cap - \$3.60 to 5.57 million	
<b>Stated Remedial Action Objectives (and Source):</b>	(Source: ROD, September 1990.)  "The two areas of Niagara River sediments, "the embayment sediments," which contain elevated concentrations of contaminants ("hot spots"), will be dredged, and these highly contaminated sediments will be incinerated at an off-site facility. The remaining sediments will be dredged out to the "clean line" with respect to site-related contamination. These remaining sediments, after	

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dewatering, will then be consolidated on the landfill. Any NAPL found within the remaining sediments will be extracted, and will be incinerated at an off-site facility."

"The primary focus of this remediation plan is to contain the NAPL plume with a slurry wall. In the event the slurry wall's initial positioning places it across the "hot spot" area(s), practicality may dictate that the wall be extended outward to enclose these "hot spots." In such case, these highly contaminated sediments, rather than being dredged and incinerated, would be left in place, that is, contained by the slurry wall, covered with fill, and finally covered with the cap. The remaining sediments beyond the slurry wall would still be dredged and consolidated beneath the cap."

(Source: ROD Amendment, June 1995). "All of the contaminated sediments in excess of action levels will be dredged and placed beneath the cap, rather than incinerating the highly contaminated sediments."

**Measures of Success to be Used:**

**Planned Monitoring and Restoration:**

(Source: ROD, September 1990). "Post-remedial monitoring to be performed to determine the effectiveness of the remedial alternatives which have been selected." (No details provided in the ROD.)

**Agency Position on Sediment Removal (and Source):**

(Source: ROD, September 1990)

"Dredging of contaminated sediments will be required to reduce risks to aquatic biota as well as to reduce contaminant bioaccumulation in edible fish. Dredging and incinerating "hot spots" will provide permanent protection from these highly contaminated sediments. Since health-based or risk-based sediment remediation criteria have not been established, these combined alternatives which have the net effect of excavating all sediments that have migrated to the "clean line," incinerating those sediments from the areas of elevated concentrations, and burying the remaining sediments beneath the cap, were selected as the most reasonable action-alternatives designed to ensure the maximum overall human and environmental protection."

"Because of the low mobility of the primary contaminants of concern in the sediments, with continued monitoring, their excavation and reburial onsite should provide adequate long-term effectiveness."

"No promulgated federal or state ARARs exist for contaminated sediment, however New York State does have "To-Be-Considered" guidelines (TBCs) for sediment which require aqueous contaminant levels in the water surrounding the sediment ("interstitial" water) to meet ambient water quality criteria (AWQC and state ambient water quality of standards (AWQS). Incineration of sediment "hot spots" will achieve these TBCs, as well as providing permanent protection from these areas of elevated contaminant concentrations. Compliance with the sediment TBCs will be achieved since all site-related sediment contamination would be dredged from the embayment."

"Dredging activities could have short-term negative impacts on the Niagara River. Prior to the initiation of any dredging activities however, a berm will be constructed beyond the area of contamination so as to effectively retain any loosened sediments, thereby preventing their transport into the River proper from the embayment. The construction of berms (to contain dredged sediment) would temporarily increase sediment loads to the River, and some of this sediment transported in the River may be contaminated. However, since the berms in question will clearly be located outside the area of contamination, it is highly unlikely that any contaminated sediments will be released into the River."

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"The 22.1 acre Site, now an industrial landfill, is bounded to the south by a shallow embayment of the River. A stone-faced bulkhead, constructed in the early 1970s to minimize soil erosion to the River, runs along the length of the shoreline at the Site. The embayment lies at the upstream end of the Little Niagara River which flows around the north shore of Cayuga Island before discharging into the River approximately 1.5 miles downstream from the Site."

(Source: Responsiveness Summary in the 1990 ROD):

"Comment: The Companies believe that dredging out to the limit of site-related chemicals above survey levels, and that incinerating sediments containing elevated levels of site-related chemicals, are not warranted based on risk or regulatory considerations."

"Comment: The Companies continue to believe that incineration of sediments with elevated concentrations of chemicals is not warranted based on risk or regulatory considerations and the additional costs are excessive in light of the absence of any additional protectiveness of human health and the environment. Placing the dewatered sediments under the cap effectively removes the sediment areas of concern from the environment and the additional cost of incineration is not justified in this instance."

"Comment: The Companies believe that the presence of mercury and the logistics of ash disposal are further justification that the incineration of Site sediments is unwarranted and inappropriate. Placement of sediments beneath the Site cap or within the slurry wall is technically feasible remedy that can be readily integrated with the remaining remedial design elements and is protective of human health and the environment."

"EPA Response (to the above comments) The selected remedy in part, does propose that the highly contaminated sediments be incinerated and that the remaining sediments be dredged out to the "clean line." (The "clean line" represents the extent to which site-related contamination has migrated.) These remaining sediments would then be consolidated beneath the cap. The EPA's intent will always be to use permanent solutions to the maximum extent practicable. In the present case, a window of opportunity exists as to the highly contaminated sediments in that they must be handled during the dredging process. Once removed from the Niagara River, rather than placing these sediments beneath the cap, it appears more prudent to incinerate them thereby permanently destroying this source of high contamination, and thereby obliging the statutory urgings to search for an to implement permanent solutions to the maximum extent practicable."

"The EPA's position regarding dredging all remaining sediments out to the "clean line" is firm. As the Companies are aware, the "clean line" is the acknowledged extent of site-related contamination outward into the embayment. These sediments must be removed or they will simply remain as a source of contamination and an exposure pathway which threatens human health and the environment."

"With respect to the comment by the Companies regarding the EPA's plan to incinerate the highly contaminated sediments, one further note is in order. As mentioned elsewhere in this ROD, the primary focus of this remediation plan is to contain the NAPL plume with the slurry wall. If, based on the data obtained from the geotechnical borings installed during the design period to detect the extent of the NAPL plume, the slurry wall's initial positioning places it across the areas containing elevated levels of contaminants, practicality may require that the wall be extended outward to enclose these areas of high contamination. In such case, these highly contaminated sediments, rather than being dredged and incinerated, would be left in place, that is, contained by the slurry wall, covered with fill, and finally covered with the cap. The remaining

## ***REMEDIAL ACTION PLANNED***

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sediments beyond the slurry wall would still be dredged and consolidated beneath the cap."

## ***RISK ASSESSMENT***

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***RA Type:*** Human Health and Ecological

***RA Status:*** Complete

***RA Objectives:***

***Company*** Gradient Corporation

***Performing RA:*** Olin and Occidental Chemical (as a separate RA)

***RA Reference Report:***

***RA Summary and Conclusions:*** Report entitled "Baseline Human Health Risk and Environmental Endangerment Assessments for the 102nd Street Landfill."

(Source: ROD, September 1990):

"The EPA's Risk Assessment evaluated potential human health risks and environmental endangerment for each aspect of the Site assuming current conditions (i.e., no future residential/commercial uses of the Site were considered). These aspects of the Site include"

- surface water contamination due to ground-water discharge;
- surface water contamination due to storm-sewer discharge;
- contaminated embayment sediments; and
- surface soil contamination (including airborne particulates)."

"Human health risks posed by exposure to the chemicals of concern were quantified for potential pathways by which the local population may be exposed. The major human exposure routes evaluated include:

- ingestion of fish from the embayment of the Niagara River;
- chemical exposure while swimming in the embayment;
- drinking water from the Niagara River as it is withdrawn at the Niagara Falls Drinking Water Treatment Plant; and
- chemical contact with, ingestion of, and inhalation of dust from off-site contaminated soils."

"Both carcinogenic and noncarcinogenic human health risks were estimated for the chemicals of concern. Based on exposure to contaminants in the embayment of the Niagara River and to soil contaminants off-site, total increased lifetime carcinogenic health risk is estimated to be  $2.2 \times 10^{-3}$ , with ingestion of fish from the embayment of the River the most important route of exposure contributing to this risk. In comparison, potential exposure to off-site soils yields an increased cancer risk of  $8.1 \times 10^{-5}$ . The carcinogens which contribute to the greatest extent to the Site's health risks are PCBs, HCCHs, hexachlorobenzene, and 2,3,7,8-TCDD (dioxin)."

"The total calculated "reasonable maximum" noncarcinogenic hazard index (a ratio of calculated exposure compared to an "allowable" exposure, as measured by the risk-reference dose) is estimated to be 4.3, where fish ingestion is the only exposure pathway which leads to the potential of significantly adverse

## ***RISK ASSESSMENT***

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health effects. The 1,2,3,4- and 1,2,4,5-tetrachlororobenzene isomers are the chemicals with the largest hazard indices with respect to fish consumption."

"Environmental endangerment was evaluated for aquatic organisms and fish-eating species at the site. No site-specific ecological data were gathered so representative sensitive species were identified using EPA environmental risk assessment methods."

"The potential environmental risks were quantified by comparing estimated environmental concentrations in the embayment with either water quality criteria for the protection of aquatic species (whenever available) or published aquatic toxicity factors."

"A number of site-related chemicals, including HCCHs, chlorinated benzenes, 2,3,7,8-TCCD, and Mirex are of probable ecological concern. The contaminated embayment sediments pose the most significant threat to the environment."

(Source: Olin review comment dated 12/30/98):

The RA performed by Olin and Occidental Chemical was not mentioned in the ROD and the results were quite different (from the Gradient RA).



## REMEDIAL ACTION IMPLEMENTED

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<b>Project Name:</b>	<b><u>HOOKER (102nd Street)</u></b>	<b>ProjectID:</b> 02-06
<b>Last Updated:</b>	01/06/99	
<b>Physical Target:</b>	Embayment of roughly 1,700 feet long and 300 feet out to the "clean line," adjacent to the PRP site.	
<b>Goals:</b>	Remove sediments out to the "clean line" and to a 2 foot depth (or deeper as dictated by characterization data).	
<b>Primary Contractor:</b>	Smith Environmental (went bankrupt during cleanup -- but completed removal project; bonding company involved)	
<b>Other Contractors:</b>	Fluor-Daniel, Inc. (design)	
<b>Generic Remediation Method:</b>	Dry excavation	
<b>Equipment:</b>	Excavators; earthen cofferdam; several sumps to control water infiltration.	
<b>Material Handling:</b>	No information available	
<b>Volume Removed:</b>	25,000 cy of sediments from the Niagara River and 3,500 cy from the Little Niagara.	
<b>Calendar Time:</b>	1996 and 1997.	
<b>Time To Implement:</b>	Not available	
<b>Total Cost:</b>	Not publicly available	
<b>Dredging Cost:</b>	Not public ally available	
<b>Disposal of Sediment:</b>	Sediments disposed in an existing on-site landfill and capped.	
<b>Volume of Water:</b>	Not available	
<b>Method of Water Treatment:</b>		
<b>Water Discharge Limit:</b>		
<b>Air Monitoring During Remediation:</b>		
<b>Water Monitoring During Remediation:</b>		
<b>Outcome:</b>	Removed about 28,500 cy in 1996 and 1997; about 25,000 cy from an embayment along the 1700' front of the site and 3,500 cy from the Little Niagara; removal depth of 2 feet (or deeper as dictated by characterization data); no verification sampling; sediments disposed under dedicated on-site landfill cap. No cost data available.	
<b>Restoration and Post-Monitoring:</b>	Targeted a defined depth of removal; one foot of soil was placed in dredged areas for restoration purposes (this resulted in a net increase of 1 foot of water depth in remediated areas); no verification sampling performed.	
<b>Site-Specific Difficulties:</b>	Not identified.	
<b>Monitoring Data References:</b>		

- Sediment

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***Project Name:***                ***HOOKER (102nd Street)***

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- ***Water:***
- ***Fish:***

***POTENTIALLY RESPONSIBLE PARTIES***

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***Project Name*** **HOOKER (102nd Street)**

***ProjectID:*** 02-06

***PRP Name:*** PRP INFORMATION NOT RELEASED

***PRPID:***

***Street Address:***

***City:***

***State:***

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## **KEY CONTACTS**

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***Project Name*** **HOOKER (102nd Street)**

***ProjectID:*** 02-06

***Last Name:*** KEY CONTACT INFORMATION NOT RELEASED

***Contact ID:***

***First Name:***

***Title:***

***Company:***

***Address:***

***City:***

***State:***

***Postal Code:***

***Work Phone # :***

***Other Phone #:***

***Fax # :***

***Email Address:***

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## REFERENCES

---

**Project Name** **HOOKER (102nd Street)**

**ProjectID:** 02-06

**Reference Type:** A

**ReferenceID:** 9

**Title:** ***EPA Superfund Record of Decision Amendment: Hooker (102nd Street)***

**Location:** AEM

**Category:** ROD/Proposed Plan/Action Memo/Decision Document

**Prepared by/Author:** US EPA Region II

**Preparer/Author  
Address:**

**Prepared For:**

**Date Published:** September 1995

**Key Words and  
Phrases:**

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**Reference Type:** A

**ReferenceID:** 304

**Title:** ***Superfund Record of Decision: Hooker-102nd Street, NY  
First Remedial Action - Final***

**Location:** AEM

**Category:** ROD/Proposed Plan/Action Memo/Decision Document

**Prepared by/Author:** US EPA HQ

**Preparer/Author  
Address:** 401 M Street, S.W.  
Washington, D.C. 20460

**Prepared For:** General Public

**Date Published:** September 1990

**Key Words and  
Phrases:**

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## REFERENCES

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**Project Name** HOOKER (102nd Street)

**ProjectID:** 02-06

**Reference Type:** A

**ReferenceID:** 402

**Title:** **Remedial Investigation Final Report (Section 9.6, Conclusions and Figures 9.1 thru 9.11)**  
**Volume 1 - Text**

**Location:** AEM

**Category:** RI/FS

**Prepared by/Author:** (1) Conestoga-Rovers & Associates and (2) Woodward-Clyde Consultants

**Preparer/Author Address:** (1) 651 Colby Drive  
Waterloo, Ontario, Canada N2V 1C2  
(2) 5120 Butler Pike  
Plymouth Meeting, PA 19462

**Prepared For:** Occidental Chemical Corporation  
Olin Chemicals Group

**Date Published:** July 1990

**Key Words and Phrases:**

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**Reference Type:** A

**ReferenceID:** 403

**Title:** **Revision 3 - Milestone Report No. 14**  
**NAPL Study - 102nd Street Landfill**  
**Remedial Investigation**

**Location:** AEM

**Category:** RI/FS

**Prepared by/Author:** (1) Conestoga-Rovers & Associates and (2) Woodward-Clyde Consultants

**Preparer/Author Address:** (1) 651 Colby Drive  
Waterloo, Ontario, Canada N2V 1C2  
(2) 5120 Butler Pike  
Plymouth Meeting, PA 19462

**Prepared For:** Occidental Chemical Corporation  
Olin Chemicals Group

**Date Published:** October 21, 1987

**Key Words and Phrases:**

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## REFERENCES

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**Project Name** **HOOKER (102nd Street)**

**ProjectID:** 02-06

**Reference Type:** A

**ReferenceID:** 404

**Title:** ***Supplemental NAPL Investigation - Revision 2  
102nd Street Landfill Remedial Investigation***

**Location:** AEM

**Category:** RI/FS

**Prepared by/Author:** (1) Conestoga-Rovers & Associates and (2) Woodward-Clyde Consultants

**Preparer/Author  
Address:** (1) 651 Colby Drive  
Waterloo, Ontario, Canada N2V 1C2  
(2) 5120 Butler Pike  
Plymouth Meeting, PA 19462

**Prepared For:** Occidental Chemical Corporation  
Olin Chemicals Group

**Date Published:** December 1988

**Key Words and  
Phrases:**

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**Reference Type:** A

**ReferenceID:** 933

**Title:** ***Consent Decree Between The United States of America, The State  
of New York and Occidental Chemical Corporation and Olin  
Corporation***

**Location:** AEM

**Category:** Legal

**Prepared by/Author:**

**Preparer/Author  
Address:**

**Prepared For:**

**Date Published:** June 30, 1999

**Key Words and  
Phrases:**

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## REFERENCES

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**Project Name** **HOOKER (102nd Street)**

**ProjectID:** 02-06

**Reference Type:** B

**ReferenceID:** 2

**Title:** ***Letter from NYSDEC***

**Location:** AEM

**Category:** Site Update

**Prepared by/Author:** Abul Barkat

**Preparer/Author** New York State Department of Environmental Conservation

**Address:** 270 Michigan Avenue  
Buffalo, NY 14203-2999

**Prepared For:** Distribution

**Date Published:** May 5, 1997

**Key Words and  
Phrases:**

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**Reference Type:** B

**ReferenceID:** 278

**Title:** ***Hooker - 102 nd Street Landfill; NYSDEC Inactive Hazardous  
Waste Disposal Report***

**Location:** AEM

**Category:** Site Update

**Prepared by/Author:** New York State Department of Environmental Conservation

**Preparer/Author** Albany, NY

**Address:**

**Prepared For:** General Public

**Date Published:** April 1998

**Key Words and  
Phrases:**

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**Reference Type:** B

**ReferenceID:** 342

**Title:** ***Hooker 102nd Street Fact Sheet***

**Location:** AEM

**Category:** Site Update

**Prepared by/Author:** US EPA Region II

**Preparer/Author** [http://www.epa.gov/region02/superfund/site\\_sum/0201644c.htm](http://www.epa.gov/region02/superfund/site_sum/0201644c.htm)

**Address:**

**Prepared For:** General Public

**Date Published:** April 1998

**Key Words and  
Phrases:**

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## REFERENCES

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**Project Name** **HOOKER (102nd Street)**

**ProjectID:** 02-06

**Reference Type:** B

**ReferenceID:** 772

**Title:** ***Realizing Remediation I - Great Lakes Contaminated Sediments  
102nd Street Embayment  
(see Reference A-905)***

**Location:** AEM

**Category:** Dredging: Remedial (Contaminated Sediments)

**Prepared by/Author:** US EPA Great Lakes National Program Office (GLNPO)

**Preparer/Author  
Address:** 77 West Jackson Boulevard (G-17J)  
Chicago, IL 60604

**Prepared For:** General Public

**Date Published:** August 1, 2002

**Key Words and  
Phrases:**

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**Reference Type:** B

**ReferenceID:** 822

**Title:** ***Realizing Remediation II - Updated Summary:  
Niagara River AOC: 102nd Street Embayment (Hooker)  
(see Reference A-907)***

**Location:** AEM

**Category:** Dredging: Remedial (Contaminated Sediments)

**Prepared by/Author:** US EPA Great Lakes National Program Office (GLNPO)

**Preparer/Author  
Address:** 77 West Jackson Boulevard (G-17J)  
Chicago, IL 60604

**Prepared For:** General Public

**Date Published:** July 2000

**Key Words and  
Phrases:**

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## REFERENCES

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**Project Name** **HOOKER (102nd Street)**

**ProjectID:** 02-06

**Reference Type:** B

**ReferenceID:** 1051

**Title:** ***EPA Proposes to Remove Three Niagara County Sites from the Superfund List***

**Location:** AEM

**Category:** Site Update

**Prepared by/Author:** US EPA Region II

**Preparer/Author  
Address:**

**Prepared For:** General Public

**Date Published:** March 17, 2004

**Key Words and  
Phrases:**

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**Reference Type:** B

**ReferenceID:** 1052

**Title:** ***Public Notice: Hooker - 102nd Street Landfill Superfund Site Notice of Intent to Delete***

**Location:** AEM

**Category:** Site Update

**Prepared by/Author:** US EPA Region II

**Preparer/Author  
Address:**

**Prepared For:** General Public

**Date Published:** February 23, 2004

**Key Words and  
Phrases:**

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**Reference Type:** C

**ReferenceID:** 2

**Title:** ***PRPs run leachate pipe from 102nd St. Landfill***

**Location:** AEM

**Category:** Site Update

**Prepared by/Author:**

**Preparer/Author  
Address:**

**Prepared For:** Superfund Week

**Date Published:** January 2, 1998

**Key Words and  
Phrases:**

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## REFERENCES

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**Project Name** **HOOKER (102nd Street)**

**ProjectID:** 02-06

**Reference Type:** C

**ReferenceID:** 194

**Title:** ***Progress made at Niagara Falls site***

**Location:** AEM

**Category:** Site Update

**Prepared by/Author:**

**Preparer/Author**

**Address:**

**Prepared For:** Superfund Week

**Date Published:** March 20, 1992

**Key Words and  
Phrases:**

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**Reference Type:** C

**ReferenceID:** 195

**Title:** ***Engineering draft completed***

**Location:** AEM

**Category:** Site Update

**Prepared by/Author:**

**Preparer/Author**

**Address:**

**Prepared For:** Superfund Week

**Date Published:** March 5, 1993

**Key Words and  
Phrases:**

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**Reference Type:** C

**ReferenceID:** 196

**Title:** ***Hooker cap design due in a year***

**Location:** AEM

**Category:** Site Update

**Prepared by/Author:**

**Preparer/Author**

**Address:**

**Prepared For:** Superfund Week

**Date Published:** April 28, 1995

**Key Words and  
Phrases:**

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## REFERENCES

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**Project Name** **HOOKER (102nd Street)**

**ProjectID:** 02-06

**Reference Type:** C

**ReferenceID:** 573

**Title:** ***Sediment Remediation Can Improve Great Lakes Water Quality***

**Location:** AEM

**Category:** Miscellaneous

**Prepared by/Author:** (1) John H. Hartig, (2) Lisa Maynard, (3) Michael A. Zarull, (4) Gail Krantzberg

**Preparer/Author** (1) Greater Detroit American Heritage River Institute

**Address:** Detroit, MI  
(2) International Joint Commission  
Windsor, Ontario, Canada  
(3) National Water Research Institute  
Burlington, Ontario, Canada  
(4) Ontario Ministry of Environment

**Prepared For:** Water Environment & Technology (WE&T)

**Date Published:** October 1999

**Key Words and  
Phrases:**

---

**Reference Type:** L

**ReferenceID:** 13

**Title:** ***Memo re: Hooker 102nd Street***

**Location:** AEM

**Category:** Site Update

**Prepared by/Author:** AEM, Inc.

**Preparer/Author** Malvern, PA 19355

**Address:**

**Prepared For:** Internal file

**Date Published:** September 26, 1997

**Key Words and  
Phrases:**

---

**Reference Type:** L

**ReferenceID:** 136

**Title:** ***Maximum Baseline Cancer Risks for Contaminated Sediment Sites***

**Location:** AEM

**Category:** Risk Assessment

**Prepared by/Author:** AEM, Inc.

**Preparer/Author**

**Address:**

**Prepared For:** Distribution

**Date Published:** October 22, 2001

**Key Words and  
Phrases:**

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## REFERENCES

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**Project Name** **HOOKER (102nd Street)**

**ProjectID:** 02-06

**Reference Type:** M

**ReferenceID:** 150

**Title:** **DNAPL Site Evaluation**

**Location:** AEM

**Category:** Site Update

**Prepared by/Author:** (1) Robert M. Cohen, (2) James W. Mercer, and (3) John Matthews

**Preparer/Author** (1 and 2) GeoTrans, Inc.

**Address:** 46050 Manekin Plaza, Suite 100  
Sterling, VA 21066  
(3) Robert S. Kerr Environmental Research Laboratory  
Office of Research and Development,  
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Ada, OK 74820

**Prepared For:** Occidental Chemical Corporation  
Olin Chemicals Group

**Date Published:** 1992 post

**Key Words and  
Phrases:**

---

**Reference Type:** R

**ReferenceID:** 15

**Title:** **Letter to PRP re: Case Histories: Contaminated Sediment Sites  
(with response from Olin Corporation)**

**Location:** AEM

**Category:** Site Update

**Prepared by/Author:** AEM, Inc. with response from Olin

**Preparer/Author** Malvern, PA 19355

**Address:**

**Prepared For:** Olin Corporation, submitted to

**Date Published:** August 17, 1998

**Key Words and  
Phrases:**

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## **REFERENCES**

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**Project Name** **HOOKER (102nd Street)**

**ProjectID:** 02-06

**Reference Type:** R

**ReferenceID:** 17

**Title:** ***Letter to PRP re: Case Histories: Contaminated Sediment Sites  
(with response from CRA)***

**Location:** AEM

**Category:** Site Update

**Prepared by/Author:** AEM, Inc. with response from CRA Services

**Preparer/Author  
Address:** Malvern, PA 19355

**Prepared For:** CRA Services, submitted to

**Date Published:** August 14, 1998

**Key Words and  
Phrases:**

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