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**NEW YORK STATE  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
Division of Solid & Hazardous Materials**

## **FINAL DECISION and RESPONSE TO COMMENTS**

### **SELECTION OF REMEDIES TO ADDRESS CONTAMINATION AT ELECTRONICS PARK AND IN THE WEST BRANCH OF BLOODY BROOK**

for the

**LOCKHEED MARTIN CORPORATION  
ELECTRONICS PARK FACILITY  
TOWN OF SALINA, ONONDAGA COUNTY  
NEW YORK**

USEPA ID No.: NYD059385120

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#### **INTRODUCTION**

The New York State Department of Environmental Conservation (Department) has selected the Final Corrective Remedies to address the presence of contaminated media at the Lockheed Martin Corporation (LMC), Electronics Park (EP) facility and in the West Branch of Bloody Brook immediately south of the New York State Thruway. The remedies selection was made after the public comment period ended February 3, 1997, and the submitted written comments were reviewed and considered. The Department and LMC will enter into an Order on Consent which will be the mechanism to implement the final remedies and perform long-term monitoring.

The purpose of this document serves as the following:

- Addresses the written comments received during the public review and comment period;
- Briefly describes the areas impacted at the EP facility and in the West Branch of Bloody Brook;
- Briefly describes the selected remedies and clean-up goals that are to be achieved;
- Briefly describes the continued monitoring and post-remedial monitoring that will be required to verify the selected remedies achieve the clean-up goals.

## **SUMMARY OF COMMENTS RECEIVED**

The Department set a public comment period from January 1, 1997 to February 3, 1997 for the review and comment of proposed remedies that are to address contamination at the EP facility and in the West Branch of Bloody Brook. These proposed remedies were published in a "Statement of Basis" dated January 1997. In addition, two public information meetings were held (December 17, 1996 and January 13, 1997) to inform the public of the proposed selected remedies. Written comments were received from two parties during the public comment period. One party included two concerned citizens; the other party was Lockheed Martin Corporation (LMC). Below is a summation of the comments received, and the Department's responses to those comments. Copies of the comments, and response to comments are included as an attachment to this document.

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### **Comment Summary received from concerned citizens**

The commenter indicated that the Department "had knowledge of this issue [contamination in Bloody Brook] as early as 1994 and should have notified the public sooner." The commenter did not like the use of "on-site testing" for Volatile Organic Constituents (solvents) because the company would be aware of the Department's presence and could alter contaminant levels. The commenter indicated that "residents are not happy with the [proposed] dictated solution" and that the Department should "allow more time to study alternative solutions and collect accurate information."

### **Department's Summary Response**

The Department recognizes that they could have done a better job in informing residents of the ongoing investigation of the stream. However, in the case of Bloody Brook, as in other cases like it, the agencies attempt to understand the nature and magnitude of a problem before initiating a public outreach program. The timing of public outreach is also related to the Agencies' perception of the threat posed by the problem. Neither the New York State Department of Health (NYSDOH), nor the Onondaga County Health Commissioner considered the presence of the contaminated sediments in Bloody Brook an imminent threat to residents in the vicinity of the stream. Consequently, the Agencies waited until we had a clear understanding of the nature of the problem and an appropriate means of remediating it before holding a public meeting about the stream.

The Department believes that additional time to study alternatives will only delay the clean-up. Data collection of groundwater and soils has been ongoing since 1990. The Department believes that the data collected accurately represents conditions on-site and in Bloody Brook. It is acknowledged that contamination exists from past operations and practices. These past releases have contaminated the soil and groundwater. The company cannot alter or change the contaminant level in the soil or groundwater. In addition, this contaminated groundwater infiltrates (flows into) old pipes that flow into Bloody Brook. This contamination was discovered by on-site sampling. Repairs made to this system will minimize contaminated groundwater from entering these pipes. Continuation of the pumping and treating of contaminated groundwater will reduce the concentration of contamination. Routine on-site monitoring was, and will continue to be critical to determine if the final measures are doing the job.

#### **Comment Summary received from Lockheed Martin Corporation (LMC)**

LMC's comments were directed towards clarification of the "Statement of Basis" dated January 1997. The Statement of Basis was published to describe current conditions and describe the proposed remedies that would address on-site contamination and elevated levels of cadmium found in the West Branch of Bloody Brook. In this document, the Department lumped groundwater treatment into one category and did not segregate out the separate groundwater treatment unit operating in Building EP-10. The Statement of Basis indicated that low-level polychlorinated biphenyls (PCBs) were being treated as part of the facilities groundwater treatment unit, but it did not specifically indicate that groundwater entering the Building EP-10 sump is treated using activated carbon (to remove PCBs); then discharged to the Onondaga County sanitary sewer system pursuant to LMC's industrial wastewater discharge permit.

#### **Department's Summary Response**

The Building EP-10 sump, treatment unit and discharge is further clarified in this "Final Decision" Document. Although the treatment units could have been delineated better in the "Statement of Basis," the goal of the EP treatment system(s) as a whole will function to prevent the off-site migration of VOC contaminated groundwater and the PCB-impacted groundwater in the Building EP-10 sump. In addition to the "Statement of Basis," the "Corrective Measures Implementation Plan" (pages 6 through 9), public noticed at the same time, did clearly describe the Building EP-10 sump and the treatment system.

## CONCLUSIONS

Changes to the proposed remedies, or the selection of alternative remedies may be made if comments or additional data indicate that such changes would result in a more appropriate solution. Neither party had specific concerns or comments directly related to the proposed final remedies for Electronics Park or Bloody Brook. No other options or solutions were presented or discussed, nor were specific reasons given for not implementing the proposed final remedies. **Therefore, the proposed remedies outlined in the Statement of Basis will be the selected final remedies for the Electronics Park Facility and the West Branch of Bloody Brook.**

Included below, are Tables that outline areas that have been impacted by contamination, a summary of the selected remedies to address the contamination, and the anticipated goal for each remedial area.

The Department will now enter into an Order on Consent with Lockheed Martin. Pursuant to the authority under "Environmental Conservation Law, Article 27, Title 9 and §71-2727(3), the clean-up activities will begin or continue as outlined in the Order on Consent and its attachments.

### **AREAS IMPACTED at the EP FACILITY and the WEST BRANCH OF BLOODY BROOK**

As a result of past manufacturing and operations, a variety of chemicals used at the EP facility have impacted soils, sediment and groundwater. These include volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), heavy metals, and hazardous constituents found in petroleum based products (BTEX). Below is a summary of the locations and type of contaminants found at the EP facility. These areas are outlined in the Table below:

**AREAS IMPACTED at the EP FACILITY**

<b>Location</b>	<b>Type of Impacts found</b>	<b>Media Impacted</b>
Groundwater at the EP facility	VOCs (including trichloroethene, 1,2,dichloroethene, and vinyl chloride). Groundwater entering the Building 10 basement sump is also contaminated with low levels of PCB's.	Groundwater
Former EP Gasoline Storage Area	Petroleum based compounds (benzene, toluene, ethylbenzene, and xylene)	Soil & Groundwater
Former EP Drum Storage Area	VOCs and Petroleum based compounds	Soils
EP Storm Sewers	VOCs	Groundwater & Surface Water

**AREAS IMPACTED in the WEST BRANCH OF BLOODY BROOK**

<b>Location</b>	<b>Type of Impacts Found</b>	<b>Media Impacted</b>
West Branch of Bloody Brook	Cadmium, PCBs	Stream Sediments

## PROPOSED FINAL REMEDIES AND GOALS

The selected final remedies were based on achieving a goal that is protective of human health and the environment. Specific clean-up goals have been established for each environmental media (soil, sediment and groundwater). The chosen remedies and goals are outlined in the Table below:

### SELECTED REMEDIES AND REMEDIAL GOALS FOR SOIL, SEDIMENT, AND GROUNDWATER

Location	Final Selected Remedies and Goals
Groundwater at the EP Facility	Clean up and prevent the off-site migration of VOC-impacted groundwater and PCB impacted groundwater in Building EP-10 Basement sump. Continue to pump and treat VOC impacted groundwater using the two existing on-site air strippers and continue to pump and treat PCB impacted groundwater entering the Building EP-10 sump using a carbon treatment system (to remove PCBs); then discharged to the Onondaga County sanitary sewer system.
Former EP Gasoline Storage Area	Clean up VOC-impacted soils at the Former EP Gasoline Storage Tank Area. Soils will be treated to remove VOCs using in-situ bioremediation.
Former EP Drum Storage Area	Clean up VOC-impacted soils at the Former EP Drum Storage Area. Soils will be treated to remove VOCs using in-situ vapor extraction.
EP Storm Sewers	Prevent the off-site discharge of VOC-impacted groundwater. Continue the repair and maintenance of the storm sewer system to eliminate the infiltration of VOC-impacted groundwater.
West Branch of Bloody Brook	Clean an impacted section of Bloody Brook. Removed and disposed off-site PCB and cadmium-impacted sediment found in a 750-foot segment of the West Branch of Bloody Brook immediately downstream of the NYS Thruway.

## POST-REMEDIAL MONITORING

To be sure the selected final remedies have worked appropriately, monitoring at both the EP facility and of Bloody Brook will continue. Results of this monitoring will show if the goals of the implemented remedies are being accomplished. A brief description of the continued monitoring to be performed during, and after the initiation of the remedial activities are described below:

**Groundwater Monitoring:** Routine sampling of on-site and perimeter groundwater monitoring wells will continue. Also collection of groundwater elevations. This data will confirm that the concentrations of groundwater contamination are being reduced, and that groundwater contamination is not leaving the EP facility.

**Former Gasoline Storage Tank Area:** Monitoring will include vapor phase measurements of volatile organic compounds (VOCs) in the soils. This will monitor the progress of the remedial activity (in-situ bioremediation) as it is expected to reduce or eliminate the presence of VOCs in the unsaturated soils.

**Former Drum Storage Area:** Monitoring here will also include vapor phase measurements of VOCs in the soils to evaluate the progress of the remedial activity (in-situ soil vapor extraction) in the unsaturated soils. This remedy is expected to reduce or eliminate the presence of VOCs in the unsaturated soils.

**Storm Sewers:** Monitoring at storm sewer locations on-site and in Bloody Brook will continue to evaluate the progress of the repair and maintenance program. As repairs continue, infiltration of VOC-impacted groundwater should be minimized.

**Bloody Brook:** Confirmation sampling of the stream will be performed to ensure sediments containing elevated levels of Cadmium have been removed. In order to evaluate whether the sediment removal program has effectively addressed the potential threat to stream organisms, long-term monitoring of crayfish for Cadmium and PCBs will be performed. It is anticipated that over time, the impacts of the residual sediment contamination on the stream organisms will diminish. If, however, the monitoring data indicate

that the residual sediment contamination represents an unacceptable threat to these stream organisms, additional investigation and remediation of the stream will be necessary.