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Fox
Muszynski
cc: Caspe/Action
Response Due 8/7/
Direct Reply

Stephen D. Ramsey
Vice President,
Corporate Environmental Programs

General Electric Company
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July 20, 2000

Jeanne M. Fox
Regional Administrator
U.S. EPA Region 2
290 Broadway
New York, NY 10007-1866

US EPA
'00 JUL 24 PM 12:01
OPM/PPEB

Re: Hudson River Meeting Follow-up

Dear Ms. Fox:

Thank you very much for the opportunity to present our scientific research related to the Hudson River project to you and your team. I hope you found this useful, particularly the analysis focusing on the discrepancy between the EPA model and the conclusion derived from your team's earlier analysis of the low resolution cores. This is a fundamentally important issue since your model shows (as does GE's) that the buried deposits of PCBs in the so-called "Hot Spots" are stable and will remain isolated. The remedies appropriate for stable deposits are obviously different from those needed for instable materials. I hope you will try to resolve this discrepancy before your team embarks upon the analysis of remedial alternatives.

During our discussion on the limitations of dredging technology, Richard Caspe expressed a belief that our statement that the post-dredging PCB concentration of 9.2 ppm at the GM Massena site was incorrect and the actual value was 3 ppm. Attached is a note from Blasland, Bouck & Lee, the consultant who performed these calculations, showing that the post-dredging value was 9.2 ppm and that only after capping a portion of the site was an average value of 3 ppm achieved. We continue to believe that 9.2 ppm is a fair and appropriate value to use for assessing the effectiveness of dredging technology to reduce PCB levels in surface sediments.

Since we met, we have received new data from a site in Manistique, Michigan where EPA has been dredging sediments since 1995. These data clearly show the limitations of dredging technology in controlling risks and that dredging can actually increase risks. Attached is a graph summarizing this information that shows PCB levels in surface sediments increased from approximately 15 ppm to 26 ppm as a

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result of EPA's dredging. In areas not dredged, PCB levels declined from 12 ppm to 8 ppm presumably due to burial by cleaner sediment. To date EPA has spent over $35 million to perform this work. We believe that as more data is obtained from other sites, it will become even more apparent that dredging is ineffective in reducing risk.

I hope you will consider our proposal to open a dialogue on key scientific issues. GE and the Agency have spent a long time together on the Hudson and will no doubt spend more. Genuine exchange and better understanding between us, particularly on the narrowing range of scientific questions, would be valuable. We remain willing and ready to discuss with your staff whatever ground rules would facilitate candid discussion.

Please let me know if you have any questions about the material presented.

Sincerely,

Steve Ramsey

Stephen D. Ramsey

Attachments
cc: Richard Caspe, U.S. EPA
William Muszynski, U.S. EPA

MASSENA PLANT
P.O. Box 460
Massena, New York
13662-0460

June 14, 1996

Chief, New York/Caribbean Superfund Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency - Region II
290 Broadway, 20th Floor
New York, New York 10007-1866

Attention: GM/Massena Superfund Site Project Manager

Re: General Motors-Massena Superfund Site, Massena, New York
EPA Order Index No. II CERCLA-20207
– St. Lawrence River Sediment Removal Project Remedial Action Completion Report

Dear Ms. Jackson:

In accordance with Section X Paragraph 34.d of the above referenced Order, enclosed are copies of the St. Lawrence River Sediment Removal Project Remedial Action Completion Report. The report documents the sediment removal activities completed in 1995 and includes the final river bottom sample results. The report also discusses in detail the design and installation of the sediment cap over a portion of the work area. A Monitoring and Maintenance Plan is currently being prepared to address testing, inspection and potential maintenance of the cap. The plan will be submitted for review and approval in June 1996.

The report summarizes the extensive efforts that were made to remove sediment to the maximum extent practicable, although the final PCB levels did not achieve the 1 ppm goal in all cases. Except for the Quadrant 3 subarea, residual concentration in sediment and other penetrable bottom material averaged approximately 3 ppm, with no single sample exceeding 10 ppm. In Quadrant 3, residual concentrations were higher, but a sediment cap, approved by the USEPA, was installed over the area.

Lisa Jackson
June 12, 1996

Since the established PCB cleanup goal was not achieved in all cases, GM is hereby petitioning the USEPA to modify the sediment cleanup goal in accordance with the requirements set forth in Section X Paragraph 36 of the Order. The enclosed report fulfills all the requirements outlined in the Order requiring GM to demonstrate the technical impracticability of further dredging. With the bottom sediment removed to the greatest extent practicable and a sediment cap installed over the areas with elevated PCB concentrations, a protective remedy has been implemented.

With the submittal of this report, GM requests that the USEPA review the information and, in accordance with paragraph 36.i of the Order, provide a written determination that this remedial action conforms with the requirements of the Order and the Operable Unit 1 Record of Decision and the remedial activities for the St. Lawrence River are complete.

Should you or your staff have any questions regarding this correspondence, please contact me at (315) 746-2233 or Jim Hartnett at (315) 764-2239.

Sincerely,

DC Premo

Douglas C. Premo
GM. Project Coordinator

Enclosure

TABLE 15

River Sediment Grid Sample Results By Sample Round

St. Lawrence River Sediment Removal Project

Total PCBs (mg/kg) - Dry Weight

Quadrant	Sample Location	First Round	Second Round	Third Round	Fourth Round	Fifth Round	Sixth Round	Seventh Round	Eigth Round
Q1	1		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Q1	2		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Q1	3		8.2	8.2	8.2	8.2	8.2	8.2	8.2
Q1	4	102.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Q1	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Q1	6		13.8	4.1	4.1	4.1	4.1	4.1	4.1
Q1	7	69.8	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Q1	8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Q1	9	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Q1	10		13.7	3.8	3.8	3.8	3.8	3.8	3.8
Q1	11	14.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Q1	12	3.1	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Q1	13	1.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Q1	14		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Q1	15	8.5	13.7	6.0	6.0	6.0	6.0	6.0	6.0
Q1	16	8.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Q1	17	2.4	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Q1	18		1.2	1.2	1.2	1.2	1.2	1.2	1.2
Q1	19		7.6	7.6	7.6	7.6	7.6	7.6	7.6
Q1 Avg/Total		**19.3**	**4.0**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**
Q2	20		4.5	4.2	4.2	4.2	4.2	4.2	4.2
Q2	21		5.9	14.1	5.5	5.5	5.5	5.5	5.5
Q2	22	6.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Q2	23			0.1	0.1	0.1	0.1	0.1	0.1
Q2	24	0.4	0.4	3.1	3.1	3.1	3.1	3.1	3.1
Q2	25	3.7	3.7	6.1	6.1	6.1	6.1	6.1	6.1
Q2	26		2.4	2.4	2.4	2.4	2.4	2.4	2.4
Q2	27			1.4	1.4	1.4	1.4	1.4	1.4
Q2	28	26.4	26.4	6.5	6.5	6.5	6.5	6.5	6.5
Q2	29	7.5	7.5	3.8	3.8	3.8	3.8	3.8	3.8
Q2	30				7.4	7.4	7.4	7.4	7.4
Q2	31				124.3	4.5	4.5	4.5	4.5
Q2	32				32.1	4.3	4.3	4.3	4.3
Q2 Avg/Total		**8.9**	**6.4**	**4.2**	**13.8**	**3.8**	**3.8**	**3.8**	**3.8**

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Total PCBs (mg/kg) - Dry Weight

Quadrant	Sample Location	First Round	Second Round	Third Round	Fourth Round	Fifth Round	Sixth Round	Seventh Round	Eigth Round
Q2+	33	12.0	80.0	80.0	157.8	411.0	38.8	38.8	38.8
Q2+	34	173.6	13.4	13.4	505.0	389.5	1333.0	1649.0	34.5
Q2+	35	2159.0	217.1	217.1	232.0	185.8	226.8	7.9	7.9
Q2+	36		227.8	436.0	10.4	10.4	7.0	7.0	7.0
Q3	37	283.0	92.8	434.0	281.0	454.0	435.0	91.0	91.0
Q3	38	820.0	102.8	554.0	246.8	371.0	63.3	63.3	63.3
Q3	39	2469.0	133.7	11.4	0.8	0.8	0.8	0.8	0.8
Q3	40	42.9	74.6	66.0	227.6	8.3	8.3	8.3	8.3
Q3	41			176.4	12.4	12.4	41.2	41.2	41.2
Q3	42	7970.0	369.9	155.0	116.6	630.0	17200.0	57.0	57.0
Q3	43	9.2	113.0	17.8	153.7	103.1	164.4	14.5	14.5
Q3	44	351.0	46.2	67.1	37.4	32.6	73.9	73.9	73.9
Q3	45	5.1	165.2	126.2	12.5	9.1	9.1	9.1	9.1
Q3	46			14.4	3.5	3.5	68.3	68.3	68.3
Q3	47		2773.0	71.6	21.0	21.0	21.0	21.0	21.0
Q3	48	607.0	231.0	1250.0	18.9	156.5	491.0	18.8	18.8
Q3	49	74.6	38.0	9.0	9.0	9.0	9.0	9.0	9.0
Q3	50	256.0	34.0	28.4	69.4	66.5	407.0	129.0	9.0
Q3	51	20.1	27.5	10.0	10.0	10.0	10.0	10.0	10.0
Q3	52			10.0	10.0	10.0	10.0	10.0	10.0
Q3	53	149.5	22.7	132.0	1031.0	67.4	290.0	244.0	27.8
Q3	54	22.3	14.8	4.2	4.2	4.2	4.2	4.2	4.2
Q3	55	38.2	14.8	182.0	81.0	147.0	32.3	32.3	32.3
Q3	56	1.2	10.2	13.8	0.3	8.2	8.2	8.2	8.2
Q3	57			0.6	0.6	0.6	0.6	0.6	0.6
Q4+	58		25.2	41.9	32.7	12.6	66.3	66.3	66.3
Q4+	60		15.4	24.4	98.6	35.1	12.8	12.8	12.8
Q4+	61		21.5	10.1	23.0	11.0	23.5	23.5	23.5
Q4+	62			14.7	42.5	42.5	7.6	7.6	7.6
Q3 Avg/Total		**813.9**	**202.7**	**143.8**	**119.0**	**111.1**	**726.3**	**94.0**	**26.8**
Q4	63	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Q4	64	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Q4	65	72.6	32.8	1.3	1.3	1.3	1.3	1.3	1.3
Q4	66		0.9	0.9	0.9	0.9	0.9	0.9	0.9
Q4	67	11.9	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Q4	68	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Q4	69		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Q4 Avg/Total		**19.3**	**7.2**	**2.7**	**2.7**	**2.7**	**2.7**	**2.7**	**2.7**
Phase 1 Avg/Total		**395.4**	**85.6**	**64.9**	**54.0**	**48.5**	**307.0**	**41.3**	**13.0**

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Total PCBs (mg/kg) - Dry Weight

Quadrant	Sample Location	First Round	Second Round	Third Round	Fourth Round	Fifth Round	Sixth Round	Seventh Round	Eigth Round
Q5	70	15.5	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Q5	71	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Q5	72	20.8	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Q5	73	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Q5	74	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Q5	75	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Q5	76	10.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Q5	77	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
Q5	78	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Q5	79	11.7	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Q5	80	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Q5	81	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Q5	82	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Q5	83	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
Q5	84	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Q5	85	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
Q5	86	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Q5	87	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Q5	88	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Q5	89	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Q5	90	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Q5	91	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Q5	92	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Q5 Avg/Total		**5.9**	**3.9**	**3.9**	**3.9**	**3.9**	**3.9**	**3.9**	**3.9**

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St. Lawrence River Sediment Removal Project

Total PCBs (mg/kg) - Dry Weight

Quadrant	Sample Location	First Round	Second Round	Third Round	Fourth Round	Fifth Round	Sixth Round	Seventh Round	Eigth Round
Q6	93	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Q6	94	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Q6	95	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Q6	96	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Q6	97	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Q6	98	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Q6	99	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Q6	100	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Q6	101	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Q6	102	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Q6	103	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Q6	104	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Q6	105	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Q6	106	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Q6	107	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Q6	108	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Q6	109	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Q6	110	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Q6	111	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Q6	112	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Q6	113	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Q6 Avg/Total		**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**
Phase 2 Avg/Total		**4.3**	**3.2**	**3.2**	**3.2**	**3.2**	**3.2**	**3.2**	**3.2**
Site Avg/Total		**190.5**	**50.4**	**40.3**	**34.3**	**30.9**	**188.7**	**26.5**	**9.2**

Manistique River & Harbor, MI: Area D -- Comparison of PCB Surface Concentrations in Areas Dredged and Not Dredged