URS

Memorandum

To:	Mike Liberati, DuPont	From:	Todd Morrison JR Flanders
cc:	Ralph Stahl	Office:	Fort Washington
		Date:	June 29, 2006

Subject: **June Sampling Event Summary, South River, VA**

During the week of June 19, 2006, in accordance with the Phase I System Characterization Work Plan (CRG 2006), samples were collected to provide baseline measures of chemical parameters in sediment, surface water, and crayfish tissue. Sixteen locations were sampled: thirteen locations in the preliminary study area, and three potential reference locations. Table 1 describes the parameters analyzed and the number of replicates collected at each location. All samples planned for collection were collected successfully. Samples were shipped overnight, and at the time of this update, all samples shipped had been received by the lab. Samples were received at the proper temperature and without any breakage.

Sample collection protocols adhered to those described in the workplan with no exceptions Surface water samples were collected in triplicate for filtered and unfiltered total mercury (THg) and methylmercury (MeHg), and single samples were collected for all other parameters. Crayfish were collected via kick nets and electrofishing, and were relatively abundant, allowing the collection of one field duplicate. Single composite samples were collected at each location. The sediment sampling technique described in the work plan successfully generated an adequate amount of fine-grained sediment for each analysis planned. Sediment samples were collected in triplicate for THg and MeHg, and single samples were collected for all other parameters.

Low crayfish abundance at station RRM-4.2 was again evident during the June sampling event. While the required numbers of crayfish were obtained at this location, a second sampling effort was necessary and conducted in order to obtain sufficient numbers of organisms (a total of three crayfish). Total estimated sampling time required to obtain the full sample was approximately 90-120 minutes of electrofishing. Low crayfish abundance at this location reflects the general lack of suitable habitat along this section of the study area.

Discharge during the sampling event was below the mean daily streamflow for the period sampled. Mean daily streamflow was approximately 71 cubic feet per second (CFS) for the sampling period, at Harriston, VA. This was well below the median daily streamflow of approximately 128 CFS. The conditions encountered during the sample collection event are indicative of summertime baseflow conditions.

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Table 1
Sample Collection Summary
Phase I System Characterization
Ecological Study

Sampling Locations	Number of Replicate Samples Collected for Media Types													
	Surface Water					Sediment					Crayfish			
	Ancillary Parameters[1]	MeHg[2]	THg[2]	Metals[2]	PAH/ OCP	Ancillary Parameters[3]	MeHg	THg	Metals	PAH	MeHg	THg	Metals	PAH
Study Areas														
RRM 0.6	1	3	3	1	1	1	3	3	1	1	1	1	1	1
RRM 2.0	1	3	3	--	--	1	3	3	--	--	1	1	--	--
RRM 3.0	1	3	3	1	1	1	3	3	1	1	1	1	1	1
RRM 4.2	1	3	3	--	--	1	3	3	--	--	1	1	--	--
RRM 5.2	1	3	3	--	--	1	3	3	--	--	1	1	--	--
RRM 7.1	1	3	3	1	--	1	3	3	1	--	1	1	1	--
RRM 8.7	1	3	3	1	1	1	3	3	1	1	1	1	1	1
RRM 11.8	1	3	3	--	--	1	3	3	--	--	1	1	--	--
RRM 13.1	1	3	3	--	--	1	3	3	--	--	1	1	--	--
RRM 14.6	1	3	3	--	--	1	3	3	--	--	1	1	--	--
RRM 19.0	1	3	3	--	--	1	3	3	--	--	1	1	--	--
RRM 22.4	1	3	3	--	--	1	3	3	--	--	1	1	--	--
SFS 01	1	3	3	1	1	1	3	3	1	1	1	1	1	1
Reference Areas														
SR 01	1	3	3	1	1	1	3	3	1	1	1	1	1	1
NR 01	1	3	3	1	1	1	3	3	1	1	1	1	1	1
NR 02	1	3	3	1	1	1	3	3	1	1	1	1	1	1

Note:
[1] Total suspended solids, total organic carbon, major ions (NO_3/NO_2, SO_4, PO_4), hardness
[2] Both total and dissolved samples were collected for this parameter
[3] Loss on ignition, pH
PAH = Polycyclic aromatic hydrocarbons