Exponent™

EXTERNAL MEMORANDUM

TO: Cheryl Hiatt
FROM: Rick Bodishbaugh
DATE: May 12, 2002
CONTRACT: 8601913.001
SUBJECT: Bedford Stream Investigation High Flow Sampling

The Stream Investigation Work Plan, developed in June 2001, calls for surface water sampling in the study area streams under both high and low flow conditions. Low flow sampling was conducted at 10 stations in October 2001, as described by the Stream Investigation Field Sampling Plan (FSP). Conditions are presently suitable for high flow sampling due to seasonal heavy rainfall in Bedford. The high-flow sampling event should ideally be completed sometime before the end of May to take advantage of the Spring wet season. The scope of this sampling effort is described below. Refer to the attached map for all surface water station locations.

In accordance with the Work Plan and FSP, surface water will be re-sampled at the following original stations sampled in October 2001, and analyzed for TCL VOCs, SVOCs, and PCBs, TAL metals (less earth metals), filtered PCBs, filtered metals, total cyanide, total Kjeldahl nitrogen, ammonia, pH, total suspended solids, total dissolved solids, and calcium carbonate hardness.

- ST-1 Upper unnamed tributary (Parcel 4)
- ST-4 Bailey's Branch at Broomsage Road (Parcel 22)
- ST-10 Pleasant Run at Mount Pleasant Road bridge (Parcel 31)
- ST-16 Pleasant Run downstream of Peerless Road bridge (Parcel 39)
- ST-19 Pleasant Run at site of former Murdock railroad crossing (Parcel 40)
- ST-21 Salt Creek approximately 1 mile upstream of confluence with Pleasant Run

- ST-23 Salt Creek approximately 1 mile downstream of confluence with Pleasant Run
- R-1 Gullets Creek at Needmore Road bridge (Upstream Reference)
- SP-1 Eastern seep area at Bailey Scales Road (GM Property)
- SP-4 Western seep area at M Street (Parcel 2)

In addition to the surface water stations originally specified by the FSP, a number of additional locations have been sampled for PCBs in 2002. These include spring water, seep water, and stream water samples. Sampling for total and filtered PCBs will be conducted at all locations shown on the attached figure which have not previously been sampled under high flow conditions, in order to evaluate whether high groundwater flows may result in contaminant transport to surface water drainages.

In addition to PCBs, water at the following stations on GM property near the north disposal area will be re-sampled for TCL VOCs, SVOCs, TAL metals (less earth metals), and filtered metals:

- Eastern Seep Area 01
- Eastern Seep Area 02
- Surface water stations 1426, 1427, 1428

Finally, the following new surface water stations in the uppermost reach of the main study area drainage will be sampled for total and filtered PCBs, in order to evaluate the possibility of PCB loading to the creek via groundwater influx:

- 1 Station immediately downstream of Outfall 002
- 1 Station just below Station 731 (seep in stream bed)
- 1 Station just below Station 730 (seep in stream bed)
- 1 Station at Bailey Scales Road

## SCHEDULE

Tentatively, this sampling is scheduled to begin the week of May 13, 2002. Due to the short-term effects of rainfall on some study area stream levels, the timing and duration of field work may be highly dependent on weather. Exponent and CRA field sampling teams will mobilize to the Site on Monday, May 13, and initiate sampling after determining that high flow conditions are present. Agency personnel who wish to be present for the sampling will be notified a day before sampling is initiated by telephone. Sampling is anticipated to take one to two weeks, depending on weather.

Samples in the surface water will be collected in accordance with the Stream Investigation FSP, using similar methodologies to low flow groundwater sampling. Additional precautions will be taken to ensure that none of the sampling crews is placed at risk during flash flooding in the creek bed.

Once sampling is completed each day, samples will be shipped to the laboratory overnight. Once all sample results are validated, the results will be summarized in a technical memorandum, which will include summary tables and figures showing sampling locations.