

9-275-1
REV (10-01)

Geological Survey
Water Resources Division

Processed by BA

Sta. No. 3659390890841 Acoustic Profiler Discharge Measurement Notes

CK'd by BA

Sta. Name OHIO RIVER ABOVE CAIRO Party BA/CR MAIN CHANNEL ONLY

Date 5/5 2011 Area 224,000 Vel. 4.46 GH 1.02

Width 4740 Profiler Water Temp 16.6 °C at Rated area Index Velocity 2.40

Profiler S/N 1127 Mfr. RD1 Freq. 600 Firmware 10.1.1 Software Ver. 2.04

Depth Cell Size	50 cm	Other commands:
No. of Cells	72	
Blanking Distance	25 cm	
Water Mode	1	
Ambiguity Vel.	260	
Water pings	1	
Bottom pings	1	

Boat/Motor Used QUADSKIFF ADCP Time to WT @

Mag. Var. 1) 2 2) 3 3) 4 Model -1.9 Avg. -1.9 Comp. Cal. ✓

Samples collected: water quality, sediment, biological, other: ✓

Measurements documented on other sheets: water quality, and base gage, other: ✓

Rain-gage serviced/calibrated: ✓

Weather: ✓

Wind Spd Dir ✓

Air Temp °C at ✓

Water Temp 16.6 °C at ✓

Specific Cond: ✓

Checkbar/chain found ✓

Changed to at ✓

Correct ✓

Wading, cable, ice, boat, upstr., downstr., side bridge, ft., mi. upstr., downstr. of gage.

Measurement rated: excellent (2%), good (5%), fair (8%), poor (>8%) based on following conditions:

Flow: UNEVEN, TURBULENT

Cross section: EVEN SAND CHANNEL, TILES + BRUSH AT OVERBANKS

Control: CHANNEL

Gage operating: Record removed: Y or N Filename: ✓

Battery voltage: Intakes/Orifice cleaned/purged:

Bubble-gage psi: Tank Line Bubble rate /min.

Extreme-GH indicators: max min

CSG checked: HWM height on stick Ref elev HWM elev

Remarks: TWO TRANSDUCERS FOR TIME

GH of zero flow = GH = ft. rated ft.

Sheet No. of sheets

Performed Moving Bed Test: NO

Performed Compass Test: NO

Map Location:

Station Number: 365939 089094601

Meas. No: 7

Station Name: Ohio above Thurs

Date: 05/05/2011

Party: RA/CR

Width: 4,740 ft

Processed by: RA

Boat/Motor: QWboat

Area: 228,000 ft²

Mean Velocity: 4.46 ft/s

Gage Height: 0.00 ft

G.H.Change: 0.000 ft

Discharge: 1,020,000 ft³/s

Area Method: Avg. Course

ADCP Depth: 2.400 ft

Index Vel.: 0.00 ft/s

Rating No.: 1

Nav. Method: DGPS

Shore Ens.: 10

Adj. Mean Vel: 0.00 ft/s

Qm Rating: U

MagVar Method: Model (-1.9°)

Bottom Est: Power (0.1667)

Rated Area: 0.000 ft²

Diff.: 0.000%

Depth Sounder: Not Used

Top Est: Power (0.1667)

Control1: Unspecified

Control2: Unspecified

Control3: Unspecified

Screening Thresholds:

BT 3-Beam Solution: YES

Max. Vel.: 13.3 ft/s

ADCP:

Type/Freq.: Rio Grande/600 kHz

WT 3-Beam Solution: NO

Max. Depth: 97.0 ft

Serial #: 1127

Firmware: 10.16

BT Error Vel.: 0.33 ft/s

Mean Depth: 48.1 ft

Bin Size: 50 cm

Blank: 25 cm

WT Error Vel.: 3.50 ft/s

% Meas.: 80.52

BT Mode: 5

BT Pings: 1

BT Up Vel.: 1.00 ft/s

Water Temp.: None

WT Mode: 1

WT Pings: 1

WT Up Vel.: 11.00 ft/s

ADCP Temp.: 16.6 °C

WV: 260

Use Weighted Mean Depth: YES

Performed Diag. Test: NO YES

Project Name: Ohio main Thurs_.mmt

Performed Moving Bed Test: NO YES 003

Software: 2.04

Performed Compass Test: NO YES

Meas. Location:

Tr.#		Edge Distance		#Ens.	Discharge						Width	Area	Time		Mean Vel.		% Bad	
		L	R		Top	Middle	Bottom	Left	Right	Total			Start	End	Boat	Water	Ens.	Bins
001	L	306	615	1020	76431	854449	93606	18750	16120	1059356	4745	231181	11:52	12:02	7.25	4.58	0	0
002	R	336	615	915	70788	784067	83666	20916	16114	975549	4740	225332	12:02	12:10	7.96	4.33	0	0
Mean		321	615	967	73610	819258	88636	19833	16117	1017453	4743	228256	Total	00:17	7.60	4.46	0	0
SDev		21	0	74	3991	49768	7029	1531	4.25	59261	3.6	4135.8			0.50	0.18		
SD/M		0.07	0.00	0.08	0.05	0.06	0.08	0.08	0.00	0.06	0.00	0.02			0.07	0.04		

Remarks:

LC Version 3.20, July 8, 2010

Processed on: 23-Jun-2011

Loop File: Ohio main Thurs__003_11-05-05_ASC.TXT

Distance Made Good (ft)	Loop Time (sec)	Moving Bed Velocity (ft/s)	Moving Bed Direction (degrees)	Flow Direction (degrees)	Estimated Percent Correction (percent)
117.28	1039.93	0.11	137.30	132.90	3.00

Percent Bad Bottom Track: 7.3

WARNING: Percentage of bad bottom track values exceeds 5.
Loop may not be accurate. Please review data.

Difference in flow direction between out and back sections: 3.0 deg

Loop Closure Error not in Upstream Direction -- No Correction Recommended
