

9-275-1	10/24/08	U.S. DEPARTMENT OF THE INTERIOR U.S. Geological Survey				Meas. No. 2
Station Number		ADCP Discharge Measurement Notes				Processed by SS
365933 089084601						Checked by SS
Station Name OHIO RIVER CAIRO (MAIN CHANNEL)						
Date	4-30	20 11	Party ESS/JEM			
Width	Area / Rated Area	Velocity	Index Vel.	Gage Height	Discharge	
4570	218,000	3.57	-	-	778,000	
Gage Height Change	Meas. plots	From rating	Shift		ADCP Sync'd to WT	
-in- hrs.	% diff	No.:			Q at	or N
ADCP Mfr / Model / Frequency		Serial No.	Firmware	Software		
FD1 / R10 / 600		1127	10.16	2.07		
Boat/Motors Used		GPS Used	ADCP Depth	Diag. Test / Errors?		
NO WSC GW		TRIMM AG.	2.40	Y or N		
Compass Calib. & Total Error	Mag. Var	On-site Mode	Previous	Moving Bed?		
Y or N	.8	-1.6		Y or N		
Meas. Water Temp	ADCP Water Temp	Weather / Air Temp	Wind Speed / Dir.			
16.6 °F / Out	16.4 °F / Out	QVC WAGA	5-10 SSW			
Gage Readings						
Time		Inside	Outside	Site Conditions		
1438 (S)				Max Water Depth	98.3	
				Max Water Speed	-	
				Max Boat Speed	-	
1524 (F)				Water Mode	12	
				Bottom Mode	5	
				Streambed material		
				Salinity		
				ppt/at		
Weighted MGH				Checkbar found		
GH corrections				Checkbar changed to:		
Correct MGH				at		
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	FAIRLY EVEN					
Cross section:						
Control:	CHANNEL					
Gage operating:	Y or N	Record removed:	Y or N	Filename:		
Battery voltage		V	Intakes/Orifice cleaned/purged:			
Bubble-gage psi:	Tank	Line	Bubble rate			/ min
Extreme-GH indicators:	Max	Min	CSG Checked	Y or N		
HW/M on stick		Ref elev.	HW/M elevation			
GH of zero flow = GH		- depth at control	ft. Rated =			
Sheet No.				of	sheets	

Station Number:

Meas. No:

Station Name: Ohio Rv at Cairo Main Channel

Date: 04/30/2011

Party: ESS/JRM

Width: 4,570 ft

Processed by: ESS

Boat/Motor: MO WSC QW

Area: 218,000 ft²

Mean Velocity: 3.57 ft/s

Gage Height: 0.00 ft

G.H.Change: 0.000 ft

Discharge: 778,000 ft³/s

Area Method: Avg. Course

ADCP Depth: 2.400 ft

Index Vel.: 0.00 ft/s

Rating No.: 1

Nav. Method: Bottom Track

Shore Ens.: 10

Adj. Mean Vel: 0.00 ft/s

Qm Rating: F

MagVar Method: Model (-1.6°)

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:

ADCP:

BT 3-Beam Solution: YES

Max. Vel.: 8.25 ft/s

Type/Freq.: Rio Grande/600 kHz

WT 3-Beam Solution: NO

Max. Depth: 98.3 ft

Serial #: 1127

Firmware: 10.16

BT Error Vel.: 0.33 ft/s*

Mean Depth: 47.8 ft

Bin Size: 50 cm

Blank: 25 cm

WT Error Vel.: 3.50 ft/s

% Meas.: 82.44

BT Mode: 5

BT Pings: 1

BT Up Vel.: 1.00 ft/s

Water Temp.: 16.6 °C

WT Mode: 12

WT Pings: 1

WT Up Vel.: 8.00 ft/s

ADCP Temp.: 16.4 °C

WV : 175

WO : 1, 19

Use Weighted Mean Depth: YES

Performed Diag. Test: NO

Project Name: OhioRvCairoMainCh_0.mmt

Performed Moving Bed Test: YES

Software: 2.07

Performed Compass Test: NO

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
000 R	127	790	701	58129	620406	67962	939	14602	762039	4407	215984	14:38	14:46	7.53	3.53	5	0
003 L	325	764	900	61288	654361	68380	3538	4463	792030	4779	221928	14:54	15:04	6.03	3.57	2	0
004 R	127	766	808	60654	643903	71729	456	3023	779765	4507	214203	15:04	15:13	6.65	3.64	4	0
005 L	142	765	930	60411	646953	66574	660	3522	778120	4575	220278	15:14	15:24	5.84	3.53	1	0
Mean	180	771	834	60121	641406	68661	1398	6403	777989	4567	218098	Total	00:46	6.51	3.57	3	0
SDev	97	13	103	1378	14672	2186	1440	5499	12312	157.1	3608.5			0.76	0.05		
SD/M	0.54	0.02	0.12	0.02	0.02	0.03	1.03	0.86	0.02	0.03	0.02			0.12	0.01		

Remarks:

- transect has been subsectioned

* - value not consistent for all transects

LC Version 3.20, July 8, 2010

Processed on: 30-Apr-2011

Loop File: OhioRvCiaraMainCh_0_000_LBT_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)
275.09	921.74	0.30	127.43	125.55	10.50

Percent Bad Bottom Track: 9.5

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: 5.3 deg

WARNING: Difference in flow direction between out and back sections of
loop exceeds 5 degrees. This may indicated an inaccurate compass
and the loop may not be accurate. Please review data.

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



R

-
* -