RIPTIDE

Recovery, Information, Prevention, and **Tactical Intervention** for **Drowning Emergencies**

April 5, 2006

Inspector Bill Chandler
Enforcement Services, Room 6
Hennepin County Courthouse
350 SO. 5th St.
Minneapolis, MN 55415

Dear Inspector Chandler:

Re: body flotation observation March 29, 2006

Thank you for being so helpful with our exploratory observation project regarding Christopher Jenkins. Our goal was to answer three questions:

1. Could Chris Jenkins have entered the water from Nicollet Island and have then ended up in the location where he was recovered?
2. Was it possible for Chris to have entered the water from Nicollet Island and kept his shoes on?
3. Could Chris have entered the water from the iron bridge on the east side of Nicollet Island and have ended up in the location where he was recovered?

On March 28th, 2006 we had a follow-up meeting with Omid Mohseni - Professor of St Anthony Falls Laboratory for Univ. of Minnesota, a river flow expert, to discuss water flow rates and directions on the day Chris was missing, the day he was recovered, and the observation conditions. We also wanted to re-confirm with him where he thought Chris was most likely to have come from to have ended up where he was recovered. It was Mr. Mohseni's opinion that Chris would have traveled past the west bank of Nicollet Island, not the east bank, and did not come from the peninsula area of the Island. We also discussed ice conditions and where the large trees came from that were observed in the debris area where Chris was recovered.

As we have already discussed, in August 2005 I put approximately 50 tennis balls in the Mississippi river from both banks and the peninsula of Nicollet Island, and from the closest three bridges. The balls thrown from the east bank and peninsula of Nicollet Island all ended up by the power plant. The balls thrown from the west bank of the Island all ended up on the point where the power plant and small falls connect. Balls thrown from the iron bridge ended up at the power plant.

Balls from Hennepin Bridge went to different locations depending on where they were dropped from. We began on the east side of the bridge, down river left, and dropped balls every 20 feet heading west. Up to the 100 foot mark on the bridge, all the balls stalled approximately 200 feet down river against the west bank of the Island. Then starting from the 100 foot mark, balls were dropped every 20 feet to approximately 260 feet. These balls all went to the location where Chris

was recovered. Then balls were dropped every 20 feet beginning at the 260 foot mark heading west to the West bank. Those balls either went over the two center waterfalls or into the locks, river descending right.

Balls were dropped off the Third Avenue bridge to see how items moved in that water area. If the balls were near the little Island under the bridge they ended up where Chris was found. Balls dropped near the bridge's west-side, down-river look-out point went to the east side of the falls or the power plant.

Tennis balls are a reasonable first test to see where a floating body might travel. Mr. Mohseni suggested to the family that they build a model of the river so he could re-enact where Chris could have come from. The model was going to cost about $100,000. The issue was raised that MPD might assist in paying for this model. In discussions with the family I believed we could garner reasonably similar information with a mannequin re-enactment for travel and hotel expenses. Hence, we came to the March 29, 2006 date.

A Simulaids™ Adult Water Rescue Mannequin part no. 1326 (65 inches x 23 inches x 9 inches, 52 lbs when empty) was prepared with neoprene flotation secured to the torso to represent the ice and decomposition gas. The legs were set up to hang in as close to the same position Chris's legs were observed in scene photos as possible. The original plan, as discussed with Chief Dolan, was to track the mannequin from a boat, within a reasonably safe distance from the falls. This was not possible due to the water flow so we were required to tether the mannequin and work solely from shore. The first tether was a 3/8 inch multifilament, braided polypropylene line. When a longer tether became necessary we were forced to obtain and use a second line that was a 3/8th inch braided nylon line. The first line therefore floated and the second line sank.

I donned a drysuit and swiftwater PFD with a back tether and walked from the Nicollete Island peninsula to a distance of 150 feet, and discovered that the maximum depth of the water did not extend deeper than 40 inches, as was predicted by Mr. Mohseni. The tethered mannequin was then placed in the water from various locations on the peninsula and allowed free movement. When it went towards the east bank it was constantly pulled back into the shore line. When it ws pushed far enough out for the current to move it, it headed towards the power plant.

The mannequin was then placed in several locations down the west bank starting at the peninsula. The depth was very shallow, less than 3-4 feet of water for at least 100 feet of shore. This was true except for one location that will be discussed shortly. The mannequin was let go anywhere from approximately 60 feet from shore to 100 feet. It was pushed out into the current and it still came back to the eddy near shore (the shallow water).

The mannequin continued to do this until we went just up river from the steel fence line where we found a water depth of approximately ten feet approximately ten feet from shore. This was the first location where a body could have laid on the bottom for more than a few days. It was discovered that when the mannequin was pushed 80-90 feet form shore, into the current, it remained in the current and was not pulled back into the peninsula by the eddy. This occurred three times out of three trials that were conducted 20-25 feet up river from each other. It is our opinion that Chris could have been in this location from the steel fence up river to the wooden observation platforms and have then ended up in the location where he was recovered.

Hence, the answer to the first question is yes, a person could have entered the water from the above described west bank location and ended up where Chris was recovered. And if he had come in from under the midsection of the Hennepin county bridge, as described earlier, he could

have also ended up in that recovery location. The other Nicollete Island locations were not possible entry points.

There is a third area that Chris could have entered the water from that is based on the mannequin observations from Nicollet Island, the tennis ball trials from Hennepin Ave Bridge, and the information provided by Mr. Mohseni. This area includes the east and west river banks approximately a mile or more upriver from the Hennepin Ave Bridge.

It is our opinion that even though a body could have entered the water from the west bank of Nicolette Island and the midsection of Hennipen Ave Bridge, it is perhaps less likely that Chris entered the water in those locations than the upstream location because of the ice around Chris and the little ice elsewhere. The ice around Chris either had to have formed in the location where he surfaced and remained for a period of time, or it formed when he was up against the tree where he was recovered. The latter possibility needs to be examined closely. There are several issues:

1. If the ice formed while Chris was against the tree, then would it be expected that he would have been somewhat attached to the tree, especially at the point where a tree branch lay over his torso. The recovering firefighter told Steve Jenkins that Chris was not at all attached to the tree.
2. It was suggested to us that a body could lay in that location for two or more days without anyone noticing it. It was our opinion that after watching the number of people walking and looking over the bridge, and the clear visibility of Chris's recovery location from the bridge, that this is not likely. There is no way of knowing that a body was in a location for any period of time before it was discovered, since there can be no documentation that a body was there before it is discovered. When a body is discovered, the Sheriff's department recovers it. Therefore, there is no reasonable proof that this suggestion is possible for the location Chris was recovered in. Hence, when did the ice have time to form?
3. Look at the scene photos from the first time he was photographed to the time he was near shore during the recovery effort. You will notice that the ice is disappearing.
4. We have the air temperatures for the week running backwards from the day Chris was recovered. The water temperatures are being collected. This will help determine if it was even possible for ice to have formed in a few days of Chris's recovery.

The second question related to whether or not Chris could have kept his shoes on while walking off Nicollete Island into the water. At no point during our observations did we find a location that had a soft enough bottom composition for shoes to be pulled off the feet of someone walking into the water. The third question of the iron bridge as an entry point had the answer of, Chris could not have come off the bridge and ended in his recovery location because of the way the water flows around the sand bar.

We believe that it is possibly more likely that Chris entered the water a mile or more up river from the bridge because of the ice issue that needs further investigation. Thank you again for your assistance with our observations on March 29, 2006.

Stay safe always,
Walt Hendrick
CC. Chief Dolan, MPD
Detective Lee Edwards, MPD
Steve and Jan Jenkins