Microcystin, Cylindrospermopsin, & Saxitoxin Report
Project: Utah DEQ – Division of Water Quality

Sample ID	Site	Date Collected
4990880	State Canal at Rd Xing	7/26/16
4990890	Jordan R at Burnham Dam	7/26/16
4991310	Surplus at I-80	7/26/16
4992290	Jordan R 1700 S	7/26/16
4992320	Jordan R 2100 S	7/26/16
4992890	Jordan R 3900 S	7/26/16
4992970	Big Cottonwood ab Jordan	7/26/16
4993580	Little Cottonwood ab Jordon	7/26/16
4994100	Jordan R 6400 S	7/26/16
4994520	Jordan R Bangerner	7/26/16
4994720	Jordan R Narrows	7/26/16
4994790	Jordan R at Lake Outlet	7/26/16

Toxins – microcystins/nodularins (MCs), cylindrospermopsin (CYN), saxitoxin (STX),

Sample Prep

The samples were ultra-sonicated to lyse cells and release toxins. Duplicate samples were prepared for lab fortified matrices (LFMs) with CYN (1.0 µg/L) and STX (0.2 µg/L) and MC-LR (1.0 µg/L).

Analytical Methodology

MC

The Adda (Abraxis) microcystins enzyme linked immunosorbent assay (ELISA) was utilized for the quantitative and sensitive congener-independent detection of MCs. The current assay is sensitive to down to a LOD/LOQ of 0.15 µg/L for total MCs. The average recovery of a laboratory fortified blank (LFB) spiked with 1.0 µg/L MCLR was 96%.

CYN

A cylindrospermopsin ELISA (Abraxis) was utilized for the quantitative detection of CYN. The current assay is sensitive down to a LOD/LOQ limit of 0.10 µg/L for CYN. The average LFB recovery was 101%.

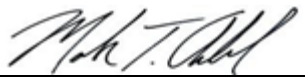
STX

A saxitoxin enzyme linked immunosorbent assay (ELISA) was utilized for the quantitative detection of STX. The current assay is sensitive down to a LOD/LOQ limit of 0.05 µg/L STX. The average LFB recovery was 100%.

Summary of Results

Sample	MC levels (µg/L)	CYN levels (µg/L)	STX levels (µg/L)
4990880	**ND**	**ND**	**ND**
4990890	**ND**	**ND**	**ND**
4991310	**ND**	**ND**	**ND**
4992290	**ND**	**ND**	**ND**
4992320	**ND**	**ND**	**ND**
4992890	**ND**	**ND**	**ND**
4992970	**ND**	**ND**	**ND**
4993580	**ND**	**ND**	**ND**
4994100	**ND**	**ND**	**ND**
4994520	**ND**	**ND**	**ND**
4994720	**ND**	**ND**	**ND**
4994790	**ND**	**ND**	**ND**
Detection Limits (µg/L)	*0.15*	*0.10*	*0.05*

ND = Not detected above the detection limit

Submitted by: 

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Date: 7/29/16