

WO-0084, WO-0085, WO-0086, WO-0087, WO-0094 and WO-0098 show a downward five year trend in tritium concentration. The monitoring location WM-0110 which has historically the highest tritium concentration is currently trending downwards. Monitoring location WM-0089 has the highest tritium concentration in second quarter 2016.

Six monitoring locations selected for trending show no evidence of an upward or downward five year trend. Three monitoring locations show an upward tritium concentration trend and eighteen monitoring locations show a downward tritium concentration trend for the five year period. For comparison, in 2015 (CNS, 2015), there were four, five, and eighteen monitoring locations having no, upward, and downward trend, respectively, for the five year period.

**TABLE 3-1
LIST OF MONITORING LOCATIONS AND TRENDS
IDENTIFIED IN THE 2016 ANNUAL TRENDING DATA REPORT**

SAMPLE POINT	TYPE	TREND FOR	5 YEAR TREND	3 YEAR TREND
WB-0401	Boundary well	Water Elevation	Upward	Upward
WB-0502	Boundary well	Water Elevation	Upward	Upward
WB-1001	Boundary well	Water Elevation	Upward	Upward
		Tritium	Upward	None
WB-1003	Boundary well	Water Elevation	Upward	Upward
WC-0002	Creek/Spring	Tritium	Downward	Downward
WC-0008	Creek/Spring	Tritium	Downward	Downward
WM-0039	On-site well	Tritium	Downward	Downward
WM-0049	On-site well	Tritium	Downward	Downward
WM-0055	On-site well	Tritium	Downward	Downward
WM-0056	On-site well	Tritium	Downward	Downward
WM-0073	On-site well	Tritium	None	None
WM-0089	On-site well	Tritium	None	Downward
WM-0098	On-site well	Tritium	Downward	Downward
WM-0103	On-site well	Tritium	None	Upward
WM-0110	On-site well	Tritium	Downward	Downward
WM-0113	On-site well	Tritium	Downward	None
WM-0114	On-site well	Tritium	Downward	Downward
WM-0115	On-site well	Tritium	None	Downward
WM-0118	On-site well	Tritium	Downward	Downward
WM-0124	On-site well	Tritium	Upward	None
WM-0128	On-site well	Tritium	Downward	Downward

SAMPLE POINT	TYPE	TREND FOR	5 YEAR TREND	3 YEAR TREND
WO-0084	Off-site well	Tritium	Downward	None
WO-0085	Off-site well	Tritium	Downward	Downward
WO-0086	Off-site well	Tritium	Downward	None
WO-0087	Off-site well	Tritium	Downward	Downward
WO-0088	Off-site well	Tritium	None	None
WO-0094	Off-site well	Tritium	Downward	Downward
WO-0098	Off-site well	Tritium	Downward	Downward
WO-0100*	Off-site well	Tritium	None	None
WO-0112	Off-site well	Tritium	Upward	Upward

* upward trend in the past year.

NOTE:

"None" refers to results showing no evidence of upward trend and no evidence of downward trend.

Figure 3-1 shows the monitoring locations having five year tritium trending results by colored squares with green for downward trend, blue for no trend and red for upward trend. Monitoring locations having downward or no trend tend to align from the northeast to the southwest in the western and middle part of the disposal site. Upward trending locations have the same alignment but occur from the middle and eastern part of the disposal site. The alignment of trends appears to coincide with pathlines shown in CNS, 2011. The upward trending monitoring locations appear to be in areas that have pathlines which may originate from trenches filled in the late 70's and early 80's located in the eastern, and middle portions of the disposal site.

Other notable trends observed in the time series graphs are (See Appendix B):

- WB-1001 has trended downwards in the last year
- WC-0008 shows a downward trend in the last two years
- WM-0073 has trended downwards approximately the last two years
- WM-0124 trended downward in approximately the last two years

and

- WO-0100 has an upward trend in the last year.

At DHEC's request (DHEC, 2016) tritium concentration in monitoring wells DW-0004, WO-0090 and WO-0091 trends are provided. These wells are located near the