

# Analytical Summary Report

Analysis Method: 7196A

ANALYST: Indiana

Parameter: Hexavalent Chromium

SUPERVISOR REVIEW BY: apatel

Run Number: LB96180

pH Meter ID: WC pH Meter-1

| Reagent/Standard                      | Lot/Log # |
|---------------------------------------|-----------|
| Calibration Std. hexchrome 0.1 ppm    | WP65496   |
| Calibration Std. hexchrome 0.05 ppm   | WP65495   |
| 5N sulfuric acid                      | WP65054   |
| Calibratation STD HexaChrome 1 PPM    | WP65498   |
| Calibratation STD Hexa Chrome 0.5 PPM | WP65497   |
| calibration std. hexchrome 0.01 ppm   | WP65493   |
| calibration std. hexchrome 0 ppm      | WP65492   |
| Hexavalent Chromium ICV Std.          | WP65499   |
| Hexavalent Chromium CCV Std           | WP65500   |
| hexavalent chromium color reagent     | WP65446   |
| HNO3 Hex-Chrome, 5M                   | WP65055   |
| Calibration std Hexachrome, 0.025ppm  | WP65494   |

Intercept: 0.0001

Slope: 0.77

Regression: 0.999986

| Seq | Lab ID | True Value (mg/l) | DF | Initial Vol (ml/gm) | Final Vol (ml) | pH HN03 | pH H2SO4 | Absorb. at 540 |       | Absorbance Difference | Anal Date  | Anal Time |
|-----|--------|-------------------|----|---------------------|----------------|---------|----------|----------------|-------|-----------------------|------------|-----------|
|     |        |                   |    |                     |                |         |          | Backgrnd       | Color |                       |            |           |
| 1   | CAL1   | 0                 | 1  | 100                 | 100            |         | 1.58     | 0.000          | 0.000 | 0.000                 | 06/21/2018 | 13:00     |
| 2   | CAL2   | 0.01              | 1  | 100                 | 100            |         | 2.13     | 0.000          | 0.008 | 0.008                 | 06/21/2018 | 13:00     |
| 3   | CAL3   | 0.025             | 1  | 100                 | 100            |         | 1.77     | 0.000          | 0.017 | 0.017                 | 06/21/2018 | 13:01     |
| 4   | CAL4   | 0.05              | 1  | 100                 | 100            |         | 2.26     | 0.000          | 0.038 | 0.038                 | 06/21/2018 | 13:01     |
| 5   | CAL5   | 0.1               | 1  | 100                 | 100            |         | 2.34     | 0.000          | 0.079 | 0.079                 | 06/21/2018 | 13:02     |
| 6   | CAL6   | 0.5               | 1  | 100                 | 100            |         | 1.88     | 0.000          | 0.387 | 0.387                 | 06/21/2018 | 13:02     |
| 7   | CAL7   | 1                 | 1  | 100                 | 100            |         | 1.95     | 0.000          | 0.769 | 0.769                 | 06/21/2018 | 13:02     |



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| Seq | Lab ID          | True Value (mg/l) | DF | Initial Vol (ml/gm) | Final Vol (ml) | pH HN03 | pH H2SO4 | Absorb. at 540 |       | Absorbance Difference | Result | Anal Date  | Anal Time |
|-----|-----------------|-------------------|----|---------------------|----------------|---------|----------|----------------|-------|-----------------------|--------|------------|-----------|
|     |                 |                   |    |                     |                |         |          | Backgrnd       | Color |                       |        |            |           |
| 1   | ICV             | 0.5               | 1  | 100                 | 100            |         | 1.77     | 0.000          | 0.389 | 0.389                 | 0.505  | 06/21/2018 | 13:03     |
| 2   | ICB             |                   | 1  | 100                 | 100            |         | 2.04     | 0.000          | 0.000 | 0.000                 | 0.000  | 06/21/2018 | 13:03     |
| 3   | CCV1            | 0.5               | 1  | 100                 | 100            |         | 1.90     | 0.000          | 0.389 | 0.389                 | 0.505  | 06/21/2018 | 13:04     |
| 4   | CCB1            |                   | 1  | 100                 | 100            |         | 1.63     | 0.000          | 0.000 | 0.000                 | 0.000  | 06/21/2018 | 13:04     |
| 5   | PB110476BL      |                   | 1  | 2.51                | 100            | 7.30    | 1.54     | 0.000          | 0.000 | 0.000                 | 0.000  | 06/21/2018 | 13:05     |
| 6   | PB110476BS      | 20                | 1  | 2.54                | 100            | 7.25    | 2.13     | 0.000          | 0.371 | 0.371                 | 0.482  | 06/21/2018 | 13:05     |
| 7   | J3246-03        |                   | 1  | 2.55                | 100            | 7.63    | 2.21     | 0.014          | 0.017 | 0.003                 | 0.004  | 06/21/2018 | 13:06     |
| 8   | J3622-01        |                   | 1  | 2.52                | 100            | 7.20    | 1.88     | 0.020          | 0.020 | 0.000                 | 0.000  | 06/21/2018 | 13:06     |
| 9   | J3622-04        |                   | 1  | 2.53                | 100            | 7.88    | 2.37     | 0.024          | 0.024 | 0.000                 | 0.000  | 06/21/2018 | 13:07     |
| 10  | J3622-08        |                   | 1  | 2.54                | 100            | 7.14    | 2.30     | 0.027          | 0.027 | 0.000                 | 0.000  | 06/21/2018 | 13:07     |
| 11  | J3622-12        |                   | 1  | 2.50                | 100            | 7.25    | 1.79     | 0.022          | 0.022 | 0.000                 | 0.000  | 06/21/2018 | 13:08     |
| 12  | J3622-16        |                   | 1  | 2.52                | 100            | 7.68    | 1.55     | 0.018          | 0.018 | 0.000                 | 0.000  | 06/21/2018 | 13:08     |
| 13  | J3628-01        |                   | 1  | 2.53                | 100            | 7.10    | 1.66     | 0.076          | 0.076 | 0.000                 | 0.000  | 06/21/2018 | 13:09     |
| 14  | J3628-01DUP     |                   | 1  | 2.50                | 100            | 7.17    | 2.04     | 0.079          | 0.079 | 0.000                 | 0.000  | 06/21/2018 | 13:09     |
| 15  | CCV2            | 0.5               | 1  | 100                 | 100            |         | 2.44     | 0.000          | 0.389 | 0.389                 | 0.505  | 06/21/2018 | 13:10     |
| 16  | CCB2            |                   | 1  | 100                 | 100            |         | 2.07     | 0.000          | 0.000 | 0.000                 | 0.000  | 06/21/2018 | 13:10     |
| 17  | J3628-01MSPre   | 40                | 2  | 2.51                | 100            | 7.25    | 1.95     | 0.081          | 0.158 | 0.077                 | 0.100  | 06/21/2018 | 13:11     |
| 18  | J3628-01MS2Ins  | 1284              | 40 | 2.52                | 100            | 7.90    | 1.76     | 0.077          | 0.630 | 0.553                 | 0.718  | 06/21/2018 | 13:11     |
| 19  | J3628-01MS3Post | 40                | 2  | 2.53                | 100            | 7.36    | 2.33     | 0.086          | 0.160 | 0.074                 | 0.096  | 06/21/2018 | 13:12     |
| 20  | PB110477BL      |                   | 1  | 2.54                | 100            | 7.15    | 2.10     | 0.000          | 0.000 | 0.000                 | 0.000  | 06/21/2018 | 13:12     |
| 21  | PB110477BS      | 20                | 1  | 2.52                | 100            | 7.31    | 2.14     | 0.000          | 0.377 | 0.377                 | 0.489  | 06/21/2018 | 13:13     |
| 22  | J3629-01        |                   | 1  | 2.51                | 100            | 7.44    | 1.64     | 0.015          | 0.017 | 0.002                 | 0.002  | 06/21/2018 | 13:13     |
| 23  | J3629-01DUP     |                   | 1  | 2.50                | 100            | 7.60    | 1.87     | 0.014          | 0.016 | 0.002                 | 0.002  | 06/21/2018 | 13:14     |
| 24  | J3629-01MSPre   | 40                | 2  | 2.53                | 100            | 7.77    | 2.20     | 0.017          | 0.353 | 0.336                 | 0.436  | 06/21/2018 | 13:14     |
| 25  | J3629-01MS2Ins  | 1284              | 40 | 2.53                | 100            | 7.64    | 2.41     | 0.014          | 0.599 | 0.585                 | 0.760  | 06/21/2018 | 13:15     |
| 26  | J3629-01MS3Post | 40                | 2  | 2.53                | 100            | 7.20    | 1.78     | 0.016          | 0.360 | 0.344                 | 0.447  | 06/21/2018 | 13:15     |
| 27  | CCV3            | 0.5               | 1  | 100                 | 100            |         | 2.45     | 0.000          | 0.390 | 0.390                 | 0.506  | 06/21/2018 | 13:16     |
| 28  | CCB3            |                   | 1  | 100                 | 100            |         | 1.60     | 0.000          | 0.000 | 0.000                 | 0.000  | 06/21/2018 | 13:16     |
| 29  | J3629-02        |                   | 1  | 2.55                | 100            | 7.13    | 1.57     | 0.012          | 0.013 | 0.001                 | 0.001  | 06/21/2018 | 13:17     |
| 30  | J3629-05        |                   | 1  | 2.53                | 100            | 7.58    | 2.36     | 0.018          | 0.018 | 0.000                 | 0.000  | 06/21/2018 | 13:17     |
| 31  | J3629-06        |                   | 1  | 2.51                | 100            | 7.44    | 2.24     | 0.011          | 0.016 | 0.005                 | 0.006  | 06/21/2018 | 13:18     |
| 32  | J3629-07        |                   | 1  | 2.52                | 100            | 7.25    | 1.80     | 0.013          | 0.015 | 0.002                 | 0.002  | 06/21/2018 | 13:18     |
| 33  | J3629-08        |                   | 1  | 2.53                | 100            | 7.03    | 1.76     | 0.019          | 0.019 | 0.000                 | 0.000  | 06/21/2018 | 13:19     |
| 34  | J3629-09        |                   | 1  | 2.50                | 100            | 7.14    | 2.10     | 0.016          | 0.016 | 0.000                 | 0.000  | 06/21/2018 | 13:19     |
| 35  | J3629-13        |                   | 1  | 2.55                | 100            | 7.69    | 2.46     | 0.059          | 0.059 | 0.000                 | 0.000  | 06/21/2018 | 13:20     |
| 36  | J3629-14        |                   | 1  | 2.51                | 100            | 7.25    | 1.93     | 0.027          | 0.027 | 0.000                 | 0.000  | 06/21/2018 | 13:20     |
| 37  | J3629-15        |                   | 1  | 2.53                | 100            | 7.11    | 1.78     | 0.097          | 0.097 | 0.000                 | 0.000  | 06/21/2018 | 13:21     |
| 38  | J3629-16        |                   | 1  | 2.50                | 100            | 7.17    | 1.56     | 0.083          | 0.083 | 0.000                 | 0.000  | 06/21/2018 | 13:21     |
| 39  | CCV4            | 0.5               | 1  | 100                 | 100            |         | 2.05     | 0.000          | 0.390 | 0.390                 | 0.506  | 06/21/2018 | 13:22     |
| 40  | CCB4            |                   | 1  | 100                 | 100            |         | 2.11     | 0.000          | 0.000 | 0.000                 | 0.000  | 06/21/2018 | 13:22     |