



## Analytical Summary Report

Analysis Method: ASTM D1067-11

Reviewed By: AMANDEEP

Parameter: Acidity

Supervisor Review By: apatel

Run Number: LB105222

Constant: 50,000

Normality1 (T1): 0.02

Normality2 (T2): 0.02

pH Meter ID: WC PH METER-1

| Reagent/Standard       | Lot/Log # |
|------------------------|-----------|
| 0.02N NaOH FOR ACIDITY | WP73081   |
| Acidity LCSW -50 ppm   | WP78181   |

| Seq | LabID      | ClientID   | TV<br>(mg/L) | DL | Sample<br>Vol (mL) | Residual<br>Chlorine | Initial<br>pH | T1<br>(mL) | Adj<br>pH | T2<br>(mL) | End<br>Point<br>pH | Result<br>(mg/L) | Anal Date  | Anal<br>Time |
|-----|------------|------------|--------------|----|--------------------|----------------------|---------------|------------|-----------|------------|--------------------|------------------|------------|--------------|
| 1   | LB105222BL | LB105222BL |              | 1  | 50.00              | NEGATIVE             | 6.02          | 5.00       | 3.90      | 5.00       | 8.21               | 0.00             | 09/19/2019 | 10:39        |
| 2   | LB105222BS | LB105222BS | -50          | 1  | 50.00              | NEGATIVE             | 9.81          | 5.00       | 3.10      | 2.80       | 8.26               | -44.00           | 09/19/2019 | 10:55        |
| 3   | K4843-28   | PT-ACD-WP  |              | 1  | 50.00              | NEGATIVE             | 4.07          | 5.00       | 3.83      | 82.80      | 8.25               | 1,556.0          | 09/19/2019 | 11:20        |

T1 = Titrant1 (H2SO4)

T2 = Titrant2 (NaOH)

Result = ((T2 \* Normality2) - (T1 \* Normality1)) \* Constant / Sample Vol

# WORKLIST(Hardcopy Internal Chain)

WorkList Name : K4843 WetPT

WorkList ID : 130842

Department : Wet-Chemistry

Date : 09-11-2019 14:19:52

| Due Date   | Matrix | Sample   | Test                  | Preservative  | Customer | Storage Location | Customer Sample | Collect Date | Method      |
|------------|--------|----------|-----------------------|---------------|----------|------------------|-----------------|--------------|-------------|
| 09/10/2019 | Water  | K4843-01 | ✓ Hexavalent Chromium | Cool 4 deg C  | CHEM02   | QA Office        | PT-CR6-WP       | 09/09/2019   | 7196A       |
| 09/10/2019 | Water  | K4843-02 | ✓ Hexavalent Chromium | Cool 4 deg C  | CHEM02   | QA Office        | PT-CR6-WP       | 09/09/2019   | SM3500-Cr B |
| 09/11/2019 | Water  | K4843-03 | ✓ BOD5                | Cool 4 deg C  | CHEM02   | QA Office        | PT-DEM-WP       | 09/09/2019   | SM5210 B    |
| 09/11/2019 | Water  | K4843-03 | ✓ CBOD5               | Cool 4 deg C  | CHEM02   | QA Office        | PT-DEM-WP       | 09/09/2019   | SM5210 B    |
| 09/24/2019 | Water  | K4843-03 | ✓ COD                 | Conc H2SO4 to | CHEM02   | QA Office        | PT-DEM-WP       | 09/09/2019   | SM5220 D    |
| 09/24/2019 | Water  | K4843-03 | ✓ TOC                 | Conc H2SO4 to | CHEM02   | QA Office        | PT-DEM-WP       | 09/09/2019   | SM5310B     |
| 09/24/2019 | Water  | K4843-04 | ✓ TOC                 | Conc H2SO4 to | CHEM02   | QA Office        | PT-DEM-WP       | 09/09/2019   | 9060A       |
| 09/23/2019 | Water  | K4843-05 | ✓ Alkalinity          | Cool 4 deg C  | CHEM02   | QA Office        | PT-MIN1-WP      | 09/09/2019   | SM2320 B    |
| 09/11/2019 | Water  | K4843-05 | ✓ Anions Group1       | Cool 4 deg C  | CHEM02   | QA Office        | PT-MIN1-WP      | 09/09/2019   | 300.0       |
| 09/24/2019 | Water  | K4843-05 | ✓ Chloride            | Cool 4 deg C  | CHEM02   | QA Office        | PT-MIN1-WP      | 09/09/2019   | SM4500-CL C |
| 09/24/2019 | Water  | K4843-05 | ✓ Sulfate             | Cool 4 deg C  | CHEM02   | QA Office        | PT-MIN1-WP      | 09/09/2019   | SM426C 15Ed |
| 09/11/2019 | Water  | K4843-06 | ✓ Anions Group1       | Cool 4 deg C  | CHEM02   | QA Office        | PT-MIN1-WP      | 09/09/2019   | 9056A       |
| 09/24/2019 | Water  | K4843-06 | ✓ Sulfate             | Cool 4 deg C  | CHEM02   | QA Office        | PT-MIN1-WP      | 09/09/2019   | 9038        |
| 09/24/2019 | Water  | K4843-07 | ✓ Conductance         | Cool 4 deg C  | CHEM02   | QA Office        | PT-COND-WP      | 09/09/2019   | SM2510 B    |
| 09/24/2019 | Water  | K4843-08 | ✓ Conductance         | Cool 4 deg C  | CHEM02   | QA Office        | PT-COND-WP      | 09/09/2019   | 120.1       |
| 09/24/2019 | Water  | K4843-09 | ✓ Conductance         | Cool 4 deg C  | CHEM02   | QA Office        | PT-COND-WP      | 09/09/2019   | 9050A       |
| 09/16/2019 | Water  | K4843-10 | ✓ TDS                 | Cool 4 deg C  | CHEM02   | QA Office        | PT-SOL-WP       | 09/09/2019   | SM2540 C    |
| 09/16/2019 | Water  | K4843-10 | ✓ TS                  | Cool 4 deg C  | CHEM02   | QA Office        | PT-SOL-WP       | 09/09/2019   | SM2540 B    |
| 09/16/2019 | Water  | K4843-10 | ✓ TSS                 | Cool 4 deg C  | CHEM02   | QA Office        | PT-SOL-WP       | 09/09/2019   | SM2540 D    |
| 09/24/2019 | Water  | K4843-11 | ✓ Ammonia             | Conc H2SO4 to | CHEM02   | QA Office        | PT-NUT1-WP      | 09/09/2019   | SM4500-NH3  |
| 09/11/2019 | Water  | K4843-11 | ✓ Anions Group2       | Cool 4 deg C  | CHEM02   | QA Office        | PT-NUT1-WP      | 09/09/2019   | 300.0       |
| 09/11/2019 | Water  | K4843-12 | ✓ Anions Group2       | Cool 4 deg C  | CHEM02   | QA Office        | PT-NUT1-WP      | 09/09/2019   | 9056A       |

Date/Time 5/12/19 9:05 AM

Date/Time 10/2/19 16:00

Received by: AP

Received by: WDP

Relinquished by: WDP

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# WORKLIST(Hardcopy Internal Chain)

WorkList Name : K4843 WetPT WorkList ID : 130842 Department : Wet-Chemistry Date : 09-11-2019 14:19:52

| Due Date   | Matrix | Sample   | Test                | Preservative    | Customer | Storage Location | Customer Sample | Collect Date | Method       |
|------------|--------|----------|---------------------|-----------------|----------|------------------|-----------------|--------------|--------------|
| 09/11/2019 | Water  | K4843-12 | ✓ Phosphorus-Ortho  | Cool 4 deg C    | CHEM02   | QA Office        | PT-NUT1-WP      | 09/09/2019   | SM4500-P E   |
| 09/24/2019 | Water  | K4843-13 | ✓ Phosphorus-Total  | Conc H2SO4 to   | CHEM02   | QA Office        | PT-NUT2-WP      | 09/09/2019   | 365.3        |
| 09/24/2019 | Water  | K4843-13 | ✓ TKN               | Conc H2SO4 to   | CHEM02   | QA Office        | PT-NUT2-WP      | 09/09/2019   | SM4500 N Org |
| 09/11/2019 | Water  | K4843-14 | ✓ Nitrite pH=7.0    | Cool 4 deg C    | CHEM02   | QA Office        | PT-NUT3-WP      | 09/09/2019   | SM4500-NO2   |
| 09/11/2019 | Water  | K4843-15 | ✓ Anions Group4     | Cool 4 deg C    | CHEM02   | QA Office        | PT-NUT3-WP      | 09/09/2019   | 300.0        |
| 09/11/2019 | Water  | K4843-16 | ✓ Anions Group5     | Cool 4 deg C    | CHEM02   | QA Office        | PT-NUT3-WP      | 09/09/2019   | 9056A        |
| 09/24/2019 | Water  | K4843-17 | ✓ Oil and Grease    | Conc H2SO4 to   | CHEM02   | QA Office        | PT-OGRI1L-WP    | 09/09/2019   | 1664A        |
| 09/16/2019 | Water  | K4843-18 | ✓ TPH               | Conc H2SO4 to   | CHEM02   | QA Office        | RR-TPH1L-WP     | 09/09/2019   | 1664A        |
| 09/09/2019 | Water  | K4843-19 | ✓ Residual Chlorine | Cool 4 deg C    | CHEM02   | QA Office        | PT-CL-WP        | 09/09/2019   | SM4500 CI G  |
| 09/09/2019 | Water  | K4843-20 | ✓ pH                | Cool 4 deg C    | CHEM02   | QA Office        | PT-PH-WP        | 09/09/2019   | SM 4500-H B  |
| 09/09/2019 | Water  | K4843-21 | ✓ pH                | Cool 4 deg C    | CHEM02   | QA Office        | PT-PH-WP        | 09/09/2019   | 9040C        |
| 09/09/2019 | Water  | K4843-22 | ✓ pH                | Cool 4 deg C    | CHEM02   | QA Office        | PT-PH-WP        | 09/09/2019   | 9041A        |
| 09/23/2019 | Water  | K4843-23 | ✓ Cyanide           | 10 N NaOH to I  | CHEM02   | QA Office        | PT-CN-WP        | 09/09/2019   | SM4500-CN C  |
| 09/23/2019 | Water  | K4843-24 | ✓ Cyanide           | 10 N NaOH to I  | CHEM02   | QA Office        | PT-CN-WP        | 09/09/2019   | 9012B        |
| 09/23/2019 | Water  | K4843-25 | ✓ Cyanide           | 10 N NaOH to I  | CHEM02   | QA Office        | PT-CN-WP        | 09/09/2019   | 9014         |
| 09/24/2019 | Water  | K4843-26 | ✓ Phenolics         | Conc H2SO4 to   | CHEM02   | QA Office        | PT-PHEN-WP      | 09/09/2019   | 9065         |
| 09/24/2019 | Water  | K4843-27 | ✓ Phenolics         | Conc H2SO4 to   | CHEM02   | QA Office        | PT-PHEN-WP      | 09/09/2019   | 420.1        |
| 09/23/2019 | Water  | K4843-28 | ✓ Acidity           | Cool 4 deg C    | CHEM02   | QA Office        | PT-ACD-WP       | 09/09/2019   | ASTM D1067-  |
| 09/23/2019 | Water  | K4843-29 | ✓ Acidity           | Cool 4 deg C    | CHEM02   | QA Office        | PT-ACD-WP       | 09/09/2019   | SM2310 B     |
| 09/11/2019 | Water  | K4843-30 | ✓ MBAS              | Cool 4 deg C    | CHEM02   | QA Office        | PT-MBAS-WP      | 09/09/2019   | SM5540 C     |
| 09/11/2019 | Water  | K4843-31 | ✓ Color             | Cool 4 deg C    | CHEM02   | QA Office        | PT-COL-WP       | 09/09/2019   | SM2120 B     |
| 09/16/2019 | Water  | K4843-32 | ✓ Sulfide           | Zinc acetate an | CHEM02   | QA Office        | PT-S2-WP        | 09/09/2019   | SM4500 S E   |

Date/Time 9/12/19 9:05 AM Date/Time 9/12/19 11:00  
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 Relinquished by: Relinquished by:

# WORKLIST(Hardcopy Internal Chain)

WorkList Name : K4843 WetPT      WorkList ID : 130842      Department : Wet-Chemistry      Date : 09-11-2019 14:19:52

| Due Date   | Matrix | Sample   | Test                | Preservative    | Customer | Storage Location | Customer Sample | Collect Date | Method   |
|------------|--------|----------|---------------------|-----------------|----------|------------------|-----------------|--------------|----------|
| 09/16/2019 | Water  | K4843-33 | ✓ Sulfide           | Zinc acetate an | CHEM02   | QA Office        | PT-S2-WP        | 09/09/2019   | 9034     |
| 09/11/2019 | Water  | K4843-34 | ✓ Settleable Solids | Cool 4 deg C    | CHEM02   | QA Office        | PT-SSOL-WP      | 09/09/2019   | SM2540 F |
| 09/16/2019 | Water  | K4843-35 | ✓ TVS               | Cool 4 deg C    | CHEM02   | QA Office        | PT-VSOL-WP      | 09/09/2019   | SM2540 G |
| 09/16/2019 | Water  | K4843-36 | ✓ TVS               | Cool 4 deg C    | CHEM02   | QA Office        | PT-VSOL-WP      | 09/09/2019   | 160.4    |
| 09/11/2019 | Water  | K4843-37 | ✓ Turbidity         | Cool 4 deg C    | CHEM02   | QA Office        | PT-TURB-WP      | 09/09/2019   | SM2130 B |
| 09/11/2019 | Water  | K4843-38 | ✓ Turbidity         | Cool 4 deg C    | CHEM02   | QA Office        | PT-TURB-WP      | 09/09/2019   | 180.1    |

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