

"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","375-73-5","PFBS","1.33","ng/L","J","0.861","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","307-24-4","PFHxA","1.90","ng/L","J","1.05","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","375-85-9","PFHpA","2.58","ng/L","J","0.284","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","355-46-4","PFHxS","9.72","ng/L","","0.455","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","335-67-1","PFOA","10.4","ng/L","","0.313","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","1763-23-1","PFOS","4.53","ng/L","","0.388","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","375-95-1","PFNA","44.7","ng/L","","0.389","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","335-76-2","PFDA","2.40","ng/L","U","0.716","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","2355-31-9","MeFOSAA","2.40","ng/L","U","0.793","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40"  
,""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","2058-94-8","PFUnA","2.40","ng/L","U","0.505","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","2991-50-6","EtFOSAA","2.40","ng/L","U","0.659","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40"  
,""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","307-55-1","PFDoA","2.40","ng/L","U","0.381","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","72629-94-8","PFTTrDA","2.40","ng/L","U","0.238","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40",""  
,""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","376-06-7","PFTeDA","2.40","ng/L","U","0.363","LOD","","TRG","","","3.85","LOQ","YES","-99","","0.260","0.001","2.40",""  
,""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","13C3-PFBS","13C3-PFBS","85.4","%R","","-99","NA","","IS","85.4","","-99","NA","YES","100","","0.260","0.001","-99",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","13C2-PFHxA","13C2-PFHxA","80.7","%R","","-99","NA","","IS","80.7","","-99","NA","YES","100","","0.260","0.001","-99",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","13C4-PFHpA","13C4-PFHpA","80.9","%R","","-99","NA","","IS","80.9","","-99","NA","YES","100","","0.260","0.001","-99",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","18O2-PFHxS","18O2-PFHxS","81.5","%R","","-99","NA","","IS","81.5","","-99","NA","YES","100","","0.260","0.001","-99",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","13C2-PFOA","13C2-PFOA","78.3","%R","","-99","NA","","IS","78.3","","-99","NA","YES","100","","0.260","0.001","-99",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","13C8-PFOS","13C8-PFOS","77.8","%R","","-99","NA","","IS","77.8","","-99","NA","YES","100","","0.260","0.001","-99",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","13C5-PFNA","13C5-PFNA","88.6","%R","","-99","NA","","IS","88.6","","-99","NA","YES","100","","0.260","0.001","-99",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","13C2-PFDA","13C2-PFDA","72.9","%R","","-99","NA","","IS","72.9","","-99","NA","YES","100","","0.260","0.001","-99",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","d3-MeFOSAA","d3-MeFOSAA","92.0","%R","","-99","NA","","IS","92.0","","-99","NA","YES","100","","0.260","0.001","-99",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","13C2-PFUnA","13C2-PFUnA","73.8","%R","","-99","NA","","IS","73.8","","-99","NA","YES","100","","0.260","0.001","-99",""  
"FT-PZ458S-20171214","Modified EPA Method 537","Initial","1701970-01","Vista","d5-EtFOSAA","d5-

EtFOSAA", "84.6", "%R", "", "-99", "NA", "", "IS", "84.6", "", "-99", "NA", "YES", "100", "", "0.260", "0.001", "-99", ""  
"FT-PZ458S-20171214", "Modified EPA Method 537", "Initial", "1701970-01", "Vista", "13C2-PFDoA", "13C2-  
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"FT-PZ458S-20171214", "Modified EPA Method 537", "Initial", "1701970-01", "Vista", "13C2-PFTeDA", "13C2-  
PFTeDA", "58.7", "%R", "", "-99", "NA", "", "IS", "58.7", "", "-99", "NA", "YES", "100", "", "0.260", "0.001", "-99", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "375-73-  
5", "PFBS", "1.44", "ng/L", "J", "0.885", "LOD", "", "TRG", "", "", "3.95", "LOQ", "YES", "-99", "", "0.253", "0.001", "2.47", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "307-24-  
4", "PFHxA", "53.9", "ng/L", "", "1.08", "LOD", "", "TRG", "", "", "3.95", "LOQ", "YES", "-99", "", "0.253", "0.001", "2.47", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "375-85-  
9", "PFHpA", "28.0", "ng/L", "", "0.292", "LOD", "", "TRG", "", "", "3.95", "LOQ", "YES", "-99", "", "0.253", "0.001", "2.47", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "355-46-  
4", "PFHxS", "11.4", "ng/L", "", "0.468", "LOD", "", "TRG", "", "", "3.95", "LOQ", "YES", "-99", "", "0.253", "0.001", "2.47", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "335-67-  
1", "PFOA", "34.9", "ng/L", "", "0.322", "LOD", "", "TRG", "", "", "3.95", "LOQ", "YES", "-99", "", "0.253", "0.001", "2.47", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "1763-23-  
1", "PFOS", "16.8", "ng/L", "", "0.399", "LOD", "", "TRG", "", "", "3.95", "LOQ", "YES", "-99", "", "0.253", "0.001", "2.47", ""  
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2", "PFDA", "10.0", "ng/L", "", "0.736", "LOD", "", "TRG", "", "", "3.95", "LOQ", "YES", "-99", "", "0.253", "0.001", "2.47", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "2355-31-  
9", "MeFOSAA", "2.47", "ng/L", "U", "0.816", "LOD", "", "TRG", "", "", "3.95", "LOQ", "YES", "-99", "", "0.253", "0.001", "2.47", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "2058-94-  
8", "PFUnA", "2.47", "ng/L", "U", "0.519", "LOD", "", "TRG", "", "", "3.95", "LOQ", "YES", "-99", "", "0.253", "0.001", "2.47", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "2991-50-  
6", "EtFOSAA", "2.47", "ng/L", "U", "0.677", "LOD", "", "TRG", "", "", "3.95", "LOQ", "YES", "-99", "", "0.253", "0.001", "2.47", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "307-55-  
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"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "72629-94-  
8", "PFTrDA", "2.47", "ng/L", "U", "0.244", "LOD", "", "TRG", "", "", "3.95", "LOQ", "YES", "-99", "", "0.253", "0.001", "2.47", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "376-06-  
7", "PFTeDA", "2.47", "ng/L", "U", "0.373", "LOD", "", "TRG", "", "", "3.95", "LOQ", "YES", "-99", "", "0.253", "0.001", "2.47", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "13C3-PFBS", "13C3-  
PFBS", "107", "%R", "", "-99", "NA", "", "IS", "107", "", "-99", "NA", "YES", "100", "", "0.253", "0.001", "-99", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "13C2-PFHxA", "13C2-  
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"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "13C4-PFHpA", "13C4-  
PFHpA", "93.5", "%R", "", "-99", "NA", "", "IS", "93.5", "", "-99", "NA", "YES", "100", "", "0.253", "0.001", "-99", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "18O2-PFHxS", "18O2-  
PFHxS", "94.3", "%R", "", "-99", "NA", "", "IS", "94.3", "", "-99", "NA", "YES", "100", "", "0.253", "0.001", "-99", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "13C2-PFOA", "13C2-  
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MeFOSAA", "101", "%R", "", "-99", "NA", "", "IS", "101", "", "-99", "NA", "YES", "100", "", "0.253", "0.001", "-99", ""  
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"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "d5-EtFOSAA", "d5-  
EtFOSAA", "118", "%R", "", "-99", "NA", "", "IS", "118", "", "-99", "NA", "YES", "100", "", "0.253", "0.001", "-99", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "13C2-PFDoA", "13C2-  
PFDoA", "102", "%R", "", "-99", "NA", "", "IS", "102", "", "-99", "NA", "YES", "100", "", "0.253", "0.001", "-99", ""  
"FT-PZ458I-20171214", "Modified EPA Method 537", "Initial", "1701970-02", "Vista", "13C2-PFTeDA", "13C2-  
PFTeDA", "88.4", "%R", "", "-99", "NA", "", "IS", "88.4", "", "-99", "NA", "YES", "100", "", "0.253", "0.001", "-99", ""  
"SA-MW132S-20171214", "Modified EPA Method 537", "Initial", "1701970-03", "Vista", "375-73-  
5", "PFBS", "1.27", "ng/L", "J", "0.868", "LOD", "", "TRG", "", "", "3.88", "LOQ", "YES", "-99", "", "0.258", "0.001", "2.42", ""  
"SA-MW132S-20171214", "Modified EPA Method 537", "Initial", "1701970-03", "Vista", "307-24-  
4", "PFHxA", "63.0", "ng/L", "", "1.06", "LOD", "", "TRG", "", "", "3.88", "LOQ", "YES", "-99", "", "0.258", "0.001", "2.42", ""  
"SA-MW132S-20171214", "Modified EPA Method 537", "Initial", "1701970-03", "Vista", "375-85-  
9", "PFHpA", "42.0", "ng/L", "", "0.287", "LOD", "", "TRG", "", "", "3.88", "LOQ", "YES", "-99", "", "0.258", "0.001", "2.42", ""  
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4", "PFHxS", "7.42", "ng/L", "", "0.459", "LOD", "", "TRG", "", "", "3.88", "LOQ", "YES", "-99", "", "0.258", "0.001", "2.42", ""  
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1", "PFOA", "59.8", "ng/L", "", "0.316", "LOD", "", "TRG", "", "", "3.88", "LOQ", "YES", "-99", "", "0.258", "0.001", "2.42", ""  
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1", "PFOS", "4.93", "ng/L", "", "0.392", "LOD", "", "TRG", "", "", "3.88", "LOQ", "YES", "-99", "", "0.258", "0.001", "2.42", ""  
"SA-MW132S-20171214", "Modified EPA Method 537", "Dilution", "1701970-03", "Vista", "375-95-  
1", "PFNA", "1270", "ng/L", "D", "3.93", "LOD", "", "TRG", "", "", "38.8", "LOQ", "YES", "-99", "", "0.258", "0.001", "24.2", ""  
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2", "PFDA", "6.59", "ng/L", "", "0.723", "LOD", "", "TRG", "", "", "3.88", "LOQ", "YES", "-99", "", "0.258", "0.001", "2.42", ""  
"SA-MW132S-20171214", "Modified EPA Method 537", "Initial", "1701970-03", "Vista", "2355-31-  
9", "MeFOSAA", "2.42", "ng/L", "U", "0.801", "LOD", "", "TRG", "", "", "3.88", "LOQ", "YES", "-99", "", "0.258", "0.001", "2.42", ""  
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8", "PFUnA", "49.8", "ng/L", "", "0.509", "LOD", "", "TRG", "", "", "3.88", "LOQ", "YES", "-99", "", "0.258", "0.001", "2.42", ""  
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6", "EtFOSAA", "2.42", "ng/L", "U", "0.665", "LOD", "", "TRG", "", "", "3.88", "LOQ", "YES", "-99", "", "0.258", "0.001", "2.42", ""  
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1", "PFDoA", "2.42", "ng/L", "U", "0.384", "LOD", "", "TRG", "", "", "3.88", "LOQ", "YES", "-99", "", "0.258", "0.001", "2.42", ""  
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PFHxS", "93.0", "%R", "", "-99", "NA", "", "IS", "93.0", "", "-99", "NA", "YES", "100", "", "0.258", "0.001", "-99", ""  
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PFTeDA", "96.8", "%R", "", "-99", "NA", "", "IS", "96.8", "", "-99", "NA", "YES", "100", "", "0.258", "0.001", "-99", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "375-73-  
5", "PFBS", "2.67", "ng/L", "U", "0.958", "LOD", "", "TRG", "", "", "4.28", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "307-24-  
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"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "375-85-  
9", "PFHpA", "2.67", "ng/L", "U", "0.316", "LOD", "", "TRG", "", "", "4.28", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "355-46-  
4", "PFHxS", "2.67", "ng/L", "U", "0.507", "LOD", "", "TRG", "", "", "4.28", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "335-67-  
1", "PFOA", "2.67", "ng/L", "U", "0.348", "LOD", "", "TRG", "", "", "4.28", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "1763-23-  
1", "PFOS", "2.67", "ng/L", "U", "0.432", "LOD", "", "TRG", "", "", "4.28", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
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1", "PFNA", "2.67", "ng/L", "U", "0.433", "LOD", "", "TRG", "", "", "4.28", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "335-76-  
2", "PFDA", "2.67", "ng/L", "U", "0.797", "LOD", "", "TRG", "", "", "4.28", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "2355-31-  
9", "MeFOSAA", "2.67", "ng/L", "U", "0.883", "LOD", "", "TRG", "", "", "4.28", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
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8", "PFUnA", "2.67", "ng/L", "U", "0.562", "LOD", "", "TRG", "", "", "4.28", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "2991-50-  
6", "EtFOSAA", "2.67", "ng/L", "U", "0.733", "LOD", "", "TRG", "", "", "4.28", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
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1", "PFDoA", "2.67", "ng/L", "U", "0.424", "LOD", "", "TRG", "", "", "4.28", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "72629-94-  
8", "PFTeDA", "2.67", "ng/L", "U", "0.264", "LOD", "", "TRG", "", "", "4.28", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "376-06-  
7", "PFTeDA", "2.67", "ng/L", "U", "0.404", "LOD", "", "TRG", "", "", "4.28", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "13C3-PFBS", "13C3-  
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"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "13C2-PFHxA", "13C2-  
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"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "13C4-PFHpA", "13C4-  
PFHpA", "94.4", "%R", "", "-99", "NA", "", "IS", "94.4", "", "-99", "NA", "YES", "100", "", "0.234", "0.001", "-99", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "18O2-PFHxS", "18O2-  
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"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "13C2-PFOA", "13C2-

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"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "13C8-PFOS", "13C8-  
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PFDA", "97.9", "%R", "", "-99", "NA", "", "IS", "97.9", "", "-99", "NA", "YES", "100", "", "0.234", "0.001", "-99", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "d3-MeFOSAA", "d3-  
MeFOSAA", "89.9", "%R", "", "-99", "NA", "", "IS", "89.9", "", "-99", "NA", "YES", "100", "", "0.234", "0.001", "-99", ""  
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PFUnA", "77.6", "%R", "", "-99", "NA", "", "IS", "77.6", "", "-99", "NA", "YES", "100", "", "0.234", "0.001", "-99", ""  
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EtFOSAA", "92.8", "%R", "", "-99", "NA", "", "IS", "92.8", "", "-99", "NA", "YES", "100", "", "0.234", "0.001", "-99", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "13C2-PFDaA", "13C2-  
PFDaA", "69.5", "%R", "", "-99", "NA", "", "IS", "69.5", "", "-99", "NA", "YES", "100", "", "0.234", "0.001", "-99", ""  
"SA-MW132S-FRB-20171214", "Modified EPA Method 537", "Initial", "1701970-04", "Vista", "13C2-PFTeDA", "13C2-  
PFTeDA", "70.0", "%R", "", "-99", "NA", "", "IS", "70.0", "", "-99", "NA", "YES", "100", "", "0.234", "0.001", "-99", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "375-73-  
5", "PFBS", "2.67", "ng/L", "U", "0.955", "LOD", "", "TRG", "", "", "4.27", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "307-24-  
4", "PFHxA", "83.7", "ng/L", "", "1.16", "LOD", "", "TRG", "", "", "4.27", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "375-85-  
9", "PFHpA", "81.2", "ng/L", "", "0.315", "LOD", "", "TRG", "", "", "4.27", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "355-46-  
4", "PFHxS", "1.90", "ng/L", "J", "0.505", "LOD", "", "TRG", "", "", "4.27", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "335-67-  
1", "PFOA", "128", "ng/L", "", "0.347", "LOD", "", "TRG", "", "", "4.27", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "1763-23-  
1", "PFOS", "8.69", "ng/L", "", "0.430", "LOD", "", "TRG", "", "", "4.27", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Dilution", "1701970-05", "Vista", "375-95-  
1", "PFNA", "2900", "ng/L", "D", "4.32", "LOD", "", "TRG", "", "", "42.7", "LOQ", "YES", "-99", "", "0.234", "0.001", "26.7", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "335-76-  
2", "PFDA", "5.82", "ng/L", "", "0.795", "LOD", "", "TRG", "", "", "4.27", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "2355-31-  
9", "MeFOSAA", "2.67", "ng/L", "U", "0.880", "LOD", "", "TRG", "", "", "4.27", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "2058-94-  
8", "PFUnA", "6.47", "ng/L", "", "0.560", "LOD", "", "TRG", "", "", "4.27", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "2991-50-  
6", "EtFOSAA", "2.67", "ng/L", "U", "0.731", "LOD", "", "TRG", "", "", "4.27", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "307-55-  
1", "PFDaA", "2.67", "ng/L", "U", "0.422", "LOD", "", "TRG", "", "", "4.27", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "72629-94-  
8", "PFTTrDA", "2.67", "ng/L", "U", "0.263", "LOD", "", "TRG", "", "", "4.27", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "376-06-  
7", "PFTeDA", "2.67", "ng/L", "U", "0.403", "LOD", "", "TRG", "", "", "4.27", "LOQ", "YES", "-99", "", "0.234", "0.001", "2.67", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "13C3-PFBS", "13C3-  
PFBS", "111", "%R", "", "-99", "NA", "", "IS", "111", "", "-99", "NA", "YES", "100", "", "0.234", "0.001", "-99", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "13C2-PFHxA", "13C2-  
PFHxA", "104", "%R", "", "-99", "NA", "", "IS", "104", "", "-99", "NA", "YES", "100", "", "0.234", "0.001", "-99", ""  
"SA-MW132I-20171214", "Modified EPA Method 537", "Initial", "1701970-05", "Vista", "13C4-PFHpA", "13C4-

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"SA-MW132I-20171214","Modified EPA Method 537","Initial","1701970-05","Vista","18O2-PFHxS","18O2-  
PFHxS","101","%R","",-99,"NA","","IS","101","",-99,"NA","YES","100","","0.234","0.001","-99",""  
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"SA-MW132I-20171214","Modified EPA Method 537","Initial","1701970-05","Vista","13C8-PFOS","13C8-  
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"SA-MW132I-20171214","Modified EPA Method 537","Dilution","1701970-05","Vista","13C5-PFNA","13C5-  
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"SA-MW132I-20171214","Modified EPA Method 537","Initial","1701970-05","Vista","13C2-PFDA","13C2-  
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"SA-MW132I-20171214","Modified EPA Method 537","Initial","1701970-05","Vista","d3-MeFOSAA","d3-  
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"SA-MW132I-20171214","Modified EPA Method 537","Initial","1701970-05","Vista","13C2-PFUnA","13C2-  
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"SA-MW132I-20171214","Modified EPA Method 537","Initial","1701970-05","Vista","13C2-PFTeDA","13C2-  
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"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","375-73-  
5","PFBS","2.47","ng/L","U","0.884","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47",""  
"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","307-24-  
4","PFHxA","2.47","ng/L","U","1.08","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47",""  
"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","375-85-  
9","PFHpA","0.430","ng/L","J","0.292","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47",""  
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"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","355-46-  
4","PFHxS","2.47","ng/L","U","0.468","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47",""  
"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","335-67-  
1","PFOA","1.17","ng/L","J","0.321","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47",""  
"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","1763-23-  
1","PFOS","2.47","ng/L","U","0.398","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47",""  
"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","375-95-  
1","PFNA","2.47","ng/L","U","0.400","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47",""  
"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","335-76-  
2","PFDA","2.47","ng/L","U","0.736","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47",""  
"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","2355-31-  
9","MeFOSAA","2.47","ng/L","U","0.815","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47"  
"  
"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","2058-94-  
8","PFUnA","2.47","ng/L","U","0.518","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47",""  
"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","2991-50-  
6","EtFOSAA","2.47","ng/L","U","0.676","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47"  
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"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","307-55-  
1","PFDoA","2.47","ng/L","U","0.391","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47",""  
"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","72629-94-  
8","PFTTrDA","2.47","ng/L","U","0.244","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47",""  
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"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","376-06-  
7","PFTeDA","2.47","ng/L","U","0.373","LOD","","TRG","","","3.95","LOQ","YES","-99","","0.253","0.001","2.47",  
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"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","13C3-PFBS","13C3-PFBS","109","%R","",-99,"NA","","IS","109","",-99,"NA","YES","100","","0.253","0.001","-99",""

"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","13C2-PFHxA","13C2-PFHxA","96.1","%R","",-99,"NA","","IS","96.1","",-99,"NA","YES","100","","0.253","0.001","-99",""

"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","13C4-PFHpA","13C4-PFHpA","93.2","%R","",-99,"NA","","IS","93.2","",-99,"NA","YES","100","","0.253","0.001","-99",""

"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","18O2-PFHxS","18O2-PFHxS","107","%R","",-99,"NA","","IS","107","",-99,"NA","YES","100","","0.253","0.001","-99",""

"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","13C2-PFOA","13C2-PFOA","94.9","%R","",-99,"NA","","IS","94.9","",-99,"NA","YES","100","","0.253","0.001","-99",""

"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","13C8-PFOS","13C8-PFOS","92.1","%R","",-99,"NA","","IS","92.1","",-99,"NA","YES","100","","0.253","0.001","-99",""

"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","13C5-PFNA","13C5-PFNA","104","%R","",-99,"NA","","IS","104","",-99,"NA","YES","100","","0.253","0.001","-99",""

"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","13C2-PFDA","13C2-PFDA","78.1","%R","",-99,"NA","","IS","78.1","",-99,"NA","YES","100","","0.253","0.001","-99",""

"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","d3-MeFOSAA","d3-MeFOSAA","78.3","%R","",-99,"NA","","IS","78.3","",-99,"NA","YES","100","","0.253","0.001","-99",""

"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","13C2-PFUnA","13C2-PFUnA","80.6","%R","",-99,"NA","","IS","80.6","",-99,"NA","YES","100","","0.253","0.001","-99",""

"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","d5-EtFOSAA","d5-EtFOSAA","77.7","%R","",-99,"NA","","IS","77.7","",-99,"NA","YES","100","","0.253","0.001","-99",""

"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","13C2-PFDoA","13C2-PFDoA","138","%R","",-99,"NA","","IS","138","",-99,"NA","YES","100","","0.253","0.001","-99",""

"FT-PZ459S-20171214","Modified EPA Method 537","Initial","1701970-06","Vista","13C2-PFTeDA","13C2-PFTeDA","119","%R","",-99,"NA","","IS","119","",-99,"NA","YES","100","","0.253","0.001","-99",""

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","375-73-5","PFBS","2.54","ng/L","U","0.911","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",""

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","307-24-4","PFHxA","2.43","ng/L","J","1.11","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",""

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","375-85-9","PFHpA","2.48","ng/L","J","0.301","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",""

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","355-46-4","PFHxS","2.36","ng/L","J","0.482","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",""

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","335-67-1","PFOA","8.06","ng/L","","0.331","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",""

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","1763-23-1","PFOS","11.2","ng/L","","0.411","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",""

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","375-95-1","PFNA","33.0","ng/L","","0.412","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",""

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","335-76-2","PFDA","1.05","ng/L","J","0.758","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",""

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","2355-31-9","MeFOSAA","2.54","ng/L","U","0.839","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",""

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","2058-94-8","PFUnA","23.4","ng/L","","0.534","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",""

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","2991-50-6","EtFOSAA","13.1","ng/L","","0.697","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",""

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","307-55-1","PFDoA","2.54","ng/L","U","0.403","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",""

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","72629-94-8","PFTTrDA","2.54","ng/L","U","0.251","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",""

"

"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","376-06-7","PFTeDA","2.54","ng/L","U","0.384","LOD","","TRG","","","4.07","LOQ","YES","-99","","0.246","0.001","2.54",  
""  
"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","13C3-PFBS","13C3-PFBS","118","%R","","-99","NA","","IS","118","","-99","NA","YES","100","","0.246","0.001","-99",  
"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","13C2-PFHxA","13C2-PFHxA","99.4","%R","","-99","NA","","IS","99.4","","-99","NA","YES","100","","0.246","0.001","-99",  
"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","13C4-PFHpA","13C4-PFHpA","93.8","%R","","-99","NA","","IS","93.8","","-99","NA","YES","100","","0.246","0.001","-99",  
"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","18O2-PFHxS","18O2-PFHxS","104","%R","","-99","NA","","IS","104","","-99","NA","YES","100","","0.246","0.001","-99",  
"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","13C2-PFOA","13C2-PFOA","83.2","%R","","-99","NA","","IS","83.2","","-99","NA","YES","100","","0.246","0.001","-99",  
"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","13C8-PFOS","13C8-PFOS","111","%R","","-99","NA","","IS","111","","-99","NA","YES","100","","0.246","0.001","-99",  
"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","13C5-PFNA","13C5-PFNA","92.8","%R","","-99","NA","","IS","92.8","","-99","NA","YES","100","","0.246","0.001","-99",  
"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","13C2-PFDA","13C2-PFDA","109","%R","","-99","NA","","IS","109","","-99","NA","YES","100","","0.246","0.001","-99",  
"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","d3-MeFOSAA","d3-MeFOSAA","90.2","%R","","-99","NA","","IS","90.2","","-99","NA","YES","100","","0.246","0.001","-99",  
"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","13C2-PFUnA","13C2-PFUnA","101","%R","","-99","NA","","IS","101","","-99","NA","YES","100","","0.246","0.001","-99",  
"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","d5-EtFOSAA","d5-EtFOSAA","105","%R","","-99","NA","","IS","105","","-99","NA","YES","100","","0.246","0.001","-99",  
"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","13C2-PFDoA","13C2-PFDoA","74.7","%R","","-99","NA","","IS","74.7","","-99","NA","YES","100","","0.246","0.001","-99",  
"FT-PZ459I-20171214","Modified EPA Method 537","Initial","1701970-07","Vista","13C2-PFTeDA","13C2-PFTeDA","75.3","%R","","-99","NA","","IS","75.3","","-99","NA","YES","100","","0.246","0.001","-99",  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","375-73-5","PFBS","2.43","ng/L","U","0.869","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","307-24-4","PFHxA","2.43","ng/L","U","1.06","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","375-85-9","PFHpA","2.43","ng/L","U","0.287","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","355-46-4","PFHxS","2.43","ng/L","U","0.460","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","335-67-1","PFOA","1.73","ng/L","J","0.316","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","1763-23-1","PFOS","2.43","ng/L","U","0.392","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","375-95-1","PFNA","2.54","ng/L","J","0.393","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","335-76-2","PFDA","2.43","ng/L","U","0.724","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","2355-31-9","MeFOSAA","2.43","ng/L","U","0.801","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",  
""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","2058-94-8","PFUnA","2.43","ng/L","U","0.510","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","2991-50-6","EtFOSAA","2.43","ng/L","U","0.665","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",  
""  
,"



"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","307-55-1","PFDoA","2.43","ng/L","U","0.385","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","72629-94-8","PFTTrDA","2.43","ng/L","U","0.240","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","376-06-7","PFTeDA","2.43","ng/L","U","0.367","LOD","","TRG","","","3.89","LOQ","YES","-99","","0.257","0.001","2.43",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","13C3-PFBS","13C3-PFBS","94.2","%R","","-99","NA","","IS","94.2","","-99","NA","YES","100","","0.257","0.001","-99",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","13C2-PFHxA","13C2-PFHxA","96.2","%R","","-99","NA","","IS","96.2","","-99","NA","YES","100","","0.257","0.001","-99",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","13C4-PFHpA","13C4-PFHpA","102","%R","","-99","NA","","IS","102","","-99","NA","YES","100","","0.257","0.001","-99",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","18O2-PFHxS","18O2-PFHxS","87.9","%R","","-99","NA","","IS","87.9","","-99","NA","YES","100","","0.257","0.001","-99",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","13C2-PFOA","13C2-PFOA","79.3","%R","","-99","NA","","IS","79.3","","-99","NA","YES","100","","0.257","0.001","-99",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","13C8-PFOS","13C8-PFOS","92.8","%R","","-99","NA","","IS","92.8","","-99","NA","YES","100","","0.257","0.001","-99",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","13C5-PFNA","13C5-PFNA","101","%R","","-99","NA","","IS","101","","-99","NA","YES","100","","0.257","0.001","-99",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","13C2-PFDA","13C2-PFDA","86.6","%R","","-99","NA","","IS","86.6","","-99","NA","YES","100","","0.257","0.001","-99",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","d3-MeFOSAA","d3-MeFOSAA","80.0","%R","","-99","NA","","IS","80.0","","-99","NA","YES","100","","0.257","0.001","-99",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","13C2-PFUnA","13C2-PFUnA","101","%R","","-99","NA","","IS","101","","-99","NA","YES","100","","0.257","0.001","-99",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","d5-EtFOSAA","d5-EtFOSAA","91.7","%R","","-99","NA","","IS","91.7","","-99","NA","YES","100","","0.257","0.001","-99",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","13C2-PFDoA","13C2-PFDoA","67.9","%R","","-99","NA","","IS","67.9","","-99","NA","YES","100","","0.257","0.001","-99",""  
"FT-PZ463S-20171214","Modified EPA Method 537","Initial","1701970-08","Vista","13C2-PFTeDA","13C2-PFTeDA","51.8","%R","","-99","NA","","IS","51.8","","-99","NA","YES","100","","0.257","0.001","-99",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","375-73-5","PFBS","2.39","ng/L","U","0.855","LOD","","TRG","","","3.82","LOQ","YES","-99","","0.262","0.001","2.39",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","307-24-4","PFHxA","14.0","ng/L","","1.04","LOD","","TRG","","","3.82","LOQ","YES","-99","","0.262","0.001","2.39",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","375-85-9","PFHpA","12.6","ng/L","","0.282","LOD","","TRG","","","3.82","LOQ","YES","-99","","0.262","0.001","2.39",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","355-46-4","PFHxS","27.0","ng/L","","0.452","LOD","","TRG","","","3.82","LOQ","YES","-99","","0.262","0.001","2.39",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","335-67-1","PFOA","31.9","ng/L","","0.311","LOD","","TRG","","","3.82","LOQ","YES","-99","","0.262","0.001","2.39",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","1763-23-1","PFOS","16.5","ng/L","","0.386","LOD","","TRG","","","3.82","LOQ","YES","-99","","0.262","0.001","2.39",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","375-95-1","PFNA","62.3","ng/L","","0.387","LOD","","TRG","","","3.82","LOQ","YES","-99","","0.262","0.001","2.39",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","335-76-2","PFDA","2.15","ng/L","J","0.712","LOD","","TRG","","","3.82","LOQ","YES","-99","","0.262","0.001","2.39",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","2355-31-9","MeFOSAA","2.39","ng/L","U","0.788","LOD","","TRG","","","3.82","LOQ","YES","-99","","0.262","0.001","2.39",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","2058-94-

8","PFUnA","4.09","ng/L","","0.502","LOD","","TRG","","","3.82","LOQ","YES",-99","","0.262","0.001","2.39",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","2991-50-  
6","EtFOSAA","2.39","ng/L","U","0.655","LOD","","TRG","","","3.82","LOQ","YES",-99","","0.262","0.001","2.39"  
,"  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","307-55-  
1","PFDoA","2.39","ng/L","U","0.378","LOD","","TRG","","","3.82","LOQ","YES",-99","","0.262","0.001","2.39",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","72629-94-  
8","PFTTrDA","2.39","ng/L","U","0.236","LOD","","TRG","","","3.82","LOQ","YES",-99","","0.262","0.001","2.39",""  
,"  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","376-06-  
7","PFTeDA","2.39","ng/L","U","0.361","LOD","","TRG","","","3.82","LOQ","YES",-99","","0.262","0.001","2.39",""  
,"  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","13C3-PFBS","13C3-  
PFBS","98.6","%R","","-99","NA","","IS","98.6","","-99","NA","YES","100","","0.262","0.001","-99",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","13C2-PFHxA","13C2-  
PFHxA","84.4","%R","","-99","NA","","IS","84.4","","-99","NA","YES","100","","0.262","0.001","-99",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","13C4-PFHpA","13C4-  
PFHpA","91.0","%R","","-99","NA","","IS","91.0","","-99","NA","YES","100","","0.262","0.001","-99",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","18O2-PFHxS","18O2-  
PFHxS","82.9","%R","","-99","NA","","IS","82.9","","-99","NA","YES","100","","0.262","0.001","-99",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","13C2-PFOA","13C2-  
PFOA","90.9","%R","","-99","NA","","IS","90.9","","-99","NA","YES","100","","0.262","0.001","-99",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","13C8-PFOS","13C8-  
PFOS","79.2","%R","","-99","NA","","IS","79.2","","-99","NA","YES","100","","0.262","0.001","-99",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","13C5-PFNA","13C5-  
PFNA","83.9","%R","","-99","NA","","IS","83.9","","-99","NA","YES","100","","0.262","0.001","-99",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","13C2-PFDA","13C2-  
PFDA","75.1","%R","","-99","NA","","IS","75.1","","-99","NA","YES","100","","0.262","0.001","-99",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","d3-MeFOSAA","d3-  
MeFOSAA","76.5","%R","","-99","NA","","IS","76.5","","-99","NA","YES","100","","0.262","0.001","-99",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","13C2-PFUnA","13C2-  
PFUnA","76.7","%R","","-99","NA","","IS","76.7","","-99","NA","YES","100","","0.262","0.001","-99",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","d5-EtFOSAA","d5-  
EtFOSAA","71.2","%R","","-99","NA","","IS","71.2","","-99","NA","YES","100","","0.262","0.001","-99",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","13C2-PFDoA","13C2-  
PFDoA","82.2","%R","","-99","NA","","IS","82.2","","-99","NA","YES","100","","0.262","0.001","-99",""  
"FT-PZ463I-20171214","Modified EPA Method 537","Initial","1701970-09","Vista","13C2-PFTeDA","13C2-  
PFTeDA","71.0","%R","","-99","NA","","IS","71.0","","-99","NA","YES","100","","0.262","0.001","-99",""  
"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","375-73-  
5","PFBS","2.41","ng/L","U","0.864","LOD","","TRG","","","3.86","LOQ","YES",-99","","0.259","0.001","2.41",""  
"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","307-24-  
4","PFHxA","2.41","ng/L","U","1.05","LOD","","TRG","","","3.86","LOQ","YES",-99","","0.259","0.001","2.41",""  
"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","375-85-  
9","PFHpA","2.41","ng/L","U","0.285","LOD","","TRG","","","3.86","LOQ","YES",-99","","0.259","0.001","2.41",""  
"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","355-46-  
4","PFHxS","2.41","ng/L","U","0.457","LOD","","TRG","","","3.86","LOQ","YES",-99","","0.259","0.001","2.41",""  
"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","335-67-  
1","PFOA","2.41","ng/L","U","0.314","LOD","","TRG","","","3.86","LOQ","YES",-99","","0.259","0.001","2.41",""  
"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","1763-23-  
1","PFOS","2.41","ng/L","U","0.390","LOD","","TRG","","","3.86","LOQ","YES",-99","","0.259","0.001","2.41",""  
"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","375-95-  
1","PFNA","2.41","ng/L","U","0.391","LOD","","TRG","","","3.86","LOQ","YES",-99","","0.259","0.001","2.41",""  
"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","335-76-  
2","PFDA","2.41","ng/L","U","0.719","LOD","","TRG","","","3.86","LOQ","YES",-99","","0.259","0.001","2.41",""

"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","2355-31-9","MeFOSAA","2.41","ng/L","U","0.797","LOD","","TRG","","","3.86","LOQ","YES","-99","","0.259","0.001","2.41",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","2058-94-8","PFUnA","4.09","ng/L","","0.507","LOD","","TRG","","","3.86","LOQ","YES","-99","","0.259","0.001","2.41",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","2991-50-6","EtFOSAA","2.41","ng/L","U","0.661","LOD","","TRG","","","3.86","LOQ","YES","-99","","0.259","0.001","2.41",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","307-55-1","PFDaA","2.41","ng/L","U","0.382","LOD","","TRG","","","3.86","LOQ","YES","-99","","0.259","0.001","2.41",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","72629-94-8","PFTeDA","2.41","ng/L","U","0.239","LOD","","TRG","","","3.86","LOQ","YES","-99","","0.259","0.001","2.41",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","376-06-7","PFTeDA","2.41","ng/L","U","0.365","LOD","","TRG","","","3.86","LOQ","YES","-99","","0.259","0.001","2.41",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","13C3-PFBS","13C3-PFBS","107","%R","","-99","NA","","IS","107","","-99","NA","YES","100","","0.259","0.001","-99",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","13C2-PFHxA","13C2-PFHxA","93.9","%R","","-99","NA","","IS","93.9","","-99","NA","YES","100","","0.259","0.001","-99",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","13C4-PFHpA","13C4-PFHpA","93.7","%R","","-99","NA","","IS","93.7","","-99","NA","YES","100","","0.259","0.001","-99",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","18O2-PFHxS","18O2-PFHxS","87.9","%R","","-99","NA","","IS","87.9","","-99","NA","YES","100","","0.259","0.001","-99",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","13C2-PFOA","13C2-PFOA","99.3","%R","","-99","NA","","IS","99.3","","-99","NA","YES","100","","0.259","0.001","-99",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","13C8-PFOS","13C8-PFOS","109","%R","","-99","NA","","IS","109","","-99","NA","YES","100","","0.259","0.001","-99",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","13C5-PFNA","13C5-PFNA","93.5","%R","","-99","NA","","IS","93.5","","-99","NA","YES","100","","0.259","0.001","-99",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","13C2-PFDA","13C2-PFDA","74.7","%R","","-99","NA","","IS","74.7","","-99","NA","YES","100","","0.259","0.001","-99",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","d3-MeFOSAA","d3-MeFOSAA","78.1","%R","","-99","NA","","IS","78.1","","-99","NA","YES","100","","0.259","0.001","-99",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","13C2-PFUnA","13C2-PFUnA","72.0","%R","","-99","NA","","IS","72.0","","-99","NA","YES","100","","0.259","0.001","-99",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","d5-EtFOSAA","d5-EtFOSAA","74.8","%R","","-99","NA","","IS","74.8","","-99","NA","YES","100","","0.259","0.001","-99",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","13C2-PFDoA","13C2-PFDoA","77.2","%R","","-99","NA","","IS","77.2","","-99","NA","YES","100","","0.259","0.001","-99",""  
,"CV-TANK-20171214","Modified EPA Method 537","Initial","1701970-10","Vista","13C2-PFTeDA","13C2-PFTeDA","57.7","%R","","-99","NA","","IS","57.7","","-99","NA","YES","100","","0.259","0.001","-99",""  
,"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","375-73-5","PFBS","2.50","ng/L","U","0.895","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""  
,"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","307-24-4","PFHxA","2.50","ng/L","U","1.09","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""  
,"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","375-85-9","PFHpA","2.50","ng/L","U","0.296","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""  
,"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","355-46-4","PFHxS","2.50","ng/L","U","0.474","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""  
,"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","335-67-1","PFOA","2.50","ng/L","U","0.326","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""  
,"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","1763-23-1","PFOS","2.50","ng/L","U","0.404","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""

"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","375-95-1","PFNA","2.50","ng/L","U","0.405","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","335-76-2","PFDA","2.50","ng/L","U","0.745","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","2355-31-9","MeFOSAA","2.50","ng/L","U","0.825","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","2058-94-8","PFUnA","2.50","ng/L","U","0.525","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","2991-50-6","EtFOSAA","2.50","ng/L","U","0.685","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","307-55-1","PFDoA","2.50","ng/L","U","0.396","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","72629-94-8","PFTTrDA","2.50","ng/L","U","0.247","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","376-06-7","PFTeDA","2.50","ng/L","U","0.378","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","13C3-PFBS","13C3-PFBS","96.6","%R","","-99","NA","","IS","96.6","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","13C2-PFHxA","13C2-PFHxA","93.6","%R","","-99","NA","","IS","93.6","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","13C4-PFHpA","13C4-PFHpA","84.5","%R","","-99","NA","","IS","84.5","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","18O2-PFHxS","18O2-PFHxS","82.5","%R","","-99","NA","","IS","82.5","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","13C2-PFOA","13C2-PFOA","98.4","%R","","-99","NA","","IS","98.4","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","13C8-PFOS","13C8-PFOS","84.1","%R","","-99","NA","","IS","84.1","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","13C5-PFNA","13C5-PFNA","98.9","%R","","-99","NA","","IS","98.9","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","13C2-PFDA","13C2-PFDA","77.8","%R","","-99","NA","","IS","77.8","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","d3-MeFOSAA","d3-MeFOSAA","93.4","%R","","-99","NA","","IS","93.4","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","13C2-PFUnA","13C2-PFUnA","93.9","%R","","-99","NA","","IS","93.9","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","d5-EtFOSAA","d5-EtFOSAA","78.8","%R","","-99","NA","","IS","78.8","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","13C2-PFDoA","13C2-PFDoA","105","%R","","-99","NA","","IS","105","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BLK1","Modified EPA Method 537","Initial","B7L0188-BLK1","Vista","13C2-PFTeDA","13C2-PFTeDA","136","%R","","-99","NA","","IS","136","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","375-73-5","PFBS","38.5","ng/L","","0.895","LOD","","TRG","96.3","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","307-24-4","PFHxA","40.1","ng/L","","1.09","LOD","","TRG","100","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","375-85-9","PFHpA","38.2","ng/L","","0.296","LOD","","TRG","95.4","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"

" ""  
,  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","355-46-4","PFHxS","42.2","ng/L","","0.474","LOD","","TRG","106","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"  
,"  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","335-67-1","PFOA","38.5","ng/L","","0.326","LOD","","TRG","96.2","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"  
,"  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","1763-23-1","PFOS","42.4","ng/L","","0.404","LOD","","TRG","106","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"  
,"  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","375-95-1","PFNA","32.0","ng/L","","0.405","LOD","","TRG","80.1","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"  
,"  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","335-76-2","PFDA","34.6","ng/L","","0.745","LOD","","TRG","86.5","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"  
,"  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","2355-31-9","MeFOSAA","50.7","ng/L","","0.825","LOD","","TRG","127","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"  
,"  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","2058-94-8","PFUnA","48.1","ng/L","","0.525","LOD","","TRG","120","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"  
,"  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","2991-50-6","EtFOSAA","35.8","ng/L","","0.685","LOD","","TRG","89.5","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"  
,"  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","307-55-1","PFDoA","33.3","ng/L","","0.396","LOD","","TRG","83.2","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"  
,"  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","72629-94-8","PFTrDA","28.2","ng/L","","0.247","LOD","","TRG","70.4","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"  
,"  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","376-06-7","PFTeDA","28.6","ng/L","","0.378","LOD","","TRG","71.5","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"  
,"  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","13C3-PFBS","13C3-PFBS","114","%R","","-99","NA","","IS","114","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","13C2-PFHxA","13C2-PFHxA","102","%R","","-99","NA","","IS","102","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","13C4-PFHpA","13C4-PFHpA","113","%R","","-99","NA","","IS","113","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","18O2-PFHxS","18O2-PFHxS","93.2","%R","","-99","NA","","IS","93.2","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","13C2-PFOA","13C2-PFOA","102","%R","","-99","NA","","IS","102","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","13C8-PFOS","13C8-PFOS","82.3","%R","","-99","NA","","IS","82.3","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","13C5-PFNA","13C5-PFNA","92.5","%R","","-99","NA","","IS","92.5","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","13C2-PFDA","13C2-PFDA","89.9","%R","","-99","NA","","IS","89.9","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","d3-MeFOSAA","d3-MeFOSAA","64.2","%R","","-99","NA","","IS","64.2","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","13C2-PFUnA","13C2-PFUnA","66.9","%R","","-99","NA","","IS","66.9","","-99","NA","YES","100","","0.250","0.001","-99",""

"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","d5-EtFOSAA","d5-EtFOSAA","72.6","%R","",-99,"NA","","IS","72.6","",-99,"NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","13C2-PFDoA","13C2-PFDoA","81.1","%R","",-99,"NA","","IS","81.1","",-99,"NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-BS1","Modified EPA Method 537","Initial","B7L0188-BS1","Vista","13C2-PFTeDA","13C2-PFTeDA","88.3","%R","",-99,"NA","","IS","88.3","",-99,"NA","YES","100","","0.250","0.001","-99",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","375-73-5","PFBS","37.1","ng/L","","0.899","LOD","","TRG","92.2","","4.02","LOQ","YES","40.2","SA-MW132I-20171214","0.249","0.001","2.51",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","307-24-4","PFHxA","145","ng/L","H","1.09","LOD","","TRG","151","","4.02","LOQ","YES","40.2","SA-MW132I-20171214","0.249","0.001","2.51",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","375-85-9","PFHpA","111","ng/L","","0.297","LOD","","TRG","73.7","","4.02","LOQ","YES","40.2","SA-MW132I-20171214","0.249","0.001","2.51",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","355-46-4","PFHxS","39.7","ng/L","","0.475","LOD","","TRG","93.9","","4.02","LOQ","YES","40.2","SA-MW132I-20171214","0.249","0.001","2.51",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","335-67-1","PFOA","157","ng/L","","0.327","LOD","","TRG","72.4","","4.02","LOQ","YES","40.2","SA-MW132I-20171214","0.249","0.001","2.51",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","1763-23-1","PFOS","43.7","ng/L","","0.405","LOD","","TRG","87.2","","4.02","LOQ","YES","40.2","SA-MW132I-20171214","0.249","0.001","2.51",""  
"B7L0188-MS1","Modified EPA Method 537","Dilution","B7L0188-MS1","Vista","375-95-1","PFNA","2990","ng/L","D, H","4.07","LOD","","TRG","23.1","","40.2","LOQ","YES","402","SA-MW132I-20171214","0.249","0.001","25.1",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","335-76-2","PFDA","41.3","ng/L","","0.748","LOD","","TRG","88.3","","4.02","LOQ","YES","40.2","SA-MW132I-20171214","0.249","0.001","2.51",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","2355-31-9","MeFOSAA","31.2","ng/L","","0.828","LOD","","TRG","77.6","","4.02","LOQ","YES","40.2","SA-MW132I-20171214","0.249","0.001","2.51",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","2058-94-8","PFUnA","46.5","ng/L","","0.527","LOD","","TRG","99.5","","4.02","LOQ","YES","40.2","SA-MW132I-20171214","0.249","0.001","2.51",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","2991-50-6","EtFOSAA","38.4","ng/L","","0.688","LOD","","TRG","95.6","","4.02","LOQ","YES","40.2","SA-MW132I-20171214","0.249","0.001","2.51",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","307-55-1","PFDoA","45.7","ng/L","","0.398","LOD","","TRG","114","","4.02","LOQ","YES","40.2","SA-MW132I-20171214","0.249","0.001","2.51",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","72629-94-8","PFTeDA","45.5","ng/L","","0.248","LOD","","TRG","113","","4.02","LOQ","YES","40.2","SA-MW132I-20171214","0.249","0.001","2.51",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","376-06-7","PFTeDA","35.6","ng/L","","0.379","LOD","","TRG","88.6","","4.02","LOQ","YES","40.2","SA-MW132I-20171214","0.249","0.001","2.51",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","13C3-PFBS","13C3-PFBS","97.1","%R","",-99,"NA","","IS","97.1","",-99,"NA","YES","100","SA-MW132I-20171214","0.249","0.001","-99",""  
"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","13C2-PFHxA","13C2-PFHxA","88.4","%R","",-99,"NA","","IS","88.4","",-99,"NA","YES","100","SA-MW132I-20171214","0.249","0.001","-99",""

"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","13C4-PFHpA","13C4-PFHpA","99.5","%R","",-99,"NA","","IS","99.5","",-99,"NA","YES","100","SA-MW132I-20171214","0.249","0.001","-99",""

"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","18O2-PFHxS","18O2-PFHxS","103","%R","",-99,"NA","","IS","103","",-99,"NA","YES","100","SA-MW132I-20171214","0.249","0.001","-99",""

"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","13C2-PFOA","13C2-PFOA","85.9","%R","",-99,"NA","","IS","85.9","",-99,"NA","YES","100","SA-MW132I-20171214","0.249","0.001","-99",""

"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","13C8-PFOS","13C8-PFOS","95.7","%R","",-99,"NA","","IS","95.7","",-99,"NA","YES","100","SA-MW132I-20171214","0.249","0.001","-99",""

"B7L0188-MS1","Modified EPA Method 537","Dilution","B7L0188-MS1","Vista","13C5-PFNA","13C5-PFNA","93.8","%R","D","-99,"NA","","IS","93.8","",-99,"NA","YES","100","SA-MW132I-20171214","0.249","0.001","-99",""

"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","13C2-PFDA","13C2-PFDA","86.7","%R","",-99,"NA","","IS","86.7","",-99,"NA","YES","100","SA-MW132I-20171214","0.249","0.001","-99",""

"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","d3-MeFOSAA","d3-MeFOSAA","101","%R","",-99,"NA","","IS","101","",-99,"NA","YES","100","SA-MW132I-20171214","0.249","0.001","-99",""

"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","13C2-PFUnA","13C2-PFUnA","86.6","%R","",-99,"NA","","IS","86.6","",-99,"NA","YES","100","SA-MW132I-20171214","0.249","0.001","-99",""

"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","d5-EtFOSAA","d5-EtFOSAA","101","%R","",-99,"NA","","IS","101","",-99,"NA","YES","100","SA-MW132I-20171214","0.249","0.001","-99",""

"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","13C2-PFDoA","13C2-PFDoA","73.2","%R","",-99,"NA","","IS","73.2","",-99,"NA","YES","100","SA-MW132I-20171214","0.249","0.001","-99",""

"B7L0188-MS1","Modified EPA Method 537","Initial","B7L0188-MS1","Vista","13C2-PFTeDA","13C2-PFTeDA","69.4","%R","",-99,"NA","","IS","69.4","",-99,"NA","YES","100","SA-MW132I-20171214","0.249","0.001","-99",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","375-73-5","PFBS","39.4","ng/L","","0.942","LOD","","TRG","93.7","1.61","4.21","LOQ","YES","42.1","SA-MW132I-20171214","0.237","0.001","2.64",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","307-24-4","PFHxA","136","ng/L","","1.15","LOD","","TRG","123","20.4","4.21","LOQ","YES","42.1","SA-MW132I-20171214","0.237","0.001","2.64",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","375-85-9","PFHpA","108","ng/L","H","0.311","LOD","","TRG","64.7","13.0","4.21","LOQ","YES","42.1","SA-MW132I-20171214","0.237","0.001","2.64",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","355-46-4","PFHxS","44.4","ng/L","","0.498","LOD","","TRG","101","7.29","4.21","LOQ","YES","42.1","SA-MW132I-20171214","0.237","0.001","2.64",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","335-67-1","PFOA","164","ng/L","","0.343","LOD","","TRG","87.1","18.4","4.21","LOQ","YES","42.1","SA-MW132I-20171214","0.237","0.001","2.64",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","1763-23-1","PFOS","46.9","ng/L","","0.425","LOD","","TRG","90.8","4.04","4.21","LOQ","YES","42.1","SA-MW132I-20171214","0.237","0.001","2.64",""

"B7L0188-MSD1","Modified EPA Method 537","Dilution","B7L0188-MSD1","Vista","375-95-1","PFNA","2950","ng/L","D,H","4.26","LOD","","TRG","12.4","60.3","42.1","LOQ","YES","421","SA-MW132I-20171214","0.237","0.001","26.4",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","335-76-2","PFDA","38.1","ng/L","","0.784","LOD","","TRG","76.8","13.9","4.21","LOQ","YES","42.1","SA-MW132I-20171214","0.237","0.001","2.64",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","2355-31-9","MeFOSAA","38.4","ng/L","","0.868","LOD","","TRG","91.2","16.1","4.21","LOQ","YES","42.1","SA-MW132I-20171214","0.237","0.001","2.64",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","2058-94-8","PFUnA","50.4","ng/L","","0.553","LOD","","TRG","104","4.42","4.21","LOQ","YES","42.1","SA-MW132I-20171214","0.237","0.001","2.64",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","2991-50-6","EtFOSAA","40.1","ng/L","","0.721","LOD","","TRG","95.2","0.419","4.21","LOQ","YES","42.1","SA-MW132I-20171214","0.237","0.001","2.64",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","307-55-1","PFDoA","39.5","ng/L","","0.417","LOD","","TRG","93.9","19.3","4.21","LOQ","YES","42.1","SA-MW132I-20171214","0.237","0.001","2.64",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","72629-94-8","PFTTrDA","50.7","ng/L","","0.260","LOD","","TRG","120","6.01","4.21","LOQ","YES","42.1","SA-MW132I-20171214","0.237","0.001","2.64",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","376-06-7","PFTeDA","42.8","ng/L","","0.397","LOD","","TRG","102","14.1","4.21","LOQ","YES","42.1","SA-MW132I-20171214","0.237","0.001","2.64",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","13C3-PFBS","13C3-PFBS","115","%R","","-99","NA","","IS","115","","-99","NA","YES","100","SA-MW132I-20171214","0.237","0.001","-99",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","13C2-PFHxA","13C2-PFHxA","92.6","%R","","-99","NA","","IS","92.6","","-99","NA","YES","100","SA-MW132I-20171214","0.237","0.001","-99",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","13C4-PFHpA","13C4-PFHpA","105","%R","","-99","NA","","IS","105","","-99","NA","YES","100","SA-MW132I-20171214","0.237","0.001","-99",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","18O2-PFHxS","18O2-PFHxS","103","%R","","-99","NA","","IS","103","","-99","NA","YES","100","SA-MW132I-20171214","0.237","0.001","-99",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","13C2-PFOA","13C2-PFOA","86.7","%R","","-99","NA","","IS","86.7","","-99","NA","YES","100","SA-MW132I-20171214","0.237","0.001","-99",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","13C8-PFOS","13C8-PFOS","87.4","%R","","-99","NA","","IS","87.4","","-99","NA","YES","100","SA-MW132I-20171214","0.237","0.001","-99",""

"B7L0188-MSD1","Modified EPA Method 537","Dilution","B7L0188-MSD1","Vista","13C5-PFNA","13C5-PFNA","121","%R","D","-99","NA","","IS","121","","-99","NA","YES","100","SA-MW132I-20171214","0.237","0.001","-99",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","13C2-PFDA","13C2-PFDA","91.9","%R","","-99","NA","","IS","91.9","","-99","NA","YES","100","SA-MW132I-20171214","0.237","0.001","-99",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","d3-MeFOSAA","d3-MeFOSAA","127","%R","","-99","NA","","IS","127","","-99","NA","YES","100","SA-MW132I-20171214","0.237","0.001","-99",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","13C2-PFUnA","13C2-PFUnA","114","%R","","-99","NA","","IS","114","","-99","NA","YES","100","SA-MW132I-20171214","0.237","0.001","-99",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","d5-EtFOSAA","d5-EtFOSAA","114","%R","","-99","NA","","IS","114","","-99","NA","YES","100","SA-MW132I-20171214","0.237","0.001","-99",""



"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","13C2-PFDoA","13C2-PFDoA","106","%R","",-99,"NA","","IS","106","",-99,"NA","YES","100","SA-MW132I-20171214","0.237","0.001","-99",""

"B7L0188-MSD1","Modified EPA Method 537","Initial","B7L0188-MSD1","Vista","13C2-PFTeDA","13C2-PFTeDA","102","%R","",-99,"NA","","IS","102","",-99,"NA","YES","100","SA-MW132I-20171214","0.237","0.001","-99",""

"112G08005-WE05","112G08005-WE05","FT-PZ458S-20171214","12/14/2017 09:13","AQ","1701970-01","NM","","2.50","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/12/2018 17:03","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","12/15/2017 09:50","01/01/1900 00:00",""

"112G08005-WE05","112G08005-WE05","FT-PZ458I-20171214","12/14/2017 09:07","AQ","1701970-02","NM","","2.50","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/12/2018 17:15","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","12/15/2017 09:50","01/01/1900 00:00",""

"112G08005-WE05","112G08005-WE05","SA-MW132S-20171214","12/14/2017 11:01","AQ","1701970-03","NM","","2.50","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/12/2018 17:27","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","12/15/2017 09:50","01/01/1900 00:00",""

"112G08005-WE05","112G08005-WE05","SA-MW132S-20171214","12/14/2017 11:01","AQ","1701970-03","NM","","2.50","Modified EPA Method 537","METHOD","Dilution","12/28/2017 10:00","01/15/2018 12:17","Vista","COA","WET","NA","10","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","12/15/2017 09:50","01/01/1900 00:00",""

"112G08005-WE05","112G08005-WE05","SA-MW132S-FRB-20171214","12/14/2017 11:01","AQ","1701970-04","NM","","2.50","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/12/2018 17:39","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","12/15/2017 09:50","01/01/1900 00:00",""

"112G08005-WE05","112G08005-WE05","SA-MW132I-20171214","12/14/2017 11:02","AQ","1701970-05","NM","","2.50","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/12/2018 17:52","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","12/15/2017 09:50","01/01/1900 00:00",""

"112G08005-WE05","112G08005-WE05","SA-MW132I-20171214","12/14/2017 11:02","AQ","1701970-05","NM","","2.50","Modified EPA Method 537","METHOD","Dilution","12/28/2017 10:00","01/15/2018 12:29","Vista","COA","WET","NA","10","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","12/15/2017 09:50","01/01/1900 00:00",""

"112G08005-WE05","112G08005-WE05","FT-PZ459S-20171214","12/14/2017 12:17","AQ","1701970-06","NM","","2.50","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/15/2018 12:53","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","12/15/2017 09:50","01/01/1900 00:00",""

"112G08005-WE05","112G08005-WE05","FT-PZ459I-20171214","12/14/2017 12:20","AQ","1701970-07","NM","","2.50","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/12/2018 18:15","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","12/15/2017 09:50","01/01/1900 00:00",""

"112G08005-WE05","112G08005-WE05","FT-PZ463S-20171214","12/14/2017 13:57","AQ","1701970-08","NM","","2.50","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/12/2018 18:26","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","12/15/2017 09:50","01/01/1900 00:00",""

"112G08005-WE05","112G08005-WE05","FT-PZ463I-20171214","12/14/2017 13:52","AQ","1701970-09","NM","","2.50","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/12/2018 18:37","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","12/15/2017 09:50","01/01/1900 00:00",""

"112G08005-WE05","112G08005-WE05","CV-TANK-20171214","12/14/2017 16:45","AQ","1701970-10","NM","","2.50","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/12/2018 18:48","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","12/15/2017 09:50","01/01/1900 00:00",""

"112G08005-WE05","112G08005-WE05","B7L0188-BLK1","01/01/1900 00:00","AQ","B7L0188-BLK1","MB",",",", "-99","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/10/2018 16:09","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","01/01/1900 00:00","01/01/1900 00:00", ""  
"112G08005-WE05","112G08005-WE05","B7L0188-BS1","01/01/1900 00:00","AQ","B7L0188-BS1","LCS",",",", "-99","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/10/2018 15:46","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","01/01/1900 00:00","01/01/1900 00:00", ""  
"112G08005-WE05","112G08005-WE05","B7L0188-MS1","01/01/1900 00:00","AQ","B7L0188-MS1","MS",",",", "-99","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/12/2018 16:40","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","01/01/1900 00:00","01/01/1900 00:00", ""  
"112G08005-WE05","112G08005-WE05","B7L0188-MS1","01/01/1900 00:00","AQ","B7L0188-MS1","MS",",",", "-99","Modified EPA Method 537","METHOD","Dilution","12/28/2017 10:00","01/15/2018 11:54","Vista","COA","WET","NA","10","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","01/01/1900 00:00","01/01/1900 00:00", ""  
"112G08005-WE05","112G08005-WE05","B7L0188-MSD1","01/01/1900 00:00","AQ","B7L0188-MSD1","MSD",",",", "-99","Modified EPA Method 537","METHOD","Initial","12/28/2017 10:00","01/12/2018 16:51","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","01/01/1900 00:00","01/01/1900 00:00", ""  
"112G08005-WE05","112G08005-WE05","B7L0188-MSD1","01/01/1900 00:00","AQ","B7L0188-MSD1","MSD",",",", "-99","Modified EPA Method 537","METHOD","Dilution","12/28/2017 10:00","01/15/2018 12:06","Vista","COA","WET","NA","10","NA","NA","01/01/1900 00:00","100","B7L0188","B7L0188","NA","S8A0034","1701970","01/01/1900 00:00","01/01/1900 00:00", ""



TO: K. FRANCISCO DATE: MARCH 19, 2018  
 FROM: LEIGH A. CIOFANI COPIES: DV FILE  
 SUBJECT: ORGANIC DATA VALIDATION – PFAS  
 NWIRP CALVERTON – FULL REVIEW  
 SAMPLE DELIVERY GROUP (SDG) 1701970

SAMPLES: 10 / Water / PFAS

|                        |                    |                    |
|------------------------|--------------------|--------------------|
| CV-TANK-20171214       | FT-PZ458I-20171214 | FT-PZ458S-20171214 |
| FT-PZ459I-20171214     | FT-PZ459S-20171214 | FT-PZ463I-20171214 |
| FT-PZ463S-20171214     | SA-MW132I-20171214 | SA-MW132S-20171214 |
| SA-MW132S-FRB-20171214 |                    |                    |

**OVERVIEW**

The sample set for NWIRP Calverton, SDG 1701970, consists of nine (9) aqueous environmental samples and one (1) field reagent blank (FRB). No field duplicate pairs are included in this SDG.

Samples were analyzed for poly- and perfluoroalkyl substances (PFAS). The samples were collected by Tetra Tech on December 14, 2017, and analyzed by Vista Analytical Laboratory. All analyses were conducted in accordance with Modified EPA Method 537 analysis and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

- \* • Data Completeness
- \* • Holding Times
- \* • LC/MS/MS Tuning
- \* • Initial/Continuing Calibrations
- \* • Ion Transition Check
- \* • Laboratory Method Blank Results
- \* • Field Reagent Blank Results
- \* • Extraction Internal Standard Recoveries
- \* • Injection Internal Standard Recoveries
- \* • Matrix Spike/Matrix Spike Duplicate Results
- \* • Ongoing Precision Recovery (OPR) Results
- \* • Compound Quantitation
- \* • Compound Identification
- \* • Detection Limits

The asterisk (\*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains the documentation to support the findings as discussed in this data validation report. The attached table summarizes the validation qualifications which are based on the following information:

**MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

The matrix spike (MS)/matrix spike duplicate (MSD) performed on sample SA-MW132I-20171214 had MS and MSD percent recoveries (%Rs) and/or relative percent differences (RPDs) that were outside of the laboratory quality control limits as follows:

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| <u>Analyte</u>                  | <u>Noncompliance(s)</u>         | <u>Action</u> |
|---------------------------------|---------------------------------|---------------|
| Perfluorohexanoic Acid (PFHxA)  | High MS %R                      | J             |
| Perfluoroheptanoic Acid (PFhPA) | Low MSD %R                      | J             |
| Perfluorononanoic Acid (PFNA)   | Low MS and MSD %Rs;<br>High RPD | J             |

The detected results were qualified in sample SA-MW132I-20171214 as indicated above without a bias indicator because either the associated MS or MSD %Rs met quality control limits. The result for PFNA was also qualified as estimated (J) because of the low matrix spike recoveries and high RPD. PFNA in the unspiked sample concentration was greater than 4 times the spike added concentration and the matrix spike samples were also diluted 10 times. No bias was applied to PFNA because of the 10X dilution.

#### **UNCERTAINTY NEAR THE DETECTION LIMIT**

Positive results reported between the detection limit (DL) and the limit of quantitation (LOQ) were qualified as estimated (J) due to uncertainty near the DL.

#### **ADDITIONAL COMMENTS**

Non-detected results were reported to the limit of detection (LOD).

PFAS compounds were not detected in the FRB contained in this SDG.


Perfluorononanoic acid in samples SA-MW132I-20171214 and SA-MW132S-20171214 was analyzed at a dilution factor of 10.

#### **EXECUTIVE SUMMARY**

**Laboratory Performance Issues:** None.

**Other Factors Affecting Data Quality:** Some detected results were qualified due to MS/MSD noncompliances. Detected results between the DL and the LOQ were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017), EPA Method 537 Modified, the Environmental Protection Agency document EPA/600/R-08/092, Method 537, "Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)", (September 2009) and the Department of Defense (DoD) entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (2017). The text of this report has been formulated to address only those problem areas affecting data quality.

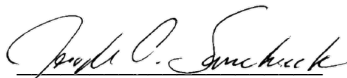
  
Tetra Tech

for

Leigh A. Ciofani  
Environmental Scientist/Data Validator

TO: K. FRANCISCO  
DATE: 03/19/18

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Tetra Tech

Joseph A. Samchuck  
Data Validation Manager

Attachments:

Appendix A – Qualified Analytical Results  
Appendix B – Results as Reported by the Laboratory  
Appendix C – Support Documentation

**APPENDIX A**

**QUALIFIED ANALYTICAL RESULTS**

### Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

|           |  |
|-----------|--|
| <b>U</b>  | The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.   |
| <b>J</b>  | The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit). |
| <b>J+</b> | The result is an estimated quantity, but the result may be biased high.  |
| <b>J-</b> | The result is an estimated quantity, but the result may be biased low.   |
| <b>UJ</b> | The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.  |
| <b>R</b>  | The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.  |
| <b>UR</b> | The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.   |

**Qualifier Codes:**

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's  $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ( $< 2 \times$  IDL for inorganics and  $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e. chromatography, interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors  $>40\%$  for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient  $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids  $<30\%$
- Z = Uncertainty at 2 standard deviations is greater than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed
- Z3 = Tentatively Identified Compound aldol condensate
- Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
- Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC



|   |            |                  |      |        |                    |      |        |                    |      |        |                    |      |  |
|---|------------|------------------|------|--------|--------------------|------|--------|--------------------|------|--------|--------------------|------|--|
| <b>PROJ_NO: 08005-WE05</b><br><b>SDG: 1701970</b><br><b>FRACTION: PFAS</b><br><b>MEDIA: WATER</b> | NSAMPLE    | CV-TANK-20171214 |      |        | FT-PZ458I-20171214 |      |        | FT-PZ458S-20171214 |      |        | FT-PZ459I-20171214 |      |  |
|   | LAB_ID     | 1701970-10       |      |        | 1701970-02         |      |        | 1701970-01         |      |        | 1701970-07         |      |  |
|   | SAMP_DATE  | 12/14/2017       |      |        | 12/14/2017         |      |        | 12/14/2017         |      |        | 12/14/2017         |      |  |
|   | QC_TYPE    | NM               |      |        | NM                 |      |        | NM                 |      |        | NM                 |      |  |
|   | UNITS      | NG/L             |      |        | NG/L               |      |        | NG/L               |      |        | NG/L               |      |  |
|   | PCT_SOLIDS | 0.0              |      |        | 0.0                |      |        | 0.0                |      |        | 0.0                |      |  |
|   | DUP_OF     |                  |      |        |                    |      |        |                    |      |        |                    |      |  |
| PARAMETER   | RESULT     | VQL              | QLCD | RESULT | VQL                | QLCD | RESULT | VQL                | QLCD | RESULT | VQL                | QLCD |  |
| N-ETHYL PERFLUOROOCCTANE SULFONAMIDOACETIC ACID   | 2.41       | U                |      | 2.47   | U                  |      | 2.4    | U                  |      | 13.1   |                    |      |  |
| N-METHYL PERFLUOROOCCTANE SULFONAMIDOACETIC ACID  | 2.41       | U                |      | 2.47   | U                  |      | 2.4    | U                  |      | 2.54   | U                  |      |  |
| PENTADEC AFLUOROOCCTANOIC ACID  | 2.41       | U                |      | 34.9   |                    |      | 10.4   |                    |      | 8.06   |                    |      |  |
| PERFLUOROBUTANESULFONIC ACID  | 2.41       | U                |      | 1.44   | J                  | P    | 1.33   | J                  | P    | 2.54   | U                  |      |  |
| PERFLUORODECANOIC ACID  | 2.41       | U                |      | 10     |                    |      | 2.4    | U                  |      | 1.05   | J                  | P    |  |
| PERFLUORODODECANOIC ACID  | 2.41       | U                |      | 2.47   | U                  |      | 2.4    | U                  |      | 2.54   | U                  |      |  |
| PERFLUOROHEPTANOIC ACID   | 2.41       | U                |      | 28     |                    |      | 2.58   | J                  | P    | 2.48   | J                  | P    |  |
| PERFLUOROHEXANESULFONIC ACID  | 2.41       | U                |      | 11.4   |                    |      | 9.72   |                    |      | 2.36   | J                  | P    |  |
| PERFLUOROHEXANOIC ACID  | 2.41       | U                |      | 53.9   |                    |      | 1.9    | J                  | P    | 2.43   | J                  | P    |  |
| PERFLUORONONANOIC ACID  | 2.41       | U                |      | 569    |                    |      | 44.7   |                    |      | 33     |                    |      |  |
| PERFLUOROOCCTANE SULFONIC ACID  | 2.41       | U                |      | 16.8   |                    |      | 4.53   |                    |      | 11.2   |                    |      |  |
| PERFLUOROTETRADECANOIC ACID   | 2.41       | U                |      | 2.47   | U                  |      | 2.4    | U                  |      | 2.54   | U                  |      |  |
| PERFLUOROTRIDECANOIC ACID   | 2.41       | U                |      | 2.47   | U                  |      | 2.4    | U                  |      | 2.54   | U                  |      |  |
| PERFLUOROUNDECANOIC ACID  | 4.09       |                  |      | 2.47   | U                  |      | 2.4    | U                  |      | 23.4   |                    |      |  |

| PARAMETER  | RESULT                     | VQL | QLCD | RESULT             | VQL | QLCD | RESULT             | VQL | QLCD | RESULT             | VQL | QLCD |
|--|----------------------------|-----|------|--------------------|-----|------|--------------------|-----|------|--------------------|-----|------|
| PROJ_NO: 08005-WE05                              | NSAMPLE FT-PZ459S-20171214 |     |      | FT-PZ463I-20171214 |     |      | FT-PZ463S-20171214 |     |      | SA-MW132I-20171214 |     |      |
| SDG: 1701970                                     | LAB_ID 1701970-06          |     |      | 1701970-09         |     |      | 1701970-08         |     |      | 1701970-05         |     |      |
| FRACTION: PFAS                                   | SAMP_DATE 12/14/2017       |     |      | 12/14/2017         |     |      | 12/14/2017         |     |      | 12/14/2017         |     |      |
| MEDIA: WATER                                     | QC_TYPE NM                 |     |      | NM                 |     |      | NM                 |     |      | NM                 |     |      |
|  | UNITS NG/L                 |     |      | NG/L               |     |      | NG/L               |     |      | NG/L               |     |      |
|  | PCT_SOLIDS 0.0             |     |      | 0.0                |     |      | 0.0                |     |      | 0.0                |     |      |
|  | DUP_OF                     |     |      |                    |     |      |                    |     |      |                    |     |      |
| N-ETHYL PERFLUOROOCCTANE SULFONAMIDOACETIC ACID  | 2.47                       | U   |      | 2.39               | U   |      | 2.43               | U   |      | 2.67               | U   |      |
| N-METHYL PERFLUOROOCCTANE SULFONAMIDOACETIC ACID | 2.47                       | U   |      | 2.39               | U   |      | 2.43               | U   |      | 2.67               | U   |      |
| PENTADEC AFLUOROOCCTANOIC ACID                   | 1.17                       | J   | P    | 31.9               |     |      | 1.73               | J   | P    | 128                |     |      |
| PERFLUOROBUTANESULFONIC ACID                     | 2.47                       | U   |      | 2.39               | U   |      | 2.43               | U   |      | 2.67               | U   |      |
| PERFLUORODECANOIC ACID                           | 2.47                       | U   |      | 2.15               | J   | P    | 2.43               | U   |      | 5.82               |     |      |
| PERFLUORODODECANOIC ACID                         | 2.47                       | U   |      | 2.39               | U   |      | 2.43               | U   |      | 2.67               | U   |      |
| PERFLUOROHEPTANOIC ACID                          | 0.43                       | J   | P    | 12.6               |     |      | 2.43               | U   |      | 81.2               | J   | D    |
| PERFLUOROHEXANESULFONIC ACID                     | 2.47                       | U   |      | 27                 |     |      | 2.43               | U   |      | 1.9                | J   | P    |
| PERFLUOROHEXANOIC ACID                           | 2.47                       | U   |      | 14                 |     |      | 2.43               | U   |      | 83.7               | J   | D    |
| PERFLUORONONANOIC ACID                           | 2.47                       | U   |      | 62.3               |     |      | 2.54               | J   | P    | 2900               | J   | D    |
| PERFLUOROOCCTANE SULFONIC ACID                   | 2.47                       | U   |      | 16.5               |     |      | 2.43               | U   |      | 8.69               |     |      |
| PERFLUOROTETRADECANOIC ACID                      | 2.47                       | U   |      | 2.39               | U   |      | 2.43               | U   |      | 2.67               | U   |      |
| PERFLUOROTRIDECANOIC ACID                        | 2.47                       | U   |      | 2.39               | U   |      | 2.43               | U   |      | 2.67               | U   |      |
| PERFLUOROUNDECANOIC ACID                         | 2.47                       | U   |      | 4.09               |     |      | 2.43               | U   |      | 6.47               |     |      |

|   |            |                    |      |        |                        |      |  |
|---|------------|--------------------|------|--------|------------------------|------|--|
| <b>PROJ_NO: 08005-WE05</b><br><b>SDG: 1701970</b><br><b>FRACTION: PFAS</b><br><b>MEDIA: WATER</b> | NSAMPLE    | SA-MW132S-20171214 |      |        | SA-MW132S-FRB-20171214 |      |  |
|   | LAB_ID     | 1701970-03         |      |        | 1701970-04             |      |  |
|   | SAMP_DATE  | 12/14/2017         |      |        | 12/14/2017             |      |  |
|   | QC_TYPE    | NM                 |      |        | NM                     |      |  |
|   | UNITS      | NG/L               |      |        | NG/L                   |      |  |
|   | PCT_SOLIDS | 0.0                |      |        | 0.0                    |      |  |
|   | DUP_OF     |                    |      |        |                        |      |  |
| PARAMETER   | RESULT     | VQL                | QLCD | RESULT | VQL                    | QLCD |  |
| N-ETHYL PERFLUOROOCANE SULFONAMIDOACETIC ACID   | 2.42       | U                  |      | 2.67   | U                      |      |  |
| N-METHYL PERFLUOROOCANE SULFONAMIDOACETIC ACID  | 2.42       | U                  |      | 2.67   | U                      |      |  |
| PENTADECYLAFLUOROOCANOIC ACID   | 59.8       |                    |      | 2.67   | U                      |      |  |
| PERFLUOROBUTANESULFONIC ACID  | 1.27       | J                  | P    | 2.67   | U                      |      |  |
| PERFLUORODECANOIC ACID  | 6.59       |                    |      | 2.67   | U                      |      |  |
| PERFLUORODODECANOIC ACID  | 2.42       | U                  |      | 2.67   | U                      |      |  |
| PERFLUOROHEPTANOIC ACID   | 42         |                    |      | 2.67   | U                      |      |  |
| PERFLUOROHEXANESULFONIC ACID  | 7.42       |                    |      | 2.67   | U                      |      |  |
| PERFLUOROHEXANOIC ACID  | 63         |                    |      | 2.67   | U                      |      |  |
| PERFLUORONONANOIC ACID  | 1270       |                    |      | 2.67   | U                      |      |  |
| PERFLUOROOCANE SULFONIC ACID  | 4.93       |                    |      | 2.67   | U                      |      |  |
| PERFLUOROTETRADECANOIC ACID   | 2.42       | U                  |      | 2.67   | U                      |      |  |
| PERFLUOROTRIDECANOIC ACID   | 2.42       | U                  |      | 2.67   | U                      |      |  |
| PERFLUOROUNDECANOIC ACID  | 49.8       |                    |      | 2.67   | U                      |      |  |

**APPENDIX B**

**RESULTS AS REPORTED BY THE LABORATORY**

**Sample ID: CV-TANK-20171214**

**Modified EPA Method 537**

| Client Data |  |                 |                 | Laboratory Data |                 |         |         |
|-------------|--|-----------------|-----------------|-----------------|-----------------|---------|---------|
| Name:       | Tetra Tech                               | Matrix:         | Aqueous         | Lab Sample:     | 1701970-10      | Column: | BEH C18 |
| Project:    | NWIRP Calverton Site 2/SA 112G08005-WE05 | Date Collected: | 14-Dec-17 16:45 | Date Received:  | 15-Dec-17 09:50 |         |         |
| SDG:        | WE05                                     |                 |                 |                 |                 |         |         |

| Analyte | Conc. (ng/L) | DL    | LOD  | LOQ  | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|---------|--------------|-------|------|------|------------|---------|-----------|-----------|-----------------|----------|
| PFBS    | ND           | 0.864 | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| PFHxA   | ND           | 1.05  | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| PFHpA   | ND           | 0.285 | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| PFHxS   | ND           | 0.457 | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| PFOA    | ND           | 0.314 | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| PFOS    | ND           | 0.390 | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| PFNA    | ND           | 0.391 | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| PFDA    | ND           | 0.719 | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| MeFOSAA | ND           | 0.797 | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| PFUnA   | 4.09         | 0.507 | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| EtFOSAA | ND           | 0.661 | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| PFDoA   | ND           | 0.382 | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| PFTrDA  | ND           | 0.239 | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| PFTeDA  | ND           | 0.365 | 2.41 | 3.86 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |

| Labeled Standards | Type | % Recovery | Limits   | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|-------------------|------|------------|----------|------------|---------|-----------|-----------|-----------------|----------|
| 13C3-PFBS         | IS   | 107        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| 13C2-PFHxA        | IS   | 93.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| 13C4-PFHpA        | IS   | 93.7       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| 18O2-PFHxS        | IS   | 87.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| 13C2-PFOA         | IS   | 99.3       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| 13C8-PFOS         | IS   | 109        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| 13C5-PFNA         | IS   | 93.5       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| 13C2-PFDA         | IS   | 74.7       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| d3-MeFOSAA        | IS   | 78.1       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| 13C2-PFUnA        | IS   | 72.0       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| d5-EtFOSAA        | IS   | 74.8       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| 13C2-PFDoA        | IS   | 77.2       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |
| 13C2-PFTeDA       | IS   | 57.7       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.259 L   | 12-Jan-18 18:48 | 1        |

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit  
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

Sample ID: FT-PZ458I-20171214

Modified EPA Method 537

| Client Data |  |                 |                 | Laboratory Data |                 |         |         |
|-------------|--|-----------------|-----------------|-----------------|-----------------|---------|---------|
| Name:       | Tetra Tech                               | Matrix:         | Aqueous         | Lab Sample:     | 1701970-02      | Column: | BEH C18 |
| Project:    | NWIRP Calverton Site 2/SA 112G08005-WE05 | Date Collected: | 14-Dec-17 09:07 | Date Received:  | 15-Dec-17 09:50 |         |         |
| SDG:        | WE05                                     |                 |                 |                 |                 |         |         |

| Analyte | Conc. (ng/L) | DL    | LOD  | LOQ  | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|---------|--------------|-------|------|------|------------|---------|-----------|-----------|-----------------|----------|
| PFBS    | 1.44         | 0.885 | 2.47 | 3.95 | J          | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFHxA   | 53.9         | 1.08  | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFHpA   | 28.0         | 0.292 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFHxS   | 11.4         | 0.468 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFOA    | 34.9         | 0.322 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFOS    | 16.8         | 0.399 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFNA    | 569          | 0.400 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFDA    | 10.0         | 0.736 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| MeFOSAA | ND           | 0.816 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFUnA   | ND           | 0.519 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| EtFOSAA | ND           | 0.677 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFDoA   | ND           | 0.391 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFTrDA  | ND           | 0.244 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFTeDA  | ND           | 0.373 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |

| Labeled Standards | Type | % Recovery | Limits   | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|-------------------|------|------------|----------|------------|---------|-----------|-----------|-----------------|----------|
| 13C3-PFBS         | IS   | 107        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C2-PFHxA        | IS   | 87.6       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C4-PFHpA        | IS   | 93.5       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 18O2-PFHxS        | IS   | 94.3       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C2-PFOA         | IS   | 73.4       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C8-PFOS         | IS   | 90.4       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C5-PFNA         | IS   | 96.7       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C2-PFDA         | IS   | 84.5       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| d3-MeFOSAA        | IS   | 101        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C2-PFUnA        | IS   | 94.2       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| d5-EtFOSAA        | IS   | 118        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C2-PFDoA        | IS   | 102        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C2-PFTeDA       | IS   | 88.4       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit  
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: FT-PZ458S-20171214**

**Modified EPA Method 537**

| Client Data |  |                 |                 | Laboratory Data |                 |         |         |
|-------------|--|-----------------|-----------------|-----------------|-----------------|---------|---------|
| Name:       | Tetra Tech                               | Matrix:         | Aqueous         | Lab Sample:     | 1701970-01      | Column: | BEH C18 |
| Project:    | NWIRP Calverton Site 2/SA 112G08005-WE05 | Date Collected: | 14-Dec-17 09:13 | Date Received:  | 15-Dec-17 09:50 |         |         |
| SDG:        | WE05                                     |                 |                 |                 |                 |         |         |

| Analyte | Conc. (ng/L) | DL    | LOD  | LOQ  | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|---------|--------------|-------|------|------|------------|---------|-----------|-----------|-----------------|----------|
| PFBS    | 1.33         | 0.861 | 2.40 | 3.85 | J          | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| PFHxA   | 1.90         | 1.05  | 2.40 | 3.85 | J          | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| PFHpA   | 2.58         | 0.284 | 2.40 | 3.85 | J          | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| PFHxS   | 9.72         | 0.455 | 2.40 | 3.85 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| PFOA    | 10.4         | 0.313 | 2.40 | 3.85 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| PFOS    | 4.53         | 0.388 | 2.40 | 3.85 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| PFNA    | 44.7         | 0.389 | 2.40 | 3.85 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| PFDA    | ND           | 0.716 | 2.40 | 3.85 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| MeFOSAA | ND           | 0.793 | 2.40 | 3.85 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| PFOxA   | ND           | 0.505 | 2.40 | 3.85 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| EtFOSAA | ND           | 0.659 | 2.40 | 3.85 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| PFOxA   | ND           | 0.381 | 2.40 | 3.85 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| PFTeDA  | ND           | 0.238 | 2.40 | 3.85 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| PFTeDA  | ND           | 0.363 | 2.40 | 3.85 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |

| Labeled Standards | Type | % Recovery | Limits   | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|-------------------|------|------------|----------|------------|---------|-----------|-----------|-----------------|----------|
| 13C3-PFBS         | IS   | 85.4       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| 13C2-PFHxA        | IS   | 80.7       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| 13C4-PFHpA        | IS   | 80.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| 18O2-PFHxS        | IS   | 81.5       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| 13C2-PFOA         | IS   | 78.3       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| 13C8-PFOS         | IS   | 77.8       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| 13C5-PFNA         | IS   | 88.6       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| 13C2-PFDA         | IS   | 72.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| d3-MeFOSAA        | IS   | 92.0       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| 13C2-PFOxA        | IS   | 73.8       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| d5-EtFOSAA        | IS   | 84.6       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| 13C2-PFOxA        | IS   | 66.2       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |
| 13C2-PFTeDA       | IS   | 58.7       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.260 L   | 12-Jan-18 17:03 | 1        |

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit  
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: FT-PZ459I-20171214**

**Modified EPA Method 537**

| Client Data |  |                 |                 | Laboratory Data |                 |         |         |
|-------------|--|-----------------|-----------------|-----------------|-----------------|---------|---------|
| Name:       | Tetra Tech                               | Matrix:         | Aqueous         | Lab Sample:     | 1701970-07      | Column: | BEH C18 |
| Project:    | NWIRP Calverton Site 2/SA 112G08005-WE05 | Date Collected: | 14-Dec-17 12:20 | Date Received:  | 15-Dec-17 09:50 |         |         |
| SDG:        | WE05                                     |                 |                 |                 |                 |         |         |

| Analyte | Conc. (ng/L) | DL    | LOD  | LOQ  | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|---------|--------------|-------|------|------|------------|---------|-----------|-----------|-----------------|----------|
| PFBS    | ND           | 0.911 | 2.54 | 4.07 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| PFHxA   | 2.43         | 1.11  | 2.54 | 4.07 | J          | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| PFHpA   | 2.48         | 0.301 | 2.54 | 4.07 | J          | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| PFHxS   | 2.36         | 0.482 | 2.54 | 4.07 | J          | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| PFOA    | 8.06         | 0.331 | 2.54 | 4.07 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| PFOS    | 11.2         | 0.411 | 2.54 | 4.07 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| PFNA    | 33.0         | 0.412 | 2.54 | 4.07 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| PFDA    | 1.05         | 0.758 | 2.54 | 4.07 | J          | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| MeFOSAA | ND           | 0.839 | 2.54 | 4.07 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| PFOA    | 23.4         | 0.534 | 2.54 | 4.07 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| EtFOSAA | 13.1         | 0.697 | 2.54 | 4.07 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| PFOA    | ND           | 0.403 | 2.54 | 4.07 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| PFOA    | ND           | 0.251 | 2.54 | 4.07 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| PFOA    | ND           | 0.384 | 2.54 | 4.07 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |

| Labeled Standards | Type | % Recovery | Limits   | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|-------------------|------|------------|----------|------------|---------|-----------|-----------|-----------------|----------|
| 13C3-PFBS         | IS   | 118        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| 13C2-PFHxA        | IS   | 99.4       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| 13C4-PFHpA        | IS   | 93.8       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| 18O2-PFHxS        | IS   | 104        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| 13C2-PFOA         | IS   | 83.2       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| 13C8-PFOS         | IS   | 111        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| 13C5-PFNA         | IS   | 92.8       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| 13C2-PFDA         | IS   | 109        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| d3-MeFOSAA        | IS   | 90.2       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| 13C2-PFOA         | IS   | 101        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| d5-EtFOSAA        | IS   | 105        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| 13C2-PFOA         | IS   | 74.7       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |
| 13C2-PFOA         | IS   | 75.3       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.246 L   | 12-Jan-18 18:15 | 1        |

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit  
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.



**Sample ID: FT-PZ459S-20171214**

**Modified EPA Method 537**

| Client Data |  |                 |                 | Laboratory Data |                 |         |         |
|-------------|--|-----------------|-----------------|-----------------|-----------------|---------|---------|
| Name:       | Tetra Tech                               | Matrix:         | Aqueous         | Lab Sample:     | 1701970-06      | Column: | BEH C18 |
| Project:    | NWIRP Calverton Site 2/SA 112G08005-WE05 | Date Collected: | 14-Dec-17 12:17 | Date Received:  | 15-Dec-17 09:50 |         |         |
| SDG:        | WE05                                     |                 |                 |                 |                 |         |         |

| Analyte | Conc. (ng/L) | DL    | LOD  | LOQ  | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|---------|--------------|-------|------|------|------------|---------|-----------|-----------|-----------------|----------|
| PFBS    | ND           | 0.884 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| PFHxA   | ND           | 1.08  | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| PFHpA   | 0.430        | 0.292 | 2.47 | 3.95 | J          | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| PFHxS   | ND           | 0.468 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| PFOA    | 1.17         | 0.321 | 2.47 | 3.95 | J          | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| PFOS    | ND           | 0.398 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| PFNA    | ND           | 0.400 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| PFDA    | ND           | 0.736 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| MeFOSAA | ND           | 0.815 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| PFUnA   | ND           | 0.518 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| EtFOSAA | ND           | 0.676 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| PFDoA   | ND           | 0.391 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| PFTrDA  | ND           | 0.244 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| PFTeDA  | ND           | 0.373 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |

| Labeled Standards | Type | % Recovery | Limits   | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|-------------------|------|------------|----------|------------|---------|-----------|-----------|-----------------|----------|
| 13C3-PFBS         | IS   | 109        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| 13C2-PFHxA        | IS   | 96.1       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| 13C4-PFHpA        | IS   | 93.2       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| 18O2-PFHxS        | IS   | 107        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| 13C2-PFOA         | IS   | 94.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| 13C8-PFOS         | IS   | 92.1       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| 13C5-PFNA         | IS   | 104        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| 13C2-PFDA         | IS   | 78.1       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| d3-MeFOSAA        | IS   | 78.3       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| 13C2-PFUnA        | IS   | 80.6       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| d5-EtFOSAA        | IS   | 77.7       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| 13C2-PFDoA        | IS   | 138        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |
| 13C2-PFTeDA       | IS   | 119        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 15-Jan-18 12:53 | 1        |

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit  
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

Sample ID: FT-PZ463I-20171214

Modified EPA Method 537

| Client Data |  |                 |                 | Laboratory Data |                 |         |         |
|-------------|--|-----------------|-----------------|-----------------|-----------------|---------|---------|
| Name:       | Tetra Tech                               | Matrix:         | Aqueous         | Lab Sample:     | 1701970-09      | Column: | BEH C18 |
| Project:    | NWIRP Calverton Site 2/SA 112G08005-WE05 | Date Collected: | 14-Dec-17 13:52 | Date Received:  | 15-Dec-17 09:50 |         |         |
| SDG:        | WE05                                     |                 |                 |                 |                 |         |         |

| Analyte | Conc. (ng/L) | DL    | LOD  | LOQ  | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|---------|--------------|-------|------|------|------------|---------|-----------|-----------|-----------------|----------|
| PFBS    | ND           | 0.855 | 2.39 | 3.82 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| PFHxA   | 14.0         | 1.04  | 2.39 | 3.82 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| PFHpA   | 12.6         | 0.282 | 2.39 | 3.82 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| PFHxS   | 27.0         | 0.452 | 2.39 | 3.82 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| PFOA    | 31.9         | 0.311 | 2.39 | 3.82 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| PFOS    | 16.5         | 0.386 | 2.39 | 3.82 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| PFNA    | 62.3         | 0.387 | 2.39 | 3.82 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| PFDA    | 2.15         | 0.712 | 2.39 | 3.82 | J          | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| MeFOSAA | ND           | 0.788 | 2.39 | 3.82 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| PFOxA   | 4.09         | 0.502 | 2.39 | 3.82 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| EtFOSAA | ND           | 0.655 | 2.39 | 3.82 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| PFOxA   | ND           | 0.378 | 2.39 | 3.82 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| PFTeDA  | ND           | 0.236 | 2.39 | 3.82 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| PFTeDA  | ND           | 0.361 | 2.39 | 3.82 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |

| Labeled Standards | Type | % Recovery | Limits   | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|-------------------|------|------------|----------|------------|---------|-----------|-----------|-----------------|----------|
| 13C3-PFBS         | IS   | 98.6       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| 13C2-PFHxA        | IS   | 84.4       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| 13C4-PFHpA        | IS   | 91.0       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| 18O2-PFHxS        | IS   | 82.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| 13C2-PFOA         | IS   | 90.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| 13C8-PFOS         | IS   | 79.2       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| 13C5-PFNA         | IS   | 83.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| 13C2-PFDA         | IS   | 75.1       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| d3-MeFOSAA        | IS   | 76.5       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| 13C2-PFOxA        | IS   | 76.7       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| d5-EtFOSAA        | IS   | 71.2       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| 13C2-PFOxA        | IS   | 82.2       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |
| 13C2-PFTeDA       | IS   | 71.0       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.262 L   | 12-Jan-18 18:37 | 1        |

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit  
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

Sample ID: FT-PZ463S-20171214

Modified EPA Method 537

| Client Data |  |                 |                 | Laboratory Data |                 |         |         |
|-------------|--|-----------------|-----------------|-----------------|-----------------|---------|---------|
| Name:       | Tetra Tech                               | Matrix:         | Aqueous         | Lab Sample:     | 1701970-08      | Column: | BEH C18 |
| Project:    | NWIRP Calverton Site 2/SA 112G08005-WE05 | Date Collected: | 14-Dec-17 13:57 | Date Received:  | 15-Dec-17 09:50 |         |         |
| SDG:        | WE05                                     |                 |                 |                 |                 |         |         |

| Analyte | Conc. (ng/L) | DL    | LOD  | LOQ  | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|---------|--------------|-------|------|------|------------|---------|-----------|-----------|-----------------|----------|
| PFBS    | ND           | 0.869 | 2.43 | 3.89 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| PFHxA   | ND           | 1.06  | 2.43 | 3.89 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| PFHpA   | ND           | 0.287 | 2.43 | 3.89 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| PFHxS   | ND           | 0.460 | 2.43 | 3.89 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| PFOA    | 1.73         | 0.316 | 2.43 | 3.89 | J          | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| PFOS    | ND           | 0.392 | 2.43 | 3.89 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| PFNA    | 2.54         | 0.393 | 2.43 | 3.89 | J          | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| PFDA    | ND           | 0.724 | 2.43 | 3.89 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| MeFOSAA | ND           | 0.801 | 2.43 | 3.89 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| PFUnA   | ND           | 0.510 | 2.43 | 3.89 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| EtFOSAA | ND           | 0.665 | 2.43 | 3.89 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| PFDoA   | ND           | 0.385 | 2.43 | 3.89 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| PFTrDA  | ND           | 0.240 | 2.43 | 3.89 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| PFTeDA  | ND           | 0.367 | 2.43 | 3.89 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |

| Labeled Standards | Type | % Recovery | Limits   | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|-------------------|------|------------|----------|------------|---------|-----------|-----------|-----------------|----------|
| 13C3-PFBS         | IS   | 94.2       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| 13C2-PFHxA        | IS   | 96.2       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| 13C4-PFHpA        | IS   | 102        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| 18O2-PFHxS        | IS   | 87.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| 13C2-PFOA         | IS   | 79.3       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| 13C8-PFOS         | IS   | 92.8       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| 13C5-PFNA         | IS   | 101        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| 13C2-PFDA         | IS   | 86.6       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| d3-MeFOSAA        | IS   | 80.0       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| 13C2-PFUnA        | IS   | 101        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| d5-EtFOSAA        | IS   | 91.7       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| 13C2-PFDoA        | IS   | 67.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |
| 13C2-PFTeDA       | IS   | 51.8       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.257 L   | 12-Jan-18 18:26 | 1        |

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit  
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: SA-MW132I-20171214**

**Modified EPA Method 537**

| Client Data |  |                 |                 | Laboratory Data |                 |         |         |
|-------------|--|-----------------|-----------------|-----------------|-----------------|---------|---------|
| Name:       | Tetra Tech                               | Matrix:         | Aqueous         | Lab Sample:     | 1701970-05      | Column: | BEH C18 |
| Project:    | NWIRP Calverton Site 2/SA 112G08005-WE05 | Date Collected: | 14-Dec-17 11:02 | Date Received:  | 15-Dec-17 09:50 |         |         |
| SDG:        | WE05                                     |                 |                 |                 |                 |         |         |

| Analyte | Conc. (ng/L) | DL    | LOD  | LOQ  | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|---------|--------------|-------|------|------|------------|---------|-----------|-----------|-----------------|----------|
| PFBS    | ND           | 0.955 | 2.67 | 4.27 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| PFHxA   | 83.7         | 1.16  | 2.67 | 4.27 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| PFHpA   | 81.2         | 0.315 | 2.67 | 4.27 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| PFHxS   | 1.90         | 0.505 | 2.67 | 4.27 | J          | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| PFOA    | 128          | 0.347 | 2.67 | 4.27 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| PFOS    | 8.69         | 0.430 | 2.67 | 4.27 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| PFNA    | 2900         | 4.32  | 26.7 | 42.7 | D          | B7L0188 | 28-Dec-17 | 0.234 L   | 15-Jan-18 12:29 | 10       |
| PFDA    | 5.82         | 0.795 | 2.67 | 4.27 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| MeFOSAA | ND           | 0.880 | 2.67 | 4.27 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| PFOA    | 6.47         | 0.560 | 2.67 | 4.27 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| EtFOSAA | ND           | 0.731 | 2.67 | 4.27 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| PFOA    | ND           | 0.422 | 2.67 | 4.27 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| PFOA    | ND           | 0.263 | 2.67 | 4.27 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| PFOA    | ND           | 0.403 | 2.67 | 4.27 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |

| Labeled Standards | Type | % Recovery | Limits   | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|-------------------|------|------------|----------|------------|---------|-----------|-----------|-----------------|----------|
| 13C3-PFBS         | IS   | 111        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| 13C2-PFHxA        | IS   | 104        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| 13C4-PFHpA        | IS   | 101        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| 18O2-PFHxS        | IS   | 101        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| 13C2-PFOA         | IS   | 96.3       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| 13C8-PFOS         | IS   | 84.6       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| 13C5-PFNA         | IS   | 90.9       | 50 - 150 | D          | B7L0188 | 28-Dec-17 | 0.234 L   | 15-Jan-18 12:29 | 10       |
| 13C2-PFDA         | IS   | 86.8       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| d3-MeFOSAA        | IS   | 96.3       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| 13C2-PFOA         | IS   | 96.0       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| d5-EtFOSAA        | IS   | 100        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| 13C2-PFOA         | IS   | 71.4       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |
| 13C2-PFOA         | IS   | 67.0       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:52 | 1        |

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit  
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: SA-MW132S-20171214**

**Modified EPA Method 537**

| Client Data |  |                 |                 |  | Laboratory Data |                 |         |         |  |  |
|-------------|--|-----------------|-----------------|--|-----------------|-----------------|---------|---------|--|--|
| Name:       | Tetra Tech                               | Matrix:         | Aqueous         |  | Lab Sample:     | 1701970-03      | Column: | BEH C18 |  |  |
| Project:    | NWIRP Calverton Site 2/SA 112G08005-WE05 | Date Collected: | 14-Dec-17 11:01 |  | Date Received:  | 15-Dec-17 09:50 |         |         |  |  |
| SDG:        | WE05                                     |                 |                 |  |                 |                 |         |         |  |  |

| Analyte | Conc. (ng/L) | DL    | LOD  | LOQ  | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|---------|--------------|-------|------|------|------------|---------|-----------|-----------|-----------------|----------|
| PFBS    | 1.27         | 0.868 | 2.42 | 3.88 | J          | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| PFHxA   | 63.0         | 1.06  | 2.42 | 3.88 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| PFHpA   | 42.0         | 0.287 | 2.42 | 3.88 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| PFHxS   | 7.42         | 0.459 | 2.42 | 3.88 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| PFOA    | 59.8         | 0.316 | 2.42 | 3.88 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| PFOS    | 4.93         | 0.392 | 2.42 | 3.88 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| PFNA    | 1270         | 3.93  | 24.2 | 38.8 | D          | B7L0188 | 28-Dec-17 | 0.258 L   | 15-Jan-18 12:17 | 10       |
| PFDA    | 6.59         | 0.723 | 2.42 | 3.88 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| MeFOSAA | ND           | 0.801 | 2.42 | 3.88 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| PFOA    | 49.8         | 0.509 | 2.42 | 3.88 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| EtFOSAA | ND           | 0.665 | 2.42 | 3.88 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| PFOA    | ND           | 0.384 | 2.42 | 3.88 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| PFOA    | ND           | 0.240 | 2.42 | 3.88 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| PFOA    | ND           | 0.366 | 2.42 | 3.88 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |

| Labeled Standards | Type | % Recovery | Limits   | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|-------------------|------|------------|----------|------------|---------|-----------|-----------|-----------------|----------|
| 13C3-PFBS         | IS   | 107        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| 13C2-PFHxA        | IS   | 93.0       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| 13C4-PFHpA        | IS   | 90.3       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| 18O2-PFHxS        | IS   | 93.0       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| 13C2-PFOA         | IS   | 90.8       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| 13C8-PFOS         | IS   | 97.1       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| 13C5-PFNA         | IS   | 74.3       | 50 - 150 | D          | B7L0188 | 28-Dec-17 | 0.258 L   | 15-Jan-18 12:17 | 10       |
| 13C2-PFDA         | IS   | 93.0       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| d3-MeFOSAA        | IS   | 107        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| 13C2-PFOA         | IS   | 91.7       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| d5-EtFOSAA        | IS   | 106        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| 13C2-PFOA         | IS   | 89.2       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |
| 13C2-PFOA         | IS   | 96.8       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.258 L   | 12-Jan-18 17:27 | 1        |

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit  
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: SA-MW132S-FRB-20171214**

**Modified EPA Method 537**

| Client Data |  |                 |                 | Laboratory Data |                 |         |         |
|-------------|--|-----------------|-----------------|-----------------|-----------------|---------|---------|
| Name:       | Tetra Tech                               | Matrix:         | Aqueous         | Lab Sample:     | 1701970-04      | Column: | BEH C18 |
| Project:    | NWIRP Calverton Site 2/SA 112G08005-WE05 | Date Collected: | 14-Dec-17 11:01 | Date Received:  | 15-Dec-17 09:50 |         |         |
| SDG:        | WE05                                     |                 |                 |                 |                 |         |         |

| Analyte | Conc. (ng/L) | DL    | LOD  | LOQ  | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|---------|--------------|-------|------|------|------------|---------|-----------|-----------|-----------------|----------|
| PFBS    | ND           | 0.958 | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| PFHxA   | ND           | 1.17  | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| PFHpA   | ND           | 0.316 | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| PFHxS   | ND           | 0.507 | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| PFOA    | ND           | 0.348 | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| PFOS    | ND           | 0.432 | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| PFNA    | ND           | 0.433 | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| PFDA    | ND           | 0.797 | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| MeFOSAA | ND           | 0.883 | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| PFOxA   | ND           | 0.562 | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| EtFOSAA | ND           | 0.733 | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| PFOxA   | ND           | 0.424 | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| PFTeDA  | ND           | 0.264 | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| PFTeDA  | ND           | 0.404 | 2.67 | 4.28 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |

| Labeled Standards | Type | % Recovery | Limits   | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|-------------------|------|------------|----------|------------|---------|-----------|-----------|-----------------|----------|
| 13C3-PFBS         | IS   | 102        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| 13C2-PFHxA        | IS   | 106        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| 13C4-PFHpA        | IS   | 94.4       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| 18O2-PFHxS        | IS   | 97.1       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| 13C2-PFOA         | IS   | 86.5       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| 13C8-PFOS         | IS   | 94.5       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| 13C5-PFNA         | IS   | 83.7       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| 13C2-PFDA         | IS   | 97.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| d3-MeFOSAA        | IS   | 89.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| 13C2-PFOxA        | IS   | 77.6       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| d5-EtFOSAA        | IS   | 92.8       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| 13C2-PFOxA        | IS   | 69.5       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |
| 13C2-PFTeDA       | IS   | 70.0       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.234 L   | 12-Jan-18 17:39 | 1        |

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit  
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**APPENDIX C**

**SUPPORT DOCUMENTATION**

January 18, 2018

**Vista Work Order No. 1701970**

Ms. Kristi Francisco  
Tetra Tech  
5700 Lake Wright Drive, Suite 309  
Norfolk, VA 23502

Dear Ms. Francisco,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on December 15, 2017. This sample set was analyzed on a standard turn-around time, under your Project Name 'NWIRP Calverton Site 2/SA 112G08005-WE05'. The SDG Number is WE05.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com).

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier  
Laboratory Director



*Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.*



**SDG Number WE05**

**Vista Work Order No. 1701970**

**Case Narrative**

**Sample Condition on Receipt:**

Ten aqueous samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

**Analytical Notes:**

**Modified EPA Method 537**

The following samples contained particulate and were centrifuged prior to extraction:

| <u>Laboratory ID</u> | <u>Sample Name</u> |
|----------------------|--------------------|
| 1701970-01           | FT-PZ458S-20171214 |
| 1701970-02           | FT-PZ458I-20171214 |
| 1701970-03           | SA-MW132S-20171214 |
| 1701970-05           | SA-MW132I-20171214 |
| 1701970-07           | FT-PZ459I-20171214 |
| 1701970-08           | FT-PZ463S-20171214 |
| 1701970-09           | FT-PZ463I-20171214 |

The samples were extracted and analyzed for a selected list of PFAS using Modified EPA Method 537.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibrations and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the method acceptance criteria.

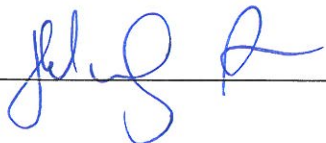
All sample extracts were re-injected because the recovery of PFTrDA was 66% in the Continuing Calibration. The results are reported from the re-injections. The raw data from the original analyses are included.

The extract of sample "FT-PZ-459S-20171214" was re-injected because it followed an extract with an analyte with a concentration greater than the highest point in the calibration curve. The results from the re-injection have been reported.

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

As requested, an MS/MSD was performed on sample "SA-MW132I-20171214". The MS/MSD recoveries and/or RPDs were out of the acceptance criteria for PFHxA, PFHpA and PFNA.

I Anna Helak, as the designated Quality Assurance Officer, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at ( 916 ) 673 1520 If there are any questions or problems with the enclosed electronic deliverables.

Signature:  Title: QA Manager Date: 01/17/2018

Revision 9  
ISG  
08/18/16

# Sample Inventory Report

| Vista Sample ID | Client Sample ID       | Sampled               | Received        | Components/Containers   |
|-----------------|------------------------|-----------------------|-----------------|---|
| 1701970-01      | FT-PZ458S-20171214     | 14-Dec-17 09:13       | 15-Dec-17 09:50 | HDPE Bottle, 250 mL<br>HDPE Bottle, 250 mL  |
| 1701970-02      | FT-PZ458I-20171214     | 14-Dec-17 09:07       | 15-Dec-17 09:50 | HDPE Bottle, 250 mL<br>HDPE Bottle, 250 mL  |
| 1701970-03      | SA-MW132S-20171214     | 14-Dec-17 11:01       | 15-Dec-17 09:50 | HDPE Bottle, 250 mL<br>HDPE Bottle, 250 mL  |
| 1701970-04      | SA-MW132S-FRB-20171214 | 14-Dec-17 11:01       | 15-Dec-17 09:50 | HDPE Bottle, 250 mL<br>HDPE Bottle, 250 mL  |
| 1701970-05      | SA-MW132I-20171214     | MS/MSD14-Dec-17 11:02 | 15-Dec-17 09:50 | HDPE Bottle, 250 mL<br>HDPE Bottle, 250 mL<br>HDPE Bottle, 250 mL<br>HDPE Bottle, 250 mL<br>HDPE Bottle, 250 mL |
| 1701970-06      | FT-PZ459S-20171214     | 14-Dec-17 12:17       | 15-Dec-17 09:50 | HDPE Bottle, 250 mL<br>HDPE Bottle, 250 mL  |
| 1701970-07      | FT-PZ459I-20171214     | 14-Dec-17 12:20       | 15-Dec-17 09:50 | HDPE Bottle, 250 mL<br>HDPE Bottle, 250 mL  |
| 1701970-08      | FT-PZ463S-20171214     | 14-Dec-17 13:57       | 15-Dec-17 09:50 | HDPE Bottle, 250 mL<br>HDPE Bottle, 250 mL  |
| 1701970-09      | FT-PZ463I-20171214     | 14-Dec-17 13:52       | 15-Dec-17 09:50 | HDPE Bottle, 250 mL<br>HDPE Bottle, 250 mL  |
| 1701970-10      | CV-TANK-20171214       | 14-Dec-17 16:45       | 15-Dec-17 09:50 | HDPE Bottle, 250 mL<br>HDPE Bottle, 250 mL  |

## **DATA QUALIFIERS & ABBREVIATIONS**

|              |  |
|--------------|--|
| <b>B</b>     | <b>This compound was also detected in the method blank.</b>                                    |
| <b>D</b>     | <b>Dilution</b>  |
| <b>E</b>     | <b>The associated compound concentration exceeded the calibration range of the instrument.</b> |
| <b>H</b>     | <b>Recovery and/or RPD was outside laboratory acceptance limits.</b>                           |
| <b>I</b>     | <b>Chemical Interference</b>   |
| <b>J</b>     | <b>The amount detected is below the Reporting Limit/LOQ.</b>                                   |
| <b>M</b>     | <b>Estimated Maximum Possible Concentration. (CA Region 2 projects only)</b>                   |
| <b>*</b>     | <b>See Cover Letter</b>  |
| <b>Conc.</b> | <b>Concentration</b>   |
| <b>NA</b>    | <b>Not applicable</b>  |
| <b>ND</b>    | <b>Not Detected</b>  |
| <b>TEQ</b>   | <b>Toxic Equivalency</b>   |
| <b>U</b>     | <b>Not Detected (specific projects only)</b>   |

**Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.**



# CHAIN OF CUSTODY

*For Laboratory Use Only*  
 Work Order #: 1701970 Temp: 2.5 °C  
 Storage ID: WR-2 Storage Secured: Yes  No

Project ID: 112G08005-WE05 PO#: \_\_\_\_\_ Sampler: Jacob Birkett  
 (name)

TAT Standard:  21 days  
 (check one): Rush (surcharge may apply)  
 14 days  7 days Specify: \_\_\_\_\_

Invoice to: Name Tetra Tech Company 5700 Lake Wright Dr. Suite 102 Address Norfolk City VA State 757.466.4902 Ph# 757.466.4902 Fax#

Relinquished by (printed name and signature) Jacob Birkett Date 12-14-17 Time \_\_\_\_\_ Received by (printed name and signature) B. Benedict Date 12/15/17 Time 1020

SHIP TO: Vista Analytical Laboratory  
 1104 Windfield Way  
 El Dorado Hills, CA 95762  
 (916) 673-1520 \* Fax (916) 673-0106

Method of Shipment: FedEx  
 Tracking No.: 8102-9107-0525

| Add Analysis(es) Requested |      | Mod. EPA Method 537      | EPA Method 537(DW only) |
|----------------------------|------|--------------------------|-------------------------|
| Container(s)               |      |                          |                         |
| Quantity                   | Type | Matrix                   |                         |
|                            |      | PFOA/PFOS                |                         |
|                            |      | UCMR3 PFAS List:6        |                         |
|                            |      | 537 List: 14             |                         |
|                            |      | Full List of 26          |                         |
|                            |      | Other: Please List Below |                         |
|                            |      | PFOA/PFOS                |                         |
|                            |      | UCMR3 PFAS List:6        |                         |
|                            |      | PFAS List: 14            |                         |

| Sample ID              | Date     | Time  | Location/Sample Description | Quantity | Type | Matrix | PFOA/PFOS | UCMR3 PFAS List:6 | 537 List: 14 | Full List of 26 | Other: Please List Below | PFOA/PFOS | UCMR3 PFAS List:6 | PFAS List: 14 | Comments |
|------------------------|----------|-------|-----------------------------|----------|------|--------|-----------|-------------------|--------------|-----------------|--------------------------|-----------|-------------------|---------------|----------|
| FT-PZ458S-20171214     | 12/14/17 | 0913  | FT-PZ458                    | 2        | P    | AQ     |           |                   | X            |                 |                          |           |                   |               |          |
| FT-PZ458I-20171214     | 12/14/17 | 0907  | ↓                           |          |      |        |           |                   |              |                 |                          |           |                   |               |          |
| SA-MW132S-20171214     |          | 11:01 | SA-MW132                    |          |      |        |           |                   |              |                 |                          |           |                   |               |          |
| SA-MW132S-FRB-20171214 |          | 1101  | ↓                           |          |      |        |           |                   |              |                 |                          |           |                   |               | FRB      |
| SA-MW132I-20171214     |          | 1102  | ↓                           | 6        |      |        |           |                   |              |                 |                          |           |                   |               | MS/MSD   |
| FT-PZ459S-20171214     |          | 1217  | FT-PZ459                    | 2        |      |        |           |                   |              |                 |                          |           |                   |               |          |
| FT-PZ459I-20171214     |          | 1220  | ↓                           |          |      |        |           |                   |              |                 |                          |           |                   |               |          |
| FT-PZ463S-20171214     |          | 1357  | FT-PZ463                    |          |      |        |           |                   |              |                 |                          |           |                   |               |          |
| FT-PZ463I-20171214     |          | 1352  | ↓                           |          |      |        |           |                   |              |                 |                          |           |                   |               |          |
| CV-TANK-20171214       |          | 1645  | Tanks                       |          |      |        |           |                   |              |                 |                          |           |                   |               |          |

Special Instructions/Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SEND DOCUMENTATION AND RESULTS TO:

Name: Kristi Francisco  
 Company: Tetra Tech  
 Address: 5700 Lake Wright Dr. Suite 102  
 City: Norfolk State: VA Zip: 23502  
 Phone: 757.466.4902 Fax: \_\_\_\_\_  
 Email: kristi.francisco@tetratech.com

Container Types: P= HDPE, PJ= HDPE Jar  
 O = Other: \_\_\_\_\_  
 Bottle Preservation Type: T = Thiosulfate,  
 TZ = Trizma: \_\_\_\_\_  
 Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,  
 SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: \_\_\_\_\_

### Sample Log-in Checklist

Vista Work Order #: 1701970 TAT Std

|                                   |  |                                |  |
|-----------------------------------|--|--------------------------------|--|
| <b>Samples Arrival:</b>           | <b>Date/Time:</b><br>12/15/17 0950   | <b>Initials:</b><br>WJB        | <b>Location:</b> WR-2<br>NA              |
| <b>Logged In:</b>                 | <b>Date/Time:</b><br>12/16/17 1429   | <b>Initials:</b><br>WMS        | <b>Location:</b> WR-2<br>Shelf/Rack: F-5 |
| <b>Delivered By:</b>              | <input checked="" type="radio"/> FedEx   | <input type="radio"/> UPS      | <input type="radio"/> On Trac            |
| <b>Preservation:</b>              | <input checked="" type="radio"/> Ice   | <input type="radio"/> Blue Ice | <input type="radio"/> Dry Ice            |
| <b>Temp °C:</b> 2.5 (uncorrected) | <b>Time:</b> 1025  | <b>Thermometer ID:</b> IR-1    |  |
| <b>Temp °C:</b> 2.5 (corrected)   | <b>Probe used:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                                |  |

|  | YES   | NO                                      | NA                                      |
|--|---|---|---|
| Adequate Sample Volume Received?                                   | ✓   |   |   |
| Holding Time Acceptable?   | ✓   |   |   |
| Shipping Container(s) Intact?                                      | ✓   |   |   |
| Shipping Custody Seals Intact?                                     | ✓   |   |   |
| Shipping Documentation Present?                                    | ✓   |   |   |
| Airbill  | Trk # 8102 9107 0525  | ✓                                       |   |
| Sample Container Intact?   | ✓   |   |   |
| Sample Custody Seals Intact?                                       |   |   | ✓                                       |
| Chain of Custody / Sample Documentation Present?                   | ✓   |   |   |
| COC Anomaly/Sample Acceptance Form completed?                      |   | ✓                                       | ✓                                       |
| If Chlorinated or Drinking Water Samples, Acceptable Preservation? |   |   | ✓                                       |
| <b>Preservation Documented:</b>                                    | <input type="radio"/> Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | <input type="radio"/> Trizma            | <input checked="" type="radio"/> None   |
| <b>Shipping Container</b>  | <input type="radio"/> Vista   | <input checked="" type="radio"/> Client | <input type="radio"/> Retain            |
|  |   |   | <input checked="" type="radio"/> Return |
|  |   |   | <input type="radio"/> Dispose           |

Comments: sample label \*  
 FT-PZ-458S-20171214  
 FT-PZ-458I-20171214  
 FT-PZ-459S-20171214  
 FT-PZ-459I-20171214  
 FT-PZ-463I-20171214

COC ID  
 FT-PZ458S-20171214  
 FT-PZ458I-20171214  
 FT-PZ459S-20171214  
 FT-PZ459I-20171214  
 FT-PZ463I-20171214  
 \* extra dash present in ID's on sample labels

Process Sheet  
**Workorder: 1701970**

Prep Expiration: 2017-Dec-28  
 Client: Tetra Tech

**Workorder Due: 08-Jan-18 00:00**

TAT: 24

Method: **537M PFAS DOD (LOQ as mRL)**  
 Matrix: **Aqueous**

Prep Batch: B7L0188

Version: 537 (14 Analyte)  
 DoD: DoD QSM 5.1

Prep Data Entered: GRB 12/29/17  
Date and Initials

Initial Sequence: SB A0034

| LabSampID  | A/B     | Prep Rec                            | Spike Rec                           | ClientSampleID         | Comments               | Location | Container           |
|------------|---------|-------------------------------------|-------------------------------------|------------------------|------------------------|----------|---------------------|
| 1701970-01 | "A"     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | FT-PZ458S-20171214     | "FT-PZ-458S-20171214"  | WR-2 F-5 | HDPE Bottle, 250 mL |
| 1701970-02 | ↓       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | FT-PZ458I-20171214     | "FT-PZ-458 I-20171214" | WR-2 F-5 | HDPE Bottle, 250 mL |
| 1701970-03 | ↓       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | SA-MW132S-20171214     |                        | WR-2 F-5 | HDPE Bottle, 250 mL |
| 1701970-04 | ↓       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | SA-MW132S-FRB-20171214 |                        | WR-2 F-5 | HDPE Bottle, 250 mL |
| 1701970-05 | A, B, C | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | SA-MW132I-20171214     | <b>MS/MSD</b>          | WR-2 F-5 | HDPE Bottle, 250 mL |
| 1701970-06 | "A"     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | FT-PZ459S-20171214     | "FT-PZ-459S-20171214"  | WR-2 F-5 | HDPE Bottle, 250 mL |
| 1701970-07 | ↓       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | FT-PZ459I-20171214     | "FT-PZ-459I-20171214"  | WR-2 F-5 | HDPE Bottle, 250 mL |
| 1701970-08 | ↓       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | FT-PZ463S-20171214     | "FT-PZ-463S-20171214"  | WR-2 F-5 | HDPE Bottle, 250 mL |
| 1701970-09 | ↓       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | FT-PZ463I-20171214     | "FT-PZ-463I-20171214"  | WR-2 F-5 | HDPE Bottle, 250 mL |
| 1701970-10 | ↓       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | CV-TANK-20171214       |                        | WR-2 F-5 | HDPE Bottle, 250 mL |

**WO Comments: Provide all analytical runs.  
 MS/MSD per batch, if MS/MSD is not provided - LCS/LCSD.**

Pre-Prep Check Out: GRB 12/27/17  
 Pre-Prep Check In: ST 12/27/17

Prep Check Out: HC 12.28.17  
 Prep Check In: NA

Prep Reconciled Initials/Date: GRB 12/27/17  
 Spike Reconciled Initials/Date: HC 12.28.17  
 VialBoxID: Cleveland



PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS DOD (LOQ as mRL)

B7L0188

Chemist: KL

Prep Date/Time: 27 Dec-17 08:04

28 1000  
KL 12/29/17

Prepared using: LCMS - SPE Extraction-LCMS

|                                     |                            | Date/Initials: <u>12/27/17 ST</u> |          |               |                 | Balance ID: <u>ABMS-4</u>  |                 |                 |                     |                   |                   |
|-------------------------------------|----------------------------|-----------------------------------|----------|---------------|-----------------|----------------------------|-----------------|-----------------|---------------------|-------------------|-------------------|
| Cen                                 | VISTA Sample ID            | pH Before                         | pH After | Chlorine (Cl) | Drops HCl Added | Bottle + Sample (g)        | Bottle Only (g) | Sample Amt. (L) | IS/NS CHEM/WIT DATE | SPE               | RS CHEM/WIT DATE  |
| <input type="checkbox"/>            | B7L0188-BLK1               | 5                                 | 2        | 0             | 2               | <del>12/27/17 ST</del> N/A | N/A             | (0.250)         | ✓ KL GRB 12/28/17   | ✓ KL GRB 12/28/17 | ✓ KL GRB 12/28/17 |
| <input type="checkbox"/>            | B7L0188-BS1                | 5                                 | 2        | 0             | 2               | N/A                        | ↓               | (0.250)         | ✓                   | ↓                 | ↓                 |
| <input checked="" type="checkbox"/> | B7L0188-MS1<br>1701970-05  | 6                                 | 2        | 0             | 3               | 276.07                     | 27.11           | 0.24896         | ✓                   | ↓                 | ↓                 |
| <input checked="" type="checkbox"/> | B7L0188-MSD1<br>1701970-05 | 6                                 | 2        | 0             | 3               | 265.29                     | 27.80           | 0.23749         | ✓                   | ↓                 | ↓                 |
| <input checked="" type="checkbox"/> | 1701970-01 (A)(B)          | 5                                 | 2        | 0             | 2               | 287.91                     | 27.93           | 0.25998         | ✓                   | ↓                 | ↓                 |
| <input checked="" type="checkbox"/> | 1701970-02                 | 6                                 | 2        | 0             | 3               | 280.43                     | 27.52           | 0.25291         | ✓                   | ↓                 | ↓                 |
| <input checked="" type="checkbox"/> | 1701970-03                 | 5                                 | 2        | 0             | 2               | 285.37                     | 27.73           | 0.25764         | ✓                   | ↓                 | ↓                 |
| <input type="checkbox"/>            | 1701970-04                 | 5                                 | 2        | 0             | 2               | 261.51                     | 27.84           | 0.23367         | ✓                   | ↓                 | ↓                 |
| <input checked="" type="checkbox"/> | 1701970-05                 | 6                                 | 2        | 0             | 3               | 262.10                     | 27.69           | 0.23441         | ✓                   | ↓                 | ↓                 |
| <input type="checkbox"/>            | 1701970-06                 | 5                                 | 2        | 0             | 2               | 280.97                     | 27.79           | 0.25318         | ✓                   | ↓                 | ↓                 |
| <input checked="" type="checkbox"/> | 1701970-07                 | 6                                 | 2        | 0             | 3               | 273.45                     | 27.75           | 0.24570         | ✓                   | ↓                 | ↓                 |
| <input checked="" type="checkbox"/> | 1701970-08                 | 5                                 | 2        | 0             | 2               | 285.07                     | 27.71           | 0.25736         | ✓                   | ↓                 | ↓                 |
| <input checked="" type="checkbox"/> | 1701970-09                 | 5                                 | 2        | 0             | 2               | 289.24                     | 27.59           | 0.26665         | ✓                   | ↓                 | ↓                 |
| <input type="checkbox"/>            | 1701970-10                 | 5                                 | 2        | 0             | 2               | 286.57                     | 27.68           | 0.25889         | ✓                   | ↓                 | ↓                 |

|                                |   |   |
|--------------------------------|---|---|
| IS: <u>17L2601, 10 mL (Vg)</u> | SPE Chem: <u>Strata X-AW 33um 200mg 6mL</u> | Notes: (A) 4 microcentrifuge tubes run to test for particulate. Nothing found. 12/27/17 ST<br>(B) sample has dark amber color, took longer and required more vacuum to SPE 7/12/28/17 |
| IS SUP: <u>NA</u>              | Ele SOLV: <u>0.5% NH4OH in MeOH / MeOH</u>  |   |
| NS: <u>17L2103, 10 mL (Vg)</u> | Final Volume(s) <u>1 mL</u>                 |   |
| RS: <u>17L2332, 10 mL (Vg)</u> |   |   |

Comments: Assume 1 g = 1 mL

Cen = Centrifuged

Batch: B7L0188

Matrix: Aqueous

| LabNumber    | WetWeight<br>(Initial) | % Solids<br>(Extraction Solids) | DryWeight | Final | Extracted       | Ext By | Spike     | SpikeAmount | ClientMatrix | Analysis              |
|--------------|------------------------|---------------------------------|-----------|-------|-----------------|--------|-----------|-------------|--------------|-----------------------|
| 1701970-01   | 0.25998 ✓              | NA                              | NA        | 1000  | 28-Dec-17 10:00 | KC     |           |             | Aqueous      | 537M PFAS DOD (LOQ as |
| 1701970-02   | 0.25291 ✓              |                                 |           | 1000  | 28-Dec-17 10:00 | KC     |           |             | Aqueous      | 537M PFAS DOD (LOQ as |
| 1701970-03   | 0.25764 ✓              |                                 |           | 1000  | 28-Dec-17 10:00 | KC     |           |             | Aqueous      | 537M PFAS DOD (LOQ as |
| 1701970-04   | 0.23367 ✓              |                                 |           | 1000  | 28-Dec-17 10:00 | KC     |           |             | Aqueous      | 537M PFAS DOD (LOQ as |
| 1701970-05   | 0.23441 ✓              |                                 |           | 1000  | 28-Dec-17 10:00 | KC     |           |             | Aqueous      | 537M PFAS DOD (LOQ as |
| 1701970-06   | 0.25318 ✓              |                                 |           | 1000  | 28-Dec-17 10:00 | KC     |           |             | Aqueous      | 537M PFAS DOD (LOQ as |
| 1701970-07   | 0.2457 ✓               |                                 |           | 1000  | 28-Dec-17 10:00 | KC     |           |             | Aqueous      | 537M PFAS DOD (LOQ as |
| 1701970-08   | 0.25736 ✓              |                                 |           | 1000  | 28-Dec-17 10:00 | KC     |           |             | Aqueous      | 537M PFAS DOD (LOQ as |
| 1701970-09   | 0.26165 ✓              |                                 |           | 1000  | 28-Dec-17 10:00 | KC     |           |             | Aqueous      | 537M PFAS DOD (LOQ as |
| 1701970-10   | 0.25889 ✓              |                                 |           | 1000  | 28-Dec-17 10:00 | KC     |           |             | Aqueous      | 537M PFAS DOD (LOQ as |
| B7L0188-BLK1 | 0.25                   |                                 |           | 1000  | 28-Dec-17 10:00 | KC     |           |             |              | QC                    |
| B7L0188-BS1  | 0.25                   |                                 |           | 1000  | 28-Dec-17 10:00 | KC     | 17L2103 ✓ | 10 ✓        |              | QC                    |
| B7L0188-MS1  | 0.24896 ✓              |                                 |           | 1000  | 28-Dec-17 10:00 | KC     | 17L2103 ✓ | 10 ✓        |              | QC                    |
| B7L0188-MSD1 | 0.23749 ✓              |                                 |           | 1000  | 28-Dec-17 10:00 | KC     | 17L2103 ✓ | 10 ✓        |              | QC                    |

GRB 12/29/17

**Sample ID: Method Blank** **Modified EPA Method 537**

|                    |  |         |         |                        |              |         |         |
|--------------------|--|---------|---------|------------------------|--------------|---------|---------|
| <b>Client Data</b> |  |         |         | <b>Laboratory Data</b> |              |         |         |
| Name:              | Tetra Tech                               | Matrix: | Aqueous | Lab Sample:            | B7L0188-BLK1 | Column: | BEH C18 |
| Project:           | NWIRP Calverton Site 2/SA 112G08005-WE05 |         |         |                        |              |         |         |

| Analyte | Conc. (ng/L) | DL    | LOD  | LOQ  | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|---------|--------------|-------|------|------|------------|---------|-----------|-----------|-----------------|----------|
| PFBS    | ND           | 0.895 | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| PFHxA   | ND           | 1.09  | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| PFHpA   | ND           | 0.296 | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| PFHxS   | ND           | 0.474 | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| PFOA    | ND           | 0.326 | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| PFOS    | ND           | 0.404 | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| PFNA    | ND           | 0.405 | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| PFDA    | ND           | 0.745 | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| MeFOSAA | ND           | 0.825 | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| PFOxA   | ND           | 0.525 | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| EtFOSAA | ND           | 0.685 | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| PFOxA   | ND           | 0.396 | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| PFTeDA  | ND           | 0.247 | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| PFTeDA  | ND           | 0.378 | 2.50 | 4.00 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |

| Labeled Standards | Type | % Recovery | Limits   | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|-------------------|------|------------|----------|------------|---------|-----------|-----------|-----------------|----------|
| 13C3-PFBS         | IS   | 96.6       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| 13C2-PFHxA        | IS   | 93.6       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| 13C4-PFHpA        | IS   | 84.5       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| 18O2-PFHxS        | IS   | 82.5       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| 13C2-PFOA         | IS   | 98.4       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| 13C8-PFOS         | IS   | 84.1       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| 13C5-PFNA         | IS   | 98.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| 13C2-PFDA         | IS   | 77.8       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| d3-MeFOSAA        | IS   | 93.4       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| 13C2-PFOxA        | IS   | 93.9       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| d5-EtFOSAA        | IS   | 78.8       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| 13C2-PFOxA        | IS   | 105        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |
| 13C2-PFTeDA       | IS   | 136        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 16:09 | 1        |

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit  
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: OPR**

**Modified EPA Method 537**

| Client Data |  |         |         | Laboratory Data |             |         |         |
|-------------|--|---------|---------|-----------------|-------------|---------|---------|
| Name:       | Tetra Tech                               | Matrix: | Aqueous | Lab Sample:     | B7L0188-BS1 | Column: | BEH C18 |
| Project:    | NWIRP Calverton Site 2/SA 112G08005-WE05 |         |         |                 |             |         |         |

| Analyte | Amt Found (ng/L) | Spike Amt | % Rec | Limits | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|---------|------------------|-----------|-------|--------|------------|---------|-----------|-----------|-----------------|----------|
| PFBS    | 38.5             | 40.0      | 96.3  | 70-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| PFHxA   | 40.1             | 40.0      | 100   | 70-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| PFHpA   | 38.2             | 40.0      | 95.4  | 70-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| PFHxS   | 42.2             | 40.0      | 106   | 70-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| PFOA    | 38.5             | 40.0      | 96.2  | 70-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| PFOS    | 42.4             | 40.0      | 106   | 70-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| PFNA    | 32.0             | 40.0      | 80.1  | 70-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| PFDA    | 34.6             | 40.0      | 86.5  | 70-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| MeFOSAA | 50.7             | 40.0      | 127   | 70-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| PFUnA   | 48.1             | 40.0      | 120   | 70-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| EtFOSAA | 35.8             | 40.0      | 89.5  | 70-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| PFDoA   | 33.3             | 40.0      | 83.2  | 70-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| PFTrDA  | 28.2             | 40.0      | 70.4  | 60-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| PFTeDA  | 28.6             | 40.0      | 71.5  | 70-130 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |

| Labeled Standards | Type | % Rec | Limits  | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|-------------------|------|-------|---------|------------|---------|-----------|-----------|-----------------|----------|
| 13C3-PFBS         | IS   | 114   | 50- 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| 13C2-PFHxA        | IS   | 102   | 50- 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| 13C4-PFHpA        | IS   | 113   | 50- 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| 18O2-PFHxS        | IS   | 93.2  | 50- 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| 13C2-PFOA         | IS   | 102   | 50- 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| 13C8-PFOS         | IS   | 82.3  | 50- 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| 13C5-PFNA         | IS   | 92.5  | 50- 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| 13C2-PFDA         | IS   | 89.9  | 50- 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| d3-MeFOSAA        | IS   | 64.2  | 50- 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| 13C2-PFUnA        | IS   | 66.9  | 50- 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| d5-EtFOSAA        | IS   | 72.6  | 50- 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| 13C2-PFDoA        | IS   | 81.1  | 50- 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |
| 13C2-PFTeDA       | IS   | 88.3  | 50- 150 |            | B7L0188 | 28-Dec-17 | 0.250 L   | 10-Jan-18 15:46 | 1        |

**Sample ID: SA-MW132I-20171214** **Modified EPA Method 537**

|   |                                      |                               |
|---|--------------------------------------|-------------------------------|
| Name: Tetra Tech                                  | Lab Sample: B7L0188-MS1/B7L0188-MSD1 | Source Lab Sample: 1701970-05 |
| Project: NWIRP Calverton Site 2/SA 112G08005-WE05 | QC Batch: B7L0188                    | Date Extracted: 28-Dec-17     |
| Matrix: Aqueous                                   | Samp Size: 0.249/0.237 L             | Column: BEH C18               |

| Analyte | Sample (ng/L) | MS (ng/L) | MS Spike Amt | MS % Rec | MS Quals | MSD (ng/L) | MSD Spike Amt | MSD % Rec | RPD   | MSD Quals | %Rec Limits | RPD Limits | MS Analyzed     | MS Dil | MSD Analyzed    | MSD Dil |
|---------|---------------|-----------|--------------|----------|----------|------------|---------------|-----------|-------|-----------|-------------|------------|-----------------|--------|-----------------|---------|
| PFBS    | ND            | 37.1      | 40.2         | 92.2     |          | 39.4       | 42.1          | 93.7      | 1.61  |           | 70-130      | 30         | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| PFHxA   | 83.7          | 145       | 40.2         | 151      | H        | 136        | 42.1          | 123       | 20.4  |           | 70-130      | 30         | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| PFHpA   | 81.2          | 111       | 40.2         | 73.7     |          | 108        | 42.1          | 64.7      | 13.0  | H         | 70-130      | 30         | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| PFHxS   | 1.90          | 39.7      | 40.2         | 93.9     |          | 44.4       | 42.1          | 101       | 7.29  |           | 70-130      | 30         | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| PFOA    | 128           | 157       | 40.2         | 72.4     |          | 164        | 42.1          | 87.1      | 18.4  |           | 70-130      | 30         | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| PFOS    | 8.69          | 43.7      | 40.2         | 87.2     |          | 46.9       | 42.1          | 90.8      | 4.04  |           | 70-130      | 30         | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| PFNA    | 2900          | 2990      | 402          | 23.1     | D, H     | 2950       | 421           | 12.4      | 60.3  | D, H      | 70-130      | 30         | 15-Jan-18 11:54 | 10     | 15-Jan-18 12:06 | 10      |
| PFDA    | 5.82          | 41.3      | 40.2         | 88.3     |          | 38.1       | 42.1          | 76.8      | 13.9  |           | 70-130      | 30         | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| MeFOSAA | ND            | 31.2      | 40.2         | 77.6     |          | 38.4       | 42.1          | 91.2      | 16.1  |           | 70-130      | 30         | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| PFUnA   | 6.47          | 46.5      | 40.2         | 99.5     |          | 50.4       | 42.1          | 104       | 4.42  |           | 70-130      | 30         | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| EtFOSAA | ND            | 38.4      | 40.2         | 95.6     |          | 40.1       | 42.1          | 95.2      | 0.419 |           | 70-130      | 30         | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| PFDoA   | ND            | 45.7      | 40.2         | 114      |          | 39.5       | 42.1          | 93.9      | 19.3  |           | 70-130      | 30         | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| PFTTrDA | ND            | 45.5      | 40.2         | 113      |          | 50.7       | 42.1          | 120       | 6.01  |           | 60-130      | 30         | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| PFTeDA  | ND            | 35.6      | 40.2         | 88.6     |          | 42.8       | 42.1          | 102       | 14.1  |           | 70-130      | 30         | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |

| Labeled Standards | Type | MS % Rec | MS Quals | MSD % Rec | MSD Quals | Limits | MS Analyzed     | MS Dil | MSD Analyzed    | MSD Dil |
|-------------------|------|----------|----------|-----------|-----------|--------|-----------------|--------|-----------------|---------|
| 13C3-PFBS         | IS   | 97.1     |          | 115       |           | 50-150 | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| 13C2-PFHxA        | IS   | 88.4     |          | 92.6      |           | 50-150 | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| 13C4-PFHpA        | IS   | 99.5     |          | 105       |           | 50-150 | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| 18O2-PFHxS        | IS   | 103      |          | 103       |           | 50-150 | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| 13C2-PFOA         | IS   | 85.9     |          | 86.7      |           | 50-150 | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| 13C8-PFOS         | IS   | 95.7     |          | 87.4      |           | 50-150 | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| 13C5-PFNA         | IS   | 93.8     | D        | 121       | D         | 50-150 | 15-Jan-18 11:54 | 10     | 15-Jan-18 12:06 | 10      |
| 13C2-PFDA         | IS   | 86.7     |          | 91.9      |           | 50-150 | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| d3-MeFOSAA        | IS   | 101      |          | 127       |           | 50-150 | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| 13C2-PFUnA        | IS   | 86.6     |          | 114       |           | 50-150 | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| d5-EtFOSAA        | IS   | 101      |          | 114       |           | 50-150 | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| 13C2-PFDoA        | IS   | 73.2     |          | 106       |           | 50-150 | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |
| 13C2-PFTeDA       | IS   | 69.4     |          | 102       |           | 50-150 | 12-Jan-18 16:40 | 1      | 12-Jan-18 16:51 | 1       |

Dataset: U:\Q4.PRO\results\180110M2\180110M2-IIS AREAS.qld

Last Altered: Thursday, January 11, 2018 09:12:45 Pacific Standard Time

Printed: Thursday, January 11, 2018 09:15:59 Pacific Standard Time

**Name: 180110M2\_29, Date: 10-Jan-2018, Time: 20:37:21, ID: 1701970-01 FT-PZ458S-20171214 0.25998, Description: FT-PZ458S-20171214**

|   | # Name       | ID                                    | Area   | %Rec  | Area Out |
|---|--------------|---------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-01 FT-PZ458S-20171214 0.25... | 4.61e3 | 78.7  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-01 FT-PZ458S-20171214 0.25... | 5.76e3 | 79.1  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-01 FT-PZ458S-20171214 0.25... | 1.56e3 | 106.6 | NO       |
| 4 | 4 13C8-PFOA  | 1701970-01 FT-PZ458S-20171214 0.25... | 5.00e3 | 71.0  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-01 FT-PZ458S-20171214 0.25... | 5.30e3 | 81.2  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-01 FT-PZ458S-20171214 0.25... | 1.44e3 | 96.6  | NO       |
| 7 | 7 13C6-PFDA  | 1701970-01 FT-PZ458S-20171214 0.25... | 3.71e3 | 84.4  | NO       |
| 8 | 8 13C7-PFUDa | 1701970-01 FT-PZ458S-20171214 0.25... | 5.13e3 | 70.9  | NO       |

**Name: 180110M2\_30, Date: 10-Jan-2018, Time: 20:48:32, ID: 1701970-02 FT-PZ458I-20171214 0.25291, Description: FT-PZ458I-20171214**

|   | # Name       | ID                                    | Area   | %Rec  | Area Out |
|---|--------------|---------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-02 FT-PZ458I-20171214 0.25... | 4.23e3 | 72.3  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-02 FT-PZ458I-20171214 0.25... | 5.17e3 | 71.0  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-02 FT-PZ458I-20171214 0.25... | 1.49e3 | 101.9 | NO       |
| 4 | 4 13C8-PFOA  | 1701970-02 FT-PZ458I-20171214 0.25... | 4.48e3 | 63.7  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-02 FT-PZ458I-20171214 0.25... | 3.88e3 | 59.5  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-02 FT-PZ458I-20171214 0.25... | 1.46e3 | 97.6  | NO       |
| 7 | 7 13C6-PFDA  | 1701970-02 FT-PZ458I-20171214 0.25... | 3.89e3 | 88.5  | NO       |
| 8 | 8 13C7-PFUDa | 1701970-02 FT-PZ458I-20171214 0.25... | 5.56e3 | 76.9  | NO       |

**Name: 180110M2\_31, Date: 10-Jan-2018, Time: 20:59:43, ID: 1701970-03 SA-MW132S-20171214 0.25764, Description: SA-MW132S-20171214**

|   | # Name       | ID                                  | Area   | %Rec  | Area Out |
|---|--------------|-------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-03 SA-MW132S-20171214 0.... | 4.39e3 | 75.0  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-03 SA-MW132S-20171214 0.... | 5.48e3 | 75.3  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-03 SA-MW132S-20171214 0.... | 1.38e3 | 94.8  | NO       |
| 4 | 4 13C8-PFOA  | 1701970-03 SA-MW132S-20171214 0.... | 5.03e3 | 71.5  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-03 SA-MW132S-20171214 0.... | 5.51e3 | 84.4  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-03 SA-MW132S-20171214 0.... | 1.30e3 | 86.8  | NO       |
| 7 | 7 13C6-PFDA  | 1701970-03 SA-MW132S-20171214 0.... | 4.88e3 | 111.1 | NO       |
| 8 | 8 13C7-PFUDa | 1701970-03 SA-MW132S-20171214 0.... | 6.04e3 | 83.5  | NO       |

**Name: 180110M2\_32, Date: 10-Jan-2018, Time: 21:10:53, ID: 1701970-04 SA-MW132S-FRB-20171214 0.23367, Description: SA-MW132S-FRB-20171214**

|   | # Name       | ID                                 | Area   | %Rec  | Area Out |
|---|--------------|------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-04 SA-MW132S-FRB-201712... | 4.86e3 | 83.1  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-04 SA-MW132S-FRB-201712... | 5.99e3 | 82.3  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-04 SA-MW132S-FRB-201712... | 1.46e3 | 100.1 | NO       |
| 4 | 4 13C8-PFOA  | 1701970-04 SA-MW132S-FRB-201712... | 5.19e3 | 73.7  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-04 SA-MW132S-FRB-201712... | 6.00e3 | 92.0  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-04 SA-MW132S-FRB-201712... | 1.21e3 | 80.8  | NO       |
| 7 | 7 13C6-PFDA  | 1701970-04 SA-MW132S-FRB-201712... | 3.45e3 | 78.5  | NO       |
| 8 | 8 13C7-PFUDa | 1701970-04 SA-MW132S-FRB-201712... | 6.53e3 | 90.3  | NO       |

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Last Altered: Thursday, January 11, 2018 09:12:45 Pacific Standard Time

Printed: Thursday, January 11, 2018 09:15:59 Pacific Standard Time

**Name: 180110M2\_33, Date: 10-Jan-2018, Time: 21:22:04, ID: 1701970-05 SA-MW132I-20171214 0.23441, Description: SA-MW132I-20171214**

| # | Name         | ID                                   | Area   | %Rec  | Area Out |
|---|--------------|--------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-05 SA-MW132I-20171214 0.2... | 4.70e3 | 80.3  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-05 SA-MW132I-20171214 0.2... | 5.41e3 | 74.3  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-05 SA-MW132I-20171214 0.2... | 1.53e3 | 105.1 | NO       |
| 4 | 4 13C8-PFOA  | 1701970-05 SA-MW132I-20171214 0.2... | 4.75e3 | 67.5  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-05 SA-MW132I-20171214 0.2... | 4.59e3 | 70.4  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-05 SA-MW132I-20171214 0.2... | 1.34e3 | 89.6  | NO       |
| 7 | 7 13C6-PFDA  | 1701970-05 SA-MW132I-20171214 0.2... | 2.83e3 | 64.4  | NO       |
| 8 | 8 13C7-PFUDa | 1701970-05 SA-MW132I-20171214 0.2... | 5.91e3 | 81.6  | NO       |

**Name: 180110M2\_34, Date: 10-Jan-2018, Time: 21:33:14, ID: IPA, Description: IPA**

| # | Name         | ID  | Area | %Rec | Area Out |
|---|--------------|-----|------|------|----------|
| 1 | 1 13C4-PFBA  | IPA |      |      | NO       |
| 2 | 2 13C5-PFHxA | IPA |      |      | NO       |
| 3 | 3 13C3-PFHxS | IPA |      |      | NO       |
| 4 | 4 13C8-PFOA  | IPA |      |      | NO       |
| 5 | 5 13C9-PFNA  | IPA |      |      | NO       |
| 6 | 6 13C4-PFOS  | IPA |      |      | NO       |
| 7 | 7 13C6-PFDA  | IPA |      |      | NO       |
| 8 | 8 13C7-PFUDa | IPA |      |      | NO       |

**Name: 180110M2\_35, Date: 10-Jan-2018, Time: 21:44:25, ID: ST180110M2-3 PFC CS3 18A0811, Description: PFC CS3 18A0811**

| # | Name         | ID                           | Area   | %Rec  | Area Out |
|---|--------------|------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | ST180110M2-3 PFC CS3 18A0811 | 7.65e3 | 130.7 | NO       |
| 2 | 2 13C5-PFHxA | ST180110M2-3 PFC CS3 18A0811 | 9.41e3 | 129.3 | NO       |
| 3 | 3 13C3-PFHxS | ST180110M2-3 PFC CS3 18A0811 | 2.25e3 | 154.1 | YES      |
| 4 | 4 13C8-PFOA  | ST180110M2-3 PFC CS3 18A0811 | 6.78e3 | 96.4  | NO       |
| 5 | 5 13C9-PFNA  | ST180110M2-3 PFC CS3 18A0811 | 8.52e3 | 130.6 | NO       |
| 6 | 6 13C4-PFOS  | ST180110M2-3 PFC CS3 18A0811 | 1.99e3 | 133.0 | NO       |
| 7 | 7 13C6-PFDA  | ST180110M2-3 PFC CS3 18A0811 | 5.94e3 | 135.2 | NO       |
| 8 | 8 13C7-PFUDa | ST180110M2-3 PFC CS3 18A0811 | 8.60e3 | 118.8 | NO       |

**Name: 180110M2\_36, Date: 10-Jan-2018, Time: 21:55:36, ID: IPA, Description: IPA**

| # | Name         | ID  | Area | %Rec | Area Out |
|---|--------------|-----|------|------|----------|
| 1 | 1 13C4-PFBA  | IPA |      |      | NO       |
| 2 | 2 13C5-PFHxA | IPA |      |      | NO       |
| 3 | 3 13C3-PFHxS | IPA |      |      | NO       |
| 4 | 4 13C8-PFOA  | IPA |      |      | NO       |
| 5 | 5 13C9-PFNA  | IPA |      |      | NO       |
| 6 | 6 13C4-PFOS  | IPA |      |      | NO       |
| 7 | 7 13C6-PFDA  | IPA |      |      | NO       |
| 8 | 8 13C7-PFUDa | IPA |      |      | NO       |

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**Name: 180110M2\_37, Date: 10-Jan-2018, Time: 22:06:47, ID: 1701970-06 FT-PZ459S-20171214 0.25318, Description: FT-PZ459S-20171214**

|   | # Name       | ID                                    | Area   | %Rec | Area Out |
|---|--------------|---------------------------------------|--------|------|----------|
| 1 | 1 13C4-PFBA  | 1701970-06 FT-PZ459S-20171214 0.25... | 5.02e3 | 85.8 | NO       |
| 2 | 2 13C5-PFHxA | 1701970-06 FT-PZ459S-20171214 0.25... | 5.70e3 | 78.3 | NO       |
| 3 | 3 13C3-PFHxS | 1701970-06 FT-PZ459S-20171214 0.25... | 1.41e3 | 96.3 | NO       |
| 4 | 4 13C8-PFOA  | 1701970-06 FT-PZ459S-20171214 0.25... | 5.37e3 | 76.4 | NO       |
| 5 | 5 13C9-PFNA  | 1701970-06 FT-PZ459S-20171214 0.25... | 6.07e3 | 92.9 | NO       |
| 6 | 6 13C4-PFOS  | 1701970-06 FT-PZ459S-20171214 0.25... | 1.43e3 | 95.8 | NO       |
| 7 | 7 13C6-PFDA  | 1701970-06 FT-PZ459S-20171214 0.25... | 3.92e3 | 89.1 | NO       |
| 8 | 8 13C7-PFUDa | 1701970-06 FT-PZ459S-20171214 0.25... | 5.66e3 | 78.2 | NO       |

**Name: 180110M2\_38, Date: 10-Jan-2018, Time: 22:18:02, ID: 1701970-07 FT-PZ459I-20171214 0.2457, Description: FT-PZ459I-20171214**

|   | # Name       | ID                                   | Area   | %Rec | Area Out |
|---|--------------|--------------------------------------|--------|------|----------|
| 1 | 1 13C4-PFBA  | 1701970-07 FT-PZ459I-20171214 0.2457 | 4.48e3 | 76.6 | NO       |
| 2 | 2 13C5-PFHxA | 1701970-07 FT-PZ459I-20171214 0.2457 | 5.33e3 | 73.2 | NO       |
| 3 | 3 13C3-PFHxS | 1701970-07 FT-PZ459I-20171214 0.2457 | 1.35e3 | 92.2 | NO       |
| 4 | 4 13C8-PFOA  | 1701970-07 FT-PZ459I-20171214 0.2457 | 5.08e3 | 72.2 | NO       |
| 5 | 5 13C9-PFNA  | 1701970-07 FT-PZ459I-20171214 0.2457 | 5.29e3 | 81.1 | NO       |
| 6 | 6 13C4-PFOS  | 1701970-07 FT-PZ459I-20171214 0.2457 | 1.34e3 | 89.5 | NO       |
| 7 | 7 13C6-PFDA  | 1701970-07 FT-PZ459I-20171214 0.2457 | 4.21e3 | 95.8 | NO       |
| 8 | 8 13C7-PFUDa | 1701970-07 FT-PZ459I-20171214 0.2457 | 5.16e3 | 71.3 | NO       |

**Name: 180110M2\_39, Date: 10-Jan-2018, Time: 22:29:11, ID: 1701970-08 FT-PZ463S-20171214 0.25736, Description: FT-PZ463S-20171214**

|   | # Name       | ID                                    | Area   | %Rec  | Area Out |
|---|--------------|---------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-08 FT-PZ463S-20171214 0.25... | 4.95e3 | 84.7  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-08 FT-PZ463S-20171214 0.25... | 6.88e3 | 94.5  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-08 FT-PZ463S-20171214 0.25... | 1.66e3 | 113.5 | NO       |
| 4 | 4 13C8-PFOA  | 1701970-08 FT-PZ463S-20171214 0.25... | 4.98e3 | 70.8  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-08 FT-PZ463S-20171214 0.25... | 5.39e3 | 82.6  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-08 FT-PZ463S-20171214 0.25... | 1.58e3 | 105.4 | NO       |
| 7 | 7 13C6-PFDA  | 1701970-08 FT-PZ463S-20171214 0.25... | 4.14e3 | 94.1  | NO       |
| 8 | 8 13C7-PFUDa | 1701970-08 FT-PZ463S-20171214 0.25... | 5.24e3 | 72.3  | NO       |

**Name: 180110M2\_40, Date: 10-Jan-2018, Time: 22:40:22, ID: 1701970-09 FT-PZ463I-20171214 0.26165, Description: FT-PZ463I-20171214**

|   | # Name       | ID                                    | Area   | %Rec  | Area Out |
|---|--------------|---------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-09 FT-PZ463I-20171214 0.26... | 4.93e3 | 84.3  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-09 FT-PZ463I-20171214 0.26... | 5.50e3 | 75.6  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-09 FT-PZ463I-20171214 0.26... | 1.77e3 | 121.2 | NO       |
| 4 | 4 13C8-PFOA  | 1701970-09 FT-PZ463I-20171214 0.26... | 6.10e3 | 86.8  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-09 FT-PZ463I-20171214 0.26... | 5.65e3 | 86.7  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-09 FT-PZ463I-20171214 0.26... | 1.35e3 | 90.5  | NO       |
| 7 | 7 13C6-PFDA  | 1701970-09 FT-PZ463I-20171214 0.26... | 3.19e3 | 72.6  | NO       |
| 8 | 8 13C7-PFUDa | 1701970-09 FT-PZ463I-20171214 0.26... | 5.92e3 | 81.8  | NO       |



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**Name: 180110M2\_41, Date: 10-Jan-2018, Time: 22:51:32, ID: 1701970-10 CV-TANK-20171214 0.25889, Description: CV-TANK-20171214**

| # | Name         | ID                                  | Area   | %Rec  | Area Out |
|---|--------------|-------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-10 CV-TANK-20171214 0.25889 | 4.69e3 | 80.2  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-10 CV-TANK-20171214 0.25889 | 5.66e3 | 77.8  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-10 CV-TANK-20171214 0.25889 | 1.48e3 | 101.3 | NO       |
| 4 | 4 13C8-PFOA  | 1701970-10 CV-TANK-20171214 0.25889 | 5.94e3 | 84.4  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-10 CV-TANK-20171214 0.25889 | 5.50e3 | 84.3  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-10 CV-TANK-20171214 0.25889 | 1.42e3 | 95.3  | NO       |
| 7 | 7 13C6-PFDA  | 1701970-10 CV-TANK-20171214 0.25889 | 4.81e3 | 109.4 | NO       |
| 8 | 8 13C7-PFUdA | 1701970-10 CV-TANK-20171214 0.25889 | 6.13e3 | 84.7  | NO       |

**Name: 180110M2\_42, Date: 10-Jan-2018, Time: 23:02:43, ID: IPA, Description: IPA**

| # | Name         | ID  | Area | %Rec | Area Out |
|---|--------------|-----|------|------|----------|
| 1 | 1 13C4-PFBA  | IPA |      |      | NO       |
| 2 | 2 13C5-PFHxA | IPA |      |      | NO       |
| 3 | 3 13C3-PFHxS | IPA |      |      | NO       |
| 4 | 4 13C8-PFOA  | IPA |      |      | NO       |
| 5 | 5 13C9-PFNA  | IPA |      |      | NO       |
| 6 | 6 13C4-PFOS  | IPA |      |      | NO       |
| 7 | 7 13C6-PFDA  | IPA |      |      | NO       |
| 8 | 8 13C7-PFUdA | IPA |      |      | NO       |

**Name: 180110M2\_43, Date: 10-Jan-2018, Time: 23:13:54, ID: B7L0218-BS1 OPR 0.25, Description: OPR**

| # | Name         | ID                   | Area   | %Rec  | Area Out |
|---|--------------|----------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | B7L0218-BS1 OPR 0.25 | 4.89e3 | 83.6  | NO       |
| 2 | 2 13C5-PFHxA | B7L0218-BS1 OPR 0.25 | 6.59e3 | 90.6  | NO       |
| 3 | 3 13C3-PFHxS | B7L0218-BS1 OPR 0.25 | 1.79e3 | 122.7 | NO       |
| 4 | 4 13C8-PFOA  | B7L0218-BS1 OPR 0.25 | 6.02e3 | 85.6  | NO       |
| 5 | 5 13C9-PFNA  | B7L0218-BS1 OPR 0.25 | 7.53e3 | 115.5 | NO       |
| 6 | 6 13C4-PFOS  | B7L0218-BS1 OPR 0.25 | 1.42e3 | 94.7  | NO       |
| 7 | 7 13C6-PFDA  | B7L0218-BS1 OPR 0.25 | 4.14e3 | 94.3  | NO       |
| 8 | 8 13C7-PFUdA | B7L0218-BS1 OPR 0.25 | 6.15e3 | 84.9  | NO       |

**Name: 180110M2\_44, Date: 10-Jan-2018, Time: 23:25:04, ID: B7L0218-BSD1 LCSD 0.25, Description: LCSD**

| # | Name         | ID                     | Area   | %Rec | Area Out |
|---|--------------|------------------------|--------|------|----------|
| 1 | 1 13C4-PFBA  | B7L0218-BSD1 LCSD 0.25 | 4.38e3 | 74.9 | NO       |
| 2 | 2 13C5-PFHxA | B7L0218-BSD1 LCSD 0.25 | 5.29e3 | 72.8 | NO       |
| 3 | 3 13C3-PFHxS | B7L0218-BSD1 LCSD 0.25 | 1.34e3 | 91.6 | NO       |
| 4 | 4 13C8-PFOA  | B7L0218-BSD1 LCSD 0.25 | 5.12e3 | 72.8 | NO       |
| 5 | 5 13C9-PFNA  | B7L0218-BSD1 LCSD 0.25 | 5.49e3 | 84.2 | NO       |
| 6 | 6 13C4-PFOS  | B7L0218-BSD1 LCSD 0.25 | 1.46e3 | 98.0 | NO       |
| 7 | 7 13C6-PFDA  | B7L0218-BSD1 LCSD 0.25 | 3.14e3 | 71.5 | NO       |
| 8 | 8 13C7-PFUdA | B7L0218-BSD1 LCSD 0.25 | 5.32e3 | 73.5 | NO       |

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ⓐ PFOSA > 130%

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Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_010818.mdb 09 Jan 2018 10:39:49  
Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-08-18\_FULL-M2.cdb 09 Jan 2018 11:01:39

Name: 180110M2\_1, Date: 10-Jan-2018, Time: 15:24:24, ID: ST180110M2-1 PFC CS0 18A0808, Description: PFC CS0 18A0808

AC  
1/11/18  
JFA-  
01/11/2018

| #  | Name                        | Trace         | Area   | IS Area | wt/vol | RRF   | Pred.RT | RT   | y Axis Resp. | Conc.  | %Rec  |
|----|-----------------------------|---------------|--------|---------|--------|-------|---------|------|--------------|--------|-------|
| 1  | 1 PFBA                      | 213.0 > 168.8 | 4.94e2 | 5.11e3  | 1.0000 |       | 1.38    | 1.42 | 1.21         | 0.964  | 96.4  |
| 2  | 2 PFPeA                     | 263.1 > 218.9 | 5.14e2 | 5.62e3  | 1.0000 |       | 2.37    | 2.37 | 1.14         | 1.065  | 106.5 |
| 3  | 3 PFBS                      | 299.0 > 79.7  | 1.16e2 | 7.35e2  | 1.0000 |       | 2.66    | 2.65 | 1.98         | 1.081  | 108.1 |
| 4  | 4 PFHxA                     | 313.2 > 268.9 | 7.18e2 | 1.81e3  | 1.0000 |       | 3.15    | 3.15 | 1.98         | 1.065  | 106.5 |
| 5  | 5 PFHpA                     | 363.0 > 318.9 | 4.91e2 | 4.57e3  | 1.0000 |       | 3.78    | 3.77 | 1.34         | 0.982  | 98.2  |
| 6  | 6 L-PFHxS                   | 398.9 > 79.6  | 9.31e1 | 6.35e2  | 1.0000 |       | 3.94    | 3.91 | 1.83         | 1.001  | 100.1 |
| 7  | 8 6:2 FTS                   | 427.1 > 407   | 1.65e2 | 6.35e2  | 1.0000 |       | 4.25    | 4.22 | 3.26         | 1.299  | 129.9 |
| 8  | 9 L-PFOA                    | 413 > 368.7   | 6.81e2 | 7.31e3  | 1.0000 |       | 4.31    | 4.28 | 1.16         | 1.081  | 108.1 |
| 9  | 11 PFHpS                    | 449 > 80.0    | 1.67e2 | 7.31e3  | 1.0000 |       | 4.42    | 4.38 | 0.285        | 1.015  | 101.5 |
| 10 | 12 PFNA                     | 463.0 > 418.8 | 6.44e2 | 6.65e3  | 1.0000 |       | 4.81    | 4.70 | 1.21         | 0.919  | 91.9  |
| 11 | 13 PFOSA                    | 498.1 > 77.8  | 1.50e2 | 1.10e3  | 1.0000 |       | 4.87    | 4.77 | 1.69         | 1.568  | 156.8 |
| 12 | 14 L-PFOS                   | 499 > 79.9    | 1.36e2 | 1.59e3  | 1.0000 |       | 4.89    | 4.79 | 1.07         | 1.110  | 111.0 |
| 13 | 16 PFDA                     | 513 > 468.8   | 6.64e2 | 5.79e3  | 1.0000 |       | 5.18    | 5.07 | 1.43         | 0.882  | 88.2  |
| 14 | 17 8:2 FTS                  | 527 > 506.9   | 1.30e2 | 5.79e3  | 1.0000 |       | 5.15    | 5.04 | 0.280        | 0.809  | 80.9  |
| 15 | 18 N-MeFOSAA                | 570.1 > 419   | 3.15e2 | 2.20e3  | 1.0000 |       | 5.32    | 5.22 | 1.79         | 1.259  | 125.9 |
| 16 | 19 N-EtFOSAA                | 584.2 > 419   | 1.62e2 | 2.44e3  | 1.0000 |       | 5.48    | 5.37 | 0.830        | 0.818  | 81.8  |
| 17 | 20 PFUDa                    | 563.0 > 518.9 | 7.31e2 | 7.62e3  | 1.0000 |       | 5.50    | 5.39 | 1.20         | 1.026  | 102.6 |
| 18 | 21 PFDS                     | 598.8 > 80    | 1.39e2 | 7.62e3  | 1.0000 |       | 5.54    | 5.44 | 0.228        | 0.800  | 80.0  |
| 19 | 22 PFDoA                    | 612.9 > 569.0 | 5.40e2 | 4.36e3  | 1.0000 |       | 5.77    | 5.67 | 1.55         | 0.704  | 70.4  |
| 20 | 23 N-MeFOSA                 | 512.1 > 168.9 | 3.47e2 | 8.39e3  | 1.0000 |       | 5.80    | 5.75 | 6.20         | 6.001  | 120.0 |
| 21 | 24 PFTrDA                   | 662.9 > 618.9 | 7.96e2 | 4.36e3  | 1.0000 |       | 6.00    | 5.92 | 2.28         | 0.997  | 99.7  |
| 22 | 25 PFTeDA                   | 712.9 > 668.8 | 4.69e2 | 2.36e3  | 1.0000 |       | 6.22    | 6.12 | 2.48         | 0.921  | 92.1  |
| 23 | 26 N-EtFOSA                 | 526.1 > 168.9 | 3.98e2 | 1.34e4  | 1.0000 |       | 6.17    | 6.13 | 4.44         | 4.781  | 95.6  |
| 24 | 27 PFHxDA                   | 813.1 > 768.6 | 2.35e2 | 1.44e3  | 1.0000 |       | 6.53    | 6.45 | 0.813        | 0.944  | 94.4  |
| 25 | 28 PFODA                    | 913.1 > 868.8 | 2.21e2 | 1.44e3  | 1.0000 |       | 6.74    | 6.67 | 0.764        | 0.880  | 88.0  |
| 26 | 29 N-MeFOSE                 | 616.1 > 58.9  | 4.25e2 | 1.24e4  | 1.0000 |       | 6.27    | 6.24 | 5.14         | 5.657  | 113.1 |
| 27 | 30 N-EtFOSE                 | 630.1 > 58.9  | 4.81e2 | 1.20e4  | 1.0000 |       | 6.43    | 6.40 | 6.02         | 5.019  | 100.4 |
| 28 | 31 13C3-PFBA                | 216.1 > 171.8 | 5.11e3 | 5.88e3  | 1.0000 | 0.873 | 1.38    | 1.42 | 10.9         | 12.452 | 99.6  |
| 29 | 32 13C3-PFPeA               | 266. > 221.8  | 5.62e3 | 7.28e3  | 1.0000 | 0.867 | 2.37    | 2.37 | 9.66         | 11.145 | 89.2  |
| 30 | 33 13C3-PFBS                | 302. > 98.8   | 7.35e2 | 7.28e3  | 1.0000 | 0.116 | 2.77    | 2.65 | 1.26         | 10.854 | 86.8  |
| 31 | Work Order 180110M2-1 PFHxA | 315 > 269.8   | 1.81e3 | 7.28e3  | 1.0000 | 0.655 | 3.15    | 3.15 | 3.11         | 4.746  | 94.8  |

70-120

Not applicable for environmental samples in this SDG

50-150

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Name: 180110M2\_1, Date: 10-Jan-2018, Time: 15:24:24, ID: ST180110M2-1 PFC CS0 18A0808, Description: PFC CS0 18A0808

| #  | Name | Trace        | Area          | IS Area | wt/vol | RRF    | Pred.RT | RT   | y Axis Resp. | Conc. | %Rec    |       |
|----|------|--------------|---------------|---------|--------|--------|---------|------|--------------|-------|---------|-------|
| 32 | 35   | 13C4-PFHpA   | 367.2 > 321.8 | 4.57e3  | 7.28e3 | 1.0000 | 0.722   | 3.78 | 3.77         | 7.86  | 10.878  | 87.0  |
| 33 | 36   | 18O2-PFHxS   | 403.0 > 102.6 | 6.35e2  | 1.46e3 | 1.0000 | 0.348   | 3.94 | 3.91         | 5.44  | 15.611  | 124.9 |
| 34 | 37   | 13C2-6:2 FTS | 429.1 > 408.9 | 1.38e3  | 7.04e3 | 1.0000 | 0.222   | 4.25 | 4.22         | 2.46  | 11.099  | 88.8  |
| 35 | 38   | 13C2-PFOA    | 414.9 > 369.7 | 7.31e3  | 7.04e3 | 1.0000 | 1.023   | 4.31 | 4.28         | 13.0  | 12.703  | 101.6 |
| 36 | 39   | 13C5-PFNA    | 468.2 > 422.9 | 6.65e3  | 6.53e3 | 1.0000 | 0.916   | 4.81 | 4.71         | 12.7  | 13.911  | 111.3 |
| 37 | 40   | 13C8-PFOSA   | 506.1 > 77.7  | 1.10e3  | 7.24e3 | 1.0000 | 0.210   | 4.87 | 4.77         | 1.90  | 9.050   | 72.4  |
| 38 | 41   | 13C8-PFOS    | 507.0 > 79.9  | 1.59e3  | 1.49e3 | 1.0000 | 1.035   | 4.89 | 4.78         | 13.3  | 12.871  | 103.0 |
| 39 | 42   | 13C2-PFDA    | 515.1 > 469.9 | 5.79e3  | 4.40e3 | 1.0000 | 1.142   | 5.18 | 5.07         | 16.5  | 14.425  | 115.4 |
| 40 | 43   | 13C2-8:2 FTS | 529.1 > 508.7 | 7.88e2  | 7.28e3 | 1.0000 | 0.157   | 5.15 | 5.04         | 1.35  | 8.643   | 69.1  |
| 41 | 44   | d3-N-MeFOSAA | 573.3 > 419   | 2.20e3  | 7.24e3 | 1.0000 | 0.299   | 5.32 | 5.22         | 3.80  | 12.727  | 101.8 |
| 42 | 45   | d5-N-EiFOSAA | 589.3 > 419   | 2.44e3  | 7.24e3 | 1.0000 | 0.369   | 5.47 | 5.37         | 4.22  | 11.434  | 91.5  |
| 43 | 46   | 13C2-PFUdA   | 565 > 519.8   | 7.62e3  | 7.24e3 | 1.0000 | 1.012   | 5.49 | 5.39         | 13.2  | 13.004  | 104.0 |
| 44 | 47   | 13C2-PFDoA   | 615.0 > 569.7 | 4.36e3  | 7.24e3 | 1.0000 | 0.647   | 5.77 | 5.67         | 7.53  | 11.632  | 93.1  |
| 45 | 48   | d3-N-MeFOSA  | 515.2 > 168.9 | 8.39e3  | 7.24e3 | 1.0000 | 0.110   | 5.83 | 5.78         | 14.5  | 132.034 | 88.0  |
| 46 | 49   | 13C2-PFTeDA  | 714.8 > 669.6 | 2.36e3  | 7.24e3 | 1.0000 | 0.294   | 6.22 | 6.12         | 4.08  | 13.905  | 111.2 |
| 47 | 50   | d5-N-ETFOSA  | 531.1 > 168.9 | 1.34e4  | 7.24e3 | 1.0000 | 0.155   | 6.18 | 6.14         | 23.2  | 149.940 | 100.0 |
| 48 | 51   | 13C2-PFHxDA  | 815 > 769.7   | 1.44e3  | 7.24e3 | 1.0000 | 0.507   | 6.53 | 6.45         | 2.49  | 4.923   | 98.5  |
| 49 | 52   | d7-N-MeFOSE  | 623.1 > 58.9  | 1.24e4  | 7.24e3 | 1.0000 | 0.140   | 6.27 | 6.23         | 21.4  | 153.638 | 102.4 |
| 50 | 53   | d9-N-EiFOSE  | 639.2 > 58.8  | 1.20e4  | 7.24e3 | 1.0000 | 0.132   | 6.42 | 6.38         | 20.7  | 156.260 | 104.2 |
| 51 | 54   | 13C4-PFBA    | 217. > 171.8  | 5.88e3  | 5.88e3 | 1.0000 | 1.000   | 1.38 | 1.42         | 12.5  | 12.500  | 100.0 |
| 52 | 55   | 13C5-PFHxA   | 318 > 272.9   | 7.28e3  | 7.28e3 | 1.0000 | 1.000   | 3.15 | 3.15         | 12.5  | 12.500  | 100.0 |
| 53 | 56   | 13C3-PFHxS   | 401.9 > 79.9  | 1.46e3  | 1.46e3 | 1.0000 | 1.000   | 4.02 | 3.91         | 12.5  | 12.500  | 100.0 |
| 54 | 57   | 13C8-PFOA    | 421.3 > 376   | 7.04e3  | 7.04e3 | 1.0000 | 1.000   | 4.38 | 4.28         | 12.5  | 12.500  | 100.0 |
| 55 | 58   | 13C9-PFNA    | 472.2 > 426.9 | 6.53e3  | 6.53e3 | 1.0000 | 1.000   | 4.81 | 4.70         | 12.5  | 12.500  | 100.0 |
| 56 | 59   | 13C4-PFOS    | 503 > 79.9    | 1.49e3  | 1.49e3 | 1.0000 | 1.000   | 4.89 | 4.78         | 12.5  | 12.500  | 100.0 |
| 57 | 60   | 13C6-PFDA    | 519.1 > 473.7 | 4.40e3  | 4.40e3 | 1.0000 | 1.000   | 5.18 | 5.07         | 12.5  | 12.500  | 100.0 |
| 58 | 61   | 13C7-PFUdA   | 570.1 > 524.8 | 7.24e3  | 7.24e3 | 1.0000 | 1.000   | 5.49 | 5.39         | 12.5  | 12.500  | 100.0 |

50-150  
↓

Dataset: Untitled

Last Altered: Thursday, January 11, 2018 09:34:33 Pacific Standard Time

Printed: Thursday, January 11, 2018 09:35:07 Pacific Standard Time

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_010818.mdb 09 Jan 2018 10:39:49

Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-08-18\_FULL-M2.cdb 09 Jan 2018 11:01:39

Compound name: PFBA

|    | Name        | ID                                    | Acq.Date  | Acq.Time |
|----|-------------|---------------------------------------|-----------|----------|
| 1  | 180110M2_1  | ST180110M2-1 PFC CS0 18A0808 ✓        | 10-Jan-18 | 15:24:24 |
| 2  | 180110M2_2  | IPA                                   | 10-Jan-18 | 15:35:32 |
| 3  | 180110M2_3  | B7L0188-BS1 OPR 0.25                  | 10-Jan-18 | 15:46:43 |
| 4  | 180110M2_4  | B7L0215-BS1 OPR 0.125                 | 10-Jan-18 | 15:57:54 |
| 5  | 180110M2_5  | B7L0188-BLK1 Method Blank 0.25        | 10-Jan-18 | 16:09:04 |
| 6  | 180110M2_6  | B7L0215-BLK1 Method Blank 0.125       | 10-Jan-18 | 16:20:15 |
| 7  | 180110M2_7  | B7L0215-MS1 Matrix Spike 0.12336      | 10-Jan-18 | 16:31:25 |
| 8  | 180110M2_8  | B7L0215-MSD1 Matrix Spike Dup 0.12396 | 10-Jan-18 | 16:42:36 |
| 9  | 180110M2_9  | 1701986-01 REEPDW060 0.12357          | 10-Jan-18 | 16:53:47 |
| 10 | 180110M2_10 | 1701986-02 REEPDW505 0.12328          | 10-Jan-18 | 17:04:58 |
| 11 | 180110M2_11 | 1701986-03 REEPDW061 0.12293          | 10-Jan-18 | 17:16:09 |
| 12 | 180110M2_12 | 1701986-04 REEPDW062 0.11873          | 10-Jan-18 | 17:27:19 |
| 13 | 180110M2_13 | 1701986-05 REEPDW063 0.12261          | 10-Jan-18 | 17:38:30 |
| 14 | 180110M2_14 | 1701986-06 REEPDW064 0.12328          | 10-Jan-18 | 17:49:41 |
| 15 | 180110M2_15 | 1701986-07 REEPDW065 0.12516          | 10-Jan-18 | 18:00:53 |
| 16 | 180110M2_16 | 1701986-08 REEPDW066 0.11884          | 10-Jan-18 | 18:12:02 |
| 17 | 180110M2_17 | 1701986-09 REEPDW067 0.12708          | 10-Jan-18 | 18:23:13 |
| 18 | 180110M2_18 | 1701986-10 REEPDW068 0.12339          | 10-Jan-18 | 18:34:23 |
| 19 | 180110M2_19 | IPA                                   | 10-Jan-18 | 18:45:34 |
| 20 | 180110M2_20 | ST180110M2-2 PFC CS3 18A0811          | 10-Jan-18 | 18:56:45 |
| 21 | 180110M2_21 | IPA                                   | 10-Jan-18 | 19:07:56 |
| 22 | 180110M2_22 | 1701986-11 REEPDW069 0.1225           | 10-Jan-18 | 19:19:06 |
| 23 | 180110M2_23 | 1701986-12 REEPDW070 0.12154          | 10-Jan-18 | 19:30:17 |
| 24 | 180110M2_24 | 1701986-13 REEPDW506 0.11149          | 10-Jan-18 | 19:41:28 |
| 25 | 180110M2_25 | 1701986-14 REEPDW071 0.12235          | 10-Jan-18 | 19:52:39 |
| 26 | 180110M2_26 | 1701986-15 REEPDW072 0.12184          | 10-Jan-18 | 20:03:49 |
| 27 | 180110M2_27 | B7L0188-MS1 Matrix Spike 0.24896      | 10-Jan-18 | 20:15:00 |
| 28 | 180110M2_28 | B7L0188-MSD1 Matrix Spike Dup 0.23749 | 10-Jan-18 | 20:26:11 |
| 29 | 180110M2_29 | 1701970-01 FT-PZ458S-20171214 0.25998 | 10-Jan-18 | 20:37:21 |
| 30 | 180110M2_30 | 1701970-02 FT-PZ458I-20171214 0.25291 | 10-Jan-18 | 20:48:32 |
| 31 | 180110M2_31 | 1701970-03 SA-MW132S-20171214 0.25764 | 10-Jan-18 | 20:59:43 |



Dataset: Untitled

Last Altered: Thursday, January 11, 2018 09:34:33 Pacific Standard Time  
Printed: Thursday, January 11, 2018 09:35:07 Pacific Standard Time

Compound name: PFBA

|    | Name        | ID                                       | Acq.Date  | Acq.Time |
|----|-------------|--|-----------|----------|
| 32 | 180110M2_32 | 1701970-04 SA-MW132S-FRB-20171214 0.2... | 10-Jan-18 | 21:10:53 |
| 33 | 180110M2_33 | 1701970-05 SA-MW132I-20171214 0.23441    | 10-Jan-18 | 21:22:04 |
| 34 | 180110M2_34 | IPA                                      | 10-Jan-18 | 21:33:14 |
| 35 | 180110M2_35 | ST180110M2-3 PFC CS3 18A0811             | 10-Jan-18 | 21:44:25 |
| 36 | 180110M2_36 | IPA                                      | 10-Jan-18 | 21:55:36 |
| 37 | 180110M2_37 | 1701970-06 FT-PZ459S-20171214 0.25318    | 10-Jan-18 | 22:06:47 |
| 38 | 180110M2_38 | 1701970-07 FT-PZ459I-20171214 0.2457     | 10-Jan-18 | 22:18:02 |
| 39 | 180110M2_39 | 1701970-08 FT-PZ463S-20171214 0.25736    | 10-Jan-18 | 22:29:11 |
| 40 | 180110M2_40 | 1701970-09 FT-PZ463I-20171214 0.26165    | 10-Jan-18 | 22:40:22 |
| 41 | 180110M2_41 | 1701970-10 CV-TANK-20171214 0.25889      | 10-Jan-18 | 22:51:32 |
| 42 | 180110M2_42 | IPA                                      | 10-Jan-18 | 23:02:43 |
| 43 | 180110M2_43 | B7L0218-BS1 OPR 0.25                     | 10-Jan-18 | 23:13:54 |
| 44 | 180110M2_44 | B7L0218-BSD1 LCSD 0.25                   | 10-Jan-18 | 23:25:04 |
| 45 | 180110M2_45 | IPA                                      | 10-Jan-18 | 23:36:15 |
| 46 | 180110M2_46 | B7L0218-BLK1 Method Blank 0.25           | 10-Jan-18 | 23:47:26 |
| 47 | 180110M2_47 | 1701991-01 REEPDW073 0.11453             | 10-Jan-18 | 23:58:45 |
| 48 | 180110M2_48 | 1701991-02 REEPDW074 0.11902             | 11-Jan-18 | 00:09:55 |
| 49 | 180110M2_49 | 1701991-03 REEPDW075 0.11962             | 11-Jan-18 | 00:21:06 |
| 50 | 180110M2_50 | 1701991-04 REEPDW076 0.11478             | 11-Jan-18 | 00:32:17 |
| 51 | 180110M2_51 | 1701991-05 REEPDW077 0.11838             | 11-Jan-18 | 00:43:31 |
| 52 | 180110M2_52 | 1701992-01 REEPDW073FRB 0.11802          | 11-Jan-18 | 00:54:49 |
| 53 | 180110M2_53 | 1701992-02 REEPDW074FRB 0.11783          | 11-Jan-18 | 01:06:06 |
| 54 | 180110M2_54 | 1701992-03 REEPDW075FRB 0.10583          | 11-Jan-18 | 01:17:16 |
| 55 | 180110M2_55 | 1701992-04 REEPDW076FRB 0.11734          | 11-Jan-18 | 01:28:27 |
| 56 | 180110M2_56 | 1701992-05 REEPDW077FRB 0.11805          | 11-Jan-18 | 08:37:58 |
| 57 | 180110M2_57 | IPA                                      | 11-Jan-18 | 08:49:16 |
| 58 | 180110M2_58 | ST180110M2-4 PFC CS3 18A0811             | 11-Jan-18 | 09:00:26 |
| 59 | 180110M2_59 | IPA                                      | 11-Jan-18 | 09:11:37 |

Ⓐ RI, outside of 12 hr limit.  
AC  
1/11/18

Dataset: U:\Q4.PRO\results\180110M2\180110M2-20.qld

Last Altered: Thursday, January 11, 2018 08:47:31 Pacific Standard Time  
Printed: Thursday, January 11, 2018 08:47:57 Pacific Standard Time

Ⓐ 8:2 FTS < 70%

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_010818.mdb 09 Jan 2018 10:39:49  
Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-08-18\_FULL-M2.cdb 09 Jan 2018 11:01:39

AC  
11/11/18  
rJA  
01/11/2018

Name: 180110M2\_20, Date: 10-Jan-2018, Time: 18:56:45, ID: ST180110M2-2 PFC CS3 18A0811, Description: PFC CS3 18A0811

| #  | Name          | Trace         | Area   | IS Area | wt/vol | RRF   | Pred.RT | RT   | y Axis Resp. | Conc.  | %Rec   |
|----|---------------|---------------|--------|---------|--------|-------|---------|------|--------------|--------|--------|
| 1  | 1 PFBA        | 213.0 > 168.8 | 5.63e3 | 5.66e3  | 1.0000 |       | 1.38    | 1.35 | 12.4         | 10.149 | 101.5  |
| 2  | 2 PFPeA       | 263.1 > 218.9 | 5.30e3 | 6.51e3  | 1.0000 |       | 2.37    | 2.33 | 10.2         | 9.792  | 97.9   |
| 3  | 3 PFBS        | 299.0 > 79.7  | 1.19e3 | 8.87e2  | 1.0000 |       | 2.66    | 2.61 | 16.7         | 9.266  | 92.7   |
| 4  | 4 PFHxA       | 313.2 > 268.9 | 7.42e3 | 2.16e3  | 1.0000 |       | 3.15    | 3.10 | 17.2         | 9.594  | 95.9   |
| 5  | 5 PFHpA       | 363.0 > 318.9 | 6.32e3 | 5.60e3  | 1.0000 |       | 3.78    | 3.72 | 14.1         | 10.679 | 106.8  |
| 6  | 6 L-PFHxS     | 398.9 > 79.6  | 9.56e2 | 7.88e2  | 1.0000 |       | 3.94    | 3.87 | 15.2         | 8.114  | 81.1   |
| 7  | 8 6:2 FTS     | 427.1 > 407   | 1.32e3 | 7.88e2  | 1.0000 |       | 4.25    | 4.19 | 21.0         | 7.324  | 73.2   |
| 8  | 9 L-PFOA      | 413 > 368.7   | 7.40e3 | 8.58e3  | 1.0000 |       | 4.31    | 4.24 | 10.8         | 9.809  | 98.1   |
| 9  | 11 PFHpS      | 449 > 80.0    | 1.66e3 | 8.58e3  | 1.0000 |       | 4.42    | 4.35 | 2.42         | 8.556  | 85.6   |
| 10 | 12 PFNA       | 463.0 > 418.8 | 7.19e3 | 6.36e3  | 1.0000 |       | 4.81    | 4.68 | 14.1         | 11.219 | 112.2  |
| 11 | 13 PFOSA      | 498.1 > 77.8  | 1.26e3 | 1.62e3  | 1.0000 |       | 4.87    | 4.73 | 9.73         | 9.423  | 94.2   |
| 12 | 14 L-PFOS     | 499 > 79.9    | 1.71e3 | 2.10e3  | 1.0000 |       | 4.89    | 4.76 | 10.2         | 10.701 | 107.0  |
| 13 | 16 PFDA       | 513 > 468.8   | 7.55e3 | 7.04e3  | 1.0000 |       | 5.18    | 5.05 | 13.4         | 9.257  | 92.6   |
| 14 | 17 8:2 FTS    | 527 > 506.9   | 1.26e3 | 7.04e3  | 1.0000 |       | 5.15    | 5.02 | 2.24         | 6.833  | Ⓐ 68.3 |
| 15 | 18 N-MeFOSAA  | 570.1 > 419   | 2.75e3 | 2.12e3  | 1.0000 |       | 5.32    | 5.20 | 16.2         | 10.741 | 107.4  |
| 16 | 19 N-EtFOSAA  | 584.2 > 419   | 2.94e3 | 2.73e3  | 1.0000 |       | 5.48    | 5.35 | 13.5         | 12.081 | 120.8  |
| 17 | 20 PFUDa      | 563.0 > 518.9 | 6.54e3 | 8.10e3  | 1.0000 |       | 5.50    | 5.37 | 10.1         | 8.814  | 88.1   |
| 18 | 21 PFDS       | 598.8 > 80    | 1.64e3 | 8.10e3  | 1.0000 |       | 5.54    | 5.42 | 2.54         | 8.881  | 88.8   |
| 19 | 22 PFDoA      | 612.9 > 569.0 | 8.56e3 | 5.04e3  | 1.0000 |       | 5.77    | 5.66 | 21.2         | 9.565  | 95.7   |
| 20 | 23 N-MeFOSA   | 512.1 > 168.9 | 3.61e3 | 9.87e3  | 1.0000 |       | 5.80    | 5.71 | 54.9         | 52.759 | 105.5  |
| 21 | 24 PFTTrDA    | 662.9 > 618.9 | 8.24e3 | 5.04e3  | 1.0000 |       | 6.00    | 5.90 | 20.4         | 8.535  | 85.4   |
| 22 | 25 PFTeDA     | 712.9 > 668.8 | 5.42e3 | 2.50e3  | 1.0000 |       | 6.22    | 6.12 | 27.1         | 9.660  | 96.6   |
| 23 | 26 N-EtFOSA   | 526.1 > 168.9 | 4.88e3 | 1.54e4  | 1.0000 |       | 6.17    | 6.11 | 47.7         | 51.382 | 102.8  |
| 24 | 27 PFHxDA     | 813.1 > 768.6 | 2.73e3 | 1.85e3  | 1.0000 |       | 6.53    | 6.44 | 7.38         | 9.386  | 93.9   |
| 25 | 28 PFODA      | 913.1 > 868.8 | 2.88e3 | 1.85e3  | 1.0000 |       | 6.74    | 6.68 | 7.77         | 9.510  | 95.1   |
| 26 | 29 N-MeFOSE   | 616.1 > 58.9  | 5.23e3 | 1.53e4  | 1.0000 |       | 6.27    | 6.25 | 51.2         | 50.157 | 100.3  |
| 27 | 30 N-EtFOSE   | 630.1 > 58.9  | 5.75e3 | 1.32e4  | 1.0000 |       | 6.43    | 6.41 | 65.2         | 54.277 | 108.6  |
| 28 | 31 13C3-PFBA  | 216.1 > 171.8 | 5.66e3 | 6.56e3  | 1.0000 | 0.873 | 1.38    | 1.35 | 10.8         | 12.342 | 98.7   |
| 29 | 32 13C3-PFPeA | 266. > 221.8  | 6.51e3 | 7.51e3  | 1.0000 | 0.867 | 2.37    | 2.32 | 10.8         | 12.500 | 100.0  |
| 30 | 33 13C3-PFBS  | 302. > 98.8   | 8.87e2 | 7.51e3  | 1.0000 | 0.116 | 2.77    | 2.61 | 1.48         | 12.701 | 101.6  |
| 31 | 34 13C3-PFHxA | 315 > 269.8   | 2.16e3 | 7.51e3  | 1.0000 | 0.655 | 3.15    | 3.10 | 3.59         | 5.483  | 109.7  |

70-130

Not applicable for environmental samples in this SDG

50-150

Dataset: U:\Q4.PRO\results\180110M2\180110M2-20.qld

Last Altered: Thursday, January 11, 2018 08:47:31 Pacific Standard Time

Printed: Thursday, January 11, 2018 08:47:57 Pacific Standard Time

Name: 180110M2\_20, Date: 10-Jan-2018, Time: 18:56:45, ID: ST180110M2-2 PFC CS3 18A0811, Description: PFC CS3 18A0811

| #  | Name | Trace        | Area          | IS Area | wt/vol | RRF    | Pred.RT | RT   | y Axis Resp. | Conc. | %Rec    |       |
|----|------|--------------|---------------|---------|--------|--------|---------|------|--------------|-------|---------|-------|
| 32 | 35   | 13C4-PFHpA   | 367.2 > 321.8 | 5.60e3  | 7.51e3 | 1.0000 | 0.722   | 3.78 | 3.72         | 9.33  | 12.923  | 103.4 |
| 33 | 36   | 18O2-PFHxS   | 403.0 > 102.6 | 7.88e2  | 1.99e3 | 1.0000 | 0.348   | 3.94 | 3.87         | 4.95  | 14.209  | 113.7 |
| 34 | 37   | 13C2-6:2 FTS | 429.1 > 408.9 | 1.54e3  | 7.06e3 | 1.0000 | 0.222   | 4.25 | 4.19         | 2.73  | 12.334  | 98.7  |
| 35 | 38   | 13C2-PFOA    | 414.9 > 369.7 | 8.58e3  | 7.06e3 | 1.0000 | 1.023   | 4.31 | 4.24         | 15.2  | 14.861  | 118.9 |
| 36 | 39   | 13C5-PFNA    | 468.2 > 422.9 | 6.36e3  | 7.10e3 | 1.0000 | 0.916   | 4.81 | 4.68         | 11.2  | 12.222  | 97.8  |
| 37 | 40   | 13C8-PFOSA   | 506.1 > 77.7  | 1.62e3  | 7.95e3 | 1.0000 | 0.210   | 4.87 | 4.74         | 2.55  | 12.102  | 96.8  |
| 38 | 41   | 13C8-PFOS    | 507.0 > 79.9  | 2.10e3  | 1.48e3 | 1.0000 | 1.035   | 4.89 | 4.76         | 17.8  | 17.193  | 137.5 |
| 39 | 42   | 13C2-PFDA    | 515.1 > 469.9 | 7.04e3  | 5.96e3 | 1.0000 | 1.142   | 5.18 | 5.05         | 14.8  | 12.925  | 103.4 |
| 40 | 43   | 13C2-8:2 FTS | 529.1 > 508.7 | 7.43e2  | 7.51e3 | 1.0000 | 0.157   | 5.15 | 5.02         | 1.24  | 7.905   | 63.2  |
| 41 | 44   | d3-N-MeFOSAA | 573.3 > 419   | 2.12e3  | 7.95e3 | 1.0000 | 0.299   | 5.32 | 5.20         | 3.33  | 11.153  | 89.2  |
| 42 | 45   | d5-N-EtFOSAA | 589.3 > 419   | 2.73e3  | 7.95e3 | 1.0000 | 0.369   | 5.47 | 5.35         | 4.28  | 11.607  | 92.9  |
| 43 | 46   | 13C2-PFUdA   | 565 > 519.8   | 8.10e3  | 7.95e3 | 1.0000 | 1.012   | 5.49 | 5.37         | 12.7  | 12.580  | 100.6 |
| 44 | 47   | 13C2-PFDoA   | 615.0 > 569.7 | 5.04e3  | 7.95e3 | 1.0000 | 0.647   | 5.77 | 5.65         | 7.93  | 12.255  | 98.0  |
| 45 | 48   | d3-N-MeFOSA  | 515.2 > 168.9 | 9.87e3  | 7.95e3 | 1.0000 | 0.110   | 5.83 | 5.73         | 15.5  | 141.354 | 94.2  |
| 46 | 49   | 13C2-PFTeDA  | 714.8 > 669.6 | 2.50e3  | 7.95e3 | 1.0000 | 0.294   | 6.22 | 6.11         | 3.93  | 13.399  | 107.2 |
| 47 | 50   | d5-N-ETFOSA  | 531.1 > 168.9 | 1.54e4  | 7.95e3 | 1.0000 | 0.155   | 6.18 | 6.12         | 24.2  | 156.255 | 104.2 |
| 48 | 51   | 13C2-PFHxDA  | 815 > 769.7   | 1.85e3  | 7.95e3 | 1.0000 | 0.507   | 6.53 | 6.44         | 2.91  | 5.741   | 114.8 |
| 49 | 52   | d7-N-MeFOSE  | 623.1 > 58.9  | 1.53e4  | 7.95e3 | 1.0000 | 0.140   | 6.27 | 6.25         | 24.1  | 172.445 | 115.0 |
| 50 | 53   | d9-N-EtFOSE  | 639.2 > 58.8  | 1.32e4  | 7.95e3 | 1.0000 | 0.132   | 6.42 | 6.40         | 20.8  | 157.037 | 104.7 |
| 51 | 54   | 13C4-PFBA    | 217. > 171.8  | 6.56e3  | 6.56e3 | 1.0000 | 1.000   | 1.38 | 1.35         | 12.5  | 12.500  | 100.0 |
| 52 | 55   | 13C5-PFHxA   | 318 > 272.9   | 7.51e3  | 7.51e3 | 1.0000 | 1.000   | 3.15 | 3.10         | 12.5  | 12.500  | 100.0 |
| 53 | 56   | 13C3-PFHxS   | 401.9 > 79.9  | 1.99e3  | 1.99e3 | 1.0000 | 1.000   | 4.02 | 3.87         | 12.5  | 12.500  | 100.0 |
| 54 | 57   | 13C8-PFOA    | 421.3 > 376   | 7.06e3  | 7.06e3 | 1.0000 | 1.000   | 4.38 | 4.24         | 12.5  | 12.500  | 100.0 |
| 55 | 58   | 13C9-PFNA    | 472.2 > 426.9 | 7.10e3  | 7.10e3 | 1.0000 | 1.000   | 4.81 | 4.68         | 12.5  | 12.500  | 100.0 |
| 56 | 59   | 13C4-PFOS    | 503 > 79.9    | 1.48e3  | 1.48e3 | 1.0000 | 1.000   | 4.89 | 4.76         | 12.5  | 12.500  | 100.0 |
| 57 | 60   | 13C6-PFDA    | 519.1 > 473.7 | 5.96e3  | 5.96e3 | 1.0000 | 1.000   | 5.18 | 5.05         | 12.5  | 12.500  | 100.0 |
| 58 | 61   | 13C7-PFUdA   | 570.1 > 524.8 | 7.95e3  | 7.95e3 | 1.0000 | 1.000   | 5.49 | 5.37         | 12.5  | 12.500  | 100.0 |

50-150  
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Dataset: Untitled

Last Altered: Thursday, January 11, 2018 09:34:33 Pacific Standard Time

Printed: Thursday, January 11, 2018 09:35:07 Pacific Standard Time

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_010818.mdb 09 Jan 2018 10:39:49

Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-08-18\_FULL-M2.cdb 09 Jan 2018 11:01:39

Compound name: PFBA

|    | Name        | ID                                    | Acq.Date  | Acq.Time |
|----|-------------|---------------------------------------|-----------|----------|
| 1  | 180110M2_1  | ST180110M2-1 PFC CS0 18A0808          | 10-Jan-18 | 15:24:24 |
| 2  | 180110M2_2  | IPA                                   | 10-Jan-18 | 15:35:32 |
| 3  | 180110M2_3  | B7L0188-BS1 OPR 0.25                  | 10-Jan-18 | 15:46:43 |
| 4  | 180110M2_4  | B7L0215-BS1 OPR 0.125                 | 10-Jan-18 | 15:57:54 |
| 5  | 180110M2_5  | B7L0188-BLK1 Method Blank 0.25        | 10-Jan-18 | 16:09:04 |
| 6  | 180110M2_6  | B7L0215-BLK1 Method Blank 0.125       | 10-Jan-18 | 16:20:15 |
| 7  | 180110M2_7  | B7L0215-MS1 Matrix Spike 0.12336      | 10-Jan-18 | 16:31:25 |
| 8  | 180110M2_8  | B7L0215-MSD1 Matrix Spike Dup 0.12396 | 10-Jan-18 | 16:42:36 |
| 9  | 180110M2_9  | 1701986-01 REEPDW060 0.12357          | 10-Jan-18 | 16:53:47 |
| 10 | 180110M2_10 | 1701986-02 REEPDW505 0.12328          | 10-Jan-18 | 17:04:58 |
| 11 | 180110M2_11 | 1701986-03 REEPDW061 0.12293          | 10-Jan-18 | 17:16:09 |
| 12 | 180110M2_12 | 1701986-04 REEPDW062 0.11873          | 10-Jan-18 | 17:27:19 |
| 13 | 180110M2_13 | 1701986-05 REEPDW063 0.12261          | 10-Jan-18 | 17:38:30 |
| 14 | 180110M2_14 | 1701986-06 REEPDW064 0.12328          | 10-Jan-18 | 17:49:41 |
| 15 | 180110M2_15 | 1701986-07 REEPDW065 0.12516          | 10-Jan-18 | 18:00:53 |
| 16 | 180110M2_16 | 1701986-08 REEPDW066 0.11884          | 10-Jan-18 | 18:12:02 |
| 17 | 180110M2_17 | 1701986-09 REEPDW067 0.12708          | 10-Jan-18 | 18:23:13 |
| 18 | 180110M2_18 | 1701986-10 REEPDW068 0.12339          | 10-Jan-18 | 18:34:23 |
| 19 | 180110M2_19 | IPA                                   | 10-Jan-18 | 18:45:34 |
| 20 | 180110M2_20 | ST180110M2-2 PFC CS3 18A0811 ✓        | 10-Jan-18 | 18:56:45 |
| 21 | 180110M2_21 | IPA                                   | 10-Jan-18 | 19:07:56 |
| 22 | 180110M2_22 | 1701986-11 REEPDW069 0.1225           | 10-Jan-18 | 19:19:06 |
| 23 | 180110M2_23 | 1701986-12 REEPDW070 0.12154          | 10-Jan-18 | 19:30:17 |
| 24 | 180110M2_24 | 1701986-13 REEPDW506 0.11149          | 10-Jan-18 | 19:41:28 |
| 25 | 180110M2_25 | 1701986-14 REEPDW071 0.12235          | 10-Jan-18 | 19:52:39 |
| 26 | 180110M2_26 | 1701986-15 REEPDW072 0.12184          | 10-Jan-18 | 20:03:49 |
| 27 | 180110M2_27 | B7L0188-MS1 Matrix Spike 0.24896      | 10-Jan-18 | 20:15:00 |
| 28 | 180110M2_28 | B7L0188-MSD1 Matrix Spike Dup 0.23749 | 10-Jan-18 | 20:26:11 |
| 29 | 180110M2_29 | 1701970-01 FT-PZ458S-20171214 0.25998 | 10-Jan-18 | 20:37:21 |
| 30 | 180110M2_30 | 1701970-02 FT-PZ458I-20171214 0.25291 | 10-Jan-18 | 20:48:32 |
| 31 | 180110M2_31 | 1701970-03 SA-MW132S-20171214 0.25764 | 10-Jan-18 | 20:59:43 |



Dataset: Untitled

Last Altered: Thursday, January 11, 2018 09:34:33 Pacific Standard Time

Printed: Thursday, January 11, 2018 09:35:07 Pacific Standard Time

Compound name: PFBA

| Name | ID          | Acq.Date                                 | Acq.Time           |
|------|-------------|--|--------------------|
| 32   | 180110M2_32 | 1701970-04 SA-MW132S-FRB-20171214 0.2... | 10-Jan-18 21:10:53 |
| 33   | 180110M2_33 | 1701970-05 SA-MW132I-20171214 0.23441    | 10-Jan-18 21:22:04 |
| 34   | 180110M2_34 | IPA                                      | 10-Jan-18 21:33:14 |
| 35   | 180110M2_35 | ST180110M2-3 PFC CS3 18A0811             | 10-Jan-18 21:44:25 |
| 36   | 180110M2_36 | IPA                                      | 10-Jan-18 21:55:36 |
| 37   | 180110M2_37 | 1701970-06 FT-PZ459S-20171214 0.25318    | 10-Jan-18 22:06:47 |
| 38   | 180110M2_38 | 1701970-07 FT-PZ459I-20171214 0.2457     | 10-Jan-18 22:18:02 |
| 39   | 180110M2_39 | 1701970-08 FT-PZ463S-20171214 0.25736    | 10-Jan-18 22:29:11 |
| 40   | 180110M2_40 | 1701970-09 FT-PZ463I-20171214 0.26165    | 10-Jan-18 22:40:22 |
| 41   | 180110M2_41 | 1701970-10 CV-TANK-20171214 0.25889      | 10-Jan-18 22:51:32 |
| 42   | 180110M2_42 | IPA                                      | 10-Jan-18 23:02:43 |
| 43   | 180110M2_43 | B7L0218-BS1 OPR 0.25                     | 10-Jan-18 23:13:54 |
| 44   | 180110M2_44 | B7L0218-BSD1 LCSD 0.25                   | 10-Jan-18 23:25:04 |
| 45   | 180110M2_45 | IPA                                      | 10-Jan-18 23:36:15 |
| 46   | 180110M2_46 | B7L0218-BLK1 Method Blank 0.25           | 10-Jan-18 23:47:26 |
| 47   | 180110M2_47 | 1701991-01 REEPDW073 0.11453             | 10-Jan-18 23:58:45 |
| 48   | 180110M2_48 | 1701991-02 REEPDW074 0.11902             | 11-Jan-18 00:09:55 |
| 49   | 180110M2_49 | 1701991-03 REEPDW075 0.11962             | 11-Jan-18 00:21:06 |
| 50   | 180110M2_50 | 1701991-04 REEPDW076 0.11478             | 11-Jan-18 00:32:17 |
| 51   | 180110M2_51 | 1701991-05 REEPDW077 0.11838             | 11-Jan-18 00:43:31 |
| 52   | 180110M2_52 | 1701992-01 REEPDW073FRB 0.11802          | 11-Jan-18 00:54:49 |
| 53   | 180110M2_53 | 1701992-02 REEPDW074FRB 0.11783          | 11-Jan-18 01:06:06 |
| 54   | 180110M2_54 | 1701992-03 REEPDW075FRB 0.10583          | 11-Jan-18 01:17:16 |
| 55   | 180110M2_55 | 1701992-04 REEPDW076FRB 0.11734          | 11-Jan-18 01:28:27 |
| 56   | 180110M2_56 | 1701992-05 REEPDW077FRB 0.11805          | 11-Jan-18 08:37:58 |
| 57   | 180110M2_57 | IPA                                      | 11-Jan-18 08:49:16 |
| 58   | 180110M2_58 | ST180110M2-4 PFC CS3 18A0811             | 11-Jan-18 09:00:26 |
| 59   | 180110M2_59 | IPA                                      | 11-Jan-18 09:11:37 |

Ⓐ RT. outside of 12 hr limit.  
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Dataset: U:\Q4.PRO\results\180112M3\180112M3\_IIS.qld

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**Name: 180112M3\_17, Date: 12-Jan-2018, Time: 16:40:14, ID: B7L0188-MS1 Matrix Spike 0.24896, Description: Matrix Spike**

| # | Name         | ID                               | Area   | %Rec  | Area Out |
|---|--------------|----------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | B7L0188-MS1 Matrix Spike 0.24896 | 8.64e3 | 76.7  | NO       |
| 2 | 2 13C5-PFHxA | B7L0188-MS1 Matrix Spike 0.24896 | 1.10e4 | 79.4  | NO       |
| 3 | 3 13C3-PFHxS | B7L0188-MS1 Matrix Spike 0.24896 | 2.70e3 | 77.3  | NO       |
| 4 | 4 13C8-PFOA  | B7L0188-MS1 Matrix Spike 0.24896 | 9.62e3 | 84.9  | NO       |
| 5 | 5 13C9-PFNA  | B7L0188-MS1 Matrix Spike 0.24896 | 8.62e3 | 63.0  | NO       |
| 6 | 6 13C4-PFOS  | B7L0188-MS1 Matrix Spike 0.24896 | 2.64e3 | 76.8  | NO       |
| 7 | 7 13C6-PFDA  | B7L0188-MS1 Matrix Spike 0.24896 | 6.42e3 | 85.7  | NO       |
| 8 | 8 13C7-PFUDa | B7L0188-MS1 Matrix Spike 0.24896 | 9.26e3 | 100.3 | NO       |

**Name: 180112M3\_18, Date: 12-Jan-2018, Time: 16:51:42, ID: B7L0188-MSD1 Matrix Spike Dup 0.23749, Description: Matrix Spike Dup**

| # | Name         | ID                                     | Area   | %Rec | Area Out |
|---|--------------|--|--------|------|----------|
| 1 | 1 13C4-PFBA  | B7L0188-MSD1 Matrix Spike Dup 0.237... | 8.27e3 | 73.4 | NO       |
| 2 | 2 13C5-PFHxA | B7L0188-MSD1 Matrix Spike Dup 0.237... | 9.88e3 | 71.3 | NO       |
| 3 | 3 13C3-PFHxS | B7L0188-MSD1 Matrix Spike Dup 0.237... | 2.75e3 | 78.9 | NO       |
| 4 | 4 13C8-PFOA  | B7L0188-MSD1 Matrix Spike Dup 0.237... | 8.39e3 | 74.1 | NO       |
| 5 | 5 13C9-PFNA  | B7L0188-MSD1 Matrix Spike Dup 0.237... | 7.88e3 | 57.6 | NO       |
| 6 | 6 13C4-PFOS  | B7L0188-MSD1 Matrix Spike Dup 0.237... | 2.39e3 | 69.7 | NO       |
| 7 | 7 13C6-PFDA  | B7L0188-MSD1 Matrix Spike Dup 0.237... | 5.77e3 | 77.0 | NO       |
| 8 | 8 13C7-PFUDa | B7L0188-MSD1 Matrix Spike Dup 0.237... | 6.74e3 | 73.0 | NO       |

**Name: 180112M3\_19, Date: 12-Jan-2018, Time: 17:03:12, ID: 1701970-01 FT-PZ458S-20171214 0.25998, Description: FT-PZ458S-20171214**

| # | Name         | ID                                    | Area   | %Rec  | Area Out |
|---|--------------|---------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-01 FT-PZ458S-20171214 0.25... | 9.00e3 | 79.9  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-01 FT-PZ458S-20171214 0.25... | 1.22e4 | 88.1  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-01 FT-PZ458S-20171214 0.25... | 3.44e3 | 98.4  | NO       |
| 4 | 4 13C8-PFOA  | 1701970-01 FT-PZ458S-20171214 0.25... | 1.02e4 | 89.9  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-01 FT-PZ458S-20171214 0.25... | 1.04e4 | 75.8  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-01 FT-PZ458S-20171214 0.25... | 3.45e3 | 100.5 | NO       |
| 7 | 7 13C6-PFDA  | 1701970-01 FT-PZ458S-20171214 0.25... | 8.12e3 | 108.4 | NO       |
| 8 | 8 13C7-PFUDa | 1701970-01 FT-PZ458S-20171214 0.25... | 9.49e3 | 102.8 | NO       |

**Name: 180112M3\_20, Date: 12-Jan-2018, Time: 17:15:53, ID: 1701970-02 FT-PZ458I-20171214 0.25291, Description: FT-PZ458I-20171214**

| # | Name         | ID                                    | Area   | %Rec  | Area Out |
|---|--------------|---------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-02 FT-PZ458I-20171214 0.25... | 8.34e3 | 74.1  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-02 FT-PZ458I-20171214 0.25... | 1.01e4 | 72.9  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-02 FT-PZ458I-20171214 0.25... | 2.99e3 | 85.7  | NO       |
| 4 | 4 13C8-PFOA  | 1701970-02 FT-PZ458I-20171214 0.25... | 1.14e4 | 100.8 | NO       |
| 5 | 5 13C9-PFNA  | 1701970-02 FT-PZ458I-20171214 0.25... | 8.86e3 | 64.7  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-02 FT-PZ458I-20171214 0.25... | 3.08e3 | 89.6  | NO       |
| 7 | 7 13C6-PFDA  | 1701970-02 FT-PZ458I-20171214 0.25... | 6.93e3 | 92.5  | NO       |
| 8 | 8 13C7-PFUDa | 1701970-02 FT-PZ458I-20171214 0.25... | 7.69e3 | 83.3  | NO       |

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**Name: 180112M3\_21, Date: 12-Jan-2018, Time: 17:27:26, ID: 1701970-03 SA-MW132S-20171214 0.25764, Description: SA-MW132S-20171214**

| # | Name         | ID                                 | Area   | %Rec | Area Out |
|---|--------------|------------------------------------|--------|------|----------|
| 1 | 1 13C4-PFBA  | 1701970-03 SA-MW132S-20171214 0... | 8.60e3 | 76.4 | NO       |
| 2 | 2 13C5-PFHxA | 1701970-03 SA-MW132S-20171214 0... | 1.12e4 | 80.6 | NO       |
| 3 | 3 13C3-PFHxS | 1701970-03 SA-MW132S-20171214 0... | 2.98e3 | 85.2 | NO       |
| 4 | 4 13C8-PFOA  | 1701970-03 SA-MW132S-20171214 0... | 1.06e4 | 93.2 | NO       |
| 5 | 5 13C9-PFNA  | 1701970-03 SA-MW132S-20171214 0... | 8.95e3 | 65.5 | NO       |
| 6 | 6 13C4-PFOS  | 1701970-03 SA-MW132S-20171214 0... | 3.12e3 | 90.9 | NO       |
| 7 | 7 13C6-PFDA  | 1701970-03 SA-MW132S-20171214 0... | 6.42e3 | 85.7 | NO       |
| 8 | 8 13C7-PFUDa | 1701970-03 SA-MW132S-20171214 0... | 8.29e3 | 89.9 | NO       |

**Name: 180112M3\_22, Date: 12-Jan-2018, Time: 17:39:06, ID: 1701970-04 SA-MW132S-FRB-20171214 0.23367, Description: SA-MW132S-FRB-20171214**

| # | Name         | ID                                 | Area   | %Rec  | Area Out |
|---|--------------|------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-04 SA-MW132S-FRB-201712... | 8.90e3 | 79.0  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-04 SA-MW132S-FRB-201712... | 1.14e4 | 82.3  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-04 SA-MW132S-FRB-201712... | 3.18e3 | 91.0  | NO       |
| 4 | 4 13C8-PFOA  | 1701970-04 SA-MW132S-FRB-201712... | 1.09e4 | 96.3  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-04 SA-MW132S-FRB-201712... | 1.06e4 | 77.7  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-04 SA-MW132S-FRB-201712... | 3.06e3 | 89.2  | NO       |
| 7 | 7 13C6-PFDA  | 1701970-04 SA-MW132S-FRB-201712... | 5.40e3 | 72.1  | NO       |
| 8 | 8 13C7-PFUDa | 1701970-04 SA-MW132S-FRB-201712... | 1.05e4 | 114.1 | NO       |

**Name: 180112M3\_23, Date: 12-Jan-2018, Time: 17:52:40, ID: 1701970-05 SA-MW132I-20171214 0.23441, Description: SA-MW132I-20171214**

| # | Name         | ID                                   | Area   | %Rec | Area Out |
|---|--------------|--------------------------------------|--------|------|----------|
| 1 | 1 13C4-PFBA  | 1701970-05 SA-MW132I-20171214 0.2... | 8.02e3 | 71.2 | NO       |
| 2 | 2 13C5-PFHxA | 1701970-05 SA-MW132I-20171214 0.2... | 9.02e3 | 65.1 | NO       |
| 3 | 3 13C3-PFHxS | 1701970-05 SA-MW132I-20171214 0.2... | 2.80e3 | 80.3 | NO       |
| 4 | 4 13C8-PFOA  | 1701970-05 SA-MW132I-20171214 0.2... | 8.85e3 | 78.1 | NO       |
| 5 | 5 13C9-PFNA  | 1701970-05 SA-MW132I-20171214 0.2... | 7.66e3 | 56.0 | NO       |
| 6 | 6 13C4-PFOS  | 1701970-05 SA-MW132I-20171214 0.2... | 3.04e3 | 88.7 | NO       |
| 7 | 7 13C6-PFDA  | 1701970-05 SA-MW132I-20171214 0.2... | 6.55e3 | 87.4 | NO       |
| 8 | 8 13C7-PFUDa | 1701970-05 SA-MW132I-20171214 0.2... | 9.01e3 | 97.6 | NO       |

**Name: 180112M3\_24, Date: 12-Jan-2018, Time: 18:04:06, ID: 1701970-06 FT-PZ459S-20171214 0.25318, Description: FT-PZ459S-20171214**

| # | Name         | ID                                    | Area   | %Rec  | Area Out |
|---|--------------|---------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-06 FT-PZ459S-20171214 0.25... | 9.42e3 | 83.6  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-06 FT-PZ459S-20171214 0.25... | 1.06e4 | 76.4  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-06 FT-PZ459S-20171214 0.25... | 2.92e3 | 83.7  | NO       |
| 4 | 4 13C8-PFOA  | 1701970-06 FT-PZ459S-20171214 0.25... | 1.03e4 | 91.4  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-06 FT-PZ459S-20171214 0.25... | 1.06e4 | 77.3  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-06 FT-PZ459S-20171214 0.25... | 2.78e3 | 81.0  | NO       |
| 7 | 7 13C6-PFDA  | 1701970-06 FT-PZ459S-20171214 0.25... | 6.60e3 | 88.2  | NO       |
| 8 | 8 13C7-PFUDa | 1701970-06 FT-PZ459S-20171214 0.25... | 1.02e4 | 110.7 | NO       |

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**Name: 180112M3\_25, Date: 12-Jan-2018, Time: 18:15:15, ID: 1701970-07 FT-PZ459I-20171214 0.2457,**  
**Description: FT-PZ459I-20171214**

|   | # Name       | ID                                   | Area   | %Rec | Area Out |
|---|--------------|--------------------------------------|--------|------|----------|
| 1 | 1 13C4-PFBA  | 1701970-07 FT-PZ459I-20171214 0.2457 | 8.92e3 | 79.2 | NO       |
| 2 | 2 13C5-PFHxA | 1701970-07 FT-PZ459I-20171214 0.2457 | 1.07e4 | 76.9 | NO       |
| 3 | 3 13C3-PFHxS | 1701970-07 FT-PZ459I-20171214 0.2457 | 2.94e3 | 84.1 | NO       |
| 4 | 4 13C8-PFOA  | 1701970-07 FT-PZ459I-20171214 0.2457 | 1.07e4 | 94.4 | NO       |
| 5 | 5 13C9-PFNA  | 1701970-07 FT-PZ459I-20171214 0.2457 | 1.04e4 | 75.7 | NO       |
| 6 | 6 13C4-PFOS  | 1701970-07 FT-PZ459I-20171214 0.2457 | 2.76e3 | 80.5 | NO       |
| 7 | 7 13C6-PFDA  | 1701970-07 FT-PZ459I-20171214 0.2457 | 5.15e3 | 68.7 | NO       |
| 8 | 8 13C7-PFUDa | 1701970-07 FT-PZ459I-20171214 0.2457 | 8.75e3 | 94.8 | NO       |

**Name: 180112M3\_26, Date: 12-Jan-2018, Time: 18:26:25, ID: 1701970-08 FT-PZ463S-20171214 0.25736,**  
**Description: FT-PZ463S-20171214**

|   | # Name       | ID                                    | Area   | %Rec  | Area Out |
|---|--------------|---------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-08 FT-PZ463S-20171214 0.25... | 9.13e3 | 81.1  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-08 FT-PZ463S-20171214 0.25... | 1.11e4 | 80.2  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-08 FT-PZ463S-20171214 0.25... | 3.11e3 | 89.1  | NO       |
| 4 | 4 13C8-PFOA  | 1701970-08 FT-PZ463S-20171214 0.25... | 1.00e4 | 88.5  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-08 FT-PZ463S-20171214 0.25... | 9.66e3 | 70.6  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-08 FT-PZ463S-20171214 0.25... | 2.92e3 | 85.1  | NO       |
| 7 | 7 13C6-PFDA  | 1701970-08 FT-PZ463S-20171214 0.25... | 5.62e3 | 75.0  | NO       |
| 8 | 8 13C7-PFUDa | 1701970-08 FT-PZ463S-20171214 0.25... | 9.73e3 | 105.4 | NO       |

**Name: 180112M3\_27, Date: 12-Jan-2018, Time: 18:37:36, ID: 1701970-09 FT-PZ463I-20171214 0.26165,**  
**Description: FT-PZ463I-20171214**

|   | # Name       | ID                                    | Area   | %Rec  | Area Out |
|---|--------------|---------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-09 FT-PZ463I-20171214 0.26... | 9.13e3 | 81.0  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-09 FT-PZ463I-20171214 0.26... | 1.17e4 | 84.5  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-09 FT-PZ463I-20171214 0.26... | 3.02e3 | 86.6  | NO       |
| 4 | 4 13C8-PFOA  | 1701970-09 FT-PZ463I-20171214 0.26... | 1.05e4 | 92.5  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-09 FT-PZ463I-20171214 0.26... | 1.08e4 | 79.0  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-09 FT-PZ463I-20171214 0.26... | 3.13e3 | 91.4  | NO       |
| 7 | 7 13C6-PFDA  | 1701970-09 FT-PZ463I-20171214 0.26... | 7.19e3 | 95.9  | NO       |
| 8 | 8 13C7-PFUDa | 1701970-09 FT-PZ463I-20171214 0.26... | 1.03e4 | 111.1 | NO       |

**Name: 180112M3\_28, Date: 12-Jan-2018, Time: 18:48:47, ID: 1701970-10 CV-TANK-20171214 0.25889,**  
**Description: CV-TANK-20171214**

|   | # Name       | ID                                  | Area   | %Rec  | Area Out |
|---|--------------|-------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1701970-10 CV-TANK-20171214 0.25889 | 8.57e3 | 76.1  | NO       |
| 2 | 2 13C5-PFHxA | 1701970-10 CV-TANK-20171214 0.25889 | 1.11e4 | 80.1  | NO       |
| 3 | 3 13C3-PFHxS | 1701970-10 CV-TANK-20171214 0.25889 | 3.16e3 | 90.4  | NO       |
| 4 | 4 13C8-PFOA  | 1701970-10 CV-TANK-20171214 0.25889 | 9.86e3 | 87.1  | NO       |
| 5 | 5 13C9-PFNA  | 1701970-10 CV-TANK-20171214 0.25889 | 9.91e3 | 72.4  | NO       |
| 6 | 6 13C4-PFOS  | 1701970-10 CV-TANK-20171214 0.25889 | 2.43e3 | 70.8  | NO       |
| 7 | 7 13C6-PFDA  | 1701970-10 CV-TANK-20171214 0.25889 | 7.11e3 | 94.9  | NO       |
| 8 | 8 13C7-PFUDa | 1701970-10 CV-TANK-20171214 0.25889 | 1.06e4 | 114.8 | NO       |

Dataset: U:\Q4.PRO\results\180112M3\180112M3\_IIS.qld

Last Altered: Saturday, January 13, 2018 17:04:49 Pacific Standard Time

Printed: Saturday, January 13, 2018 17:08:51 Pacific Standard Time

Name: 180112M3\_29, Date: 12-Jan-2018, Time: 18:59:58, ID: IPA, Description: IPA

| # | Name         | ID  | Area   | %Rec | Area Out |
|---|--------------|-----|--------|------|----------|
| 1 | 1 13C4-PFBA  | IPA | 9.45e3 | 83.9 | NO       |
| 2 | 2 13C5-PFHxA | IPA | 1.12e4 | 80.9 | NO       |
| 3 | 3 13C3-PFHxS | IPA | 3.29e3 | 94.2 | NO       |
| 4 | 4 13C8-PFOA  | IPA | 1.11e4 | 98.0 | NO       |
| 5 | 5 13C9-PFNA  | IPA | 1.21e4 | 88.6 | NO       |
| 6 | 6 13C4-PFOS  | IPA | 2.95e3 | 86.1 | NO       |
| 7 | 7 13C6-PFDA  | IPA | 7.30e3 | 97.5 | NO       |
| 8 | 8 13C7-PFUdA | IPA | 8.69e3 | 94.2 | NO       |

Name: 180112M3\_30, Date: 12-Jan-2018, Time: 19:11:09, ID: ST180112M3-11 PFC CS3 18A0811, Description: PFC CS3 18A0811

| # | Name         | ID                            | Area   | %Rec  | Area Out |
|---|--------------|-------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | ST180112M3-11 PFC CS3 18A0811 | 1.26e4 | 111.8 | NO       |
| 2 | 2 13C5-PFHxA | ST180112M3-11 PFC CS3 18A0811 | 1.51e4 | 108.9 | NO       |
| 3 | 3 13C3-PFHxS | ST180112M3-11 PFC CS3 18A0811 | 3.63e3 | 104.0 | NO       |
| 4 | 4 13C8-PFOA  | ST180112M3-11 PFC CS3 18A0811 | 1.43e4 | 126.6 | NO       |
| 5 | 5 13C9-PFNA  | ST180112M3-11 PFC CS3 18A0811 | 1.47e4 | 107.7 | NO       |
| 6 | 6 13C4-PFOS  | ST180112M3-11 PFC CS3 18A0811 | 3.05e3 | 89.0  | NO       |
| 7 | 7 13C6-PFDA  | ST180112M3-11 PFC CS3 18A0811 | 8.49e3 | 113.3 | NO       |
| 8 | 8 13C7-PFUdA | ST180112M3-11 PFC CS3 18A0811 | 1.58e4 | 171.1 | YES      |

Name: 180112M3\_31, Date: 12-Jan-2018, Time: 19:22:19, ID: IPA, Description: IPA

| # | Name         | ID  | Area   | %Rec  | Area Out |
|---|--------------|-----|--------|-------|----------|
| 1 | 1 13C4-PFBA  | IPA | 1.02e4 | 90.6  | NO       |
| 2 | 2 13C5-PFHxA | IPA | 1.26e4 | 91.3  | NO       |
| 3 | 3 13C3-PFHxS | IPA | 3.50e3 | 100.2 | NO       |
| 4 | 4 13C8-PFOA  | IPA | 1.10e4 | 97.5  | NO       |
| 5 | 5 13C9-PFNA  | IPA | 1.24e4 | 90.5  | NO       |
| 6 | 6 13C4-PFOS  | IPA | 3.20e3 | 93.2  | NO       |
| 7 | 7 13C6-PFDA  | IPA | 5.89e3 | 78.6  | NO       |
| 8 | 8 13C7-PFUdA | IPA | 1.04e4 | 112.3 | NO       |

Name: 180112M3\_34, Date: 12-Jan-2018, Time: 19:33:30, ID: 1702013-01 WI-CV-1RW14-1217 0.26251, Description: WI-CV-1RW14-1217

| # | Name         | ID                                   | Area   | %Rec  | Area Out |
|---|--------------|--------------------------------------|--------|-------|----------|
| 1 | 1 13C4-PFBA  | 1702013-01 WI-CV-1RW14-1217 0.262... | 8.49e3 | 75.3  | NO       |
| 2 | 2 13C5-PFHxA | 1702013-01 WI-CV-1RW14-1217 0.262... | 1.05e4 | 75.8  | NO       |
| 3 | 3 13C3-PFHxS | 1702013-01 WI-CV-1RW14-1217 0.262... | 3.26e3 | 93.3  | NO       |
| 4 | 4 13C8-PFOA  | 1702013-01 WI-CV-1RW14-1217 0.262... | 9.61e3 | 84.8  | NO       |
| 5 | 5 13C9-PFNA  | 1702013-01 WI-CV-1RW14-1217 0.262... | 1.01e4 | 73.8  | NO       |
| 6 | 6 13C4-PFOS  | 1702013-01 WI-CV-1RW14-1217 0.262... | 2.94e3 | 85.7  | NO       |
| 7 | 7 13C6-PFDA  | 1702013-01 WI-CV-1RW14-1217 0.262... | 6.62e3 | 88.3  | NO       |
| 8 | 8 13C7-PFUdA | 1702013-01 WI-CV-1RW14-1217 0.262... | 9.27e3 | 100.4 | NO       |

Dataset: U:\Q4.PRO\results\180112M3\180112M3\_30.qld

Last Altered: Monday, January 15, 2018 16:47:08 Pacific Standard Time  
Printed: Monday, January 15, 2018 16:47:37 Pacific Standard Time

Rev'd: AMH 01/15/2018

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_010818C.mdb 11 Jan 2018 15:33:36  
Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-12-18-FULL.cdb 13 Jan 2018 14:58:25

Name: 180112M3\_30, Date: 12-Jan-2018, Time: 19:11:09, ID: ST180112M3-11 PFC CS3 18A0811, Description: PFC CS3 18A0811

|    | # Name        | Trace         | Area   | IS Area | RRF   | Pred.RT | RT   | y Axis Resp. | Conc. | %Rec  | Recovery Out           |
|----|---------------|---------------|--------|---------|-------|---------|------|--------------|-------|-------|------------------------|
| 1  | 1 PFBA        | 213.0 > 168.8 | 1.06e4 | 1.10e4  |       | 1.38    | 1.34 | 12.0         | 10.2  | 102.3 | NO                     |
| 2  | 2 PFPeA       | 263.1 > 218.9 | 1.02e4 | 1.32e4  |       | 2.37    | 2.32 | 9.67         | 9.37  | 93.7  | NO                     |
| 3  | 3 PFBS        | 299.0 > 79.7  | 2.76e3 | 1.65e3  |       | 2.66    | 2.60 | 20.8         | 11.4  | 114.2 | NO                     |
| 4  | 4 PFHxA       | 313.2 > 268.9 | 1.40e4 | 4.22e3  |       | 3.15    | 3.10 | 16.6         | 9.98  | 99.8  | NO                     |
| 5  | 5 PFHpA       | 363.0 > 318.9 | 1.22e4 | 1.07e4  |       | 3.78    | 3.71 | 14.3         | 11.1  | 111.5 | NO                     |
| 6  | 6 L-PFHxS     | 398.9 > 79.6  | 2.01e3 | 1.47e3  |       | 3.94    | 3.86 | 17.0         | 9.54  | 95.4  | NO                     |
| 7  | 8 6:2 FTS     | 427.1 > 407   | 2.74e3 | 1.47e3  |       | 4.25    | 4.18 | 23.2         | 8.81  | 88.1  | NO                     |
| 8  | 9 L-PFOA      | 413 > 368.7   | 1.26e4 | 1.43e4  |       | 4.31    | 4.23 | 11.1         | 10.0  | 100.1 | NO                     |
| 9  | 11 PFHpS      | 449 > 80.0    | 3.20e3 | 1.43e4  |       | 4.42    | 4.34 | 2.80         | 10.3  | 102.8 | NO                     |
| 10 | 12 PFNA       | 463.0 > 418.8 | 1.25e4 | 1.34e4  |       | 4.81    | 4.67 | 11.6         | 9.09  | 90.9  | NO                     |
| 11 | 13 PFOSA      | 498.1 > 77.8  | 2.95e3 | 3.00e3  |       | 4.87    | 4.73 | 12.3         | 11.0  | 110.4 | NO                     |
| 12 | 14 L-PFOS     | 499 > 79.9    | 2.74e3 | 3.37e3  |       | 4.75    | 4.75 | 10.2         | 8.60  | 86.0  | NO                     |
| 13 | 16 PFDA       | 513 > 468.8   | 1.14e4 | 1.10e4  |       | 5.18    | 5.04 | 12.9         | 9.10  | 91.0  | NO                     |
| 14 | 17 8:2 FTS    | 527 > 506.9   | 2.47e3 | 1.10e4  |       | 5.15    | 5.01 | 2.81         | 10.8  | 108.2 | NO                     |
| 15 | 18 N-MeFOSAA  | 570.1 > 419   | 6.81e3 | 4.85e3  |       | 5.32    | 5.19 | 17.6         | 10.2  | 102.1 | NO                     |
| 16 | 19 N-EtFOSAA  | 584.2 > 419   | 5.40e3 | 6.10e3  |       | 5.48    | 5.34 | 11.1         | 10.4  | 103.6 | NO                     |
| 17 | 20 PFUDa      | 563.0 > 518.9 | 1.33e4 | 1.26e4  |       | 5.50    | 5.36 | 13.2         | 11.5  | 115.0 | NO                     |
| 18 | 21 PFDS       | 598.8 > 80    | 3.69e3 | 1.26e4  |       | 5.54    | 5.40 | 3.66         | 11.0  | 109.7 | NO                     |
| 19 | 22 PFDoA      | 612.9 > 569.0 | 1.45e4 | 8.75e3  |       | 5.77    | 5.64 | 20.7         | 8.54  | 85.4  | NO                     |
| 20 | 23 N-MeFOSA   | 512.1 > 168.9 | 6.45e3 | 1.87e4  |       | 5.80    | 5.74 | 51.8         | 58.3  | 116.7 | NO                     |
| 21 | 24 PFTTrDA    | 662.9 > 618.9 | 1.07e4 | 8.75e3  |       | 6.00    | 5.89 | 15.3         | 7.11  | 71.1  | NO                     |
| 22 | 25 PFTeDA     | 712.9 > 668.8 | 5.97e3 | 3.62e3  |       | 6.22    | 6.10 | 20.6         | 9.54  | 95.4  | NO                     |
| 23 | 26 N-EtFOSA   | 526.1 > 168.9 | 8.81e3 | 2.83e4  |       | 6.17    | 6.13 | 46.8         | 52.2  | 104.4 | NO                     |
| 24 | 27 PFHxDA     | 813.1 > 768.6 | 4.70e3 | 3.08e3  |       | 6.53    | 6.43 | 7.65         | 8.59  | 85.9  | NO                     |
| 25 | 28 PFODA      | 913.1 > 868.8 | 5.30e3 | 3.08e3  |       | 6.74    | 6.67 | 8.62         | 10.8  | 108.2 | NO                     |
| 26 | 29 N-MeFOSE   | 616.1 > 58.9  | 8.22e3 | 2.49e4  |       | 6.27    | 6.27 | 49.6         | 47.7  | 95.4  | NO                     |
| 27 | 30 N-EtFOSE   | 630.1 > 58.9  | 1.08e4 | 2.61e4  |       | 6.43    | 6.43 | 62.2         | 52.9  | 105.7 | NO                     |
| 28 | 31 13C3-PFBA  | 216.1 > 171.8 | 1.10e4 | 1.26e4  | 0.888 | 1.38    | 1.34 | 10.9         | 12.3  | 98.0  | NO                     |
| 29 | 32 13C3-PFPeA | 266. > 221.8  | 1.32e4 | 1.51e4  | 0.875 | 2.37    | 2.32 | 11.0         | 12.5  | 100.2 | NO                     |
| 30 | 33 13C3-PFBS  | 302. > 98.8   | 1.65e3 | 1.51e4  | 0.112 | 2.77    | 2.60 | 1.37         | 12.3  | 98.1  | NO                     |
| 31 | 34 13C2-PFHxA | 315 > 269.8   | 4.22e3 | 1.51e4  | 0.691 | 3.15    | 3.10 | 3.50         | 5.07  | 101.3 | NO                     |
| 32 | 35 13C4-PFHpA | 367.2 > 321.8 | 1.07e4 | 1.51e4  | 0.708 | 3.78    | 3.71 | 8.84         | 12.5  | 99.9  | NO GM for AP 1/15/2018 |

Dataset: U:\Q4.PRO\results\180112M3\180112M3\_30.qld

Last Altered: Monday, January 15, 2018 16:47:08 Pacific Standard Time

Printed: Monday, January 15, 2018 16:47:37 Pacific Standard Time

Name: 180112M3\_30, Date: 12-Jan-2018, Time: 19:11:09, ID: ST180112M3-11 PFC CS3 18A0811, Description: PFC CS3 18A0811

|    | # Name          | Trace         | Area   | IS Area | RRF   | Pred.RT | RT   | y Axis Resp. | Conc. | %Rec  | Recovery Out |
|----|-----------------|---------------|--------|---------|-------|---------|------|--------------|-------|-------|--------------|
| 33 | 36 18O2-PFHxS   | 403.0 > 102.6 | 1.47e3 | 3.63e3  | 0.353 | 3.94    | 3.86 | 5.07         | 14.4  | 115.0 | NO           |
| 34 | 37 13C2-6:2 FTS | 429.1 > 408.9 | 3.06e3 | 1.44e4  | 0.285 | 4.25    | 4.18 | 2.67         | 9.36  | 74.9  | NO           |
| 35 | 38 13C2-PFOA    | 414.9 > 369.7 | 1.43e4 | 1.44e4  | 1.049 | 4.31    | 4.23 | 12.5         | 11.9  | 95.0  | NO           |
| 36 | 39 13C5-PFNA    | 468.2 > 422.9 | 1.34e4 | 1.47e4  | 0.910 | 4.81    | 4.66 | 11.4         | 12.5  | 99.8  | NO           |
| 37 | 40 13C8-PFOSA   | 506.1 > 77.7  | 3.00e3 | 1.58e4  | 0.252 | 4.87    | 4.73 | 2.37         | 9.43  | 75.4  | NO           |
| 38 | 41 13C8-PFOS    | 507.0 > 79.9  | 3.37e3 | 3.05e3  | 0.987 | 4.89    | 4.75 | 13.8         | 14.0  | 111.8 | NO           |
| 39 | 42 13C2-PFDA    | 515.1 > 469.9 | 1.10e4 | 8.49e3  | 1.311 | 5.18    | 5.04 | 16.2         | 12.3  | 98.7  | NO           |
| 40 | 43 13C2-8:2 FTS | 529.1 > 508.7 | 1.64e3 | 1.51e4  | 0.141 | 5.15    | 5.01 | 1.36         | 9.64  | 77.1  | NO           |
| 41 | 44 d3-N-MeFOSAA | 573.3 > 419   | 4.85e3 | 1.58e4  | 0.385 | 5.32    | 5.18 | 3.84         | 9.97  | 79.8  | NO           |
| 42 | 45 d5-N-EtFOSAA | 589.3 > 419   | 6.10e3 | 1.58e4  | 0.445 | 5.47    | 5.34 | 4.83         | 10.9  | 86.8  | NO           |
| 43 | 46 13C2-PFUdA   | 565 > 519.8   | 1.26e4 | 1.58e4  | 1.014 | 5.49    | 5.36 | 9.97         | 9.83  | 78.7  | NO           |
| 44 | 47 13C2-PFDoA   | 615.0 > 569.7 | 8.75e3 | 1.58e4  | 0.575 | 5.77    | 5.64 | 6.93         | 12.0  | 96.4  | NO           |
| 45 | 48 d3-N-MeFOSA  | 515.2 > 168.9 | 1.87e4 | 1.58e4  | 0.130 | 5.83    | 5.77 | 14.8         | 113   | 75.6  | NO           |
| 46 | 49 13C2-PFTeDA  | 714.8 > 669.6 | 3.62e3 | 1.58e4  | 0.305 | 6.22    | 6.10 | 2.86         | 9.38  | 75.0  | NO           |
| 47 | 50 d5-N-ETFOSA  | 531.1 > 168.9 | 2.83e4 | 1.58e4  | 0.192 | 6.18    | 6.15 | 22.4         | 117   | 77.7  | NO           |
| 48 | 51 13C2-PFHxDA  | 815 > 769.7   | 3.08e3 | 1.58e4  | 0.587 | 6.53    | 6.43 | 2.44         | 4.15  | 82.9  | NO           |
| 49 | 52 d7-N-MeFOSE  | 623.1 > 58.9  | 2.49e4 | 1.58e4  | 0.163 | 6.27    | 6.27 | 19.7         | 121   | 80.8  | NO           |
| 50 | 53 d9-N-EtFOSE  | 639.2 > 58.8  | 2.61e4 | 1.58e4  | 0.178 | 6.42    | 6.42 | 20.6         | 116   | 77.0  | NO           |
| 51 | 54 13C4-PFBA    | 217. > 171.8  | 1.26e4 | 1.26e4  | 1.000 | 1.38    | 1.35 | 12.5         | 12.5  | 100.0 | NO           |
| 52 | 55 13C5-PFHxA   | 318 > 272.9   | 1.51e4 | 1.51e4  | 1.000 | 3.15    | 3.10 | 12.5         | 12.5  | 100.0 | NO           |
| 53 | 56 13C3-PFHxS   | 401.9 > 79.9  | 3.63e3 | 3.63e3  | 1.000 | 4.02    | 3.86 | 12.5         | 12.5  | 100.0 | NO           |
| 54 | 57 13C8-PFOA    | 421.3 > 376   | 1.44e4 | 1.44e4  | 1.000 | 4.38    | 4.23 | 12.5         | 12.5  | 100.0 | NO           |
| 55 | 58 13C9-PFNA    | 472.2 > 426.9 | 1.47e4 | 1.47e4  | 1.000 | 4.81    | 4.66 | 12.5         | 12.5  | 100.0 | NO           |
| 56 | 59 13C4-PFOS    | 503 > 79.9    | 3.05e3 | 3.05e3  | 1.000 | 4.89    | 4.75 | 12.5         | 12.5  | 100.0 | NO           |
| 57 | 60 13C6-PFDA    | 519.1 > 473.7 | 8.49e3 | 8.49e3  | 1.000 | 5.18    | 5.04 | 12.5         | 12.5  | 100.0 | NO           |
| 58 | 61 13C7-PFUdA   | 570.1 > 524.8 | 1.58e4 | 1.58e4  | 1.000 | 5.49    | 5.36 | 12.5         | 12.5  | 100.0 | NO           |

Dataset: U:\Q4.PRO\results\180112M3\180112M3\_IIS.qld

Last Altered: Saturday, January 13, 2018 17:04:49 Pacific Standard Time

Printed: Monday, January 15, 2018 16:40:16 Pacific Standard Time

Method: U:\Q4.PRO\MethDB\PFAS\_RS-12-29-17.mdb 30 Dec 2017 10:03:31

Calibration: 13 Jan 2018 17:04:49

Compound name: 13C4-PFBA

|    | Name        | ID                                       | Acq.Date  | Acq.Time |
|----|-------------|--|-----------|----------|
| 1  | 180112M3_6  | ST180112M3-6 PFC CS3 18A0811             | 12-Jan-18 | 14:33:24 |
| 2  | 180112M3_7  | ST180112M3-7 PFC CS4 18A0812             | 12-Jan-18 | 14:44:53 |
| 3  | 180112M3_8  | ST180112M3-8 PFC CS5 18A0813             | 12-Jan-18 | 14:56:24 |
| 4  | 180112M3_9  | ST180112M3-9 PFC CS6 18A0814             | 12-Jan-18 | 15:07:57 |
| 5  | 180112M3_10 | ST180112M3-10 PFC CS7 18A0815            | 12-Jan-18 | 15:19:28 |
| 6  | 180112M3_11 | IPA                                      | 12-Jan-18 | 15:30:56 |
| 7  | 180112M3_12 | ICV180112M3-1 PFC ICV 18A0805            | 12-Jan-18 | 15:42:29 |
| 8  | 180112M3_13 | IPA                                      | 12-Jan-18 | 15:54:01 |
| 9  | 180112M3_14 | B7L0218-BS1 OPR 0.25                     | 12-Jan-18 | 16:05:31 |
| 10 | 180112M3_15 | B7L0218-BSD1 LCSD 0.25                   | 12-Jan-18 | 16:17:07 |
| 11 | 180112M3_16 | B7L0218-BLK1 Method Blank 0.25           | 12-Jan-18 | 16:28:41 |
| 12 | 180112M3_17 | B7L0188-MS1 Matrix Spike 0.24896         | 12-Jan-18 | 16:40:14 |
| 13 | 180112M3_18 | B7L0188-MSD1 Matrix Spike Dup 0.23749    | 12-Jan-18 | 16:51:42 |
| 14 | 180112M3_19 | 1701970-01 FT-PZ458S-20171214 0.25998    | 12-Jan-18 | 17:03:12 |
| 15 | 180112M3_20 | 1701970-02 FT-PZ458I-20171214 0.25291    | 12-Jan-18 | 17:15:53 |
| 16 | 180112M3_21 | 1701970-03 SA-MW132S-20171214 0.25764    | 12-Jan-18 | 17:27:26 |
| 17 | 180112M3_22 | 1701970-04 SA-MW132S-FRB-20171214 0.2... | 12-Jan-18 | 17:39:06 |
| 18 | 180112M3_23 | 1701970-05 SA-MW132I-20171214 0.23441    | 12-Jan-18 | 17:52:40 |
| 19 | 180112M3_24 | 1701970-06 FT-PZ459S-20171214 0.25318    | 12-Jan-18 | 18:04:06 |
| 20 | 180112M3_25 | 1701970-07 FT-PZ459I-20171214 0.2457     | 12-Jan-18 | 18:15:15 |
| 21 | 180112M3_26 | 1701970-08 FT-PZ463S-20171214 0.25736    | 12-Jan-18 | 18:26:25 |
| 22 | 180112M3_27 | 1701970-09 FT-PZ463I-20171214 0.26165    | 12-Jan-18 | 18:37:36 |
| 23 | 180112M3_28 | 1701970-10 CV-TANK-20171214 0.25889      | 12-Jan-18 | 18:48:47 |
| 24 | 180112M3_29 | IPA                                      | 12-Jan-18 | 18:59:58 |
| 25 | 180112M3_30 | ST180112M3-11 PFC CS3 18A0811            | 12-Jan-18 | 19:11:09 |
| 26 | 180112M3_31 | IPA                                      | 12-Jan-18 | 19:22:19 |
| 27 | 180112M3_34 | 1702013-01 WI-CV-1RW14-1217 0.26251      | 12-Jan-18 | 19:33:30 |
| 28 | 180112M3_35 | 1702013-02 WI-CV-1FB14-1217 0.25636      | 12-Jan-18 | 19:44:40 |
| 29 | 180112M3_36 | 1701997-01 MTBE_8323 0.25626             | 12-Jan-18 | 19:55:51 |
| 30 | 180112M3_37 | 1701998-01 MTBE_8322 0.25742             | 12-Jan-18 | 20:07:04 |
| 31 | 180112M3_38 | 1701998-02 MTBE_8322 DUP 0.26171         | 12-Jan-18 | 20:18:13 |
| 32 | 180112M3_39 | 1701998-03 FIELD BLANK 0.25674           | 12-Jan-18 | 20:29:24 |



Dataset: U:\Q4.PRO\results\180112M3\180112M3\_IIS.qld

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Compound name: 13C4-PFBA

|    | Name        | ID   | Acq.Date  | Acq.Time |
|----|-------------|--|-----------|----------|
| 33 | 180112M3_40 | 1701954-01 WURTS_MSPTS_Eff-171214 0.4...   | 12-Jan-18 | 20:40:34 |
| 34 | 180112M3_41 | 1701954-02 WURTS_Outfall002-171214 0.49... | 12-Jan-18 | 20:51:45 |
| 35 | 180112M3_42 | IPA  | 12-Jan-18 | 21:02:56 |
| 36 | 180112M3_43 | ST180112M3-12 PFC CS3 18A0811              | 12-Jan-18 | 21:14:07 |
| 37 | 180112M3_44 | IPA  | 12-Jan-18 | 21:25:18 |
| 38 | 180112M3_45 | 1702012-01 GW1721171218RAP 0.26166         | 12-Jan-18 | 21:36:28 |
| 39 | 180112M3_46 | 1702012-02 GW2731171218RAP 0.26149         | 12-Jan-18 | 21:47:39 |
| 40 | 180112M3_47 | 1702012-03 GW3741171218RAP 0.25614         | 12-Jan-18 | 21:58:50 |
| 41 | 180112M3_48 | 1702012-04 GW4751171219RAP 0.26075         | 12-Jan-18 | 22:10:00 |
| 42 | 180112M3_49 | 1702012-05 GW5761171219RAP 0.24934         | 12-Jan-18 | 22:21:11 |
| 43 | 180112M3_50 | 1702012-06 GW1115171219RAP 0.26005         | 12-Jan-18 | 22:32:21 |
| 44 | 180112M3_51 | 1702012-07 GW2125171220RAP 0.2545          | 12-Jan-18 | 22:43:32 |
| 45 | 180112M3_52 | 1702012-08 GW3135171220RAP 0.24266         | 12-Jan-18 | 22:54:43 |
| 46 | 180112M3_53 | 1702012-09 GW4145171220RAP 0.25823         | 12-Jan-18 | 23:05:54 |
| 47 | 180112M3_54 | 1702012-10 GW5155171220RAP 0.24026         | 12-Jan-18 | 23:17:05 |
| 48 | 180112M3_55 | B7L0208-BS1 OPR 0.25                       | 12-Jan-18 | 23:28:18 |
| 49 | 180112M3_56 | B7L0208-BLK1 Method Blank 0.25             | 12-Jan-18 | 23:39:28 |
| 50 | 180112M3_57 | IPA  | 12-Jan-18 | 23:50:39 |
| 51 | 180112M3_58 | ST180112M3-13 PFC CS3 18A0811              | 13-Jan-18 | 00:01:50 |

Dataset: U:\Q4.PRO\results\180115M1\180115M1-IIS AREAS.qld

Last Altered: Monday, January 15, 2018 13:39:15 Pacific Standard Time

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Name: 180115M1\_7, Date: 15-Jan-2018, Time: 11:42:46, ID: 1701954-02@5X WURTS\_Outfall002-171214 0.49686,  
Description: WURTS\_Outfall002-171214

| # | Name       | ID                                  | Area   | %Rec | Area Out |
|---|------------|-------------------------------------|--------|------|----------|
| 7 | 13C6-PFDA  | 1701954-02@5X WURTS_Outfall002-1... | 1.73e3 | 13.5 | YES      |
| 8 | 13C7-PFUDa | 1701954-02@5X WURTS_Outfall002-1... | 2.30e3 | 11.4 | YES      |

Name: 180115M1\_8, Date: 15-Jan-2018, Time: 11:54:15, ID: B7L0188-MS1@10X Matrix Spike 0.24896, Description: Matrix Spike

| # | Name       | ID                                    | Area   | %Rec | Area Out |
|---|------------|---------------------------------------|--------|------|----------|
| 1 | 13C4-PFBA  | B7L0188-MS1@10X Matrix Spike 0.248... | 7.40e1 | 0.4  | YES      |
| 2 | 13C5-PFHxA | B7L0188-MS1@10X Matrix Spike 0.248... | 1.01e2 | 0.5  | YES      |
| 3 | 13C3-PFHxS | B7L0188-MS1@10X Matrix Spike 0.248... | 2.65e1 | 0.6  | YES      |
| 4 | 13C8-PFOA  | B7L0188-MS1@10X Matrix Spike 0.248... | 9.47e1 | 0.5  | YES      |
| 5 | 13C9-PFNA  | B7L0188-MS1@10X Matrix Spike 0.248... | 1.22e2 | 0.7  | YES      |
| 6 | 13C4-PFOS  | B7L0188-MS1@10X Matrix Spike 0.248... | 2.88e1 | 0.6  | YES      |
| 7 | 13C6-PFDA  | B7L0188-MS1@10X Matrix Spike 0.248... | 6.54e1 | 0.5  | YES      |
| 8 | 13C7-PFUDa | B7L0188-MS1@10X Matrix Spike 0.248... | 8.54e1 | 0.4  | YES      |

Name: 180115M1\_9, Date: 15-Jan-2018, Time: 12:06:04, ID: B7L0188-MSD1@10X Matrix Spike Dup 0.23749,  
Description: Matrix Spike Dup

| # | Name       | ID                                  | Area   | %Rec | Area Out |
|---|------------|-------------------------------------|--------|------|----------|
| 1 | 13C4-PFBA  | B7L0188-MSD1@10X Matrix Spike Du... | 1.38e2 | 0.7  | YES      |
| 2 | 13C5-PFHxA | B7L0188-MSD1@10X Matrix Spike Du... | 1.38e2 | 0.7  | YES      |
| 3 | 13C3-PFHxS | B7L0188-MSD1@10X Matrix Spike Du... | 4.57e1 | 1.0  | YES      |
| 4 | 13C8-PFOA  | B7L0188-MSD1@10X Matrix Spike Du... | 1.30e2 | 0.7  | YES      |
| 5 | 13C9-PFNA  | B7L0188-MSD1@10X Matrix Spike Du... | 1.44e2 | 0.9  | YES      |
| 6 | 13C4-PFOS  | B7L0188-MSD1@10X Matrix Spike Du... | 3.91e1 | 0.8  | YES      |
| 7 | 13C6-PFDA  | B7L0188-MSD1@10X Matrix Spike Du... | 1.36e2 | 1.1  | YES      |
| 8 | 13C7-PFUDa | B7L0188-MSD1@10X Matrix Spike Du... | 1.63e2 | 0.8  | YES      |

Name: 180115M1\_10, Date: 15-Jan-2018, Time: 12:17:55, ID: 1701970-03@10X SA-MW132S-20171214 0.25764,  
Description: SA-MW132S-20171214

| # | Name       | ID                                | Area   | %Rec | Area Out |
|---|------------|-----------------------------------|--------|------|----------|
| 1 | 13C4-PFBA  | 1701970-03@10X SA-MW132S-20171... | 8.50e1 | 0.5  | YES      |
| 2 | 13C5-PFHxA | 1701970-03@10X SA-MW132S-20171... | 1.02e2 | 0.5  | YES      |
| 3 | 13C3-PFHxS | 1701970-03@10X SA-MW132S-20171... | 2.73e1 | 0.6  | YES      |
| 4 | 13C8-PFOA  | 1701970-03@10X SA-MW132S-20171... | 8.68e1 | 0.5  | YES      |
| 5 | 13C9-PFNA  | 1701970-03@10X SA-MW132S-20171... | 1.13e2 | 0.7  | YES      |
| 6 | 13C4-PFOS  | 1701970-03@10X SA-MW132S-20171... | 2.03e1 | 0.4  | YES      |
| 7 | 13C6-PFDA  | 1701970-03@10X SA-MW132S-20171... | 6.45e1 | 0.5  | YES      |
| 8 | 13C7-PFUDa | 1701970-03@10X SA-MW132S-20171... | 1.50e2 | 0.7  | YES      |

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Name: 180115M1\_11, Date: 15-Jan-2018, Time: 12:29:46, ID: 1701970-05@10X SA-MW132I-20171214 0.23441,  
Description: SA-MW132I-20171214

| # | Name         | ID                                 | Area   | %Rec | Area Out |
|---|--------------|------------------------------------|--------|------|----------|
| 1 | 1 13C4-PFBA  | 1701970-05@10X SA-MW132I-201712... | 2.72e2 | 1.5  | YES      |
| 2 | 2 13C5-PFHxA | 1701970-05@10X SA-MW132I-201712... | 3.05e2 | 1.5  | YES      |
| 3 | 3 13C3-PFHxS | 1701970-05@10X SA-MW132I-201712... | 7.07e1 | 1.5  | YES      |
| 4 | 4 13C8-PFOA  | 1701970-05@10X SA-MW132I-201712... | 3.33e2 | 1.9  | YES      |
| 5 | 5 13C9-PFNA  | 1701970-05@10X SA-MW132I-201712... | 3.18e2 | 1.9  | YES      |
| 6 | 6 13C4-PFOS  | 1701970-05@10X SA-MW132I-201712... | 7.35e1 | 1.6  | YES      |
| 7 | 7 13C6-PFDA  | 1701970-05@10X SA-MW132I-201712... | 1.46e2 | 1.1  | YES      |
| 8 | 8 13C7-PFUdA | 1701970-05@10X SA-MW132I-201712... | 1.82e2 | 0.9  | YES      |

Name: 180115M1\_12, Date: 15-Jan-2018, Time: 12:41:37, ID: IPA, Description: IPA

| # | Name         | ID  | Area   | %Rec | Area Out |
|---|--------------|-----|--------|------|----------|
| 1 | 1 13C4-PFBA  | IPA |        |      | NO       |
| 2 | 2 13C5-PFHxA | IPA |        |      | NO       |
| 3 | 3 13C3-PFHxS | IPA |        |      | NO       |
| 4 | 4 13C8-PFOA  | IPA |        |      | NO       |
| 5 | 5 13C9-PFNA  | IPA |        |      | NO       |
| 6 | 6 13C4-PFOS  | IPA | 5.08e0 | 0.1  | YES      |
| 7 | 7 13C6-PFDA  | IPA |        |      | NO       |
| 8 | 8 13C7-PFUdA | IPA |        |      | NO       |

Name: 180115M1\_13, Date: 15-Jan-2018, Time: 12:53:04, ID: 1701970-06 FT-PZ459S-20171214 0.25318,  
Description: FT-PZ459S-20171214

| # | Name         | ID                                   | Area   | %Rec | Area Out |
|---|--------------|--------------------------------------|--------|------|----------|
| 1 | 1 13C4-PFBA  | 1701970-06 FT-PZ459S-20171214 0.2... | 1.30e4 | 69.5 | NO       |
| 2 | 2 13C5-PFHxA | 1701970-06 FT-PZ459S-20171214 0.2... | 1.42e4 | 69.1 | NO       |
| 3 | 3 13C3-PFHxS | 1701970-06 FT-PZ459S-20171214 0.2... | 3.71e3 | 78.2 | NO       |
| 4 | 4 13C8-PFOA  | 1701970-06 FT-PZ459S-20171214 0.2... | 1.32e4 | 74.6 | NO       |
| 5 | 5 13C9-PFNA  | 1701970-06 FT-PZ459S-20171214 0.2... | 1.25e4 | 75.0 | NO       |
| 6 | 6 13C4-PFOS  | 1701970-06 FT-PZ459S-20171214 0.2... | 3.43e3 | 74.2 | NO       |
| 7 | 7 13C6-PFDA  | 1701970-06 FT-PZ459S-20171214 0.2... | 8.72e3 | 68.3 | NO       |
| 8 | 8 13C7-PFUdA | 1701970-06 FT-PZ459S-20171214 0.2... | 1.33e4 | 65.6 | NO       |

Name: 180115M1\_14, Date: 15-Jan-2018, Time: 13:04:31, ID: B7L0218-BS1 OPR 0.25, Description: OPR

| # | Name         | ID                   | Area   | %Rec | Area Out |
|---|--------------|----------------------|--------|------|----------|
| 1 | 1 13C4-PFBA  | B7L0218-BS1 OPR 0.25 | 8.82e3 | 47.2 | YES      |
| 2 | 2 13C5-PFHxA | B7L0218-BS1 OPR 0.25 | 1.03e4 | 50.3 | NO       |
| 3 | 3 13C3-PFHxS | B7L0218-BS1 OPR 0.25 | 2.48e3 | 52.2 | NO       |
| 4 | 4 13C8-PFOA  | B7L0218-BS1 OPR 0.25 | 9.36e3 | 53.0 | NO       |
| 5 | 5 13C9-PFNA  | B7L0218-BS1 OPR 0.25 | 8.65e3 | 51.8 | NO       |
| 6 | 6 13C4-PFOS  | B7L0218-BS1 OPR 0.25 | 3.07e3 | 66.5 | NO       |
| 7 | 7 13C6-PFDA  | B7L0218-BS1 OPR 0.25 | 6.15e3 | 48.2 | YES      |
| 8 | 8 13C7-PFUdA | B7L0218-BS1 OPR 0.25 | 1.04e4 | 51.3 | NO       |

Dataset: U:\Q4.PRO\results\180115M1\180115M1-IIS AREAS.qld

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Name: 180115M1\_15, Date: 15-Jan-2018, Time: 13:15:58, ID: B7L0218-BLK1 Method Blank 0.25, Description: Method Blank

|   | # | Name       | ID                             | Area   | %Rec | Area Out   |
|---|---|------------|--------------------------------|--------|------|------------|
| 1 | 1 | 13C4-PFBA  | B7L0218-BLK1 Method Blank 0.25 | 1.00e4 | 53.6 | NO         |
| 2 | 2 | 13C5-PFHxA | B7L0218-BLK1 Method Blank 0.25 | 1.05e4 | 51.3 | NO         |
| 3 | 3 | 13C3-PFHxS | B7L0218-BLK1 Method Blank 0.25 | 3.05e3 | 64.2 | NO         |
| 4 | 4 | 13C8-PFOA  | B7L0218-BLK1 Method Blank 0.25 | 9.29e3 | 52.6 | NO         |
| 5 | 5 | 13C9-PFNA  | B7L0218-BLK1 Method Blank 0.25 | 1.15e4 | 68.8 | NO         |
| 6 | 6 | 13C4-PFOS  | B7L0218-BLK1 Method Blank 0.25 | 2.24e3 | 48.5 | <u>YES</u> |
| 7 | 7 | 13C6-PFDA  | B7L0218-BLK1 Method Blank 0.25 | 6.40e3 | 50.1 | NO         |
| 8 | 8 | 13C7-PFUdA | B7L0218-BLK1 Method Blank 0.25 | 1.13e4 | 55.7 | NO         |

Dataset: U:\Q4.PRO\results\180115M1\180115M1-4.qld

Last Altered: Monday, January 15, 2018 11:40:07 Pacific Standard Time

Printed: Monday, January 15, 2018 11:56:59 Pacific Standard Time

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_011518.mdb 15 Jan 2018 11:38:30  
 Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-12-18-FULL.cdb 13 Jan 2018 14:58:25

AC 1/15/18  
 JJA 01/15/2018

Name: 180115M1\_4, Date: 15-Jan-2018, Time: 11:08:28, ID: ST180115M1-1 PFC CS0 18A0808, Description: ~~ST180108M2-3~~ PFC CS0 18A0808

| #  | Name          | Trace         | Area   | IS Area | wt/vol | RRF   | Pred.RT | RT   | y Axis Resp. | Conc.  | %Rec  |
|----|---------------|---------------|--------|---------|--------|-------|---------|------|--------------|--------|-------|
| 1  | 1 PFBA        | 213.0 > 168.8 | 1.65e3 | 1.62e4  | 1.0000 |       | 1.64    | 1.63 | 1.27         | 1.060  | 106.0 |
| 2  | 2 PFPeA       | 263.1 > 218.9 | 1.67e3 | 1.86e4  | 1.0000 |       | 2.60    | 2.59 | 1.12         | 1.054  | 105.4 |
| 3  | 3 PFBS        | 299.0 > 79.7  | 3.48e2 | 2.33e3  | 1.0000 |       | 2.87    | 2.86 | 1.87         | 1.016  | 101.6 |
| 4  | 4 PFHxA       | 313.2 > 268.9 | 1.98e3 | 5.32e3  | 1.0000 |       | 3.36    | 3.36 | 1.86         | 1.065  | 106.5 |
| 5  | 5 PFHpA       | 363.0 > 318.9 | 1.54e3 | 1.40e4  | 1.0000 |       | 4.00    | 3.99 | 1.37         | 1.043  | 104.3 |
| 6  | 6 L-PFHxS     | 398.9 > 79.6  | 2.60e2 | 1.67e3  | 1.0000 |       | 4.14    | 4.13 | 1.95         | 1.095  | 109.5 |
| 7  | 8 6:2 FTS     | 427.1 > 407   | 4.14e2 | 1.67e3  | 1.0000 |       | 4.46    | 4.45 | 3.10         | 1.136  | 113.6 |
| 8  | 9 L-PFOA      | 413 > 368.7   | 1.64e3 | 1.93e4  | 1.0000 |       | 4.50    | 4.50 | 1.06         | 0.913  | 91.3  |
| 9  | 11 PFHpS      | 449 > 80.0    | 4.14e2 | 1.93e4  | 1.0000 |       | 4.60    | 4.60 | 0.269        | 0.934  | 93.4  |
| 10 | 12 PFNA       | 463.0 > 418.8 | 1.70e3 | 1.67e4  | 1.0000 |       | 4.94    | 4.93 | 1.27         | 0.973  | 97.3  |
| 11 | 13 PFOSA      | 498.1 > 77.8  | 4.49e2 | 4.69e3  | 1.0000 |       | 5.00    | 4.99 | 1.20         | 1.091  | 109.1 |
| 12 | 14 L-PFOS     | 499 > 79.9    | 3.48e2 | 4.96e3  | 1.0000 |       | 5.02    | 5.01 | 0.878        | 0.818  | 81.8  |
| 13 | 16 PFDA       | 513 > 468.8   | 2.04e3 | 1.80e4  | 1.0000 |       | 5.31    | 5.30 | 1.42         | 0.972  | 97.2  |
| 14 | 17 8:2 FTS    | 527 > 506.9   | 3.39e2 | 1.80e4  | 1.0000 |       | 5.28    | 5.28 | 0.235        | 0.871  | 87.1  |
| 15 | 18 N-MeFOSAA  | 570.1 > 419   | 7.77e2 | 6.34e3  | 1.0000 |       | 5.45    | 5.45 | 1.53         | 0.943  | 94.3  |
| 16 | 19 N-EtFOSAA  | 584.2 > 419   | 6.45e2 | 7.72e3  | 1.0000 |       | 5.60    | 5.60 | 1.04         | 0.998  | 99.8  |
| 17 | 20 PFUdA      | 563.0 > 518.9 | 2.11e3 | 2.27e4  | 1.0000 |       | 5.62    | 5.62 | 1.16         | 0.900  | 90.0  |
| 18 | 21 PFDS       | 598.8 > 80    | 5.65e2 | 2.27e4  | 1.0000 |       | 5.67    | 5.66 | 0.311        | 0.978  | 97.8  |
| 19 | 22 PFDoA      | 612.9 > 569.0 | 3.78e3 | 1.71e4  | 1.0000 |       | 5.91    | 5.90 | 2.76         | 1.257  | 125.7 |
| 20 | 23 N-MeFOSA   | 512.1 > 168.9 | 1.17e3 | 3.07e4  | 1.0000 |       | 5.87    | 5.87 | 5.71         | 6.012  | 120.2 |
| 21 | 24 PFTrDA     | 662.9 > 618.9 | 2.95e3 | 1.71e4  | 1.0000 |       | 6.15    | 6.14 | 2.15         | 0.852  | 85.2  |
| 22 | 25 PFTeDA     | 712.9 > 668.8 | 1.43e3 | 7.20e3  | 1.0000 |       | 6.35    | 6.34 | 2.48         | 1.022  | 102.2 |
| 23 | 26 N-EtFOSA   | 526.1 > 168.9 | 1.29e3 | 3.79e4  | 1.0000 |       | 6.25    | 6.22 | 5.12         | 5.637  | 112.7 |
| 24 | 27 PFHxDA     | 813.1 > 768.6 | 6.54e2 | 3.72e3  | 1.0000 |       | 6.64    | 6.63 | 0.880        | 0.851  | 85.1  |
| 25 | 28 PFODA      | 913.1 > 868.8 | 5.26e2 | 3.72e3  | 1.0000 |       | 6.85    | 6.85 | 0.708        | 0.816  | 81.6  |
| 26 | 29 N-MeFOSE   | 616.1 > 58.9  | 1.28e3 | 3.67e4  | 1.0000 |       | 6.31    | 6.31 | 5.23         | 5.028  | 100.6 |
| 27 | 30 N-EtFOSE   | 630.1 > 58.9  | 1.29e3 | 3.39e4  | 1.0000 |       | 6.45    | 6.46 | 5.71         | 4.870  | 97.4  |
| 28 | 31 13C3-PFBA  | 216.1 > 171.8 | 1.62e4 | 1.87e4  | 1.0000 | 0.888 | 1.64    | 1.63 | 10.9         | 12.235 | 97.9  |
| 29 | 32 13C3-PFPeA | 266. > 221.8  | 1.86e4 | 2.05e4  | 1.0000 | 0.875 | 2.60    | 2.59 | 11.3         | 12.940 | 103.5 |
| 30 | 33 13C3-PFBS  | 302. > 98.8   | 2.33e3 | 2.05e4  | 1.0000 | 0.112 | 2.87    | 2.86 | 1.42         | 12.717 | 101.7 |
| 31 | 34 13C2-PFHxA | 315 > 269.8   | 5.32e3 | 2.05e4  | 1.0000 | 0.691 | 3.36    | 3.36 | 3.24         | 4.686  | 93.7  |

70-130  
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 50-150  
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Dataset: U:\Q4.PRO\results\180115M1\180115M1-4.qld

Last Altered: Monday, January 15, 2018 11:40:07 Pacific Standard Time

Printed: Monday, January 15, 2018 11:56:59 Pacific Standard Time

Name: 180115M1\_4, Date: 15-Jan-2018, Time: 11:08:28, ID: ST180115M1-1 PFC CS0 18A0808, Description: ST180108M2-3 PFC CS0 18A0808

|    | # Name | Trace        | Area          | IS Area | wt/vol | RRF    | Pred.RT | RT   | y Axis Resp. | Conc. | %Rec    |       |
|----|--------|--------------|---------------|---------|--------|--------|---------|------|--------------|-------|---------|-------|
| 32 | 35     | 13C4-PFHpA   | 367.2 > 321.8 | 1.40e4  | 2.05e4 | 1.0000 | 0.708   | 4.00 | 3.99         | 8.55  | 12.068  | 96.5  |
| 33 | 36     | 18O2-PFHxS   | 403.0 > 102.6 | 1.67e3  | 4.75e3 | 1.0000 | 0.353   | 4.14 | 4.13         | 4.39  | 12.449  | 99.6  |
| 34 | 37     | 13C2-6:2 FTS | 429.1 > 408.9 | 4.07e3  | 1.77e4 | 1.0000 | 0.285   | 4.46 | 4.45         | 2.88  | 10.104  | 80.8  |
| 35 | 38     | 13C2-PFOA    | 414.9 > 369.7 | 1.93e4  | 1.77e4 | 1.0000 | 1.049   | 4.50 | 4.50         | 13.6  | 12.983  | 103.9 |
| 36 | 39     | 13C5-PFNA    | 468.2 > 422.9 | 1.67e4  | 1.68e4 | 1.0000 | 0.910   | 4.94 | 4.93         | 12.5  | 13.691  | 109.5 |
| 37 | 40     | 13C8-PFOSA   | 506.1 > 77.7  | 4.69e3  | 2.03e4 | 1.0000 | 0.252   | 5.00 | 4.99         | 2.90  | 11.511  | 92.1  |
| 38 | 41     | 13C8-PFOS    | 507.0 > 79.9  | 4.96e3  | 4.62e3 | 1.0000 | 0.987   | 5.02 | 5.01         | 13.4  | 13.578  | 108.6 |
| 39 | 42     | 13C2-PFDA    | 515.1 > 469.9 | 1.80e4  | 1.33e4 | 1.0000 | 1.311   | 5.31 | 5.30         | 17.0  | 12.985  | 103.9 |
| 40 | 43     | 13C2-8:2 FTS | 529.1 > 508.7 | 2.13e3  | 2.05e4 | 1.0000 | 0.141   | 5.28 | 5.28         | 1.30  | 9.168   | 73.3  |
| 41 | 44     | d3-N-MeFOSAA | 573.3 > 419   | 6.34e3  | 2.03e4 | 1.0000 | 0.385   | 5.45 | 5.44         | 3.91  | 10.168  | 81.3  |
| 42 | 45     | d5-N-EiFOSAA | 589.3 > 419   | 7.72e3  | 2.03e4 | 1.0000 | 0.445   | 5.60 | 5.60         | 4.76  | 10.698  | 85.6  |
| 43 | 46     | 13C2-PFUdA   | 565 > 519.8   | 2.27e4  | 2.03e4 | 1.0000 | 1.014   | 5.62 | 5.62         | 14.0  | 13.794  | 110.4 |
| 44 | 47     | 13C2-PFDoA   | 615.0 > 569.7 | 1.71e4  | 2.03e4 | 1.0000 | 0.575   | 5.91 | 5.90         | 10.6  | 18.378  | 147.0 |
| 45 | 48     | d3-N-MeFOSA  | 515.2 > 168.9 | 3.07e4  | 2.03e4 | 1.0000 | 0.130   | 5.87 | 5.90         | 18.9  | 145.386 | 96.9  |
| 46 | 49     | 13C2-PFTeDA  | 714.8 > 669.6 | 7.20e3  | 2.03e4 | 1.0000 | 0.305   | 6.35 | 6.34         | 4.44  | 14.544  | 116.4 |
| 47 | 50     | d5-N-ETFOSA  | 531.1 > 168.9 | 3.79e4  | 2.03e4 | 1.0000 | 0.192   | 6.25 | 6.23         | 23.4  | 121.808 | 81.2  |
| 48 | 51     | 13C2-PFHxDA  | 815 > 769.7   | 3.72e3  | 2.03e4 | 1.0000 | 0.587   | 6.64 | 6.63         | 2.29  | 3.907   | 78.1  |
| 49 | 52     | d7-N-MeFOSE  | 623.1 > 58.9  | 3.67e4  | 2.03e4 | 1.0000 | 0.163   | 6.31 | 6.31         | 22.7  | 139.370 | 92.9  |
| 50 | 53     | d9-N-EiFOSE  | 639.2 > 58.8  | 3.39e4  | 2.03e4 | 1.0000 | 0.178   | 6.45 | 6.45         | 20.9  | 117.240 | 78.2  |
| 51 | 54     | 13C4-PFBA    | 217. > 171.8  | 1.87e4  | 1.87e4 | 1.0000 | 1.000   | 1.64 | 1.63         | 12.5  | 12.500  | 100.0 |
| 52 | 55     | 13C5-PFHxA   | 318 > 272.9   | 2.05e4  | 2.05e4 | 1.0000 | 1.000   | 3.36 | 3.36         | 12.5  | 12.500  | 100.0 |
| 53 | 56     | 13C3-PFHxS   | 401.9 > 79.9  | 4.75e3  | 4.75e3 | 1.0000 | 1.000   | 4.14 | 4.13         | 12.5  | 12.500  | 100.0 |
| 54 | 57     | 13C8-PFOA    | 421.3 > 376   | 1.77e4  | 1.77e4 | 1.0000 | 1.000   | 4.50 | 4.50         | 12.5  | 12.500  | 100.0 |
| 55 | 58     | 13C9-PFNA    | 472.2 > 426.9 | 1.68e4  | 1.68e4 | 1.0000 | 1.000   | 4.94 | 4.93         | 12.5  | 12.500  | 100.0 |
| 56 | 59     | 13C4-PFOS    | 503 > 79.9    | 4.62e3  | 4.62e3 | 1.0000 | 1.000   | 5.02 | 5.01         | 12.5  | 12.500  | 100.0 |
| 57 | 60     | 13C6-PFDA    | 519.1 > 473.7 | 1.33e4  | 1.33e4 | 1.0000 | 1.000   | 5.31 | 5.30         | 12.5  | 12.500  | 100.0 |
| 58 | 61     | 13C7-PFUdA   | 570.1 > 524.8 | 2.03e4  | 2.03e4 | 1.0000 | 1.000   | 5.62 | 5.62         | 12.5  | 12.500  | 100.0 |

50-150  


Dataset: Untitled

Last Altered: Monday, January 15, 2018 14:09:43 Pacific Standard Time

Printed: Monday, January 15, 2018 14:11:18 Pacific Standard Time

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_011518.mdb 15 Jan 2018 11:38:30

Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-12-18-FULL.cdb 13 Jan 2018 14:58:25

Compound name: PFBA

|    | Name        | ID   | Acq.Date  | Acq.Time |
|----|-------------|--|-----------|----------|
| 1  | 180115M1_3  | IPA  | 15-Jan-18 | 10:52:47 |
| 2  | 180115M1_4  | ST180115M1-1 PFC CS0 18A0808 ✓             | 15-Jan-18 | 11:08:28 |
| 3  | 180115M1_5  | IPA  | 15-Jan-18 | 11:19:52 |
| 4  | 180115M1_6  | 1701954-01@5X WURTS_MSPTS_Eff-17121...     | 15-Jan-18 | 11:31:19 |
| 5  | 180115M1_7  | 1701954-02@5X WURTS_Outfall002-171214 ...  | 15-Jan-18 | 11:42:46 |
| 6  | 180115M1_8  | B7L0188-MS1@10X Matrix Spike 0.24896       | 15-Jan-18 | 11:54:15 |
| 7  | 180115M1_9  | B7L0188-MSD1@10X Matrix Spike Dup 0.237... | 15-Jan-18 | 12:06:04 |
| 8  | 180115M1_10 | 1701970-03@10X SA-MW132S-20171214 0....    | 15-Jan-18 | 12:17:55 |
| 9  | 180115M1_11 | 1701970-05@10X SA-MW132I-20171214 0.2...   | 15-Jan-18 | 12:29:46 |
| 10 | 180115M1_12 | IPA  | 15-Jan-18 | 12:41:37 |
| 11 | 180115M1_13 | 1701970-06 FT-PZ459S-20171214 0.25318      | 15-Jan-18 | 12:53:04 |
| 12 | 180115M1_14 | B7L0218-BS1 OPR 0.25                       | 15-Jan-18 | 13:04:31 |
| 13 | 180115M1_15 | B7L0218-BLK1 Method Blank 0.25             | 15-Jan-18 | 13:15:58 |
| 14 | 180115M1_16 | IPA  | 15-Jan-18 | 13:27:32 |
| 15 | 180115M1_17 | ST180115M1-2 PFC CS3 18A0811               | 15-Jan-18 | 13:39:00 |
| 16 | 180115M1_18 | IPA  | 15-Jan-18 | 13:50:26 |



Dataset: U:\Q4.PRO\results\180115M1\180115M1-17.qld

Last Altered: Monday, January 15, 2018 13:48:54 Pacific Standard Time

Printed: Monday, January 15, 2018 13:50:51 Pacific Standard Time

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_011518.mdb 15 Jan 2018 11:38:30

Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-12-18-FULL.cdb 13 Jan 2018 14:58:25

Name: 180115M1\_17, Date: 15-Jan-2018, Time: 13:39:00, ID: ST180115M1-2 PFC CS3 18A0811, Description: PFC CS3 18A0811

AC  
1/15/18

JHA  
01/15/2018

| #  | Name          | Trace         | Area   | IS Area | wt/vol | RRF   | Pred.RT | RT   | y Axis Resp. | Conc.  | %Rec  |
|----|---------------|---------------|--------|---------|--------|-------|---------|------|--------------|--------|-------|
| 1  | 1 PFBA        | 213.0 > 168.8 | 1.87e4 | 1.99e4  | 1.0000 |       | 1.64    | 1.60 | 11.8         | 9.992  | 99.9  |
| 2  | 2 PFPeA       | 263.1 > 218.9 | 1.89e4 | 2.22e4  | 1.0000 |       | 2.60    | 2.56 | 10.6         | 10.294 | 102.9 |
| 3  | 3 PFBS        | 299.0 > 79.7  | 4.39e3 | 3.02e3  | 1.0000 |       | 2.87    | 2.83 | 18.2         | 9.957  | 99.6  |
| 4  | 4 PFHxA       | 313.2 > 268.9 | 2.48e4 | 6.58e3  | 1.0000 |       | 3.36    | 3.33 | 18.8         | 11.340 | 113.4 |
| 5  | 5 PFHpA       | 363.0 > 318.9 | 1.88e4 | 1.54e4  | 1.0000 |       | 4.00    | 3.96 | 15.3         | 11.926 | 119.3 |
| 6  | 6 L-PFHxS     | 398.9 > 79.6  | 3.08e3 | 2.04e3  | 1.0000 |       | 4.14    | 4.09 | 18.9         | 10.564 | 105.6 |
| 7  | 8 6:2 FTS     | 427.1 > 407   | 3.44e3 | 2.04e3  | 1.0000 |       | 4.46    | 4.41 | 21.1         | 7.984  | 79.8  |
| 8  | 9 L-PFOA      | 413 > 368.7   | 2.04e4 | 2.42e4  | 1.0000 |       | 4.50    | 4.47 | 10.6         | 9.577  | 95.8  |
| 9  | 11 PFHpS      | 449 > 80.0    | 5.17e3 | 2.42e4  | 1.0000 |       | 4.60    | 4.57 | 2.68         | 9.827  | 98.3  |
| 10 | 12 PFNA       | 463.0 > 418.8 | 2.12e4 | 1.96e4  | 1.0000 |       | 4.94    | 4.90 | 13.5         | 10.554 | 105.5 |
| 11 | 13 PFOSA      | 498.1 > 77.8  | 5.16e3 | 5.07e3  | 1.0000 |       | 5.00    | 4.96 | 12.7         | 11.421 | 114.2 |
| 12 | 14 L-PFOS     | 499 > 79.9    | 5.02e3 | 4.58e3  | 1.0000 |       | 5.02    | 4.97 | 13.7         | 11.592 | 115.9 |
| 13 | 16 PFDA       | 513 > 468.8   | 1.91e4 | 1.70e4  | 1.0000 |       | 5.31    | 5.27 | 14.1         | 9.948  | 99.5  |
| 14 | 17 8:2 FTS    | 527 > 506.9   | 3.13e3 | 1.70e4  | 1.0000 |       | 5.28    | 5.24 | 2.31         | 8.882  | 88.8  |
| 15 | 18 N-MeFOSAA  | 570.1 > 419   | 1.09e4 | 7.63e3  | 1.0000 |       | 5.45    | 5.41 | 17.9         | 10.421 | 104.2 |
| 16 | 19 N-EtFOSAA  | 584.2 > 419   | 9.05e3 | 9.69e3  | 1.0000 |       | 5.60    | 5.57 | 11.7         | 10.932 | 109.3 |
| 17 | 20 PFUdA      | 563.0 > 518.9 | 1.78e4 | 1.82e4  | 1.0000 |       | 5.62    | 5.58 | 12.2         | 10.603 | 106.0 |
| 18 | 21 PFDS       | 598.8 > 80    | 5.62e3 | 1.82e4  | 1.0000 |       | 5.67    | 5.63 | 3.86         | 11.559 | 115.6 |
| 19 | 22 PFDoA      | 612.9 > 569.0 | 2.67e4 | 1.75e4  | 1.0000 |       | 5.91    | 5.87 | 19.0         | 7.867  | 78.7  |
| 20 | 23 N-MeFOSA   | 512.1 > 168.9 | 1.32e4 | 3.58e4  | 1.0000 |       | 5.87    | 5.86 | 55.2         | 62.196 | 124.4 |
| 21 | 24 PFTTrDA    | 662.9 > 618.9 | 2.94e4 | 1.75e4  | 1.0000 |       | 6.15    | 6.10 | 20.9         | 9.812  | 98.1  |
| 22 | 25 PFTeDA     | 712.9 > 668.8 | 1.62e4 | 8.49e3  | 1.0000 |       | 6.35    | 6.31 | 23.8         | 11.031 | 110.3 |
| 23 | 26 N-EtFOSA   | 526.1 > 168.9 | 1.57e4 | 4.79e4  | 1.0000 |       | 6.25    | 6.22 | 49.2         | 54.947 | 109.9 |
| 24 | 27 PFHxDA     | 813.1 > 768.6 | 7.74e3 | 4.86e3  | 1.0000 |       | 6.64    | 6.60 | 7.96         | 8.951  | 89.5  |
| 25 | 28 PFOA       | 913.1 > 868.8 | 5.76e3 | 4.86e3  | 1.0000 |       | 6.85    | 6.82 | 5.92         | 7.386  | 73.9  |
| 26 | 29 N-MeFOSE   | 616.1 > 58.9  | 1.82e4 | 4.92e4  | 1.0000 |       | 6.31    | 6.30 | 55.4         | 53.356 | 106.7 |
| 27 | 30 N-EtFOSE   | 630.1 > 58.9  | 1.79e4 | 5.26e4  | 1.0000 |       | 6.45    | 6.46 | 51.1         | 43.411 | 86.8  |
| 28 | 31 13C3-PFBA  | 216.1 > 171.8 | 1.99e4 | 2.32e4  | 1.0000 | 0.888 | 1.64    | 1.60 | 10.7         | 12.041 | 96.3  |
| 29 | 32 13C3-PFPeA | 266. > 221.8  | 2.22e4 | 2.39e4  | 1.0000 | 0.875 | 2.60    | 2.57 | 11.6         | 13.278 | 106.2 |
| 30 | 33 13C3-PFBS  | 302. > 98.8   | 3.02e3 | 2.39e4  | 1.0000 | 0.112 | 2.87    | 2.83 | 1.58         | 14.107 | 112.9 |
| 31 | 34 13C2-PFHxA | 315 > 269.8   | 6.58e3 | 2.39e4  | 1.0000 | 0.691 | 3.36    | 3.33 | 3.44         | 4.975  | 99.5  |

10-120

50-150



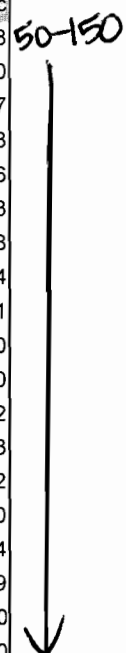
Dataset: U:\Q4.PRO\results\180115M1\180115M1-17.qld

Last Altered: Monday, January 15, 2018 13:48:54 Pacific Standard Time

Printed: Monday, January 15, 2018 13:50:51 Pacific Standard Time

Name: 180115M1\_17, Date: 15-Jan-2018, Time: 13:39:00, ID: ST180115M1-2 PFC CS3 18A0811, Description: PFC CS3 18A0811

|    | # Name | Trace        | Area          | IS Area | wt/vol | RRF    | Pred.RT | RT   | y Axis Resp | Conc. | %Rec    |       |
|----|--------|--------------|---------------|---------|--------|--------|---------|------|-------------|-------|---------|-------|
| 32 | 35     | 13C4-PFHpA   | 367.2 > 321.8 | 1.54e4  | 2.39e4 | 1.0000 | 0.708   | 4.00 | 3.96        | 8.04  | 11.354  | 90.8  |
| 33 | 36     | 18O2-PFHxS   | 403.0 > 102.6 | 2.04e3  | 5.61e3 | 1.0000 | 0.353   | 4.14 | 4.09        | 4.54  | 12.872  | 103.0 |
| 34 | 37     | 13C2-6:2 FTS | 429.1 > 408.9 | 4.42e3  | 2.37e4 | 1.0000 | 0.285   | 4.46 | 4.41        | 2.34  | 8.211   | 65.7  |
| 35 | 38     | 13C2-PFOA    | 414.9 > 369.7 | 2.42e4  | 2.37e4 | 1.0000 | 1.049   | 4.50 | 4.46        | 12.8  | 12.168  | 97.3  |
| 36 | 39     | 13C5-PFNA    | 468.2 > 422.9 | 1.96e4  | 2.30e4 | 1.0000 | 0.910   | 4.94 | 4.90        | 10.6  | 11.698  | 93.6  |
| 37 | 40     | 13C8-PFOSA   | 506.1 > 77.7  | 5.07e3  | 2.16e4 | 1.0000 | 0.252   | 5.00 | 4.95        | 2.94  | 11.666  | 93.3  |
| 38 | 41     | 13C8-PFOS    | 507.0 > 79.9  | 4.58e3  | 5.60e3 | 1.0000 | 0.987   | 5.02 | 4.97        | 10.2  | 10.347  | 82.8  |
| 39 | 42     | 13C2-PFDA    | 515.1 > 469.9 | 1.70e4  | 1.33e4 | 1.0000 | 1.311   | 5.31 | 5.27        | 16.0  | 12.178  | 97.4  |
| 40 | 43     | 13C2-8:2 FTS | 529.1 > 508.7 | 1.86e3  | 2.39e4 | 1.0000 | 0.141   | 5.28 | 5.24        | 0.973 | 6.884   | 55.1  |
| 41 | 44     | d3-N-MeFOSAA | 573.3 > 419   | 7.63e3  | 2.16e4 | 1.0000 | 0.385   | 5.45 | 5.41        | 4.42  | 11.494  | 92.0  |
| 42 | 45     | d5-N-EtFOSAA | 589.3 > 419   | 9.69e3  | 2.16e4 | 1.0000 | 0.445   | 5.60 | 5.56        | 5.62  | 12.620  | 101.0 |
| 43 | 46     | 13C2-PFUdA   | 565 > 519.8   | 1.82e4  | 2.16e4 | 1.0000 | 1.014   | 5.62 | 5.58        | 10.5  | 10.394  | 83.2  |
| 44 | 47     | 13C2-PFDoA   | 615.0 > 569.7 | 1.75e4  | 2.16e4 | 1.0000 | 0.575   | 5.91 | 5.86        | 10.2  | 17.660  | 141.3 |
| 45 | 48     | d3-N-MeFOSA  | 515.2 > 168.9 | 3.58e4  | 2.16e4 | 1.0000 | 0.130   | 5.87 | 5.89        | 20.8  | 159.281 | 106.2 |
| 46 | 49     | 13C2-PFTeDA  | 714.8 > 669.6 | 8.49e3  | 2.16e4 | 1.0000 | 0.305   | 6.35 | 6.31        | 4.92  | 16.120  | 129.0 |
| 47 | 50     | d5-N-ETFOSA  | 531.1 > 168.9 | 4.79e4  | 2.16e4 | 1.0000 | 0.192   | 6.25 | 6.23        | 27.8  | 144.573 | 96.4  |
| 48 | 51     | 13C2-PFHxDA  | 815 > 769.7   | 4.86e3  | 2.16e4 | 1.0000 | 0.587   | 6.64 | 6.60        | 2.82  | 4.797   | 95.9  |
| 49 | 52     | d7-N-MeFOSE  | 623.1 > 58.9  | 4.92e4  | 2.16e4 | 1.0000 | 0.163   | 6.31 | 6.30        | 28.5  | 175.546 | 117.0 |
| 50 | 53     | d9-N-EtFOSE  | 639.2 > 58.8  | 5.26e4  | 2.16e4 | 1.0000 | 0.178   | 6.45 | 6.45        | 30.5  | 170.926 | 114.0 |
| 51 | 54     | 13C4-PFBA    | 217. > 171.8  | 2.32e4  | 2.32e4 | 1.0000 | 1.000   | 1.64 | 1.60        | 12.5  | 12.500  | 100.0 |
| 52 | 55     | 13C5-PFHxA   | 318 > 272.9   | 2.39e4  | 2.39e4 | 1.0000 | 1.000   | 3.36 | 3.33        | 12.5  | 12.500  | 100.0 |
| 53 | 56     | 13C3-PFHxS   | 401.9 > 79.9  | 5.61e3  | 5.61e3 | 1.0000 | 1.000   | 4.14 | 4.09        | 12.5  | 12.500  | 100.0 |
| 54 | 57     | 13C8-PFOA    | 421.3 > 376   | 2.37e4  | 2.37e4 | 1.0000 | 1.000   | 4.50 | 4.46        | 12.5  | 12.500  | 100.0 |
| 55 | 58     | 13C9-PFNA    | 472.2 > 426.9 | 2.30e4  | 2.30e4 | 1.0000 | 1.000   | 4.94 | 4.90        | 12.5  | 12.500  | 100.0 |
| 56 | 59     | 13C4-PFOS    | 503 > 79.9    | 5.60e3  | 5.60e3 | 1.0000 | 1.000   | 5.02 | 4.97        | 12.5  | 12.500  | 100.0 |
| 57 | 60     | 13C6-PFDA    | 519.1 > 473.7 | 1.33e4  | 1.33e4 | 1.0000 | 1.000   | 5.31 | 5.27        | 12.5  | 12.500  | 100.0 |
| 58 | 61     | 13C7-PFUdA   | 570.1 > 524.8 | 2.16e4  | 2.16e4 | 1.0000 | 1.000   | 5.62 | 5.59        | 12.5  | 12.500  | 100.0 |

50-150  


Dataset: Untitled

Last Altered: Monday, January 15, 2018 14:09:43 Pacific Standard Time  
 Printed: Monday, January 15, 2018 14:11:18 Pacific Standard Time

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_011518.mdb 15 Jan 2018 11:38:30  
 Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-12-18-FULL.cdb 13 Jan 2018 14:58:25

Compound name: PFBA

|    | Name        | ID   | Acq.Date  | Acq.Time |
|----|-------------|--|-----------|----------|
| 1  | 180115M1_3  | IPA  | 15-Jan-18 | 10:52:47 |
| 2  | 180115M1_4  | ST180115M1-1 PFC CS0 18A0808               | 15-Jan-18 | 11:08:28 |
| 3  | 180115M1_5  | IPA  | 15-Jan-18 | 11:19:52 |
| 4  | 180115M1_6  | 1701954-01@5X WURTS_MSPTS_Eff-17121...     | 15-Jan-18 | 11:31:19 |
| 5  | 180115M1_7  | 1701954-02@5X WURTS_Outfall002-171214 ...  | 15-Jan-18 | 11:42:46 |
| 6  | 180115M1_8  | B7L0188-MS1@10X Matrix Spike 0.24896       | 15-Jan-18 | 11:54:15 |
| 7  | 180115M1_9  | B7L0188-MSD1@10X Matrix Spike Dup 0.237... | 15-Jan-18 | 12:06:04 |
| 8  | 180115M1_10 | 1701970-03@10X SA-MW132S-20171214 0....    | 15-Jan-18 | 12:17:55 |
| 9  | 180115M1_11 | 1701970-05@10X SA-MW132I-20171214 0.2...   | 15-Jan-18 | 12:29:46 |
| 10 | 180115M1_12 | IPA  | 15-Jan-18 | 12:41:37 |
| 11 | 180115M1_13 | 1701970-06 FT-PZ459S-20171214 0.25318      | 15-Jan-18 | 12:53:04 |
| 12 | 180115M1_14 | B7L0218-BS1 OPR 0.25                       | 15-Jan-18 | 13:04:31 |
| 13 | 180115M1_15 | B7L0218-BLK1 Method Blank 0.25             | 15-Jan-18 | 13:15:58 |
| 14 | 180115M1_16 | IPA  | 15-Jan-18 | 13:27:32 |
| 15 | 180115M1_17 | ST180115M1-2 PFC CS3 18A0811 ✓             | 15-Jan-18 | 13:39:00 |
| 16 | 180115M1_18 | IPA  | 15-Jan-18 | 13:50:26 |

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\180108M2\180108M2-CRV.qld

Last Altered: Tuesday, January 09, 2018 10:42:03 Pacific Standard Time

Printed: Tuesday, January 09, 2018 10:54:38 Pacific Standard Time

**Compound name: N-EtFOSA**

Coefficient of Determination: R<sup>2</sup> = 0.999796

Calibration curve:  $-6.59411e-005 * x^2 + 0.931369 * x + -0.00776819$

Response type: Internal Std ( Ref 50 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

| # | Name         | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc.  | %Dev  | Conc. Flag | CoD   | CoD Flag | x-excluded |
|---|--------------|----------|-----------|------|-----------|-----------|----------|--------|-------|------------|-------|----------|------------|
| 1 | 1 180108M2_1 | Standard | 1.250     | 6.14 | 100.909   | 14729.266 | 1.028    | 1.1    | -11.1 | NO         | 1.000 | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 2.500     | 6.14 | 273.470   | 14733.124 | 2.784    | 3.0    | 19.9  | NO         | 1.000 | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 5.000     | 6.14 | 385.791   | 14362.178 | 4.029    | 4.3    | -13.3 | NO         | 1.000 | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 10.000    | 6.14 | 829.201   | 13792.104 | 9.018    | 9.7    | -3.0  | NO         | 1.000 | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 25.000    | 6.14 | 2301.489  | 13801.328 | 25.014   | 26.9   | 7.7   | NO         | 1.000 | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 50.000    | 6.14 | 4326.133  | 13949.432 | 46.519   | 50.1   | 0.3   | NO         | 1.000 | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 250.000   | 6.14 | 20342.150 | 13371.583 | 228.195  | 249.4  | -0.2  | NO         | 1.000 | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 500.000   | 6.14 | 41444.328 | 13885.338 | 447.713  | 498.3  | -0.3  | NO         | 1.000 | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 1250.000  | 6.14 | 95642.547 | 13511.020 | 1061.828 | 1250.9 | 0.1   | NO         | 1.000 | NO       | bb         |

**Compound name: PFHxDA**

Coefficient of Determination: R<sup>2</sup> = 0.998105

Calibration curve:  $-0.000711813 * x^2 + 0.785431 * x + 0.0721835$

Response type: Internal Std ( Ref 51 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

| # | Name         | Type     | Std. Conc | RT   | Area      | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD   | CoD Flag | x-excluded |
|---|--------------|----------|-----------|------|-----------|----------|----------|-------|------|------------|-------|----------|------------|
| 1 | 1 180108M2_1 | Standard | 0.250     | 6.52 | 76.406    | 1507.392 | 0.253    | 0.2   | -7.7 | NO         | 0.998 | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 0.500     | 6.52 | 129.194   | 1466.993 | 0.440    | 0.5   | -6.2 | NO         | 0.998 | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 1.000     | 6.52 | 262.892   | 1450.641 | 0.906    | 1.1   | 6.3  | NO         | 0.998 | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 2.000     | 6.51 | 460.339   | 1443.935 | 1.594    | 1.9   | -2.9 | NO         | 0.998 | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 5.000     | 6.51 | 1268.009  | 1407.920 | 4.503    | 5.7   | 13.4 | NO         | 0.998 | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 10.000    | 6.52 | 2262.868  | 1420.926 | 7.963    | 10.1  | 1.4  | NO         | 0.998 | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 50.000    | 6.51 | 11734.237 | 1697.693 | 34.559   | 45.8  | -8.4 | NO         | 0.998 | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 100.000   | 6.52 | 23396.363 | 1569.380 | 74.540   | 104.8 | 4.8  | NO         | 0.998 | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 250.000   | 6.51 | 53821.215 | 1778.498 | 151.311  | 248.5 | -0.6 | NO         | 0.998 | NO       | bb         |

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**Compound name: PFODA**

Coefficient of Determination: R^2 = 0.999722

Calibration curve:  $-0.000640041 * x^2 + 0.818714 * x + 0.044611$

Response type: Internal Std ( Ref 51 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

| # | Name         | Type     | Std. Conc | RT   | Area      | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD   | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|-----------|----------|----------|-------|------|------------|-------|----------|------------|
| 1 | 1 180108M2_1 | Standard | 0.250     | 6.74 | 82.211    | 1507.392 | 0.273    | 0.3   | 11.5 | NO         | 1.000 | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 0.500     | 6.74 | 133.225   | 1466.993 | 0.454    | 0.5   | 0.1  | NO         | 1.000 | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 1.000     | 6.75 | 261.922   | 1450.641 | 0.903    | 1.0   | 4.9  | NO         | 1.000 | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 2.000     | 6.74 | 492.707   | 1443.935 | 1.706    | 2.0   | 1.6  | NO         | 1.000 | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 5.000     | 6.75 | 1172.789  | 1407.920 | 4.165    | 5.1   | 1.1  | NO         | 1.000 | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 10.000    | 6.75 | 2429.749  | 1420.926 | 8.550    | 10.5  | 4.7  | NO         | 1.000 | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 50.000    | 6.74 | 12989.005 | 1697.693 | 38.255   | 48.5  | -3.0 | NO         | 1.000 | NO       | bd         |
| 8 | 8 180108M2_8 | Standard | 100.000   | 6.74 | 23912.545 | 1569.380 | 76.185   | 101.0 | 1.0  | NO         | 1.000 | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 250.000   | 6.74 | 58570.027 | 1778.498 | 164.661  | 249.9 | -0.0 | NO         | 1.000 | NO       | bb         |

**Compound name: N-MeFOSE**

Coefficient of Determination: R^2 = 0.999839

Calibration curve:  $-2.99189e-005 * x^2 + 1.03784 * x + -0.734823$

Response type: Internal Std ( Ref 52 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

| # | Name         | Type     | Std. Conc | RT   | Area       | IS Area   | Response | Conc.  | %Dev  | Conc. Flag | CoD   | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|------------|-----------|----------|--------|-------|------------|-------|----------|------------|
| 1 | 1 180108M2_1 | Standard | 1.250     | 6.32 | 128.432    | 12179.248 | 1.582    | 2.2    | 78.6  | NO         | 1.000 | NO       | bbX        |
| 2 | 2 180108M2_2 | Standard | 2.500     | 6.33 | 156.340    | 14910.501 | 1.573    | 2.2    | -11.1 | NO         | 1.000 | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 5.000     | 6.32 | 392.112    | 12366.465 | 4.756    | 5.3    | 5.8   | NO         | 1.000 | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 10.000    | 6.32 | 738.470    | 11619.512 | 9.533    | 9.9    | -1.0  | NO         | 1.000 | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 25.000    | 6.32 | 2282.889   | 12417.822 | 27.576   | 27.3   | 9.2   | NO         | 1.000 | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 50.000    | 6.33 | 4096.571   | 12376.121 | 49.651   | 48.6   | -2.8  | NO         | 1.000 | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 250.000   | 6.32 | 19974.506  | 11645.093 | 257.291  | 250.4  | 0.2   | NO         | 1.000 | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 500.000   | 6.32 | 44676.801  | 13174.395 | 508.678  | 498.0  | -0.4  | NO         | 1.000 | NO       | bd         |
| 9 | 9 180108M2_9 | Standard | 1250.000  | 6.32 | 109602.195 | 13146.421 | 1250.556 | 1250.8 | 0.1   | NO         | 1.000 | NO       | bb         |

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**Compound name: N-EtFOSE**

Correlation coefficient:  $r = 0.998887$ ,  $r^2 = 0.997775$

Calibration curve:  $1.20231 * x + -0.0116801$

Response type: Internal Std ( Ref 53 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

| # | Name         | Type     | Std. Conc | RT   | Area       | IS Area   | Response | Conc.  | %Dev  | Conc. Flag | CoD   | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|------------|-----------|----------|--------|-------|------------|-------|----------|------------|
| 1 | 1 180108M2_1 | Standard | 1.250     | 6.47 | 149.979    | 11897.201 | 1.891    | 1.6    | 26.6  | NO         | 0.998 | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 2.500     | 6.47 | 256.593    | 13493.461 | 2.852    | 2.4    | -4.7  | NO         | 0.998 | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 5.000     | 6.47 | 383.638    | 11273.771 | 5.104    | 4.3    | -14.9 | NO         | 0.998 | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 10.000    | 6.47 | 809.235    | 11505.149 | 10.551   | 8.8    | -12.2 | NO         | 0.998 | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 25.000    | 6.47 | 2448.322   | 11861.866 | 30.960   | 25.8   | 3.0   | NO         | 0.998 | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 50.000    | 6.47 | 4819.350   | 11866.781 | 60.918   | 50.7   | 1.4   | NO         | 0.998 | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 250.000   | 6.47 | 24506.195  | 11483.792 | 320.097  | 266.2  | 6.5   | NO         | 0.998 | NO       | bd         |
| 8 | 8 180108M2_8 | Standard | 500.000   | 6.47 | 46207.840  | 12454.501 | 556.520  | 462.9  | -7.4  | NO         | 0.998 | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 1250.000  | 6.47 | 123741.906 | 12144.680 | 1528.347 | 1271.2 | 1.7   | NO         | 0.998 | NO       | bb         |

**Compound name: 13C3-PFBA**

Response Factor: 0.872868

RRF SD: 0.0252546, Relative SD: 2.89329

Response type: Internal Std ( Ref 54 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 1.40 | 5421.656 | 6220.474 | 10.895   | 12.5  | -0.1 | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 1.40 | 5148.906 | 6140.374 | 10.482   | 12.0  | -3.9 | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 1.39 | 4932.306 | 5611.970 | 10.986   | 12.6  | 0.7  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 1.38 | 4914.914 | 5582.391 | 11.005   | 12.6  | 0.9  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 1.39 | 4985.861 | 5442.956 | 11.450   | 13.1  | 4.9  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 1.40 | 4878.047 | 5572.749 | 10.942   | 12.5  | 0.3  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 1.39 | 4988.706 | 5669.652 | 10.999   | 12.6  | 0.8  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 1.39 | 5035.588 | 5693.722 | 11.055   | 12.7  | 1.3  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 1.37 | 4836.269 | 5821.862 | 10.384   | 11.9  | -4.8 | NO         |     | NO       | bb         |

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**Compound name: 13C3-PFPeA**

Response Factor: 0.866667

RRF SD: 0.0592006, Relative SD: 6.83083

Response type: Internal Std ( Ref 55 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 2.38 | 6375.317 | 7348.469 | 10.845   | 12.5  | 0.1  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 2.38 | 6104.348 | 7079.163 | 10.779   | 12.4  | -0.5 | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 2.37 | 6019.830 | 6096.192 | 12.343   | 14.2  | 13.9 | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 2.37 | 5682.090 | 6835.402 | 10.391   | 12.0  | -4.1 | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 2.38 | 5783.457 | 6853.771 | 10.548   | 12.2  | -2.6 | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 2.38 | 5870.812 | 7027.212 | 10.443   | 12.0  | -3.6 | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 2.38 | 6069.888 | 7037.016 | 10.782   | 12.4  | -0.5 | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 2.37 | 6035.441 | 6512.142 | 11.585   | 13.4  | 6.9  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 2.37 | 5678.038 | 7253.947 | 9.784    | 11.3  | -9.7 | NO         |     | NO       | bb         |

**Compound name: 13C3-PFBS**

Response Factor: 0.116284

RRF SD: 0.00907118, Relative SD: 7.80091

Response type: Internal Std ( Ref 55 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area    | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|---------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 2.66 | 901.633 | 7348.469 | 1.534    | 13.2  | 5.5   | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 2.66 | 780.723 | 7079.163 | 1.379    | 11.9  | -5.2  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 2.66 | 793.617 | 6096.192 | 1.627    | 14.0  | 12.0  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 2.66 | 719.272 | 6835.402 | 1.315    | 11.3  | -9.5  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 2.66 | 802.128 | 6853.771 | 1.463    | 12.6  | 0.6   | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 2.66 | 734.016 | 7027.212 | 1.306    | 11.2  | -10.2 | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 2.66 | 798.379 | 7037.016 | 1.418    | 12.2  | -2.4  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 2.66 | 827.757 | 6512.142 | 1.589    | 13.7  | 9.3   | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 2.66 | 842.256 | 7253.947 | 1.451    | 12.5  | -0.1  | NO         |     | NO       | bb         |

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**Compound name: 13C2-PFHxA**

Response Factor: 0.655154

RRF SD: 0.0464832, Relative SD: 7.095

Response type: Internal Std ( Ref 55 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 5.000     | 3.16 | 2042.621 | 7348.469 | 3.475    | 5.3   | 6.1   | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 5.000     | 3.15 | 1997.844 | 7079.163 | 3.528    | 5.4   | 7.7   | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 5.000     | 3.15 | 1504.849 | 6096.192 | 3.086    | 4.7   | -5.8  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 5.000     | 3.15 | 1784.322 | 6835.402 | 3.263    | 5.0   | -0.4  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 5.000     | 3.15 | 1566.294 | 6853.771 | 2.857    | 4.4   | -12.8 | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 5.000     | 3.16 | 1928.407 | 7027.212 | 3.430    | 5.2   | 4.7   | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 5.000     | 3.15 | 1816.175 | 7037.016 | 3.226    | 4.9   | -1.5  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 5.000     | 3.15 | 1833.573 | 6512.142 | 3.520    | 5.4   | 7.4   | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 5.000     | 3.15 | 1798.127 | 7253.947 | 3.099    | 4.7   | -5.4  | NO         |     | NO       | bb         |

**Compound name: 13C4-PFHpA**

Response Factor: 0.72221

RRF SD: 0.0479578, Relative SD: 6.64042

Response type: Internal Std ( Ref 55 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 3.79 | 5414.999 | 7348.469 | 9.211    | 12.8  | 2.0  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 3.78 | 5009.782 | 7079.163 | 8.846    | 12.2  | -2.0 | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 3.78 | 4940.721 | 6096.192 | 10.131   | 14.0  | 12.2 | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 3.78 | 4921.333 | 6835.402 | 9.000    | 12.5  | -0.3 | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 3.78 | 4584.273 | 6853.771 | 8.361    | 11.6  | -7.4 | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 3.78 | 5113.555 | 7027.212 | 9.096    | 12.6  | 0.8  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 3.78 | 4882.781 | 7037.016 | 8.673    | 12.0  | -3.9 | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 3.78 | 5040.603 | 6512.142 | 9.675    | 13.4  | 7.2  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 3.78 | 4790.760 | 7253.947 | 8.255    | 11.4  | -8.6 | NO         |     | NO       | bb         |

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**Compound name: 18O2-PFHxS**

Response Factor: 0.348337  
 RRF SD: 0.0333843, Relative SD: 9.5839  
 Response type: Internal Std ( Ref 56 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area    | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|---------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 3.94 | 696.989 | 2051.925 | 4.246    | 12.2  | -2.5  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 3.94 | 653.624 | 1806.012 | 4.524    | 13.0  | 3.9   | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 3.93 | 645.994 | 1618.090 | 4.990    | 14.3  | 14.6  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 3.93 | 565.362 | 1646.690 | 4.292    | 12.3  | -1.4  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 3.94 | 594.729 | 1861.500 | 3.994    | 11.5  | -8.3  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 3.94 | 567.584 | 1908.069 | 3.718    | 10.7  | -14.6 | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 3.94 | 661.442 | 1664.178 | 4.968    | 14.3  | 14.1  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 3.94 | 596.469 | 1756.126 | 4.246    | 12.2  | -2.5  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 3.94 | 632.321 | 1877.353 | 4.210    | 12.1  | -3.3  | NO         |     | NO       | bb         |

**Compound name: 13C2-6:2 FTS**

Response Factor: 0.221652  
 RRF SD: 0.0296583, Relative SD: 13.3806  
 Response type: Internal Std ( Ref 57 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 4.26 | 1588.350 | 7487.993 | 2.651    | 12.0  | -4.3  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 4.26 | 1436.439 | 7840.313 | 2.290    | 10.3  | -17.3 | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 4.25 | 1299.489 | 6180.695 | 2.628    | 11.9  | -5.1  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 4.25 | 1346.764 | 6605.523 | 2.549    | 11.5  | -8.0  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 4.25 | 1310.203 | 6537.998 | 2.505    | 11.3  | -9.6  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 4.25 | 1619.194 | 6575.203 | 3.078    | 13.9  | 11.1  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 4.25 | 1778.281 | 7256.473 | 3.063    | 13.8  | 10.6  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 4.25 | 1812.892 | 6664.305 | 3.400    | 15.3  | 22.7  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 4.26 | 2733.135 | 7094.738 | 4.815    | 21.7  | 73.8  | NO         |     | NO       | bbX        |



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**Compound name: 13C2-PFOA**

Response Factor: 1.02282

RRF SD: 0.041101, Relative SD: 4.01841

Response type: Internal Std ( Ref 57 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 4.31 | 7680.001 | 7487.993 | 12.821   | 12.5  | 0.3  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 4.30 | 7463.181 | 7840.313 | 11.899   | 11.6  | -6.9 | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 4.31 | 6769.833 | 6180.695 | 13.691   | 13.4  | 7.1  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 4.31 | 6848.200 | 6605.523 | 12.959   | 12.7  | 1.4  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 4.30 | 6918.426 | 6537.998 | 13.227   | 12.9  | 3.5  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 4.31 | 6690.408 | 6575.203 | 12.719   | 12.4  | -0.5 | NO         |     | NO       | bd         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 4.31 | 7359.498 | 7256.473 | 12.677   | 12.4  | -0.8 | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 4.30 | 6823.860 | 6664.305 | 12.799   | 12.5  | 0.1  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 4.31 | 6966.522 | 7094.738 | 12.274   | 12.0  | -4.0 | NO         |     | NO       | bb         |

**Compound name: 13C5-PFNA**

Response Factor: 0.915501

RRF SD: 0.026045, Relative SD: 2.84489

Response type: Internal Std ( Ref 58 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 4.75 | 7374.425 | 7921.439 | 11.637   | 12.7  | 1.7  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 4.75 | 6571.582 | 6997.254 | 11.740   | 12.8  | 2.6  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 4.75 | 6323.052 | 7139.774 | 11.070   | 12.1  | -3.3 | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 4.74 | 6955.373 | 7585.688 | 11.461   | 12.5  | 0.2  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 4.74 | 6693.576 | 7506.042 | 11.147   | 12.2  | -2.6 | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 4.75 | 6317.911 | 6670.880 | 11.839   | 12.9  | 3.5  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 4.75 | 6580.284 | 7073.824 | 11.628   | 12.7  | 1.6  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 4.74 | 6517.125 | 7042.556 | 11.567   | 12.6  | 1.1  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 4.75 | 6258.695 | 7173.994 | 10.905   | 11.9  | -4.7 | NO         |     | NO       | bb         |

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**Compound name: 13C8-PFOA**

Response Factor: 0.210434

RRF SD: 0.0135597, Relative SD: 6.44368

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 4.80 | 1673.129 | 8285.728 | 2.524    | 12.0  | -4.0 | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 4.80 | 1705.965 | 7960.388 | 2.679    | 12.7  | 1.8  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 4.80 | 1588.310 | 7324.367 | 2.711    | 12.9  | 3.1  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 4.80 | 1551.102 | 7754.067 | 2.500    | 11.9  | -4.9 | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 4.80 | 1640.265 | 6944.944 | 2.952    | 14.0  | 12.2 | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 4.80 | 1537.842 | 7668.104 | 2.507    | 11.9  | -4.7 | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 4.80 | 1429.944 | 7481.044 | 2.389    | 11.4  | -9.2 | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 4.80 | 1658.699 | 7800.454 | 2.658    | 12.6  | 1.0  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 4.80 | 1525.414 | 6925.354 | 2.753    | 13.1  | 4.7  | NO         |     | NO       | bb         |

**Compound name: 13C8-PFOS**

Response Factor: 1.03511

RRF SD: 0.0915134, Relative SD: 8.84096

Response type: Internal Std ( Ref 59 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 4.84 | 1908.927 | 1717.241 | 13.895   | 13.4  | 7.4   | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 4.83 | 1634.129 | 1604.129 | 12.734   | 12.3  | -1.6  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 4.83 | 1764.111 | 1536.795 | 14.349   | 13.9  | 10.9  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 4.83 | 1611.551 | 1537.464 | 13.102   | 12.7  | 1.3   | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 4.84 | 1605.801 | 1501.549 | 13.368   | 12.9  | 3.3   | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 4.84 | 1798.805 | 1706.105 | 13.179   | 12.7  | 1.9   | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 4.83 | 1738.847 | 1848.306 | 11.760   | 11.4  | -9.1  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 4.83 | 1836.009 | 1702.137 | 13.483   | 13.0  | 4.2   | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 4.83 | 1589.150 | 1877.686 | 10.579   | 10.2  | -18.2 | NO         |     | NO       | bb         |

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**Compound name: 13C2-PFDA**

Response Factor: 1.1421

RRF SD: 0.120268, Relative SD: 10.5305

Response type: Internal Std ( Ref 60 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 5.12 | 7175.434 | 6189.928 | 14.490   | 12.7  | 1.5   | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 5.12 | 5699.016 | 5075.857 | 14.035   | 12.3  | -1.7  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 5.13 | 4936.802 | 4875.687 | 12.657   | 11.1  | -11.3 | NO         |     | NO       | MM         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 5.12 | 5072.973 | 4732.028 | 13.401   | 11.7  | -6.1  | NO         |     | NO       | MM         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 5.12 | 5300.490 | 4306.361 | 15.386   | 13.5  | 7.8   | NO         |     | NO       | MM         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 5.13 | 6361.719 | 4638.074 | 17.145   | 15.0  | 20.1  | NO         |     | NO       | MM         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 5.13 | 5219.420 | 5233.415 | 12.467   | 10.9  | -12.7 | NO         |     | NO       | MM         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 5.12 | 6016.366 | 4883.994 | 15.398   | 13.5  | 7.9   | NO         |     | NO       | MM         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 5.12 | 5995.269 | 5547.928 | 13.508   | 11.8  | -5.4  | NO         |     | NO       | bb         |

**Compound name: 13C2-8:2 FTS**

Response Factor: 0.156561

RRF SD: 0.0239871, Relative SD: 15.3212

Response type: Internal Std ( Ref 55 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 5.10 | 1121.714 | 7348.469 | 1.908    | 12.2  | -2.5  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 5.09 | 1120.403 | 7079.163 | 1.978    | 12.6  | 1.1   | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 5.09 | 1108.064 | 6096.192 | 2.272    | 14.5  | 16.1  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 5.10 | 1186.236 | 6835.402 | 2.169    | 13.9  | 10.8  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 5.09 | 727.336  | 6853.771 | 1.327    | 8.5   | -32.2 | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 5.10 | 1032.019 | 7027.212 | 1.836    | 11.7  | -6.2  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 5.10 | 1094.893 | 7037.016 | 1.945    | 12.4  | -0.6  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 5.09 | 1157.192 | 6512.142 | 2.221    | 14.2  | 13.5  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 5.09 | 1793.465 | 7253.947 | 3.090    | 19.7  | 57.9  | NO         |     | NO       | bbX        |

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**Compound name: d3-N-MeFOSAA**

Response Factor: 0.298942

RRF SD: 0.0166612, Relative SD: 5.57339

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 5.28 | 2179.741 | 8285.728 | 3.288    | 11.0  | -12.0 | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 5.27 | 2347.936 | 7960.388 | 3.687    | 12.3  | -1.3  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 5.28 | 2273.696 | 7324.367 | 3.880    | 13.0  | 3.8   | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 5.27 | 2227.718 | 7754.067 | 3.591    | 12.0  | -3.9  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 5.28 | 2084.842 | 6944.944 | 3.752    | 12.6  | 0.4   | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 5.28 | 2447.242 | 7668.104 | 3.989    | 13.3  | 6.8   | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 5.27 | 2346.581 | 7481.044 | 3.921    | 13.1  | 4.9   | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 5.27 | 2369.292 | 7800.454 | 3.797    | 12.7  | 1.6   | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 5.27 | 2063.598 | 6925.354 | 3.725    | 12.5  | -0.3  | NO         |     | NO       | bb         |

**Compound name: d5-N-EtFOSAA**

Response Factor: 0.369103

RRF SD: 0.0318833, Relative SD: 8.63806

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 5.43 | 3266.731 | 8285.728 | 4.928    | 13.4  | 6.8   | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 5.43 | 2947.923 | 7960.388 | 4.629    | 12.5  | 0.3   | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 5.43 | 3131.900 | 7324.367 | 5.345    | 14.5  | 15.8  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 5.43 | 2854.786 | 7754.067 | 4.602    | 12.5  | -0.3  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 5.43 | 2645.263 | 6944.944 | 4.761    | 12.9  | 3.2   | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 5.43 | 2439.506 | 7668.104 | 3.977    | 10.8  | -13.8 | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 5.43 | 2492.206 | 7481.044 | 4.164    | 11.3  | -9.7  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 5.43 | 2830.896 | 7800.454 | 4.536    | 12.3  | -1.7  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 5.43 | 2538.117 | 6925.354 | 4.581    | 12.4  | -0.7  | NO         |     | NO       | bb         |

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**Compound name: 13C2-PFUdA**

Response Factor: 1.01152

RRF SD: 0.0577659, Relative SD: 5.7108

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|   | # Name       | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 5.45 | 9211.345 | 8285.728 | 13.896   | 13.7  | 9.9  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 5.45 | 7865.505 | 7960.388 | 12.351   | 12.2  | -2.3 | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 5.45 | 7297.886 | 7324.367 | 12.455   | 12.3  | -1.5 | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 5.45 | 7154.166 | 7754.067 | 11.533   | 11.4  | -8.8 | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 5.45 | 7264.995 | 6944.944 | 13.076   | 12.9  | 3.4  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 5.45 | 7337.336 | 7668.104 | 11.961   | 11.8  | -5.4 | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 5.45 | 7658.917 | 7481.044 | 12.797   | 12.7  | 1.2  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 5.44 | 7723.645 | 7800.454 | 12.377   | 12.2  | -2.1 | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 5.45 | 7396.208 | 6925.354 | 13.350   | 13.2  | 5.6  | NO         |     | NO       | bb         |

**Compound name: 13C2-PFDoA**

Response Factor: 0.646979

RRF SD: 0.0522227, Relative SD: 8.07178

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|   | # Name       | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 5.74 | 5809.440 | 8285.728 | 8.764    | 13.5  | 8.4   | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 5.73 | 5204.864 | 7960.388 | 8.173    | 12.6  | 1.1   | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 5.74 | 5167.435 | 7324.367 | 8.819    | 13.6  | 9.0   | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 5.74 | 4729.102 | 7754.067 | 7.624    | 11.8  | -5.7  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 5.74 | 4493.960 | 6944.944 | 8.089    | 12.5  | 0.0   | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 5.74 | 5436.003 | 7668.104 | 8.861    | 13.7  | 9.6   | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 5.73 | 4671.866 | 7481.044 | 7.806    | 12.1  | -3.5  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 5.73 | 4309.212 | 7800.454 | 6.905    | 10.7  | -14.6 | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 5.74 | 4290.298 | 6925.354 | 7.744    | 12.0  | -4.2  | NO         |     | NO       | bb         |

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**Compound name: d3-N-MeFOSA**

Response Factor: 0.109761

RRF SD: 0.0058277, Relative SD: 5.30945

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area      | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|-----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 150.000   | 5.76 | 10736.360 | 8285.728 | 16.197   | 147.6 | -1.6 | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 150.000   | 5.76 | 10176.388 | 7960.388 | 15.980   | 145.6 | -2.9 | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 150.000   | 5.76 | 9669.870  | 7324.367 | 16.503   | 150.4 | 0.2  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 150.000   | 5.76 | 9594.506  | 7754.067 | 15.467   | 140.9 | -6.1 | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 150.000   | 5.76 | 9843.879  | 6944.944 | 17.718   | 161.4 | 7.6  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 150.000   | 5.76 | 9629.046  | 7668.104 | 15.697   | 143.0 | -4.7 | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 150.000   | 5.76 | 9808.305  | 7481.044 | 16.389   | 149.3 | -0.5 | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 150.000   | 5.76 | 10087.503 | 7800.454 | 16.165   | 147.3 | -1.8 | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 150.000   | 5.76 | 10007.245 | 6925.354 | 18.063   | 164.6 | 9.7  | NO         |     | NO       | bb         |

**Compound name: 13C2-PFTeDA**

Response Factor: 0.293668

RRF SD: 0.0280093, Relative SD: 9.53773

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 6.20 | 2658.979 | 8285.728 | 4.011    | 13.7  | 9.3   | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 6.20 | 2105.685 | 7960.388 | 3.307    | 11.3  | -9.9  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 6.20 | 2200.929 | 7324.367 | 3.756    | 12.8  | 2.3   | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 6.20 | 2037.865 | 7754.067 | 3.285    | 11.2  | -10.5 | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 6.20 | 1960.313 | 6944.944 | 3.528    | 12.0  | -3.9  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 6.20 | 2088.984 | 7668.104 | 3.405    | 11.6  | -7.2  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 6.20 | 2546.078 | 7481.044 | 4.254    | 14.5  | 15.9  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 6.20 | 2383.667 | 7800.454 | 3.820    | 13.0  | 4.1   | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 6.20 | 3236.529 | 6925.354 | 5.842    | 19.9  | 59.1  | NO         |     | NO       | bbX        |

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**Compound name: d5-N-ETFOSA**

Response Factor: 0.154563

RRF SD: 0.00728848, Relative SD: 4.71553

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area      | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|-----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 150.000   | 6.15 | 14729.266 | 8285.728 | 22.221   | 143.8 | -4.2 | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 150.000   | 6.16 | 14733.124 | 7960.388 | 23.135   | 149.7 | -0.2 | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 150.000   | 6.15 | 14362.178 | 7324.367 | 24.511   | 158.6 | 5.7  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 150.000   | 6.15 | 13792.104 | 7754.067 | 22.234   | 143.8 | -4.1 | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 150.000   | 6.15 | 13801.328 | 6944.944 | 24.841   | 160.7 | 7.1  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 150.000   | 6.16 | 13949.432 | 7668.104 | 22.739   | 147.1 | -1.9 | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 150.000   | 6.15 | 13371.583 | 7481.044 | 22.342   | 144.6 | -3.6 | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 150.000   | 6.16 | 13885.338 | 7800.454 | 22.251   | 144.0 | -4.0 | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 150.000   | 6.16 | 13511.020 | 6925.354 | 24.387   | 157.8 | 5.2  | NO         |     | NO       | bb         |

**Compound name: 13C2-PFHxDA**

Response Factor: 0.506514

RRF SD: 0.0617694, Relative SD: 12.195

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 5.000     | 6.51 | 1507.392 | 8285.728 | 2.274    | 4.5   | -10.2 | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 5.000     | 6.52 | 1466.993 | 7960.388 | 2.304    | 4.5   | -9.0  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 5.000     | 6.51 | 1450.641 | 7324.367 | 2.476    | 4.9   | -2.2  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 5.000     | 6.51 | 1443.935 | 7754.067 | 2.328    | 4.6   | -8.1  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 5.000     | 6.51 | 1407.920 | 6944.944 | 2.534    | 5.0   | 0.1   | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 5.000     | 6.52 | 1420.926 | 7668.104 | 2.316    | 4.6   | -8.5  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 5.000     | 6.51 | 1697.693 | 7481.044 | 2.837    | 5.6   | 12.0  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 5.000     | 6.51 | 1569.380 | 7800.454 | 2.515    | 5.0   | -0.7  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 5.000     | 6.51 | 1778.498 | 6925.354 | 3.210    | 6.3   | 26.8  | NO         |     | NO       | bb         |

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**Compound name: d7-N-MeFOSE**

Response Factor: 0.13959

RRF SD: 0.0129505, Relative SD: 9.27747

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area      | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|-----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 150.000   | 6.31 | 12179.248 | 8285.728 | 18.374   | 131.6 | -12.2 | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 150.000   | 6.31 | 14910.501 | 7960.388 | 23.414   | 167.7 | 11.8  | NO         |     | NO       | bd         |
| 3 | 3 180108M2_3 | Standard | 150.000   | 6.31 | 12366.465 | 7324.367 | 21.105   | 151.2 | 0.8   | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 150.000   | 6.31 | 11619.512 | 7754.067 | 18.731   | 134.2 | -10.5 | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 150.000   | 6.31 | 12417.822 | 6944.944 | 22.350   | 160.1 | 6.7   | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 150.000   | 6.31 | 12376.121 | 7668.104 | 20.175   | 144.5 | -3.6  | NO         |     | NO       | bd         |
| 7 | 7 180108M2_7 | Standard | 150.000   | 6.31 | 11645.093 | 7481.044 | 19.458   | 139.4 | -7.1  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 150.000   | 6.31 | 13174.395 | 7800.454 | 21.112   | 151.2 | 0.8   | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 150.000   | 6.31 | 13146.421 | 6925.354 | 23.729   | 170.0 | 13.3  | NO         |     | NO       | bb         |

**Compound name: d9-N-EtFOSE**

Response Factor: 0.132359

RRF SD: 0.0090431, Relative SD: 6.83224

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area      | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|-----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 150.000   | 6.46 | 11897.201 | 8285.728 | 17.948   | 135.6 | -9.6 | NO         |     | NO       | bd         |
| 2 | 2 180108M2_2 | Standard | 150.000   | 6.46 | 13493.461 | 7960.388 | 21.188   | 160.1 | 6.7  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 150.000   | 6.46 | 11273.771 | 7324.367 | 19.240   | 145.4 | -3.1 | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 150.000   | 6.46 | 11505.149 | 7754.067 | 18.547   | 140.1 | -6.6 | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 150.000   | 6.46 | 11861.866 | 6944.944 | 21.350   | 161.3 | 7.5  | NO         |     | NO       | bd         |
| 6 | 6 180108M2_6 | Standard | 150.000   | 6.46 | 11866.781 | 7668.104 | 19.344   | 146.2 | -2.6 | NO         |     | NO       | bd         |
| 7 | 7 180108M2_7 | Standard | 150.000   | 6.46 | 11483.792 | 7481.044 | 19.188   | 145.0 | -3.4 | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 150.000   | 6.46 | 12454.501 | 7800.454 | 19.958   | 150.8 | 0.5  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 150.000   | 6.46 | 12144.680 | 6925.354 | 21.921   | 165.6 | 10.4 | NO         |     | NO       | bb         |



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**Compound name: 13C4-PFBA**

Response Factor: 1  
 RRF SD: 0, Relative SD: 0  
 Response type: Internal Std ( Ref 54 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 1.40 | 6220.474 | 6220.474 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 1.39 | 6140.374 | 6140.374 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 1.39 | 5611.970 | 5611.970 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 1.38 | 5582.391 | 5582.391 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 1.38 | 5442.956 | 5442.956 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 1.39 | 5572.749 | 5572.749 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 1.38 | 5669.652 | 5669.652 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 1.39 | 5693.722 | 5693.722 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 1.39 | 5821.862 | 5821.862 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

**Compound name: 13C5-PFHxA**

Response Factor: 1  
 RRF SD: 0, Relative SD: 0  
 Response type: Internal Std ( Ref 55 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 3.16 | 7348.469 | 7348.469 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 3.16 | 7079.163 | 7079.163 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 3.16 | 6096.192 | 6096.192 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 3.16 | 6835.402 | 6835.402 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 3.16 | 6853.771 | 6853.771 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 3.16 | 7027.212 | 7027.212 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 3.16 | 7037.016 | 7037.016 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 3.16 | 6512.142 | 6512.142 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 3.15 | 7253.947 | 7253.947 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

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**Compound name: 13C3-PFHxS**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 56 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 3.94 | 2051.925 | 2051.925 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 3.93 | 1806.012 | 1806.012 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 3.94 | 1618.090 | 1618.090 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 3.93 | 1646.690 | 1646.690 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 3.94 | 1861.500 | 1861.500 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 3.94 | 1908.069 | 1908.069 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 3.94 | 1664.178 | 1664.178 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 3.94 | 1756.126 | 1756.126 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 3.93 | 1877.353 | 1877.353 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

**Compound name: 13C8-PFOA**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 57 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 4.31 | 7487.993 | 7487.993 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 4.31 | 7840.313 | 7840.313 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 4.31 | 6180.695 | 6180.695 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 4.31 | 6605.523 | 6605.523 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 4.31 | 6537.998 | 6537.998 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 4.31 | 6575.203 | 6575.203 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 4.31 | 7256.473 | 7256.473 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 4.31 | 6664.305 | 6664.305 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 4.31 | 7094.738 | 7094.738 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

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**Compound name: 13C9-PFNA**

Response Factor: 1  
 RRF SD: 0, Relative SD: 0  
 Response type: Internal Std ( Ref 58 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 4.75 | 7921.439 | 7921.439 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 4.75 | 6997.254 | 6997.254 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 4.75 | 7139.774 | 7139.774 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 4.75 | 7585.688 | 7585.688 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 4.75 | 7506.042 | 7506.042 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 4.75 | 6670.880 | 6670.880 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 4.75 | 7073.824 | 7073.824 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 4.75 | 7042.556 | 7042.556 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 4.75 | 7173.994 | 7173.994 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

**Compound name: 13C4-PFOS**

Response Factor: 1  
 RRF SD: 0, Relative SD: 0  
 Response type: Internal Std ( Ref 59 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 4.83 | 1717.241 | 1717.241 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 4.83 | 1604.129 | 1604.129 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 4.83 | 1536.795 | 1536.795 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 4.83 | 1537.464 | 1537.464 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 4.84 | 1501.549 | 1501.549 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 4.84 | 1706.105 | 1706.105 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 4.83 | 1848.306 | 1848.306 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 4.83 | 1702.137 | 1702.137 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 4.83 | 1877.686 | 1877.686 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

Dataset: U:\Q4.PRO\results\180108M2\180108M2-CRV.qld

Last Altered: Tuesday, January 09, 2018 10:42:03 Pacific Standard Time  
 Printed: Tuesday, January 09, 2018 10:54:38 Pacific Standard Time

**Compound name: 13C6-PFDA**

Response Factor: 1  
 RRF SD: 0, Relative SD: 0  
 Response type: Internal Std ( Ref 60 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 5.12 | 6189.928 | 6189.928 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 5.12 | 5075.857 | 5075.857 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 5.12 | 4875.687 | 4875.687 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 5.12 | 4732.028 | 4732.028 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 5.12 | 4306.361 | 4306.361 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 5.13 | 4638.074 | 4638.074 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 5.12 | 5233.415 | 5233.415 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 5.12 | 4883.994 | 4883.994 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 5.12 | 5547.928 | 5547.928 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

**Compound name: 13C7-PFUdA**

Response Factor: 1  
 RRF SD: 0, Relative SD: 0  
 Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 5.45 | 8285.728 | 8285.728 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 5.45 | 7960.388 | 7960.388 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 5.45 | 7324.367 | 7324.367 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 5.44 | 7754.067 | 7754.067 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 5.45 | 6944.944 | 6944.944 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 5.45 | 7668.104 | 7668.104 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 5.45 | 7481.044 | 7481.044 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 5.45 | 7800.454 | 7800.454 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 5.45 | 6925.354 | 6925.354 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

Dataset: Untitled

Last Altered: Tuesday, January 09, 2018 11:07:39 Pacific Standard Time

Printed: Tuesday, January 09, 2018 11:16:11 Pacific Standard Time

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_010818.mdb 09 Jan 2018 10:39:49

Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-08-18\_FULL-M2.cdb 09 Jan 2018 11:01:39

Compound name: PFBA

|    | Name        | ID                            | Acq.Date  | Acq.Time |
|----|-------------|-------------------------------|-----------|----------|
| 1  | 180108M2_1  | ST180108M2-1 PFC CS-2 18A0806 | 09-Jan-18 | 00:36:40 |
| 2  | 180108M2_2  | ST180108M2-2 PFC CS-1 18A0807 | 09-Jan-18 | 00:47:55 |
| 3  | 180108M2_3  | ST180108M2-3 PFC CS0 18A0808  | 09-Jan-18 | 00:59:05 |
| 4  | 180108M2_4  | ST180108M2-4 PFC CS1 18A0809  | 09-Jan-18 | 01:10:16 |
| 5  | 180108M2_5  | ST180108M2-5 PFC CS2 18A0810  | 09-Jan-18 | 01:21:26 |
| 6  | 180108M2_6  | ST180108M2-6 PFC CS3 18A0811  | 09-Jan-18 | 01:32:37 |
| 7  | 180108M2_7  | ST180108M2-7 PFC CS4 18A0812  | 09-Jan-18 | 01:43:47 |
| 8  | 180108M2_8  | ST180108M2-8 PFC CS5 18A0813  | 09-Jan-18 | 01:54:58 |
| 9  | 180108M2_9  | ST180108M2-9 PFC CS6 18A0814  | 09-Jan-18 | 02:06:09 |
| 10 | 180108M2_10 | ST180108M2-10 PFC CS7 18A0815 | 09-Jan-18 | 02:17:20 |
| 11 | 180108M2_11 | IPA                           | 09-Jan-18 | 02:28:31 |
| 12 | 180108M2_12 | ICV180108M2-1 PFC ICV 18A0805 | 09-Jan-18 | 02:39:41 |

Dataset: U:\Q4.PRO\results\180108M2\180108M2-12.qld

Ⓐ No SS available.

Last Altered: Tuesday, January 09, 2018 11:37:16 Pacific Standard Time  
Printed: Tuesday, January 09, 2018 11:37:42 Pacific Standard Time

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_010818.mdb 09 Jan 2018 10:39:49  
Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-08-18\_FULL-M2.cdb 09 Jan 2018 11:01:39

AC  
1/9/18  
JHA  
01/09/2018

Name: 180108M2\_12, Date: 09-Jan-2018, Time: 02:39:41, ID: ICV180108M2-1 PFC ICV 18A0805, Description: ICV180108M2-1 PFC ICV 18A0805

| #  | Name             | Trace         | Area   | IS Area | wt/vol | RRF   | Pred.RT | RT   | y Axis Resp. | Conc.  | %Rec  |
|----|------------------|---------------|--------|---------|--------|-------|---------|------|--------------|--------|-------|
| 1  | 1 PFBA           | 213.0 > 168.8 | 4.51e3 | 4.74e3  | 1.0000 |       | 1.38    | 1.39 | 11.9         | 9.698  | 97.0  |
| 2  | 2 PFPeA          | 263.1 > 218.9 | 4.24e3 | 5.83e3  | 1.0000 |       | 2.37    | 2.38 | 9.09         | 8.742  | 87.4  |
| 3  | 3 PFBS           | 299.0 > 79.7  | 9.02e2 | 7.32e2  | 1.0000 |       | 2.66    | 2.66 | 15.4         | 8.529  | 85.3  |
| 4  | 4 PFHxA          | 313.2 > 268.9 | 5.88e3 | 1.85e3  | 1.0000 |       | 3.15    | 3.16 | 15.9         | 8.857  | 88.6  |
| 5  | 5 PFHpA          | 363.0 > 318.9 | 5.02e3 | 4.94e3  | 1.0000 |       | 3.78    | 3.78 | 12.7         | 9.631  | 96.3  |
| 6  | 6 L-PFHxS        | 398.9 > 79.6  | 6.83e2 | 6.46e2  | 1.0000 |       | 3.94    | 3.94 | 13.2         | 7.072  | 70.7  |
| 7  | 8 6:2 FTS        | 427.1 > 407   | 1.17e3 | 6.46e2  | 1.0000 |       | 4.25    | 4.26 | 22.6         | 7.863  | 78.6  |
| 8  | 9 L-PFOA         | 413 > 368.7   | 4.98e3 | 5.93e3  | 1.0000 |       | 4.31    | 4.31 | 10.5         | 9.564  | 95.6  |
| 9  | 11 PFHpS         | 449 > 80.0    | 1.32e3 | 5.93e3  | 1.0000 |       | 4.42    | 4.42 | 2.78         | 9.822  | 98.2  |
| 10 | 12 PFNA          | 463.0 > 418.8 | 6.11e3 | 6.46e3  | 1.0000 |       | 4.81    | 4.75 | 11.8         | 9.367  | 93.7  |
| 11 | 13 PFOSA         | 498.1 > 77.8  | 1.29e3 | 1.57e3  | 1.0000 |       | 4.87    | 4.80 | 10.3         | 9.969  | 99.7  |
| 12 | 14 L-PFOS        | 499 > 79.9    | 1.17e3 | 1.78e3  | 1.0000 |       | 4.89    | 4.84 | 8.21         | 8.642  | 86.4  |
| 13 | 16 PFDA          | 513 > 468.8   | 6.22e3 | 6.37e3  | 1.0000 |       | 5.18    | 5.12 | 12.2         | 8.443  | 84.4  |
| 14 | 17 8:2 FTS       | 527 > 506.9   | 1.43e3 | 6.37e3  | 1.0000 |       | 5.15    | 5.10 | 2.81         | 8.611  | 86.1  |
| 15 | 18 N-MeFOSAA     | 570.1 > 419   | 2.56e3 | 2.27e3  | 1.0000 |       | 5.32    | 5.28 | 14.1         | 9.334  | 93.3  |
| 16 | 19 N-EtFOSAA     | 584.2 > 419   | 2.30e3 | 3.02e3  | 1.0000 |       | 5.48    | 5.44 | 9.52         | 8.560  | 85.6  |
| 17 | 20 PFUdA         | 563.0 > 518.9 | 6.63e3 | 6.68e3  | 1.0000 |       | 5.50    | 5.45 | 12.4         | 10.852 | 108.5 |
| 18 | 21 PFDS          | 598.8 > 80    | 1.55e3 | 6.68e3  | 1.0000 |       | 5.54    | 5.50 | 2.89         | 10.132 | 101.3 |
| 19 | 22 PFDoA         | 612.9 > 569.0 | 8.01e3 | 5.05e3  | 1.0000 |       | 5.77    | 5.74 | 19.8         | 8.940  | 89.4  |
| 20 | 23 N-MeFOSA      | 512.1 > 168.9 |        | 9.16e3  | 1.0000 |       | 5.80    |      |              |        | Ⓐ     |
| 21 | 24 PFTrDA        | 662.9 > 618.9 | 8.25e3 | 5.05e3  | 1.0000 |       | 6.00    | 5.99 | 20.4         | 8.526  | 85.3  |
| 22 | 25 PFTeDA        | 712.9 > 668.8 | 4.29e3 | 2.18e3  | 1.0000 |       | 6.22    | 6.20 | 24.7         | 8.783  | 87.8  |
| 23 | 26 N-EtFOSA      | 526.1 > 168.9 |        | 1.37e4  | 1.0000 |       | 6.17    |      |              |        | Ⓐ     |
| 24 | 27 PFHxDA        | 813.1 > 768.6 |        | 1.25e3  | 1.0000 |       | 6.53    |      |              |        | Ⓐ     |
| 25 | 28 PFODA         | 913.1 > 868.8 |        | 1.25e3  | 1.0000 |       | 6.74    |      |              |        | Ⓐ     |
| 26 | 29 N-MeFOSE      | 616.1 > 58.9  |        | 1.15e4  | 1.0000 |       | 6.27    |      |              |        | Ⓐ     |
| 27 | 30 N-EtFOSE      | 630.1 > 58.9  |        | 1.10e4  | 1.0000 |       | 6.43    |      |              |        | Ⓐ     |
| 28 | 31 13C3-PFBA     | 216.1 > 171.8 | 4.74e3 | 5.23e3  | 1.0000 | 0.873 | 1.38    | 1.39 | 11.3         | 12.961 | 103.7 |
| 29 | 32 13C3-PFPeA    | 266. > 221.8  | 5.83e3 | 6.95e3  | 1.0000 | 0.867 | 2.37    | 2.38 | 10.5         | 12.085 | 96.7  |
| 30 | 33 13C3-PFBS     | 302. > 98.8   | 7.32e2 | 6.95e3  | 1.0000 | 0.116 | 2.77    | 2.66 | 1.32         | 11.313 | 90.5  |
| 31 | Work 3113270197A | 315 > 269.8   | 1.85e3 | 6.95e3  | 1.0000 | 0.655 | 3.15    | 3.16 | 3.33         | 5.080  | 101.6 |

70-130

50-150

Dataset: U:\Q4.PRO\results\180108M2\180108M2-12.qld

Last Altered: Tuesday, January 09, 2018 11:37:16 Pacific Standard Time  
Printed: Tuesday, January 09, 2018 11:37:42 Pacific Standard Time

Name: 180108M2\_12, Date: 09-Jan-2018, Time: 02:39:41, ID: ICV180108M2-1 PFC ICV 18A0805, Description: ICV180108M2-1 PFC ICV 18A0805

|    | # Name          | Trace         | Area   | IS Area | wt/vol | RRF   | Pred.RT | RT   | y Axis Resp. | Conc.   | %Rec  |
|----|-----------------|---------------|--------|---------|--------|-------|---------|------|--------------|---------|-------|
| 32 | 35 13C4-PFHpA   | 367.2 > 321.8 | 4.94e3 | 6.95e3  | 1.0000 | 0.722 | 3.78    | 3.78 | 8.87         | 12.286  | 98.3  |
| 33 | 36 18O2-PFHxS   | 403.0 > 102.6 | 6.46e2 | 1.59e3  | 1.0000 | 0.348 | 3.94    | 3.94 | 5.08         | 14.587  | 116.7 |
| 34 | 37 13C2-6:2 FTS | 429.1 > 408.9 | 1.55e3 | 6.53e3  | 1.0000 | 0.222 | 4.25    | 4.25 | 2.97         | 13.395  | 107.2 |
| 35 | 38 13C2-PFOA    | 414.9 > 369.7 | 5.93e3 | 6.53e3  | 1.0000 | 1.023 | 4.31    | 4.31 | 11.3         | 11.092  | 88.7  |
| 36 | 39 13C5-PFNA    | 468.2 > 422.9 | 6.46e3 | 6.53e3  | 1.0000 | 0.916 | 4.81    | 4.75 | 12.4         | 13.518  | 108.1 |
| 37 | 40 13C8-PFOA    | 506.1 > 77.7  | 1.57e3 | 7.15e3  | 1.0000 | 0.210 | 4.87    | 4.80 | 2.74         | 13.042  | 104.3 |
| 38 | 41 13C8-PFOS    | 507.0 > 79.9  | 1.78e3 | 1.81e3  | 1.0000 | 1.035 | 4.89    | 4.83 | 12.2         | 11.828  | 94.6  |
| 39 | 42 13C2-PFDA    | 515.1 > 469.9 | 6.37e3 | 5.31e3  | 1.0000 | 1.142 | 5.18    | 5.13 | 15.0         | 13.125  | 105.0 |
| 40 | 43 13C2-8:2 FTS | 529.1 > 508.7 | 8.00e2 | 6.95e3  | 1.0000 | 0.157 | 5.15    | 5.10 | 1.44         | 9.186   | 73.5  |
| 41 | 44 d3-N-MeFOSAA | 573.3 > 419   | 2.27e3 | 7.15e3  | 1.0000 | 0.299 | 5.32    | 5.28 | 3.97         | 13.272  | 106.2 |
| 42 | 45 d5-N-EtFOSAA | 589.3 > 419   | 3.02e3 | 7.15e3  | 1.0000 | 0.369 | 5.47    | 5.43 | 5.28         | 14.308  | 114.5 |
| 43 | 46 13C2-PFUdA   | 565 > 519.8   | 6.68e3 | 7.15e3  | 1.0000 | 1.012 | 5.49    | 5.45 | 11.7         | 11.537  | 92.3  |
| 44 | 47 13C2-PFDoA   | 615.0 > 569.7 | 5.05e3 | 7.15e3  | 1.0000 | 0.647 | 5.77    | 5.74 | 8.82         | 13.639  | 109.1 |
| 45 | 48 d3-N-MeFOSA  | 515.2 > 168.9 | 9.16e3 | 7.15e3  | 1.0000 | 0.110 | 5.83    | 5.76 | 16.0         | 145.813 | 97.2  |
| 46 | 49 13C2-PFTeDA  | 714.8 > 669.6 | 2.18e3 | 7.15e3  | 1.0000 | 0.294 | 6.22    | 6.20 | 3.80         | 12.942  | 103.5 |
| 47 | 50 d5-N-ETFOSA  | 531.1 > 168.9 | 1.37e4 | 7.15e3  | 1.0000 | 0.155 | 6.18    | 6.16 | 23.9         | 154.534 | 103.0 |
| 48 | 51 13C2-PFHxDA  | 815 > 769.7   | 1.25e3 | 7.15e3  | 1.0000 | 0.507 | 6.53    | 6.52 | 2.19         | 4.322   | 86.4  |
| 49 | 52 d7-N-MeFOSE  | 623.1 > 58.9  | 1.15e4 | 7.15e3  | 1.0000 | 0.140 | 6.27    | 6.31 | 20.0         | 143.315 | 95.5  |
| 50 | 53 d9-N-EtFOSE  | 639.2 > 58.8  | 1.10e4 | 7.15e3  | 1.0000 | 0.132 | 6.42    | 6.46 | 19.2         | 144.972 | 96.6  |
| 51 | 54 13C4-PFBA    | 217. > 171.8  | 5.23e3 | 5.23e3  | 1.0000 | 1.000 | 1.38    | 1.39 | 12.5         | 12.500  | 100.0 |
| 52 | 55 13C5-PFHxA   | 318 > 272.9   | 6.95e3 | 6.95e3  | 1.0000 | 1.000 | 3.15    | 3.16 | 12.5         | 12.500  | 100.0 |
| 53 | 56 13C3-PFHxS   | 401.9 > 79.9  | 1.59e3 | 1.59e3  | 1.0000 | 1.000 | 4.02    | 3.94 | 12.5         | 12.500  | 100.0 |
| 54 | 57 13C8-PFOA    | 421.3 > 376   | 6.53e3 | 6.53e3  | 1.0000 | 1.000 | 4.38    | 4.31 | 12.5         | 12.500  | 100.0 |
| 55 | 58 13C9-PFNA    | 472.2 > 426.9 | 6.53e3 | 6.53e3  | 1.0000 | 1.000 | 4.81    | 4.75 | 12.5         | 12.500  | 100.0 |
| 56 | 59 13C4-PFOS    | 503 > 79.9    | 1.81e3 | 1.81e3  | 1.0000 | 1.000 | 4.89    | 4.83 | 12.5         | 12.500  | 100.0 |
| 57 | 60 13C6-PFDA    | 519.1 > 473.7 | 5.31e3 | 5.31e3  | 1.0000 | 1.000 | 5.18    | 5.12 | 12.5         | 12.500  | 100.0 |
| 58 | 61 13C7-PFUdA   | 570.1 > 524.8 | 7.15e3 | 7.15e3  | 1.0000 | 1.000 | 5.49    | 5.45 | 12.5         | 12.500  | 100.0 |

50-150  
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Dataset: U:\Q4.PRO\results\180112M3\180112M3\_crv.qld

Last Altered: Saturday, January 13, 2018 14:58:25 Pacific Standard Time

Printed: Saturday, January 13, 2018 17:05:37 Pacific Standard Time

**Compound name: N-EtFOSAA**

Coefficient of Determination:  $R^2 = 0.999492$

Calibration curve:  $-0.000230523 * x^2 + 1.07268 * x + -0.0254089$

Response type: Internal Std ( Ref 45 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

| #  | Name           | Type     | Std. Conc | RT   | Area       | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD   | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|------------|----------|----------|-------|-------|------------|-------|----------|------------|
| 1  | 1 180112M3_1   | Standard | 0.250     | 5.32 | 88.409     | 5593.976 | 0.198    | 0.2   | -16.9 | NO         | 0.999 | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 0.500     | 5.33 | 195.796    | 4492.496 | 0.545    | 0.5   | 6.3   | NO         | 0.999 | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 1.000     | 5.33 | 486.260    | 5478.088 | 1.110    | 1.1   | 5.8   | NO         | 0.999 | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 2.000     | 5.33 | 703.173    | 4411.942 | 1.992    | 1.9   | -5.9  | NO         | 0.999 | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 5.000     | 5.33 | 2171.914   | 5054.803 | 5.371    | 5.0   | 0.7   | NO         | 0.999 | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 10.000    | 5.33 | 4406.764   | 5386.214 | 10.227   | 9.6   | -4.2  | NO         | 0.999 | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 50.000    | 5.33 | 20422.609  | 4474.004 | 57.059   | 53.8  | 7.7   | NO         | 0.999 | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 100.000   | 5.33 | 40212.152  | 4899.659 | 102.589  | 97.7  | -2.3  | NO         | 0.999 | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 250.000   | 5.33 | 94647.492  | 4709.659 | 251.206  | 247.4 | -1.1  | NO         | 0.999 | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 500.000   | 5.33 | 180547.938 | 4701.503 | 480.027  | 501.6 | 0.3   | NO         | 0.999 | NO       | bb         |

**Compound name: PFUdA**

Coefficient of Determination:  $R^2 = 0.999551$

Calibration curve:  $-0.000301547 * x^2 + 1.14216 * x + 0.13346$

Response type: Internal Std ( Ref 46 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

| #  | Name           | Type     | Std. Conc | RT   | Area       | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD   | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|------------|-----------|----------|-------|-------|------------|-------|----------|------------|
| 1  | 1 180112M3_1   | Standard | 0.250     | 5.34 | 406.770    | 14971.105 | 0.340    | 0.2   | -27.8 | NO         | 1.000 | NO       | bbX        |
| 2  | 2 180112M3_2   | Standard | 0.500     | 5.35 | 560.950    | 11016.060 | 0.637    | 0.4   | -11.9 | NO         | 1.000 | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 1.000     | 5.35 | 1154.768   | 11092.744 | 1.301    | 1.0   | 2.3   | NO         | 1.000 | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 2.000     | 5.35 | 2040.896   | 10221.989 | 2.496    | 2.1   | 3.5   | NO         | 1.000 | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 5.000     | 5.35 | 5931.341   | 12021.561 | 6.167    | 5.3   | 5.8   | NO         | 1.000 | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 10.000    | 5.35 | 10395.389  | 11655.509 | 11.149   | 9.7   | -3.3  | NO         | 1.000 | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 50.000    | 5.35 | 47874.348  | 9931.740  | 60.254   | 53.4  | 6.8   | NO         | 1.000 | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 100.000   | 5.35 | 95397.719  | 10964.943 | 108.753  | 97.6  | -2.4  | NO         | 1.000 | NO       | MM         |
| 9  | 9 180112M3_9   | Standard | 250.000   | 5.35 | 211531.391 | 10008.643 | 264.186  | 247.3 | -1.1  | NO         | 1.000 | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 500.000   | 5.35 | 425979.938 | 10707.508 | 497.291  | 501.7 | 0.3   | NO         | 1.000 | NO       | bb         |



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**Compound name: PFDS**

Coefficient of Determination: R<sup>2</sup> = 0.992543  
 Calibration curve: -0.000158131 \* x<sup>2</sup> + 0.337303 \* x + -0.0184942  
 Response type: Internal Std ( Ref 46 ), Area \* ( IS Conc. / IS Area )  
 Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

| #  | Name           | Type     | Std. Conc | RT   | Area       | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD   | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|------------|-----------|----------|-------|-------|------------|-------|----------|------------|
| 1  | 1 180112M3_1   | Standard | 0.250     | 5.39 | 93.785     | 14971.105 | 0.078    | 0.3   | 14.8  | NO         | 0.993 | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 0.500     | 5.40 | 127.595    | 11016.060 | 0.145    | 0.5   | -3.2  | NO         | 0.993 | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 1.000     | 5.40 | 280.951    | 11092.744 | 0.317    | 1.0   | -0.6  | NO         | 0.993 | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 2.000     | 5.40 | 555.113    | 10221.989 | 0.679    | 2.1   | 3.5   | NO         | 0.993 | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 5.000     | 5.40 | 1460.081   | 12021.561 | 1.518    | 4.6   | -8.7  | NO         | 0.993 | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 10.000    | 5.40 | 3044.137   | 11655.509 | 3.265    | 9.8   | -2.2  | NO         | 0.993 | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 50.000    | 5.40 | 13747.923  | 9931.740  | 17.303   | 52.7  | 5.3   | NO         | 0.993 | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 100.000   | 5.40 | 23488.068  | 10964.943 | 26.776   | 82.6  | -17.4 | NO         | 0.993 | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 250.000   | 5.40 | 65524.613  | 10008.643 | 81.835   | 279.2 | 11.7  | NO         | 0.993 | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 500.000   | 5.40 | 108260.094 | 10707.508 | 126.383  | 485.0 | -3.0  | NO         | 0.993 | NO       | bb         |

**Compound name: PFDoA**

Coefficient of Determination: R<sup>2</sup> = 0.999183  
 Calibration curve: -0.000455725 \* x<sup>2</sup> + 2.46304 \* x + -0.336737  
 Response type: Internal Std ( Ref 47 ), Area \* ( IS Conc. / IS Area )  
 Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

| #  | Name           | Type     | Std. Conc | RT   | Area       | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD   | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|------------|-----------|----------|-------|-------|------------|-------|----------|------------|
| 1  | 1 180112M3_1   | Standard | 0.250     | 5.63 | 484.417    | 11368.299 | 0.533    | 0.4   | 41.2  | NO         | 0.999 | NO       | MMX        |
| 2  | 2 180112M3_2   | Standard | 0.500     | 5.63 | 588.960    | 7004.138  | 1.051    | 0.6   | 12.7  | NO         | 0.999 | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 1.000     | 5.63 | 1196.356   | 6625.417  | 2.257    | 1.1   | 5.3   | NO         | 0.999 | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 2.000     | 5.63 | 1881.403   | 5781.125  | 4.068    | 1.8   | -10.6 | NO         | 0.999 | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 5.000     | 5.63 | 5375.239   | 5662.008  | 11.867   | 5.0   | -0.8  | NO         | 0.999 | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 10.000    | 5.63 | 12806.919  | 7602.770  | 21.056   | 8.7   | -13.0 | NO         | 0.999 | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 50.000    | 5.63 | 63526.941  | 6171.370  | 128.673  | 52.9  | 5.8   | NO         | 0.999 | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 100.000   | 5.63 | 111633.664 | 5619.151  | 248.333  | 102.9 | 2.9   | NO         | 0.999 | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 250.000   | 5.63 | 256413.719 | 5621.278  | 570.186  | 242.5 | -3.0  | NO         | 0.999 | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 500.000   | 5.63 | 535280.250 | 5954.897  | 1123.614 | 503.2 | 0.6   | NO         | 0.999 | NO       | bb         |

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**Compound name: N-MeFOSA**

Correlation coefficient:  $r = 0.998441$ ,  $r^2 = 0.996885$

Calibration curve:  $0.880263 * x + 0.418615$

Response type: Internal Std ( Ref 48 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

| #  | Name           | Type     | Std. Conc | RT   | Area       | IS Area   | Response | Conc.  | %Dev  | Conc. Flag | CoD   | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|------------|-----------|----------|--------|-------|------------|-------|----------|------------|
| 1  | 1 180112M3_1   | Standard | 1.250     | 5.72 | 211.369    | 19479.512 | 1.628    | 1.4    | 9.9   | NO         | 0.997 | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 2.500     | 5.73 | 228.556    | 17037.010 | 2.012    | 1.8    | -27.6 | NO         | 0.997 | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 5.000     | 5.73 | 570.397    | 17039.148 | 5.021    | 5.2    | 4.6   | NO         | 0.997 | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 10.000    | 5.73 | 1042.466   | 16417.920 | 9.524    | 10.3   | 3.4   | NO         | 0.997 | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 25.000    | 5.73 | 2863.614   | 16425.873 | 26.150   | 29.2   | 16.9  | NO         | 0.997 | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 50.000    | 5.73 | 6178.347   | 18426.049 | 50.296   | 56.7   | 13.3  | NO         | 0.997 | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 250.000   | 5.73 | 28310.555  | 17159.449 | 247.478  | 280.7  | 12.3  | NO         | 0.997 | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 500.000   | 5.73 | 53701.023  | 17133.240 | 470.148  | 533.6  | 6.7   | NO         | 0.997 | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 1250.000  | 5.73 | 123756.859 | 16374.768 | 1133.667 | 1287.4 | 3.0   | NO         | 0.997 | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 2500.000  | 5.73 | 239416.109 | 17085.115 | 2101.971 | 2387.4 | -4.5  | NO         | 0.997 | NO       | bb         |

**Compound name: PFTTrDA**

Coefficient of Determination:  $R^2 = 0.997638$

Calibration curve:  $-0.000238393 * x^2 + 2.10003 * x + 0.366519$

Response type: Internal Std ( Ref 47 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

| #  | Name           | Type     | Std. Conc | RT   | Area       | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD   | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|------------|-----------|----------|-------|-------|------------|-------|----------|------------|
| 1  | 1 180112M3_1   | Standard | 0.250     | 5.87 | 521.806    | 11368.299 | 0.574    | 0.1   | -60.5 | NO         | 0.998 | NO       | bbX        |
| 2  | 2 180112M3_2   | Standard | 0.500     | 5.88 | 636.420    | 7004.138  | 1.136    | 0.4   | -26.7 | NO         | 0.998 | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 1.000     | 5.88 | 1218.605   | 6625.417  | 2.299    | 0.9   | -8.0  | NO         | 0.998 | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 2.000     | 5.88 | 2277.500   | 5781.125  | 4.924    | 2.2   | 8.5   | NO         | 0.998 | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 5.000     | 5.88 | 6127.686   | 5662.008  | 13.528   | 6.3   | 25.4  | NO         | 0.998 | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 10.000    | 5.88 | 11969.368  | 7602.770  | 19.679   | 9.2   | -7.9  | NO         | 0.998 | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 50.000    | 5.88 | 57474.207  | 6171.370  | 116.413  | 55.6  | 11.2  | NO         | 0.998 | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 100.000   | 5.88 | 95364.172  | 5619.151  | 212.141  | 102.0 | 2.0   | NO         | 0.998 | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 250.000   | 5.88 | 216321.188 | 5621.278  | 481.032  | 235.2 | -5.9  | NO         | 0.998 | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 500.000   | 5.88 | 478066.719 | 5954.897  | 1003.516 | 506.8 | 1.4   | NO         | 0.998 | NO       | bb         |

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**Compound name: PFTeDA**

Coefficient of Determination: R<sup>2</sup> = 0.998914

Calibration curve: -0.00156751 \* x<sup>2</sup> + 2.14848 \* x + 0.288262

Response type: Internal Std ( Ref 49 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

|    | # Name         | Type     | Std. Conc | RT   | Area       | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD   | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|------------|----------|----------|-------|-------|------------|-------|----------|------------|
| 1  | 1 180112M3_1   | Standard | 0.250     | 6.09 | 273.642    | 4505.702 | 0.759    | 0.2   | -12.3 | NO         | 0.999 | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 0.500     | 6.10 | 321.302    | 3152.279 | 1.274    | 0.5   | -8.2  | NO         | 0.999 | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 1.000     | 6.10 | 546.562    | 2846.668 | 2.400    | 1.0   | -1.6  | NO         | 0.999 | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 2.000     | 6.10 | 1331.939   | 3355.262 | 4.962    | 2.2   | 8.9   | NO         | 0.999 | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 5.000     | 6.10 | 2344.534   | 2552.797 | 11.480   | 5.2   | 4.6   | NO         | 0.999 | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 10.000    | 6.10 | 6704.581   | 3714.001 | 22.565   | 10.4  | 4.5   | NO         | 0.999 | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 50.000    | 6.10 | 28292.648  | 3143.137 | 112.518  | 54.4  | 8.8   | NO         | 0.999 | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 100.000   | 6.09 | 58266.109  | 3747.025 | 194.375  | 97.2  | -2.8  | NO         | 0.999 | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 250.000   | 6.10 | 98859.508  | 2882.788 | 428.663  | 242.2 | -3.1  | NO         | 0.999 | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 500.000   | 6.10 | 211633.875 | 3844.197 | 688.160  | 509.7 | 1.9   | NO         | 0.999 | NO       | bb         |

**Compound name: N-EtFOSA**

Coefficient of Determination: R<sup>2</sup> = 0.999922

Calibration curve: -3.07456e-005 \* x<sup>2</sup> + 0.896595 \* x + 0.0665512

Response type: Internal Std ( Ref 50 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

|    | # Name         | Type     | Std. Conc | RT   | Area       | IS Area   | Response | Conc.  | %Dev | Conc. Flag | CoD   | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|------------|-----------|----------|--------|------|------------|-------|----------|------------|
| 1  | 1 180112M3_1   | Standard | 1.250     | 6.11 | 188.158    | 25249.453 | 1.118    | 1.2    | -6.2 | NO         | 1.000 | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 2.500     | 6.13 | 386.230    | 25479.150 | 2.274    | 2.5    | -1.5 | NO         | 1.000 | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 5.000     | 6.12 | 801.614    | 27084.520 | 4.440    | 4.9    | -2.4 | NO         | 1.000 | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 10.000    | 6.13 | 1582.103   | 25391.936 | 9.346    | 10.4   | 3.5  | NO         | 1.000 | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 25.000    | 6.12 | 4145.951   | 25944.201 | 23.970   | 26.7   | 6.7  | NO         | 1.000 | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 50.000    | 6.12 | 8467.227   | 28099.900 | 45.199   | 50.4   | 0.8  | NO         | 1.000 | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 250.000   | 6.12 | 38352.133  | 25857.027 | 222.486  | 250.2  | 0.1  | NO         | 1.000 | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 500.000   | 6.12 | 73441.539  | 25402.877 | 433.661  | 491.9  | -1.6 | NO         | 1.000 | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 1250.000  | 6.13 | 164267.156 | 22820.889 | 1079.716 | 1258.5 | 0.7  | NO         | 1.000 | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 2500.000  | 6.13 | 310595.063 | 22756.643 | 2047.282 | 2497.2 | -0.1 | NO         | 1.000 | NO       | bb         |

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**Compound name: PFHxDA**

Coefficient of Determination:  $R^2 = 0.999401$

Calibration curve:  $-0.00147665 * x^2 + 0.888378 * x + 0.124653$

Response type: Internal Std ( Ref 51 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

|    | # Name         | Type     | Std. Conc | RT   | Area       | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD   | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|------------|----------|----------|-------|-------|------------|-------|----------|------------|
| 1  | 1 180112M3_1   | Standard | 0.250     | 6.42 | 175.637    | 2293.444 | 0.383    | 0.3   | 16.3  | NO         | 0.999 | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 0.500     | 6.43 | 253.814    | 2548.129 | 0.498    | 0.4   | -15.9 | NO         | 0.999 | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 1.000     | 6.43 | 481.510    | 2480.352 | 0.971    | 1.0   | -4.6  | NO         | 0.999 | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 2.000     | 6.43 | 926.169    | 2311.516 | 2.003    | 2.1   | 6.1   | NO         | 0.999 | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 5.000     | 6.43 | 2359.668   | 2625.801 | 4.493    | 5.0   | -0.8  | NO         | 0.999 | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 10.000    | 6.43 | 4549.403   | 2562.900 | 8.875    | 10.0  | 0.2   | NO         | 0.999 | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 50.000    | 6.43 | 19775.377  | 2506.577 | 39.447   | 48.1  | -3.8  | NO         | 0.999 | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 100.000   | 6.43 | 42838.859  | 2816.444 | 76.051   | 103.2 | 3.2   | NO         | 0.999 | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 250.000   | 6.43 | 80567.820  | 3111.526 | 129.467  | 247.0 | -1.2  | NO         | 0.999 | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 500.000   | 6.43 | 162755.172 | 4067.885 | 200.049  |       |       | NO         | 0.999 | NO       | bbXI       |

**Compound name: PFODA**

Coefficient of Determination:  $R^2 = 0.998942$

Calibration curve:  $-0.00071601 * x^2 + 0.799547 * x + 0.0561624$

Response type: Internal Std ( Ref 51 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

|    | # Name         | Type     | Std. Conc | RT   | Area       | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD   | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|------------|----------|----------|-------|------|------------|-------|----------|------------|
| 1  | 1 180112M3_1   | Standard | 0.250     | 6.66 | 117.897    | 2293.444 | 0.257    | 0.3   | 0.5  | NO         | 0.999 | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 0.500     | 6.66 | 217.686    | 2548.129 | 0.427    | 0.5   | -7.2 | NO         | 0.999 | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 1.000     | 6.67 | 403.784    | 2480.352 | 0.814    | 0.9   | -5.1 | NO         | 0.999 | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 2.000     | 6.66 | 883.157    | 2311.516 | 1.910    | 2.3   | 16.2 | NO         | 0.999 | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 5.000     | 6.66 | 2294.808   | 2625.801 | 4.370    | 5.4   | 8.4  | NO         | 0.999 | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 10.000    | 6.66 | 4816.051   | 2562.900 | 9.396    | 11.8  | 18.1 | NO         | 0.999 | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 50.000    | 6.66 | 19091.953  | 2506.577 | 38.084   | 49.8  | -0.4 | NO         | 0.999 | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 100.000   | 6.66 | 40484.746  | 2816.444 | 71.872   | 98.5  | -1.5 | NO         | 0.999 | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 250.000   | 6.66 | 95357.836  | 3111.526 | 153.233  | 245.6 | -1.8 | NO         | 0.999 | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 500.000   | 6.66 | 180602.422 | 4067.885 | 221.986  | 516.1 | 3.2  | NO         | 0.999 | NO       | bb         |

Dataset: U:\Q4.PRO\results\180112M3\180112M3\_crv.qld

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**Compound name: N-MeFOSE**

Correlation coefficient:  $r = 0.999757$ ,  $r^2 = 0.999514$

Calibration curve:  $1.03803 * x + 0.0140593$

Response type: Internal Std ( Ref 52 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

|    | # Name         | Type     | Std. Conc | RT   | Area       | IS Area   | Response | Conc.  | %Dev  | Conc. Flag | CoD   | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|------------|-----------|----------|--------|-------|------------|-------|----------|------------|
| 1  | 1 180112M3_1   | Standard | 1.250     | 6.27 | 146.072    | 18945.594 | 1.157    | 1.1    | -12.0 | NO         | 1.000 | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 2.500     | 6.27 | 334.962    | 20978.891 | 2.395    | 2.3    | -8.3  | NO         | 1.000 | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 5.000     | 6.27 | 856.415    | 25214.846 | 5.095    | 4.9    | -2.1  | NO         | 1.000 | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 10.000    | 6.27 | 1497.470   | 21106.998 | 10.642   | 10.2   | 2.4   | NO         | 1.000 | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 25.000    | 6.27 | 3522.082   | 18945.273 | 27.886   | 26.9   | 7.4   | NO         | 1.000 | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 50.000    | 6.27 | 9949.574   | 25396.109 | 58.766   | 56.6   | 13.2  | NO         | 1.000 | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 250.000   | 6.27 | 39530.746  | 23674.258 | 250.467  | 241.3  | -3.5  | NO         | 1.000 | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 500.000   | 6.27 | 74876.695  | 20831.691 | 539.155  | 519.4  | 3.9   | NO         | 1.000 | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 1250.000  | 6.27 | 167920.109 | 19531.029 | 1289.641 | 1242.4 | -0.6  | NO         | 1.000 | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 2500.000  | 6.27 | 335534.813 | 19482.115 | 2583.406 | 2488.7 | -0.5  | NO         | 1.000 | NO       | bb         |

**Compound name: N-EtFOSE**

Correlation coefficient:  $r = 0.999320$ ,  $r^2 = 0.998641$

Calibration curve:  $1.17693 * x + -0.0247703$

Response type: Internal Std ( Ref 53 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

|    | # Name         | Type     | Std. Conc | RT   | Area       | IS Area   | Response | Conc.  | %Dev | Conc. Flag | CoD   | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|------------|-----------|----------|--------|------|------------|-------|----------|------------|
| 1  | 1 180112M3_1   | Standard | 1.250     | 6.42 | 203.012    | 18867.035 | 1.614    | 1.4    | 11.4 | NO         | 0.999 | NO       | bbX        |
| 2  | 2 180112M3_2   | Standard | 2.500     | 6.42 | 444.996    | 22759.293 | 2.933    | 2.5    | 0.5  | NO         | 0.999 | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 5.000     | 6.42 | 969.691    | 22138.869 | 6.570    | 5.6    | 12.1 | NO         | 0.999 | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 10.000    | 6.42 | 1648.415   | 21459.803 | 11.522   | 9.8    | -1.9 | NO         | 0.999 | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 25.000    | 6.42 | 4877.133   | 25764.189 | 28.395   | 24.1   | -3.4 | NO         | 0.999 | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 50.000    | 6.42 | 10674.516  | 27382.803 | 58.474   | 49.7   | -0.6 | NO         | 0.999 | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 250.000   | 6.42 | 44019.031  | 24133.248 | 273.600  | 232.5  | -7.0 | NO         | 0.999 | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 500.000   | 6.42 | 88835.867  | 22109.537 | 602.698  | 512.1  | 2.4  | NO         | 0.999 | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 1250.000  | 6.42 | 207865.188 | 22244.219 | 1401.703 | 1191.0 | -4.7 | NO         | 0.999 | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 2500.000  | 6.42 | 407279.156 | 20236.264 | 3018.930 | 2565.1 | 2.6  | NO         | 0.999 | NO       | bb         |

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**Compound name: 13C3-PFBA**

Response Factor: 0.888078

RRF SD: 0.0142239, Relative SD: 1.60166

Response type: Internal Std ( Ref 54 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 1.33 | 9643.879  | 10808.706 | 11.153   | 12.6  | 0.5  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 1.33 | 8632.702  | 9934.981  | 10.861   | 12.2  | -2.2 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 1.33 | 9299.708  | 10402.260 | 11.175   | 12.6  | 0.7  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 1.33 | 8950.318  | 9885.952  | 11.317   | 12.7  | 1.9  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 1.33 | 9028.021  | 10004.417 | 11.280   | 12.7  | 1.6  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 1.33 | 10063.032 | 11264.720 | 11.167   | 12.6  | 0.6  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 1.33 | 9053.116  | 10142.639 | 11.157   | 12.6  | 0.5  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 1.33 | 9242.895  | 10417.820 | 11.090   | 12.5  | -0.1 | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 1.33 | 8904.648  | 10365.864 | 10.738   | 12.1  | -3.3 | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 1.33 | 9330.891  | 10535.071 | 11.071   | 12.5  | -0.3 | NO         |     | NO       | bb         |

**Compound name: 13C3-PFPeA**

Response Factor: 0.874637

RRF SD: 0.0413881, Relative SD: 4.73203

Response type: Internal Std ( Ref 55 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 2.29 | 11467.582 | 12803.078 | 11.196   | 12.8  | 2.4  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 2.30 | 10854.084 | 13515.780 | 10.038   | 11.5  | -8.2 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 2.30 | 11658.507 | 12966.456 | 11.239   | 12.9  | 2.8  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 2.30 | 11232.406 | 11888.771 | 11.810   | 13.5  | 8.0  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 2.30 | 10927.261 | 12371.610 | 11.041   | 12.6  | 1.0  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 2.30 | 11721.632 | 13853.085 | 10.577   | 12.1  | -3.3 | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 2.30 | 11589.604 | 13385.722 | 10.823   | 12.4  | -1.0 | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 2.30 | 10805.021 | 12231.548 | 11.042   | 12.6  | 1.0  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 2.30 | 9985.239  | 12120.343 | 10.298   | 11.8  | -5.8 | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 2.30 | 10379.484 | 11516.518 | 11.266   | 12.9  | 3.0  | NO         |     | NO       | bb         |

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**Compound name: 13C3-PFBS**

Response Factor: 0.111663

RRF SD: 0.00657694, Relative SD: 5.88999

Response type: Internal Std ( Ref 55 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area     | IS Area   | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|-----------|----------|-------|------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 2.57 | 1444.352 | 12803.078 | 1.410    | 12.6  | 1.0  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 2.58 | 1401.073 | 13515.780 | 1.296    | 11.6  | -7.2 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 2.58 | 1486.683 | 12966.456 | 1.433    | 12.8  | 2.7  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 2.58 | 1382.649 | 11888.771 | 1.454    | 13.0  | 4.2  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 2.58 | 1496.042 | 12371.610 | 1.512    | 13.5  | 8.3  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 2.58 | 1495.902 | 13853.085 | 1.350    | 12.1  | -3.3 | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 2.58 | 1406.961 | 13385.722 | 1.314    | 11.8  | -5.9 | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 2.58 | 1483.003 | 12231.548 | 1.516    | 13.6  | 8.6  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 2.58 | 1262.900 | 12120.343 | 1.302    | 11.7  | -6.7 | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 2.58 | 1263.846 | 11516.518 | 1.372    | 12.3  | -1.7 | NO         |     | NO       | bb         |

**Compound name: 13C2-PFHxA**

Response Factor: 0.690808

RRF SD: 0.0244402, Relative SD: 3.53791

Response type: Internal Std ( Ref 55 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area     | IS Area   | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|-----------|----------|-------|------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 5.000     | 3.07 | 3588.987 | 12803.078 | 3.504    | 5.1   | 1.4  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 5.000     | 3.08 | 3463.414 | 13515.780 | 3.203    | 4.6   | -7.3 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 5.000     | 3.08 | 3588.816 | 12966.456 | 3.460    | 5.0   | 0.2  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 5.000     | 3.08 | 3398.115 | 11888.771 | 3.573    | 5.2   | 3.4  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 5.000     | 3.08 | 3546.113 | 12371.610 | 3.583    | 5.2   | 3.7  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 5.000     | 3.08 | 3759.980 | 13853.085 | 3.393    | 4.9   | -1.8 | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 5.000     | 3.08 | 3577.969 | 13385.722 | 3.341    | 4.8   | -3.3 | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 5.000     | 3.08 | 3466.172 | 12231.548 | 3.542    | 5.1   | 2.6  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 5.000     | 3.08 | 3444.628 | 12120.343 | 3.553    | 5.1   | 2.9  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 5.000     | 3.08 | 3122.426 | 11516.518 | 3.389    | 4.9   | -1.9 | NO         |     | NO       | bb         |



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**Compound name: 13C4-PFHpA**

Response Factor: 0.708222

RRF SD: 0.0300935, Relative SD: 4.24917

Response type: Internal Std ( Ref 55 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area     | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 3.69 | 9102.781 | 12803.078 | 8.887    | 12.5  | 0.4   | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 3.70 | 8570.458 | 13515.780 | 7.926    | 11.2  | -10.5 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 3.70 | 8956.404 | 12966.456 | 8.634    | 12.2  | -2.5  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 3.70 | 8642.030 | 11888.771 | 9.086    | 12.8  | 2.6   | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 3.70 | 8719.787 | 12371.610 | 8.810    | 12.4  | -0.5  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 3.70 | 9807.228 | 13853.085 | 8.849    | 12.5  | -0.0  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 3.70 | 9529.698 | 13385.722 | 8.899    | 12.6  | 0.5   | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 3.70 | 9128.853 | 12231.548 | 9.329    | 13.2  | 5.4   | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 3.70 | 8796.575 | 12120.343 | 9.072    | 12.8  | 2.5   | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 3.70 | 8322.788 | 11516.518 | 9.034    | 12.8  | 2.0   | NO         |     | NO       | bb         |

**Compound name: 18O2-PFHxS**

Response Factor: 0.352896

RRF SD: 0.0236985, Relative SD: 6.71544

Response type: Internal Std ( Ref 56 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 3.84 | 1138.225 | 3295.114 | 4.318    | 12.2  | -2.1  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 3.85 | 1091.680 | 3348.640 | 4.075    | 11.5  | -7.6  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 3.85 | 1070.768 | 3067.346 | 4.364    | 12.4  | -1.1  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 3.85 | 1187.784 | 3048.132 | 4.871    | 13.8  | 10.4  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 3.85 | 1110.996 | 2937.274 | 4.728    | 13.4  | 7.2   | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 3.84 | 1230.666 | 3491.333 | 4.406    | 12.5  | -0.1  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 3.85 | 1055.557 | 3348.468 | 3.940    | 11.2  | -10.7 | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 3.85 | 1130.438 | 3321.117 | 4.255    | 12.1  | -3.5  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 3.85 | 920.090  | 2604.742 | 4.415    | 12.5  | 0.1   | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 3.85 | 1031.513 | 2720.370 | 4.740    | 13.4  | 7.4   | NO         |     | NO       | bb         |



Dataset: U:\Q4.PRO\results\180112M3\180112M3\_crv.qld

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Compound name: ~~13C2-6:2 FTS~~  
 Response Factor: 0.284767  
 RRF SD: 0.129226, Relative SD: 45.3796 *Not used*  
 Response type: Internal Std ( Ref 57 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area     | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 4.15 | 3224.894 | 12600.635 | 3.199    | 11.2  | -10.1 | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 4.16 | 2794.883 | 11736.022 | 2.977    | 10.5  | -16.4 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 4.17 | 2347.654 | 11991.001 | 2.447    | 8.6   | -31.2 | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 4.16 | 2068.554 | 12060.161 | 2.144    | 7.5   | -39.8 | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 4.16 | 2478.051 | 12161.116 | 2.547    | 8.9   | -28.4 | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 4.16 | 2596.789 | 11322.669 | 2.867    | 10.1  | -19.5 | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 4.17 | 2712.263 | 11689.442 | 2.900    | 10.2  | -18.5 | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 4.16 | 3337.355 | 10352.454 | 4.030    | 14.2  | 13.2  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 4.17 | 4273.233 | 10739.092 | 4.974    | 17.5  | 39.7  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 4.16 | 5781.076 | 9621.300  | 7.511    | 26.4  | 111.0 | NO         |     | NO       | bb         |

Compound name: 13C2-PFOA  
 Response Factor: 1.04901  
 RRF SD: 0.0726049, Relative SD: 6.92125  
 Response type: Internal Std ( Ref 57 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 4.21 | 13586.148 | 12600.635 | 13.478   | 12.8  | 2.8  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 4.22 | 11550.678 | 11736.022 | 12.303   | 11.7  | -6.2 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 4.22 | 11895.254 | 11991.001 | 12.400   | 11.8  | -5.4 | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 4.22 | 11772.054 | 12060.161 | 12.201   | 11.6  | -6.9 | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 4.22 | 12049.740 | 12161.116 | 12.386   | 11.8  | -5.5 | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 4.22 | 11141.402 | 11322.669 | 12.300   | 11.7  | -6.2 | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 4.22 | 12520.966 | 11689.442 | 13.389   | 12.8  | 2.1  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 4.22 | 12109.147 | 10352.454 | 14.621   | 13.9  | 11.5 | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 4.22 | 11875.879 | 10739.092 | 13.823   | 13.2  | 5.4  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 4.22 | 10949.793 | 9621.300  | 14.226   | 13.6  | 8.5  | NO         |     | NO       | bb         |

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**Compound name: 13C5-PFNA**

Response Factor: 0.910037

RRF SD: 0.0781082, Relative SD: 8.58297

Response type: Internal Std ( Ref 58 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 4.64 | 12794.425 | 13761.062 | 11.622   | 12.8  | 2.2   | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 4.65 | 10816.813 | 12074.913 | 11.198   | 12.3  | -1.6  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 4.65 | 13058.794 | 12095.991 | 13.495   | 14.8  | 18.6  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 4.65 | 11614.502 | 12808.122 | 11.335   | 12.5  | -0.4  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 4.65 | 10794.973 | 12650.281 | 10.667   | 11.7  | -6.2  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 4.65 | 10995.729 | 13681.940 | 10.046   | 11.0  | -11.7 | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 4.65 | 11688.381 | 13136.934 | 11.122   | 12.2  | -2.2  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 4.65 | 11325.495 | 11578.706 | 12.227   | 13.4  | 7.5   | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 4.66 | 9456.107  | 10183.667 | 11.607   | 12.8  | 2.0   | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 4.66 | 9383.431  | 11238.003 | 10.437   | 11.5  | -8.2  | NO         |     | NO       | bb         |

**Compound name: 13C8-PFOSA**

Response Factor: 0.251659

RRF SD: 0.0397585, Relative SD: 15.7986

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area     | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 4.71 | 3044.767 | 12956.290 | 2.938    | 11.7  | -6.6  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 4.72 | 2919.915 | 12184.508 | 2.996    | 11.9  | -4.8  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 4.72 | 2852.223 | 12302.788 | 2.898    | 11.5  | -7.9  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 4.71 | 2423.439 | 11601.501 | 2.611    | 10.4  | -17.0 | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 4.72 | 2861.321 | 11472.781 | 3.118    | 12.4  | -0.9  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 4.71 | 3170.243 | 9229.500  | 4.294    | 17.1  | 36.5  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 4.72 | 2815.174 | 9708.751  | 3.625    | 14.4  | 15.2  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 4.72 | 2697.858 | 10886.688 | 3.098    | 12.3  | -1.5  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 4.72 | 2651.824 | 10238.646 | 3.238    | 12.9  | 2.9   | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 4.72 | 2306.769 | 10904.102 | 2.644    | 10.5  | -15.9 | NO         |     | NO       | bb         |

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**Compound name: 13C8-PFOS**

Response Factor: 0.987371  
 RRF SD: 0.0932548, Relative SD: 9.44476  
 Response type: Internal Std ( Ref 59 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 4.73 | 3191.616 | 2877.050 | 13.867   | 14.0  | 12.4  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 4.74 | 2961.859 | 3334.549 | 11.103   | 11.2  | -10.0 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 4.74 | 2922.072 | 3084.822 | 11.841   | 12.0  | -4.1  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 4.74 | 2842.648 | 3067.264 | 11.585   | 11.7  | -6.1  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 4.74 | 3398.177 | 3188.867 | 13.320   | 13.5  | 7.9   | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 4.74 | 3115.317 | 3430.704 | 11.351   | 11.5  | -8.0  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 4.74 | 3250.293 | 3059.901 | 13.278   | 13.4  | 7.6   | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 4.74 | 2945.822 | 3427.029 | 10.745   | 10.9  | -12.9 | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 4.74 | 2734.680 | 2475.960 | 13.806   | 14.0  | 11.9  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 4.74 | 2652.588 | 2646.966 | 12.527   | 12.7  | 1.5   | NO         |     | NO       | bb         |

**Compound name: 13C2-PFDA**

Response Factor: 1.31069  
 RRF SD: 0.154424, Relative SD: 11.7819  
 Response type: Internal Std ( Ref 60 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 5.02 | 11840.349 | 10883.691 | 13.599   | 10.4  | -17.0 | NO         |     | NO       | MM         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 5.02 | 8198.120  | 6820.778  | 15.024   | 11.5  | -8.3  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 5.02 | 11413.683 | 8798.779  | 16.215   | 12.4  | -1.0  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 5.02 | 8993.626  | 6414.435  | 17.526   | 13.4  | 7.0   | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 5.02 | 8374.505  | 7223.858  | 14.491   | 11.1  | -11.6 | NO         |     | NO       | MM         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 5.02 | 10742.175 | 7491.244  | 17.925   | 13.7  | 9.4   | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 5.03 | 10359.620 | 6956.624  | 18.615   | 14.2  | 13.6  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 5.03 | 10172.976 | 7085.407  | 17.947   | 13.7  | 9.5   | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 5.03 | 7900.604  | 7001.764  | 14.105   | 10.8  | -13.9 | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 5.02 | 9355.357  | 6359.046  | 18.390   | 14.0  | 12.2  | NO         |     | NO       | bb         |

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**Compound name: 13C2-8:2 FTS**

Response Factor: 0.141392

RRF SD: 0.0882708, Relative SD: 62.4299

*Not used*

Response type: Internal Std ( Ref 55 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area     | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 4.99 | 2625.345 | 12803.078 | 2.563    | 18.1  | 45.0  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 5.00 | 935.824  | 13515.780 | 0.865    | 6.1   | -51.0 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 5.00 | 1087.594 | 12966.456 | 1.048    | 7.4   | -40.7 | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 5.00 | 999.703  | 11888.771 | 1.051    | 7.4   | -40.5 | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 5.00 | 996.118  | 12371.610 | 1.006    | 7.1   | -43.1 | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 5.00 | 1381.043 | 13853.085 | 1.246    | 8.8   | -29.5 | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 5.00 | 1450.471 | 13385.722 | 1.354    | 9.6   | -23.4 | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 5.00 | 1492.542 | 12231.548 | 1.525    | 10.8  | -13.7 | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 5.00 | 2603.347 | 12120.343 | 2.685    | 19.0  | 51.9  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 5.00 | 3987.862 | 11516.518 | 4.328    | 30.6  | 144.9 | NO         |     | NO       | bb         |

**Compound name: d3-N-MeFOSAA**

Response Factor: 0.384784

RRF SD: 0.0369881, Relative SD: 9.61269

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area     | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 5.16 | 4578.172 | 12956.290 | 4.417    | 11.5  | -8.2  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 5.17 | 4479.246 | 12184.508 | 4.595    | 11.9  | -4.5  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 5.17 | 4148.605 | 12302.788 | 4.215    | 11.0  | -12.4 | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 5.17 | 4221.229 | 11601.501 | 4.548    | 11.8  | -5.4  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 5.17 | 4679.941 | 11472.781 | 5.099    | 13.3  | 6.0   | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 5.17 | 4150.196 | 9229.500  | 5.621    | 14.6  | 16.9  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 5.17 | 4076.322 | 9708.751  | 5.248    | 13.6  | 9.1   | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 5.18 | 4414.855 | 10886.688 | 5.069    | 13.2  | 5.4   | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 5.18 | 3516.300 | 10238.646 | 4.293    | 11.2  | -10.7 | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 5.17 | 4355.138 | 10904.102 | 4.993    | 13.0  | 3.8   | NO         |     | NO       | bb         |

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**Compound name: d5-N-EtFOSAA**

Response Factor: 0.445224

RRF SD: 0.0578319, Relative SD: 12.9894

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area     | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 5.32 | 5593.976 | 12956.290 | 5.397    | 12.1  | -3.0  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 5.33 | 4492.496 | 12184.508 | 4.609    | 10.4  | -17.2 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 5.33 | 5478.088 | 12302.788 | 5.566    | 12.5  | 0.0   | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 5.33 | 4411.942 | 11601.501 | 4.754    | 10.7  | -14.6 | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 5.33 | 5054.803 | 11472.781 | 5.507    | 12.4  | -1.0  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 5.33 | 5386.214 | 9229.500  | 7.295    | 16.4  | 31.1  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 5.33 | 4474.004 | 9708.751  | 5.760    | 12.9  | 3.5   | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 5.33 | 4899.659 | 10886.688 | 5.626    | 12.6  | 1.1   | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 5.33 | 4709.659 | 10238.646 | 5.750    | 12.9  | 3.3   | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 5.33 | 4701.503 | 10904.102 | 5.390    | 12.1  | -3.2  | NO         |     | NO       | bb         |

**Compound name: 13C2-PFUdA**

Response Factor: 1.01427

RRF SD: 0.119231, Relative SD: 11.7554

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 5.34 | 14971.105 | 12956.290 | 14.444   | 14.2  | 13.9  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 5.35 | 11016.060 | 12184.508 | 11.301   | 11.1  | -10.9 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 5.35 | 11092.744 | 12302.788 | 11.271   | 11.1  | -11.1 | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 5.35 | 10221.989 | 11601.501 | 11.014   | 10.9  | -13.1 | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 5.35 | 12021.561 | 11472.781 | 13.098   | 12.9  | 3.3   | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 5.35 | 11655.509 | 9229.500  | 15.786   | 15.6  | 24.5  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 5.35 | 9931.740  | 9708.751  | 12.787   | 12.6  | 0.9   | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 5.35 | 10964.943 | 10886.688 | 12.590   | 12.4  | -0.7  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 5.35 | 10008.643 | 10238.646 | 12.219   | 12.0  | -3.6  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 5.35 | 10707.508 | 10904.102 | 12.275   | 12.1  | -3.2  | NO         |     | NO       | bb         |

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**Compound name: 13C2-PFD<sub>o</sub>A**

Response Factor: 0.575098

RRF SD: 0.102699, Relative SD: 17.8577

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 5.62 | 11368.299 | 12956.290 | 10.968   | 19.1  | 52.6  | NO         |     | NO       | bbX        |
| 2  | 2 180112M3_2   | Standard | 12.500    | 5.63 | 7004.138  | 12184.508 | 7.185    | 12.5  | -0.0  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 5.63 | 6625.417  | 12302.788 | 6.732    | 11.7  | -6.4  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 5.63 | 5781.125  | 11601.501 | 6.229    | 10.8  | -13.4 | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 5.63 | 5662.008  | 11472.781 | 6.169    | 10.7  | -14.2 | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 5.63 | 7602.770  | 9229.500  | 10.297   | 17.9  | 43.2  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 5.63 | 6171.370  | 9708.751  | 7.946    | 13.8  | 10.5  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 5.63 | 5619.151  | 10886.688 | 6.452    | 11.2  | -10.3 | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 5.63 | 5621.278  | 10238.646 | 6.863    | 11.9  | -4.5  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 5.63 | 5954.897  | 10904.102 | 6.826    | 11.9  | -5.0  | NO         |     | NO       | bb         |

**Compound name: d3-N-MeFOSA**

Response Factor: 0.130312

RRF SD: 0.0160189, Relative SD: 12.2928

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 150.000   | 5.74 | 19479.512 | 12956.290 | 18.793   | 144.2 | -3.9  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 150.000   | 5.75 | 17037.010 | 12184.508 | 17.478   | 134.1 | -10.6 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 150.000   | 5.75 | 17039.148 | 12302.788 | 17.312   | 132.9 | -11.4 | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 150.000   | 5.75 | 16417.920 | 11601.501 | 17.689   | 135.7 | -9.5  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 150.000   | 5.75 | 16425.873 | 11472.781 | 17.897   | 137.3 | -8.4  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 150.000   | 5.75 | 18426.049 | 9229.500  | 24.955   | 191.5 | 27.7  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 150.000   | 5.75 | 17159.449 | 9708.751  | 22.093   | 169.5 | 13.0  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 150.000   | 5.75 | 17133.240 | 10886.688 | 19.672   | 151.0 | 0.6   | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 150.000   | 5.75 | 16374.768 | 10238.646 | 19.991   | 153.4 | 2.3   | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 150.000   | 5.75 | 17085.115 | 10904.102 | 19.586   | 150.3 | 0.2   | NO         |     | NO       | bb         |

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**Compound name: 13C2-PFTeDA**

Response Factor: 0.305401

RRF SD: 0.0583357, Relative SD: 19.1013

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area     | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 6.09 | 4505.702 | 12956.290 | 4.347    | 14.2  | 13.9  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 6.10 | 3152.279 | 12184.508 | 3.234    | 10.6  | -15.3 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 6.09 | 2846.668 | 12302.788 | 2.892    | 9.5   | -24.2 | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 6.10 | 3355.262 | 11601.501 | 3.615    | 11.8  | -5.3  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 6.10 | 2552.797 | 11472.781 | 2.781    | 9.1   | -27.1 | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 6.10 | 3714.001 | 9229.500  | 5.030    | 16.5  | 31.8  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 6.10 | 3143.137 | 9708.751  | 4.047    | 13.3  | 6.0   | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 6.10 | 3747.025 | 10886.688 | 4.302    | 14.1  | 12.7  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 6.10 | 2882.788 | 10238.646 | 3.519    | 11.5  | -7.8  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 6.10 | 3844.197 | 10904.102 | 4.407    | 14.4  | 15.4  | NO         |     | NO       | bb         |

**Compound name: d5-N-ETFOSA**

Response Factor: 0.192072

RRF SD: 0.0267623, Relative SD: 13.9335

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 150.000   | 6.13 | 25249.453 | 12956.290 | 24.360   | 126.8 | -15.4 | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 150.000   | 6.14 | 25479.150 | 12184.508 | 26.139   | 136.1 | -9.3  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 150.000   | 6.14 | 27084.520 | 12302.788 | 27.519   | 143.3 | -4.5  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 150.000   | 6.14 | 25391.936 | 11601.501 | 27.358   | 142.4 | -5.0  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 150.000   | 6.14 | 25944.201 | 11472.781 | 28.267   | 147.2 | -1.9  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 150.000   | 6.14 | 28099.900 | 9229.500  | 38.057   | 198.1 | 32.1  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 150.000   | 6.14 | 25857.027 | 9708.751  | 33.291   | 173.3 | 15.6  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 150.000   | 6.14 | 25402.877 | 10886.688 | 29.167   | 151.9 | 1.2   | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 150.000   | 6.14 | 22820.889 | 10238.646 | 27.861   | 145.1 | -3.3  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 150.000   | 6.14 | 22756.643 | 10904.102 | 26.087   | 135.8 | -9.5  | NO         |     | NO       | bb         |

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**Compound name: 13C2-PFHxDA**

Response Factor: 0.587315

RRF SD: 0.105071, Relative SD: 17.8901

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area     | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 5.000     | 6.42 | 2293.444 | 12956.290 | 2.213    | 3.8   | -24.7 | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 5.000     | 6.43 | 2548.129 | 12184.508 | 2.614    | 4.5   | -11.0 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 5.000     | 6.43 | 2480.352 | 12302.788 | 2.520    | 4.3   | -14.2 | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 5.000     | 6.43 | 2311.516 | 11601.501 | 2.491    | 4.2   | -15.2 | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 5.000     | 6.43 | 2625.801 | 11472.781 | 2.861    | 4.9   | -2.6  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 5.000     | 6.43 | 2562.900 | 9229.500  | 3.471    | 5.9   | 18.2  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 5.000     | 6.43 | 2506.577 | 9708.751  | 3.227    | 5.5   | 9.9   | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 5.000     | 6.43 | 2816.444 | 10886.688 | 3.234    | 5.5   | 10.1  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 5.000     | 6.43 | 3111.526 | 10238.646 | 3.799    | 6.5   | 29.4  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 5.000     | 6.43 | 4067.885 | 10904.102 | 4.663    | 7.9   | 58.8  | NO         |     | NO       | bbX        |

**Compound name: d7-N-MeFOSE**

Response Factor: 0.162517

RRF SD: 0.0318797, Relative SD: 19.6162

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 150.000   | 6.25 | 18945.594 | 12956.290 | 18.278   | 112.5 | -25.0 | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 150.000   | 6.26 | 20978.891 | 12184.508 | 21.522   | 132.4 | -11.7 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 150.000   | 6.26 | 25214.846 | 12302.788 | 25.619   | 157.6 | 5.1   | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 150.000   | 6.26 | 21106.998 | 11601.501 | 22.742   | 139.9 | -6.7  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 150.000   | 6.26 | 18945.273 | 11472.781 | 20.642   | 127.0 | -15.3 | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 150.000   | 6.26 | 25396.109 | 9229.500  | 34.395   | 211.6 | 41.1  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 150.000   | 6.26 | 23674.258 | 9708.751  | 30.481   | 187.6 | 25.0  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 150.000   | 6.26 | 20831.691 | 10886.688 | 23.919   | 147.2 | -1.9  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 150.000   | 6.26 | 19531.029 | 10238.646 | 23.845   | 146.7 | -2.2  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 150.000   | 6.26 | 19482.115 | 10904.102 | 22.333   | 137.4 | -8.4  | NO         |     | NO       | bb         |



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**Compound name: d9-N-EtFOSE**

Response Factor: 0.178469

RRF SD: 0.0320366, Relative SD: 17.9507

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|-------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 150.000   | 6.41 | 18867.035 | 12956.290 | 18.203   | 102.0 | -32.0 | NO         |     | NO       | bbX        |
| 2  | 2 180112M3_2   | Standard | 150.000   | 6.41 | 22759.293 | 12184.508 | 23.349   | 130.8 | -12.8 | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 150.000   | 6.41 | 22138.869 | 12302.788 | 22.494   | 126.0 | -16.0 | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 150.000   | 6.41 | 21459.803 | 11601.501 | 23.122   | 129.6 | -13.6 | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 150.000   | 6.41 | 25764.189 | 11472.781 | 28.071   | 157.3 | 4.9   | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 150.000   | 6.41 | 27382.803 | 9229.500  | 37.086   | 207.8 | 38.5  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 150.000   | 6.41 | 24133.248 | 9708.751  | 31.072   | 174.1 | 16.1  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 150.000   | 6.41 | 22109.537 | 10886.688 | 25.386   | 142.2 | -5.2  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 150.000   | 6.41 | 22244.219 | 10238.646 | 27.157   | 152.2 | 1.4   | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 150.000   | 6.41 | 20236.264 | 10904.102 | 23.198   | 130.0 | -13.3 | NO         |     | NO       | bb         |

**Compound name: 13C4-PFBA**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 54 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 1.33 | 10808.706 | 10808.706 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 1.33 | 9934.981  | 9934.981  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 1.33 | 10402.260 | 10402.260 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 1.33 | 9885.952  | 9885.952  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 1.33 | 10004.417 | 10004.417 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 1.33 | 11264.720 | 11264.720 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 1.33 | 10142.639 | 10142.639 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 1.33 | 10417.820 | 10417.820 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 1.33 | 10365.864 | 10365.864 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 1.33 | 10535.071 | 10535.071 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

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**Compound name: 13C5-PFHxA**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 55 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 3.07 | 12803.078 | 12803.078 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 3.08 | 13515.780 | 13515.780 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 3.08 | 12966.456 | 12966.456 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 3.08 | 11888.771 | 11888.771 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 3.08 | 12371.610 | 12371.610 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 3.08 | 13853.085 | 13853.085 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 3.08 | 13385.722 | 13385.722 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 3.08 | 12231.548 | 12231.548 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 3.08 | 12120.343 | 12120.343 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 3.08 | 11516.518 | 11516.518 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

**Compound name: 13C3-PFHxS**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 56 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 3.84 | 3295.114 | 3295.114 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 3.85 | 3348.640 | 3348.640 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 3.85 | 3067.346 | 3067.346 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 3.85 | 3048.132 | 3048.132 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 3.85 | 2937.274 | 2937.274 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 3.85 | 3491.333 | 3491.333 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 3.85 | 3348.468 | 3348.468 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 3.85 | 3321.117 | 3321.117 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 3.85 | 2604.742 | 2604.742 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 3.85 | 2720.370 | 2720.370 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

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**Compound name: 13C8-PFOA**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 57 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 4.21 | 12600.635 | 12600.635 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 4.22 | 11736.022 | 11736.022 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 4.22 | 11991.001 | 11991.001 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 4.22 | 12060.161 | 12060.161 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 4.22 | 12161.116 | 12161.116 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 4.22 | 11322.669 | 11322.669 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 4.22 | 11689.442 | 11689.442 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 4.22 | 10352.454 | 10352.454 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 4.22 | 10739.092 | 10739.092 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 4.22 | 9621.300  | 9621.300  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

**Compound name: 13C9-PFNA**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 58 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

|    | # Name         | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 4.64 | 13761.062 | 13761.062 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 4.65 | 12074.913 | 12074.913 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 4.65 | 12095.991 | 12095.991 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 4.65 | 12808.122 | 12808.122 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 4.65 | 12650.281 | 12650.281 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 4.65 | 13681.940 | 13681.940 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 4.65 | 13136.934 | 13136.934 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 4.65 | 11578.706 | 11578.706 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 4.66 | 10183.667 | 10183.667 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 4.66 | 11238.003 | 11238.003 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

Dataset: U:\Q4.PRO\results\180112M3\180112M3\_crv.qld

Last Altered: Saturday, January 13, 2018 14:58:25 Pacific Standard Time  
 Printed: Saturday, January 13, 2018 17:05:37 Pacific Standard Time

**Compound name: 13C4-PFOS**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 59 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|----------|----------|----------|-------|------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 4.73 | 2877.050 | 2877.050 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 4.74 | 3334.549 | 3334.549 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 4.74 | 3084.822 | 3084.822 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 4.74 | 3067.264 | 3067.264 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 4.74 | 3188.867 | 3188.867 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 4.74 | 3430.704 | 3430.704 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 4.74 | 3059.901 | 3059.901 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 4.74 | 3427.029 | 3427.029 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 4.74 | 2475.960 | 2475.960 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 4.74 | 2646.966 | 2646.966 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

**Compound name: 13C6-PFDA**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 60 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 5.02 | 10883.691 | 10883.691 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 5.02 | 6820.778  | 6820.778  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 5.02 | 8798.779  | 8798.779  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 5.02 | 6414.435  | 6414.435  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 5.03 | 7223.858  | 7223.858  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 5.02 | 7491.244  | 7491.244  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 5.03 | 6956.624  | 6956.624  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 5.03 | 7085.407  | 7085.407  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 5.03 | 7001.764  | 7001.764  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 5.03 | 6359.046  | 6359.046  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

Dataset: U:\Q4.PRO\results\180112M3\180112M3\_crv.qld

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Compound name: 13C7-PFUdA

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 61 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| #  | Name           | Type     | Std. Conc | RT   | Area      | IS Area   | Response | Conc. | %Dev | Conc. Flag | CoD | CoD Flag | x=excluded |
|----|----------------|----------|-----------|------|-----------|-----------|----------|-------|------|------------|-----|----------|------------|
| 1  | 1 180112M3_1   | Standard | 12.500    | 5.34 | 12956.290 | 12956.290 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 2  | 2 180112M3_2   | Standard | 12.500    | 5.35 | 12184.508 | 12184.508 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 3  | 3 180112M3_3   | Standard | 12.500    | 5.35 | 12302.788 | 12302.788 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 4  | 4 180112M3_4   | Standard | 12.500    | 5.35 | 11601.501 | 11601.501 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 5  | 5 180112M3_5   | Standard | 12.500    | 5.35 | 11472.781 | 11472.781 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 6  | 6 180112M3_6   | Standard | 12.500    | 5.35 | 9229.500  | 9229.500  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 7  | 7 180112M3_7   | Standard | 12.500    | 5.35 | 9708.751  | 9708.751  | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 8  | 8 180112M3_8   | Standard | 12.500    | 5.35 | 10886.688 | 10886.688 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 9  | 9 180112M3_9   | Standard | 12.500    | 5.35 | 10238.646 | 10238.646 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |
| 10 | 10 180112M3_10 | Standard | 12.500    | 5.35 | 10904.102 | 10904.102 | 12.500   | 12.5  | 0.0  | NO         |     | NO       | bb         |

Dataset: U:\Q4.PRO\results\180112M3\180112M3\_crv.qld

Last Altered: Saturday, January 13, 2018 14:58:25 Pacific Standard Time

Printed: Saturday, January 13, 2018 17:05:37 Pacific Standard Time

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_010818C.mdb 11 Jan 2018 15:33:36

Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-12-18-FULL.cdb 13 Jan 2018 14:58:25

Name: 180112M3\_1, Date: 12-Jan-2018, Time: 13:35:39, ID: ST180112M3-1 PFC CS-2 18A0806, Description: ST180108M2-1 PFC CS-2 18A0806

| #  | Name          | CoD    | CoD Flag | %RSD  |
|----|---------------|--------|----------|-------|
| 1  | 1 PFBA        | 0.9998 | NO       |       |
| 2  | 2 PFPeA       | 0.9995 | NO       |       |
| 3  | 3 PFBS        | 0.9996 | NO       |       |
| 4  | 4 PFHxA       | 0.9997 | NO       |       |
| 5  | 5 PFHpA       | 0.9985 | NO       |       |
| 6  | 6 L-PFHxS     | 0.9964 | NO       |       |
| 7  | 8 6:2 FTS     | 0.9989 | NO       |       |
| 8  | 9 L-PFOA      | 0.9991 | NO       |       |
| 9  | 11 PFHpS      | 0.9984 | NO       |       |
| 10 | 12 PFNA       | 0.9966 | NO       |       |
| 11 | 13 PFOSA      | 0.9995 | NO       |       |
| 12 | 14 L-PFOS     | 0.9960 | NO       |       |
| 13 | 16 PFDA       | 0.9948 | NO       |       |
| 14 | 17 8:2 FTS    | 0.9952 | NO       |       |
| 15 | 18 N-MeFOSAA  | 0.9974 | NO       |       |
| 16 | 19 N-EtFOSAA  | 0.9995 | NO       |       |
| 17 | 20 PFUdA      | 0.9996 | NO       |       |
| 18 | 21 PFDS       | 0.9925 | NO       |       |
| 19 | 22 PFDoA      | 0.9992 | NO       |       |
| 20 | 23 N-MeFOSA   | 0.9969 | NO       |       |
| 21 | 24 PFTriDA    | 0.9976 | NO       |       |
| 22 | 25 PFTeDA     | 0.9989 | NO       |       |
| 23 | 26 N-EtFOSA   | 0.9999 | NO       |       |
| 24 | 27 PFHxDA     | 0.9994 | NO       |       |
| 25 | 28 PFODA      | 0.9989 | NO       |       |
| 26 | 29 N-MeFOSE   | 0.9995 | NO       |       |
| 27 | 30 N-EtFOSE   | 0.9986 | NO       |       |
| 28 | 31 13C3-PFBA  |        | NO       | 1.602 |
| 29 | 32 13C3-PFPeA |        | NO       | 4.732 |
| 30 | 33 13C3-PFBS  |        | NO       | 5.890 |
| 31 | 34 13C2-PFHxA |        | NO       | 3.538 |

Dataset: U:\Q4.PRO\results\180112M3\180112M3\_crv.qld

Last Altered: Saturday, January 13, 2018 14:58:25 Pacific Standard Time

Printed: Saturday, January 13, 2018 17:05:37 Pacific Standard Time

Name: 180112M3\_1, Date: 12-Jan-2018, Time: 13:35:39, ID: ST180112M3-1 PFC CS-2 18A0806, Description: ST180108M2-1 PFC CS-2 18A0806

| #  | Name            | CoD | CoD Flag | %RSD   |
|----|-----------------|-----|----------|--------|
| 32 | 35 13C4-PFHpA   |     | NO       | 4.249  |
| 33 | 36 18O2-PFHxS   |     | NO       | 6.715  |
| 34 | 37 13C2-6:2 FTS |     | NO       | 45.380 |
| 35 | 38 13C2-PFOA    |     | NO       | 6.921  |
| 36 | 39 13C5-PFNA    |     | NO       | 8.583  |
| 37 | 40 13C8-PFOA    |     | NO       | 15.799 |
| 38 | 41 13C8-PFOS    |     | NO       | 9.445  |
| 39 | 42 13C2-PFDA    |     | NO       | 11.782 |
| 40 | 43 13C2-8:2 FTS |     | NO       | 62.430 |
| 41 | 44 d3-N-MeFOSAA |     | NO       | 9.613  |
| 42 | 45 d5-N-EtFOSAA |     | NO       | 12.989 |
| 43 | 46 13C2-PFUdA   |     | NO       | 11.755 |
| 44 | 47 13C2-PFDoA   |     | NO       | 17.858 |
| 45 | 48 d3-N-MeFOSA  |     | NO       | 12.293 |
| 46 | 49 13C2-PFTeDA  |     | NO       | 19.101 |
| 47 | 50 d5-N-ETFOSA  |     | NO       | 13.933 |
| 48 | 51 13C2-PFHxDA  |     | NO       | 17.890 |
| 49 | 52 d7-N-MeFOSE  |     | NO       | 19.616 |
| 50 | 53 d9-N-EtFOSE  |     | NO       | 17.951 |
| 51 | 54 13C4-PFBA    |     | NO       | 0.000  |
| 52 | 55 13C5-PFHxA   |     | NO       | 0.000  |
| 53 | 56 13C3-PFHxS   |     | NO       | 0.000  |
| 54 | 57 13C8-PFOA    |     | NO       | 0.000  |
| 55 | 58 13C9-PFNA    |     | NO       | 0.000  |
| 56 | 59 13C4-PFOS    |     | NO       | 0.000  |
| 57 | 60 13C6-PFDA    |     | NO       | 0.000  |
| 58 | 61 13C7-PFUdA   |     | NO       | 0.000  |

*not used*

*not used*



Dataset: Untitled

Last Altered: Saturday, January 13, 2018 17:17:14 Pacific Standard Time

Printed: Saturday, January 13, 2018 17:17:36 Pacific Standard Time

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_010818C.mdb 11 Jan 2018 15:33:36

Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-12-18-FULL.cdb 13 Jan 2018 14:58:25

Compound name: PFBA

|    | Name        | ID                                       | Acq.Date  | Acq.Time |
|----|-------------|--|-----------|----------|
| 1  | 180112M3_1  | ST180112M3-1 PFC CS-2 18A0806 ✓          | 12-Jan-18 | 13:35:39 |
| 2  | 180112M3_2  | ST180112M3-2 PFC CS-1 18A0807            | 12-Jan-18 | 13:47:17 |
| 3  | 180112M3_3  | ST180112M3-3 PFC CS0 18A0808             | 12-Jan-18 | 13:58:52 |
| 4  | 180112M3_4  | ST180112M3-4 PFC CS1 18A0809             | 12-Jan-18 | 14:10:20 |
| 5  | 180112M3_5  | ST180112M3-5 PFC CS2 18A0810             | 12-Jan-18 | 14:21:50 |
| 6  | 180112M3_6  | ST180112M3-6 PFC CS3 18A0811             | 12-Jan-18 | 14:33:24 |
| 7  | 180112M3_7  | ST180112M3-7 PFC CS4 18A0812             | 12-Jan-18 | 14:44:53 |
| 8  | 180112M3_8  | ST180112M3-8 PFC CS5 18A0813             | 12-Jan-18 | 14:56:24 |
| 9  | 180112M3_9  | ST180112M3-9 PFC CS6 18A0814             | 12-Jan-18 | 15:07:57 |
| 10 | 180112M3_10 | ST180112M3-10 PFC CS7 18A0815            | 12-Jan-18 | 15:19:28 |
| 11 | 180112M3_11 | IPA                                      | 12-Jan-18 | 15:30:56 |
| 12 | 180112M3_12 | ICV180112M3-1 PFC ICV 18A0805 ✓          | 12-Jan-18 | 15:42:29 |
| 13 | 180112M3_13 | IPA                                      | 12-Jan-18 | 15:54:01 |
| 14 | 180112M3_14 | B7L0218-BS1 OPR 0.25                     | 12-Jan-18 | 16:05:31 |
| 15 | 180112M3_15 | B7L0218-BSD1 LCSD 0.25                   | 12-Jan-18 | 16:17:07 |
| 16 | 180112M3_16 | B7L0218-BLK1 Method Blank 0.25           | 12-Jan-18 | 16:28:41 |
| 17 | 180112M3_17 | B7L0188-MS1 Matrix Spike 0.24896         | 12-Jan-18 | 16:40:14 |
| 18 | 180112M3_18 | B7L0188-MSD1 Matrix Spike Dup 0.23749    | 12-Jan-18 | 16:51:42 |
| 19 | 180112M3_19 | 1701970-01 FT-PZ458S-20171214 0.25998    | 12-Jan-18 | 17:03:12 |
| 20 | 180112M3_20 | 1701970-02 FT-PZ458I-20171214 0.25291    | 12-Jan-18 | 17:15:53 |
| 21 | 180112M3_21 | 1701970-03 SA-MW132S-20171214 0.25764    | 12-Jan-18 | 17:27:26 |
| 22 | 180112M3_22 | 1701970-04 SA-MW132S-FRB-20171214 0.2... | 12-Jan-18 | 17:39:06 |
| 23 | 180112M3_23 | 1701970-05 SA-MW132I-20171214 0.23441    | 12-Jan-18 | 17:52:40 |
| 24 | 180112M3_24 | 1701970-06 FT-PZ459S-20171214 0.25318    | 12-Jan-18 | 18:04:06 |
| 25 | 180112M3_25 | 1701970-07 FT-PZ459I-20171214 0.2457     | 12-Jan-18 | 18:15:15 |
| 26 | 180112M3_26 | 1701970-08 FT-PZ463S-20171214 0.25736    | 12-Jan-18 | 18:26:25 |
| 27 | 180112M3_27 | 1701970-09 FT-PZ463I-20171214 0.26165    | 12-Jan-18 | 18:37:36 |
| 28 | 180112M3_28 | 1701970-10 CV-TANK-20171214 0.25889      | 12-Jan-18 | 18:48:47 |
| 29 | 180112M3_29 | IPA                                      | 12-Jan-18 | 18:59:58 |
| 30 | 180112M3_30 | ST180112M3-11 PFC CS3 18A0811            | 12-Jan-18 | 19:11:09 |
| 31 | 180112M3_31 | IPA                                      | 12-Jan-18 | 19:22:19 |



Dataset: Untitled

Last Altered: Saturday, January 13, 2018 17:17:14 Pacific Standard Time

Printed: Saturday, January 13, 2018 17:17:36 Pacific Standard Time

Compound name: PFBA

|    | Name        | ID   | Acq.Date  | Acq.Time |
|----|-------------|--|-----------|----------|
| 32 | 180112M3_34 | 1702013-01 WI-CV-1RW14-1217 0.26251        | 12-Jan-18 | 19:33:30 |
| 33 | 180112M3_35 | 1702013-02 WI-CV-1FB14-1217 0.25636        | 12-Jan-18 | 19:44:40 |
| 34 | 180112M3_36 | 1701997-01 MTBE_8323 0.25626               | 12-Jan-18 | 19:55:51 |
| 35 | 180112M3_37 | 1701998-01 MTBE_8322 0.25742               | 12-Jan-18 | 20:07:04 |
| 36 | 180112M3_38 | 1701998-02 MTBE_8322 DUP 0.26171           | 12-Jan-18 | 20:18:13 |
| 37 | 180112M3_39 | 1701998-03 FIELD BLANK 0.25674             | 12-Jan-18 | 20:29:24 |
| 38 | 180112M3_40 | 1701954-01 WURTS_MSPTS_Eff-171214 0.4...   | 12-Jan-18 | 20:40:34 |
| 39 | 180112M3_41 | 1701954-02 WURTS_Outfall002-171214 0.49... | 12-Jan-18 | 20:51:45 |
| 40 | 180112M3_42 | IPA  | 12-Jan-18 | 21:02:56 |
| 41 | 180112M3_43 | ST180112M3-12 PFC CS3 18A0811              | 12-Jan-18 | 21:14:07 |
| 42 | 180112M3_44 | IPA  | 12-Jan-18 | 21:25:18 |
| 43 | 180112M3_45 | 1702012-01 GW1721171218RAP 0.26166         | 12-Jan-18 | 21:36:28 |
| 44 | 180112M3_46 | 1702012-02 GW2731171218RAP 0.26149         | 12-Jan-18 | 21:47:39 |
| 45 | 180112M3_47 | 1702012-03 GW3741171218RAP 0.25614         | 12-Jan-18 | 21:58:50 |
| 46 | 180112M3_48 | 1702012-04 GW4751171219RAP 0.26075         | 12-Jan-18 | 22:10:00 |
| 47 | 180112M3_49 | 1702012-05 GW5761171219RAP 0.24934         | 12-Jan-18 | 22:21:11 |
| 48 | 180112M3_50 | 1702012-06 GW1115171219RAP 0.26005         | 12-Jan-18 | 22:32:21 |
| 49 | 180112M3_51 | 1702012-07 GW2125171220RAP 0.2545          | 12-Jan-18 | 22:43:32 |
| 50 | 180112M3_52 | 1702012-08 GW3135171220RAP 0.24266         | 12-Jan-18 | 22:54:43 |
| 51 | 180112M3_53 | 1702012-09 GW4145171220RAP 0.25823         | 12-Jan-18 | 23:05:54 |
| 52 | 180112M3_54 | 1702012-10 GW5155171220RAP 0.24026         | 12-Jan-18 | 23:17:05 |
| 53 | 180112M3_55 | B7L0208-BS1 OPR 0.25                       | 12-Jan-18 | 23:28:18 |
| 54 | 180112M3_56 | B7L0208-BLK1 Method Blank 0.25             | 12-Jan-18 | 23:39:28 |
| 55 | 180112M3_57 | IPA  | 12-Jan-18 | 23:50:39 |
| 56 | 180112M3_58 | ST180112M3-13 PFC CS3 18A0811              | 13-Jan-18 | 00:01:50 |
| 57 | 180112M3_59 | IPA  | 13-Jan-18 | 00:13:00 |
| 58 | 180112M3_60 | B7L0208-BS1 OPR 0.25                       |           |          |
| 59 | 180112M3_61 | B7L0208-BLK1 Method Blank 0.25             |           |          |

Dataset: U:\Q4.PRO\results\180112M3\180112M3\_12.qld

Last Altered: Saturday, January 13, 2018 16:17:30 Pacific Standard Time  
Printed: Saturday, January 13, 2018 17:19:43 Pacific Standard Time

ⓐ Not present in SS

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_010818C.mdb 11 Jan 2018 15:33:36  
Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-12-18-FULL.cdb 13 Jan 2018 14:58:25

CP 1/13/18  
J.A. 01/15/20 18

Name: 180112M3\_12, Date: 12-Jan-2018, Time: 15:42:29, ID: ICV180112M3-1 PFC ICV 18A0805, Description: ICV180108M2-1 PFC ICV 18A0805

| #  | Name          | Trace         | Area   | IS Area | RRF   | Pred.RT | RT   | y Axis Resp. | Conc. | %Rec  | Recovery Out |
|----|---------------|---------------|--------|---------|-------|---------|------|--------------|-------|-------|--------------|
| 1  | 1 PFBA        | 213.0 > 168.8 | 8.82e3 | 9.56e3  |       | 1.38    | 1.33 | 11.5         | 9.79  | 97.9  | NO           |
| 2  | 2 PFPeA       | 263.1 > 218.9 | 9.13e3 | 1.19e4  |       | 2.37    | 2.31 | 9.62         | 9.32  | 93.2  | NO           |
| 3  | 3 PFBS        | 299.0 > 79.7  | 1.73e3 | 1.42e3  |       | 2.66    | 2.59 | 15.3         | 8.36  | 83.6  | NO           |
| 4  | 4 PFHxA       | 313.2 > 268.9 | 1.08e4 | 3.90e3  |       | 3.15    | 3.08 | 13.8         | 8.30  | 83.0  | NO           |
| 5  | 5 PFHpA       | 363.0 > 318.9 | 9.27e3 | 9.53e3  |       | 3.78    | 3.71 | 12.2         | 9.50  | 95.0  | NO           |
| 6  | 6 L-PFHxS     | 398.9 > 79.6  | 1.47e3 | 1.26e3  |       | 3.94    | 3.85 | 14.6         | 8.20  | 82.0  | NO           |
| 7  | 8 6:2 FTS     | 427.1 > 407   | 2.38e3 | 1.26e3  |       | 4.25    | 4.17 | 23.7         | 8.99  | 89.9  | NO           |
| 8  | 9 L-PFOA      | 413 > 368.7   | 1.00e4 | 1.29e4  |       | 4.31    | 4.22 | 9.72         | 8.79  | 87.9  | NO           |
| 9  | 11 PFHpS      | 449 > 80.0    | 2.48e3 | 1.29e4  |       | 4.42    | 4.33 | 2.41         | 8.85  | 88.5  | NO           |
| 10 | 12 PFNA       | 463.0 > 418.8 | 1.03e4 | 1.13e4  |       | 4.81    | 4.66 | 11.3         | 8.85  | 88.5  | NO           |
| 11 | 13 PFOSA      | 498.1 > 77.8  | 2.43e3 | 2.80e3  |       | 4.87    | 4.72 | 10.8         | 9.72  | 97.2  | NO           |
| 12 | 14 L-PFOS     | 499 > 79.9    | 2.58e3 | 3.23e3  |       | 4.75    | 4.74 | 9.99         | 8.47  | 84.7  | NO           |
| 13 | 16 PFDA       | 513 > 468.8   | 1.07e4 | 9.63e3  |       | 5.18    | 5.03 | 13.9         | 9.82  | 98.2  | NO           |
| 14 | 17 8:2 FTS    | 527 > 506.9   | 1.88e3 | 9.63e3  |       | 5.15    | 5.00 | 2.44         | 9.41  | 94.1  | NO           |
| 15 | 18 N-MeFOSAA  | 570.1 > 419   | 5.30e3 | 4.02e3  |       | 5.32    | 5.18 | 16.5         | 9.59  | 95.9  | NO           |
| 16 | 19 N-EtFOSAA  | 584.2 > 419   | 3.95e3 | 6.19e3  |       | 5.48    | 5.33 | 7.98         | 7.47  | 74.7  | NO           |
| 17 | 20 PFUdA      | 563.0 > 518.9 | 1.11e4 | 1.26e4  |       | 5.50    | 5.35 | 11.0         | 9.53  | 95.3  | NO           |
| 18 | 21 PFDS       | 598.8 > 80    | 2.58e3 | 1.26e4  |       | 5.54    | 5.40 | 2.56         | 7.67  | 76.7  | NO           |
| 19 | 22 PFDoA      | 612.9 > 569.0 | 1.04e4 | 4.88e3  |       | 5.77    | 5.63 | 26.8         | 11.0  | 110.4 | NO           |
| 20 | 23 N-MeFOSA   | 512.1 > 168.9 |        | 1.75e4  |       | 5.80    |      |              |       |       | NO           |
| 21 | 24 PFTrDA     | 662.9 > 618.9 | 9.68e3 | 4.88e3  |       | 6.00    | 5.88 | 24.8         | 11.7  | 116.5 | NO           |
| 22 | 25 PFTeDA     | 712.9 > 668.8 | 4.94e3 | 2.83e3  |       | 6.22    | 6.10 | 21.8         | 10.1  | 100.8 | NO           |
| 23 | 26 N-EtFOSA   | 526.1 > 168.9 |        | 2.66e4  |       | 6.17    |      |              |       |       | NO           |
| 24 | 27 PFHxDA     | 813.1 > 768.6 |        | 2.63e3  |       | 6.53    |      |              |       |       | NO           |
| 25 | 28 PFODA      | 913.1 > 868.8 |        | 2.63e3  |       | 6.74    |      |              |       |       | NO           |
| 26 | 29 N-MeFOSE   | 616.1 > 58.9  |        | 2.33e4  |       | 6.27    |      |              |       |       | NO           |
| 27 | 30 N-EtFOSE   | 630.1 > 58.9  | 8.51e1 | 2.33e4  |       | 6.43    | 6.42 | 0.548        | 0.487 | 4.0   | YES          |
| 28 | 31 13C3-PFBA  | 216.1 > 171.8 | 9.56e3 | 1.04e4  | 0.888 | 1.38    | 1.34 | 11.5         | 12.9  | 103.1 | NO           |
| 29 | 32 13C3-PFPeA | 266. > 221.8  | 1.19e4 | 1.46e4  | 0.875 | 2.37    | 2.30 | 10.1         | 11.6  | 92.8  | NO           |
| 30 | 33 13C3-PFBS  | 302. > 98.8   | 1.42e3 | 1.46e4  | 0.112 | 2.77    | 2.59 | 1.21         | 10.8  | 86.8  | NO           |
| 31 | 34 13C2-PFHxA | 315 > 269.8   | 3.90e3 | 1.46e4  | 0.691 | 3.15    | 3.08 | 3.33         | 4.83  | 96.5  | NO           |

also

Dataset: U:\Q4.PRO\results\180112M3\180112M3\_12.qld

Last Altered: Saturday, January 13, 2018 16:17:30 Pacific Standard Time

Printed: Saturday, January 13, 2018 17:19:43 Pacific Standard Time

Name: 180112M3\_12, Date: 12-Jan-2018, Time: 15:42:29, ID: ICV180112M3-1 PFC ICV 18A0805, Description: ICV180108M2-1 PFC ICV 18A0805

| #  | Name | Trace        | Area          | IS Area | RRF    | Pred.RT | RT   | y Axis Resp | Conc. | %Rec | Recovery | Out |
|----|------|--------------|---------------|---------|--------|---------|------|-------------|-------|------|----------|-----|
| 32 | 35   | 13C4-PFHpA   | 367.2 > 321.8 | 9.53e3  | 1.46e4 | 0.708   | 3.78 | 3.71        | 8.14  | 11.5 | 91.9     | NO  |
| 33 | 36   | 18O2-PFHxS   | 403.0 > 102.6 | 1.26e3  | 3.54e3 | 0.353   | 3.94 | 3.85        | 4.44  | 12.6 | 100.7    | NO  |
| 34 | 37   | 13C2-6:2 FTS | 429.1 > 408.9 | 2.76e3  | 1.14e4 | 0.285   | 4.25 | 4.17        | 3.04  | 10.7 | 85.4     | NO  |
| 35 | 38   | 13C2-PFOA    | 414.9 > 369.7 | 1.29e4  | 1.14e4 | 1.049   | 4.31 | 4.22        | 14.2  | 13.5 | 108.1    | NO  |
| 36 | 39   | 13C5-PFNA    | 468.2 > 422.9 | 1.13e4  | 9.80e3 | 0.910   | 4.81 | 4.66        | 14.5  | 15.9 | 127.2    | NO  |
| 37 | 40   | 13C8-PFOA    | 506.1 > 77.7  | 2.80e3  | 1.10e4 | 0.252   | 4.87 | 4.72        | 3.19  | 12.7 | 101.3    | NO  |
| 38 | 41   | 13C8-PFOS    | 507.0 > 79.9  | 3.23e3  | 3.23e3 | 0.987   | 4.89 | 4.74        | 12.5  | 12.6 | 101.2    | NO  |
| 39 | 42   | 13C2-PFDA    | 515.1 > 469.9 | 9.63e3  | 6.97e3 | 1.311   | 5.18 | 5.03        | 17.3  | 13.2 | 105.4    | NO  |
| 40 | 43   | 13C2-8:2 FTS | 529.1 > 508.7 | 1.17e3  | 1.46e4 | 0.141   | 5.15 | 5.00        | 0.999 | 7.07 | 56.5     | NO  |
| 41 | 44   | d3-N-MeFOSAA | 573.3 > 419   | 4.02e3  | 1.10e4 | 0.385   | 5.32 | 5.18        | 4.57  | 11.9 | 95.1     | NO  |
| 42 | 45   | d5-N-EtFOSAA | 589.3 > 419   | 6.19e3  | 1.10e4 | 0.445   | 5.47 | 5.33        | 7.04  | 15.8 | 126.5    | NO  |
| 43 | 46   | 13C2-PFUdA   | 565 > 519.8   | 1.26e4  | 1.10e4 | 1.014   | 5.49 | 5.35        | 14.3  | 14.1 | 112.9    | NO  |
| 44 | 47   | 13C2-PFDoA   | 615.0 > 569.7 | 4.88e3  | 1.10e4 | 0.575   | 5.77 | 5.64        | 5.55  | 9.64 | 77.1     | NO  |
| 45 | 48   | d3-N-MeFOSA  | 515.2 > 168.9 | 1.75e4  | 1.10e4 | 0.130   | 5.83 | 5.75        | 20.0  | 153  | 102.1    | NO  |
| 46 | 49   | 13C2-PFTeDA  | 714.8 > 669.6 | 2.83e3  | 1.10e4 | 0.305   | 6.22 | 6.10        | 3.22  | 10.5 | 84.4     | NO  |
| 47 | 50   | d5-N-ETFOSA  | 531.1 > 168.9 | 2.66e4  | 1.10e4 | 0.192   | 6.18 | 6.14        | 30.3  | 158  | 105.1    | NO  |
| 48 | 51   | 13C2-PFHxDA  | 815 > 769.7   | 2.63e3  | 1.10e4 | 0.587   | 6.53 | 6.43        | 2.99  | 5.08 | 101.7    | NO  |
| 49 | 52   | d7-N-MeFOSE  | 623.1 > 58.9  | 2.33e4  | 1.10e4 | 0.163   | 6.27 | 6.26        | 26.5  | 163  | 108.8    | NO  |
| 50 | 53   | d9-N-EtFOSE  | 639.2 > 58.8  | 2.33e4  | 1.10e4 | 0.178   | 6.42 | 6.41        | 26.5  | 149  | 99.0     | NO  |
| 51 | 54   | 13C4-PFBA    | 217. > 171.8  | 1.04e4  | 1.04e4 | 1.000   | 1.38 | 1.33        | 12.5  | 12.5 | 100.0    | NO  |
| 52 | 55   | 13C5-PFHxA   | 318 > 272.9   | 1.46e4  | 1.46e4 | 1.000   | 3.15 | 3.08        | 12.5  | 12.5 | 100.0    | NO  |
| 53 | 56   | 13C3-PFHxS   | 401.9 > 79.9  | 3.54e3  | 3.54e3 | 1.000   | 4.02 | 3.85        | 12.5  | 12.5 | 100.0    | NO  |
| 54 | 57   | 13C8-PFOA    | 421.3 > 376   | 1.14e4  | 1.14e4 | 1.000   | 4.38 | 4.22        | 12.5  | 12.5 | 100.0    | NO  |
| 55 | 58   | 13C9-PFNA    | 472.2 > 426.9 | 9.80e3  | 9.80e3 | 1.000   | 4.81 | 4.65        | 12.5  | 12.5 | 100.0    | NO  |
| 56 | 59   | 13C4-PFOS    | 503 > 79.9    | 3.23e3  | 3.23e3 | 1.000   | 4.89 | 4.74        | 12.5  | 12.5 | 100.0    | NO  |
| 57 | 60   | 13C6-PFDA    | 519.1 > 473.7 | 6.97e3  | 6.97e3 | 1.000   | 5.18 | 5.03        | 12.5  | 12.5 | 100.0    | NO  |
| 58 | 61   | 13C7-PFUdA   | 570.1 > 524.8 | 1.10e4  | 1.10e4 | 1.000   | 5.49 | 5.35        | 12.5  | 12.5 | 100.0    | NO  |

Calverton  
SDG 1701970

Sample Identification

FT-PZ458I-20171214

Compound

PERFLUORODECANOIC ACID (PFDA)

Sample volume (L)

0.253

Internal standard concentration

12.5

Area

2250

Internal standard area

7670

Concentration using quadratic/calibration curve

Area\*(IS concentration/IS area)

3.67

$2250 \times (12.5 / 7670)$

Curve

Calibration curve (y)= $0.00721614 \times x^2 + 1.35715 \times x + 0.231309$

$0.00721614 \times x^2 + 1.35715 \times x + 0.231309 = 3.67$

$0.00721614 \times x^2 + 1.35715 \times x - 3.438691 = 0$

a= 0.00721614

b= 1.35715

c= -3.438691

$D = 1.35715^2 - 4 \times 0.00721614 \times -3.438691$

1.941112

SQRT D

1.393238108

$x = -(1.35715 + 1.393238108) / (2 \times 0.00721614)$

2.5005133

PFDA result Conc = x/wt

9.88

result reported

10

Sample ID: FT-PZ458I-20171214

Modified EPA Method 537

| Client Data |  |                 |                 | Laboratory Data |                 |         |         |
|-------------|--|-----------------|-----------------|-----------------|-----------------|---------|---------|
| Name:       | Tetra Tech                               | Matrix:         | Aqueous         | Lab Sample:     | 1701970-02      | Column: | BEH C18 |
| Project:    | NWIRP Calverton Site 2/SA 112G08005-WE05 | Date Collected: | 14-Dec-17 09:07 | Date Received:  | 15-Dec-17 09:50 |         |         |
| SDG:        | WE05                                     |                 |                 |                 |                 |         |         |

| Analyte | Conc. (ng/L) | DL    | LOD  | LOQ  | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|---------|--------------|-------|------|------|------------|---------|-----------|-----------|-----------------|----------|
| PFBS    | 1.44         | 0.885 | 2.47 | 3.95 | J          | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFHxA   | 53.9         | 1.08  | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFHpA   | 28.0         | 0.292 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFHxS   | 11.4         | 0.468 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFOA    | 34.9         | 0.322 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFOS    | 16.8         | 0.399 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFNA    | 569          | 0.400 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFDA    | 10.0 ✓       | 0.736 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| MeFOSAA | ND           | 0.816 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFUnA   | ND           | 0.519 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| EtFOSAA | ND           | 0.677 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFDoA   | ND           | 0.391 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFTrDA  | ND           | 0.244 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| PFTeDA  | ND           | 0.373 | 2.47 | 3.95 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |

| Labeled Standards | Type | % Recovery | Limits   | Qualifiers | Batch   | Extracted | Samp Size | Analyzed        | Dilution |
|-------------------|------|------------|----------|------------|---------|-----------|-----------|-----------------|----------|
| 13C3-PFBS         | IS   | 107        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C2-PFHxA        | IS   | 87.6       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C4-PFHpA        | IS   | 93.5       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 18O2-PFHxS        | IS   | 94.3       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C2-PFOA         | IS   | 73.4       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C8-PFOS         | IS   | 90.4       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C5-PFNA         | IS   | 96.7       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C2-PFDA         | IS   | 84.5       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| d3-MeFOSAA        | IS   | 101        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C2-PFUnA        | IS   | 94.2       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| d5-EtFOSAA        | IS   | 118        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C2-PFDoA        | IS   | 102        | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |
| 13C2-PFTeDA       | IS   | 88.4       | 50 - 150 |            | B7L0188 | 28-Dec-17 | 0.253 L   | 12-Jan-18 17:15 | 1        |

DL - Detection Limit

LOD - Limit of Detection

LCL-UCL- Lower control limit - upper control limit

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.

LOQ - Limit of quantitation

Results reported to the DL.

Only the linear isomer is reported for all other analytes.

Sample Calculation - Page 3

Dataset: U:\Q4.PRO\results\180112M3\180112M3\_20.qld

Last Altered: Monday, January 15, 2018 10:39:11 Pacific Standard Time

Printed: Monday, January 15, 2018 10:41:52 Pacific Standard Time

Method: U:\Q4.PRO\MethDB\PFAS\_FULL\_80C\_010818C.mdb 11 Jan 2018 15:33:36

Calibration: U:\Q4.PRO\CurveDB\C18\_VAL-PFAS\_Q4\_01-12-18-FULL.cdb 13 Jan 2018 14:58:25

Name: 180112M3\_20, Date: 12-Jan-2018, Time: 17:15:53, ID: 1701970-02 FT-PZ458I-20171214 0.25291, Description: FT-PZ458I-20171214

|    | # Name       | Trace         | Area   | IS Area | Wt./Vol. | RRF | Pred.RT | RT   | y Axis Resp. | Conc.    | %Rec |
|----|--------------|---------------|--------|---------|----------|-----|---------|------|--------------|----------|------|
| 1  | 3 PFBS       | 299.0 > 79.7  | 6.53e1 | 1.21e3  | 0.253    |     | 2.66    | 2.59 | 0.677        | 1.4422   |      |
| 2  | 4 PFHxA      | 313.2 > 268.9 | 1.10e4 | 2.45e3  | 0.253    |     | 3.15    | 3.09 | 22.6         | 53.8704  |      |
| 3  | 5 PFHpA      | 363.0 > 318.9 | 4.86e3 | 6.69e3  | 0.253    |     | 3.78    | 3.71 | 9.08         | 28.0077  |      |
| 4  | 6 L-PFHxS    | 398.9 > 79.6  | 4.09e2 | 9.95e2  | 0.253    |     | 3.94    | 3.86 | 5.13         | 11.3853  |      |
| 5  | 9 L-PFOA     | 413 > 368.7   | 6.65e3 | 8.79e3  | 0.253    |     | 4.31    | 4.22 | 9.46         | 33.8395  |      |
| 6  | 12 PFNA      | 463.0 > 418.8 | 1.11e5 | 7.79e3  | 0.253    |     | 4.81    | 4.66 | 178          | 569.0518 |      |
| 7  | 14 L-PFOS    | 499 > 79.9    | 1.09e3 | 2.75e3  | 0.253    |     | 4.75    | 4.60 | 4.97         | 16.7752  |      |
| 8  | 16 PFDA      | 513 > 468.8   | 2.25e3 | 7.67e3  | 0.253    |     | 5.18    | 5.04 | 3.67         | 10.0496  |      |
| 9  | 18 N-MeFOSAA | 570.1 > 419   |        | 2.97e3  | 0.253    |     | 5.32    |      |              |          |      |
| 10 | 19 N-EtFOSAA | 584.2 > 419   |        | 4.03e3  | 0.253    |     | 5.48    |      |              |          |      |
| 11 | 20 PFUdA     | 563.0 > 518.9 |        | 7.35e3  | 0.253    |     | 5.50    |      |              |          |      |
| 12 | 22 PFDoA     | 612.9 > 569.0 |        | 4.49e3  | 0.253    |     | 5.77    |      |              |          |      |

Dataset: U:\Q4.PRO\results\180108M2\180108M2-CRV.qld

Last Altered: Tuesday, January 09, 2018 11:01:39 Pacific Standard Time  
 Printed: Tuesday, January 09, 2018 11:04:55 Pacific Standard Time

**Compound name: PFDA**

Coefficient of Determination: R<sup>2</sup> = 0.999649

Calibration curve:  $0.00721614 * x^2 + 1.35715 * x + 0.231309$

Response type: Internal Std ( Ref 42 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

| # | Name         | Type     | Std. Conc | RT   | Area       | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD   | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|------------|----------|----------|-------|-------|------------|-------|----------|------------|
| 1 | 1 180108M2_1 | Standard | 0.250     | 5.12 | 188.925    | 7175.434 | 0.329    | 0.1   | -71.2 | NO         | 1.000 | NO       | bbX        |
| 2 | 2 180108M2_2 | Standard | 0.500     | 5.12 | 436.926    | 5699.016 | 0.958    | 0.5   | 6.8   | NO         | 1.000 | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 1.000     | 5.13 | 556.917    | 4936.802 | 1.410    | 0.9   | -13.5 | NO         | 1.000 | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 2.000     | 5.12 | 1279.798   | 5072.973 | 3.153    | 2.1   | 6.5   | NO         | 1.000 | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 5.000     | 5.12 | 3085.837   | 5300.490 | 7.277    | 5.1   | 1.1   | NO         | 1.000 | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 10.000    | 5.13 | 7323.324   | 6361.719 | 14.389   | 9.9   | -0.9  | NO         | 1.000 | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 50.000    | 5.12 | 35969.824  | 5219.420 | 86.144   | 50.0  | 0.0   | NO         | 1.000 | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 100.000   | 5.12 | 57238.797  | 6016.366 | 118.923  | 65.0  | -35.0 | NO         | 1.000 | NO       | bbX        |
| 9 | 9 180108M2_9 | Standard | 250.000   | 5.12 | 153095.938 | 5995.269 | 319.202  | 136.3 | -45.5 | NO         | 1.000 | NO       | bbX        |

**Compound name: 8:2 FTS**

Coefficient of Determination: R<sup>2</sup> = 0.992049

Calibration curve:  $-0.000697314 * x^2 + 0.330805 * x + 0.0126419$

Response type: Internal Std ( Ref 42 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

| # | Name         | Type     | Std. Conc | RT   | Area      | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD   | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|-----------|----------|----------|-------|-------|------------|-------|----------|------------|
| 1 | 1 180108M2_1 | Standard | 0.250     | 5.10 | 33.473    | 7175.434 | 0.058    | 0.1   | -44.8 | NO         | 0.992 | NO       | MMX        |
| 2 | 2 180108M2_2 | Standard | 0.500     | 5.10 | 32.340    | 5699.016 | 0.071    | 0.2   | -64.7 | NO         | 0.992 | NO       | MMX        |
| 3 | 3 180108M2_3 | Standard | 1.000     | 5.10 | 162.365   | 4936.802 | 0.411    | 1.2   | 20.8  | NO         | 0.992 | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 2.000     | 5.09 | 192.451   | 5072.973 | 0.474    | 1.4   | -30.0 | NO         | 0.992 | NO       | MM         |
| 5 | 5 180108M2_5 | Standard | 5.000     | 5.09 | 890.347   | 5300.490 | 2.100    | 6.4   | 27.9  | NO         | 0.992 | NO       | MM         |
| 6 | 6 180108M2_6 | Standard | 10.000    | 5.10 | 1386.508  | 6361.719 | 2.724    | 8.3   | -16.6 | NO         | 0.992 | NO       | MM         |
| 7 | 7 180108M2_7 | Standard | 50.000    | 5.10 | 6327.175  | 5219.420 | 15.153   | 51.3  | 2.6   | NO         | 0.992 | NO       | MM         |
| 8 | 8 180108M2_8 | Standard | 100.000   | 5.09 | 12505.232 | 6016.366 | 25.982   | 99.3  | -0.7  | NO         | 0.992 | NO       | MM         |
| 9 | 9 180108M2_9 | Standard | 250.000   | 5.09 | 27075.176 | 5995.269 | 56.451   |       |       | NO         | 0.992 | NO       | bbXI       |



Dataset: U:\Q4.PRO\results\180108M2\180108M2-CRV.qld

Last Altered: Tuesday, January 09, 2018 10:42:03 Pacific Standard Time  
 Printed: Tuesday, January 09, 2018 10:54:38 Pacific Standard Time

**Compound name: 13C2-PFDA**

Response Factor: 1.1421

RRF SD: 0.120268, Relative SD: 10.5305

Response type: Internal Std ( Ref 60 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 5.12 | 7175.434 | 6189.928 | 14.490   | 12.7  | 1.5   | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 5.12 | 5699.016 | 5075.857 | 14.035   | 12.3  | -1.7  | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 5.13 | 4936.802 | 4875.687 | 12.657   | 11.1  | -11.3 | NO         |     | NO       | MM         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 5.12 | 5072.973 | 4732.028 | 13.401   | 11.7  | -6.1  | NO         |     | NO       | MM         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 5.12 | 5300.490 | 4306.361 | 15.386   | 13.5  | 7.8   | NO         |     | NO       | MM         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 5.13 | 6361.719 | 4638.074 | 17.145   | 15.0  | 20.1  | NO         |     | NO       | MM         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 5.13 | 5219.420 | 5233.415 | 12.467   | 10.9  | -12.7 | NO         |     | NO       | MM         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 5.12 | 6016.366 | 4883.994 | 15.398   | 13.5  | 7.9   | NO         |     | NO       | MM         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 5.12 | 5995.269 | 5547.928 | 13.508   | 11.8  | -5.4  | NO         |     | NO       | bb         |

**Compound name: 13C2-8:2 FTS**

Response Factor: 0.156561

RRF SD: 0.0239871, Relative SD: 15.3212

Response type: Internal Std ( Ref 55 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

| # | Name         | Type     | Std. Conc | RT   | Area     | IS Area  | Response | Conc. | %Dev  | Conc. Flag | CoD | CoD Flag | x=excluded |
|---|--------------|----------|-----------|------|----------|----------|----------|-------|-------|------------|-----|----------|------------|
| 1 | 1 180108M2_1 | Standard | 12.500    | 5.10 | 1121.714 | 7348.469 | 1.908    | 12.2  | -2.5  | NO         |     | NO       | bb         |
| 2 | 2 180108M2_2 | Standard | 12.500    | 5.09 | 1120.403 | 7079.163 | 1.978    | 12.6  | 1.1   | NO         |     | NO       | bb         |
| 3 | 3 180108M2_3 | Standard | 12.500    | 5.09 | 1108.064 | 6096.192 | 2.272    | 14.5  | 16.1  | NO         |     | NO       | bb         |
| 4 | 4 180108M2_4 | Standard | 12.500    | 5.10 | 1186.236 | 6835.402 | 2.169    | 13.9  | 10.8  | NO         |     | NO       | bb         |
| 5 | 5 180108M2_5 | Standard | 12.500    | 5.09 | 727.336  | 6853.771 | 1.327    | 8.5   | -32.2 | NO         |     | NO       | bb         |
| 6 | 6 180108M2_6 | Standard | 12.500    | 5.10 | 1032.019 | 7027.212 | 1.836    | 11.7  | -6.2  | NO         |     | NO       | bb         |
| 7 | 7 180108M2_7 | Standard | 12.500    | 5.10 | 1094.893 | 7037.016 | 1.945    | 12.4  | -0.6  | NO         |     | NO       | bb         |
| 8 | 8 180108M2_8 | Standard | 12.500    | 5.09 | 1157.192 | 6512.142 | 2.221    | 14.2  | 13.5  | NO         |     | NO       | bb         |
| 9 | 9 180108M2_9 | Standard | 12.500    | 5.09 | 1793.465 | 7253.947 | 3.090    | 19.7  | 57.9  | NO         |     | NO       | bbX        |



| DODCMD_ID    | INSTALLATION_ID | SDG     | SITE_NAME  | NORM_SITE_NAME | LOCATION_NAME | LOCATION_TYPE_DESC | COORD_X     | COORD_Y     | CONTRACT_ID   | DO_CTO_NUMBER | CONTR_NAME       | SAMPLE_NAME            | SAMPLE_MATRIX_DESC   | SAMPLE_TYPE_DESC      | COLLECT_DATE | ANALYTICAL_METHOD | ANALYTICAL_METHOD_GRP_DESC |
|--------------|-----------------|---------|------------|----------------|---------------|--------------------|-------------|-------------|---------------|---------------|------------------|------------------------|----------------------|-----------------------|--------------|-------------------|----------------------------|
| MID_ATLANTIC | CALVERTON_NWIRP | 1701970 | SITE 00006 | SITE 00006     | SAMW132I      | Monitoring well    | 1321512.22  | 269953.37   | N6247016D9008 | WE05          | TETRA TECH, INC. | SA-MW132I-20171214     | Ground water         | Normal (Regular)      | 14-Dec-17    | 537               | Perfluoroalkyl Compounds   |
| MID_ATLANTIC | CALVERTON_NWIRP | 1701970 | SITE 00002 | SITE 00002     | FTPZ458S      | Piezometer         | 1319263.05  | 269775.545  | N6247016D9008 | WE05          | TETRA TECH, INC. | FT-PZ458S-20171214     | Ground water         | Normal (Regular)      | 14-Dec-17    | 537               | Perfluoroalkyl Compounds   |
| MID_ATLANTIC | CALVERTON_NWIRP | 1701970 | SITE 00006 | SITE 00006     | SAMW132S      | Monitoring well    | 1321516.74  | 269955.75   | N6247016D9008 | WE05          | TETRA TECH, INC. | SA-MW132S-20171214     | Ground water         | Normal (Regular)      | 14-Dec-17    | 537               | Perfluoroalkyl Compounds   |
| MID_ATLANTIC | CALVERTON_NWIRP | 1701970 | SITE 00002 | SITE 00002     | FTPZ459S      | Piezometer         | 1319924.881 | 270289.248  | N6247016D9008 | WE05          | TETRA TECH, INC. | FT-PZ459S-20171214     | Ground water         | Normal (Regular)      | 14-Dec-17    | 537               | Perfluoroalkyl Compounds   |
| MID_ATLANTIC | CALVERTON_NWIRP | 1701970 | SITE 00002 | SITE 00002     | FTPZ458I      | Piezometer         | 1319262.369 | 269771.557  | N6247016D9008 | WE05          | TETRA TECH, INC. | FT-PZ458I-20171214     | Ground water         | Normal (Regular)      | 14-Dec-17    | 537               | Perfluoroalkyl Compounds   |
| MID_ATLANTIC | CALVERTON_NWIRP | 1701970 | SITE 00002 | SITE 00002     | FTPZ463I      | Piezometer         | 1319002.52  | 268417.5383 | N6247016D9008 | WE05          | TETRA TECH, INC. | FT-PZ463I-20171214     | Ground water         | Normal (Regular)      | 14-Dec-17    | 537               | Perfluoroalkyl Compounds   |
| MID_ATLANTIC | CALVERTON_NWIRP | 1701970 | SITE 00002 | SITE 00002     | FTPZ459I      | Piezometer         | 1319921.452 | 270287.058  | N6247016D9008 | WE05          | TETRA TECH, INC. | FT-PZ459I-20171214     | Ground water         | Normal (Regular)      | 14-Dec-17    | 537               | Perfluoroalkyl Compounds   |
| MID_ATLANTIC | CALVERTON_NWIRP | 1701970 | SITE 00002 | SITE 00002     | FTPZ463S      | Piezometer         | 1319000.627 | 268414.6307 | N6247016D9008 | WE05          | TETRA TECH, INC. | FT-PZ463S-20171214     | Ground water         | Normal (Regular)      | 14-Dec-17    | 537               | Perfluoroalkyl Compounds   |
| MID_ATLANTIC | CALVERTON_NWIRP | 1701970 |            |                |               |                    |             |             | N6247016D9008 | WE05          | TETRA TECH, INC. | SA-MW132S-FRB-20171214 | Water for QC samples | Field Reagent Blank   | 14-Dec-17    | 537               | Perfluoroalkyl Compounds   |
| MID_ATLANTIC | CALVERTON_NWIRP | 1701970 |            |                |               |                    |             |             | N6247016D9008 | WE05          | TETRA TECH, INC. | CV-TANK-20171214       | IDW Water            | Purge and rinse water | 14-Dec-17    | 537               | Perfluoroalkyl Compounds   |