# Groundwater Sample Results, Electronic Data Deliverable, Data Validation Report, and the Sample Location Report, SDG 1804077 

Naval Weapons Industrial Reserve Plant Calverton
Riverhead, New York
August 2019
"FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","375-22-
4","PFBA","8.12","ng/L","","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","2706-90-3","PFPeA","17.9","ng/L","","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","375-73-5","PFBS","2.67","ng/L","UU","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","307-24-4","PFHxA","40.4","ng/L","","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","375-85-9","PFHpA","21.5","ng/L","","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","355-46-4","PFHxS","10.1","ng/L","","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","27619-97-2","6:2 FTS","56.2","ng/L","","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","335-67-1","PFOA","35.9","ng/L","","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","375-92-8","PFHpS","2.67","ng/L","UU","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","375-95-1","PFNA","482","ng/L","","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","754-91-6","PFOSA","2.67","ng/L","UU","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67"," "
"FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","1763-23-
1","PFOS","26.0","ng/L","","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","335-76-2","PFDA","6.50","ng/L","","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","39108-34-4","8:2 FTS","9.15","ng/L","","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67",""
"FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","2355-31-
9","MeFOSAA","2.67","ng/L","UU","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.6 7",""
"FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","2991-50-
6","EtFOSAA","7.40","ng/L","","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","2058-94-8","PFUnA","2.67","ng/L","UU","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","
"FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","335-77-
3","PFDS","2.67","ng/L","UU","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","307-55-
1","PFDoA","2.67","ng/L","UU","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67","
"FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","72629-94-
8","PFTrDA","2.67","ng/L","UU","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67", ""
"FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","376-06-
7","PFTeDA","2.67","ng/L","UU","1.46","LOD","","TRG","","","4.28","LOQ","YES","-99","","0.234","0.001","2.67", ""
"FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C3-PFBA","13C3-
PFBA","87.0","\%R","","-99","NA","","IS","87.0","","-99","NA","YES","100","","0.234","0.001","-99",""
"FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C3-PFPeA","13C3-
PFPeA","85.5","\%R","","-99","NA","","IS","85.5","","-99","NA","YES","100","","0.234","0.001","-99",""
"FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C3-PFBS","13C3-

PFBS","81.3","\%R","","-99","NA","","IS","81.3","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C2-PFHxA","13C2-PFHxA","83.0","\%R","","-99","NA","","IS","83.0","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C4-PFHpA","13C4-PFHpA","88.1","\%R","","-99","NA","","IS","88.1","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","18O2-PFHxS","18O2-PFHxS","96.0","\%R","","-99","NA","","IS","96.0","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C2-6:2 FTS","13C2-6:2 FTS","83.3","\%R","","-99","NA","","IS","83.3","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C2-PFOA","13C2-PFOA","86.0","\%R","","-99","NA","","IS","86.0","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C5-PFNA","13C5-PFNA","80.1","\%R","","-99","NA","","IS","80.1","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C8-PFOSA","13C8-PFOSA","82.1","\%R","","-99","NA","","IS","82.1","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C8-PFOS","13C8-PFOS","83.8","\%R","","-99","NA","","IS","83.8","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C2-PFDA","13C2-PFDA","72.0","\%R","","-99","NA","","IS","72.0","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C2-8:2 FTS","13C2-8:2 FTS","91.1","\%R","","-99","NA","","IS","91.1","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","d3-MeFOSAA","d3-MeFOSAA","61.7","\%R","","-99","NA","","IS","61.7","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","d5-EtFOSAA","d5-EtFOSAA","61.4","\%R","","-99","NA","","IS","61.4","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C2-PFUnA","13C2-PFUnA","67.6","\%R","","-99","NA","","IS","67.6","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C2-PFDoA","13C2-PFDoA","80.8","\%R","","-99","NA","","IS","80.8","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ458I-20181211","Modified EPA 537","Initial","1804077-01","Vista","13C2-PFTeDA","13C2-PFTeDA","73.8","\%R","","-99","NA","","IS","73.8","","-99","NA","YES","100","","0.234","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","375-22-4","PFBA","2.07","ng/L","J","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","2706-90-3","PFPeA","4.57","ng/L","","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","375-73-5","PFBS","2.63","ng/L","UU","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","307-24-4","PFHxA","5.96","ng/L","","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","375-85-9","PFHpA","3.63","ng/L","J","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","355-46-4","PFHxS","1.76","ng/L","J","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","27619-97-2","6:2
FTS","2.63","ng/L","UU","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","335-67-1","PFOA","9.51","ng/L","","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","375-92-
8","PFHpS","2.63","ng/L","UU","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","375-95-1","PFNA","48.6","ng/L","","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","754-91-6","PFOSA","2.63","ng/L","UU","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63","
"FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","1763-23-
1","PFOS","2.52","ng/L","J","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63",""
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2","PFDA","2.63","ng/L","UU","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63",""
"FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","39108-34-4","8:2
FTS","2.63","ng/L","UU","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63",""
"FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","2355-31-
9","MeFOSAA","2.63","ng/L","UU","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.6 3",""
"FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","2991-50-
6","EtFOSAA","2.63","ng/L","UU","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63 " ""
"FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","2058-94-
8","PFUnA","2.63","ng/L","UU","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63"," "
"FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","335-77-
3","PFDS","2.63","ng/L","UU","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","307-55-1","PFDoA","2.63","ng/L","UU","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63"," "
"FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","72629-94-
8","PFTrDA","2.63","ng/L","UU","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63", ""
"FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","376-06-
7","PFTeDA","2.63","ng/L","UU","1.44","LOD","","TRG","","","4.21","LOQ","YES","-99","","0.238","0.001","2.63", ""
"FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","13C3-PFBA","13C3-
PFBA","88.3","\%R","","-99","NA","","IS","88.3","","-99","NA","YES","100","","0.238","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","13C3-PFPeA","13C3-PFPeA","87.3","\%R","","-99","NA","","IS","87.3","","-99","NA","YES","100","","0.238","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","13C3-PFBS","13C3-PFBS","79.9","\%R","","-99","NA","","IS","79.9","","-99","NA","YES","100","","0.238","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","13C2-PFHxA","13C2-PFHxA","80.1","\%R","","-99","NA","","IS","80.1","","-99","NA","YES","100","","0.238","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","13C4-PFHpA","13C4-PFHpA","88.7","\%R","","-99","NA","","IS","88.7","","-99","NA","YES","100","","0.238","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","18O2-PFHxS","18O2-PFHxS","90.2","\%R","","-99","NA","","IS","90.2","","-99","NA","YES","100","","0.238","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","13C2-6:2 FTS","13C2-6:2 FTS","101","\%R","","-99","NA","","IS","101","","-99","NA","YES","100","","0.238","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","13C2-PFOA","13C2-PFOA","86.6","\%R","","-99","NA","","IS","86.6","","-99","NA","YES","100","","0.238","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","13C5-PFNA","13C5-PFNA","78.5","\%R","","-99","NA","","IS","78.5","","-99","NA","YES","100","","0.238","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","13C8-PFOSA","13C8-PFOSA","40.0","\%R","H","-99","NA","","IS","40.0","","-99","NA","YES","100","","0.238","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","13C8-PFOS","13C8-PFOS","84.6","\%R","","-99","NA","","IS","84.6","","-99","NA","YES","100","","0.238","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","13C2-PFDA","13C2-PFDA","74.0","\%R","","-99","NA","","IS","74.0","","-99","NA","YES","100","","0.238","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","13C2-8:2 FTS","13C2-8:2 FTS","93.9","\%R","","-99","NA","","IS","93.9","","-99","NA","YES","100","","0.238","0.001","-99","" "FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","d3-MeFOSAA","d3-MeFOSAA","63.5","\%R","","-99","NA","","IS","63.5","","-99","NA","YES","100","","0.238","0.001","-99",""
"FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","d5-EtFOSAA","d5-
EtFOSAA","66.9","\%R","","-99","NA","","IS","66.9","","-99","NA","YES","100","","0.238","0.001","-99",""
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PFUnA","71.2","\%R","","-99","NA","","IS","71.2","","-99","NA","YES","100","","0.238","0.001","-99",""
"FT-PZ460I-20181211","Modified EPA 537","Initial","1804077-02","Vista","13C2-PFDoA","13C2-
PFDoA","80.1","\%R","","-99","NA","","IS","80.1","","-99","NA","YES","100","","0.238","0.001","-99",""
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PFTeDA","70.8","\%R","","-99","NA","","IS","70.8","","-99","NA","YES","100","","0.238","0.001","-99",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","375-22-
4","PFBA","14.7","ng/L","","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","2706-90-
3","PFPeA","31.3","ng/L","","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","375-73-
5","PFBS","2.64","ng/L","UU","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","307-24-
4","PFHxA","99.5","ng/L","","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","375-85-
9","PFHpA","60.0","ng/L","","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","355-46-4","PFHxS","2.21","ng/L","J,
Q","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","27619-97-2","6:2
FTS","182","ng/L","","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","335-67-
1","PFOA","84.1","ng/L","","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","375-92-
8","PFHpS","2.64","ng/L","UU","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","375-95-1","PFNA","2020","ng/L","","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","754-91-6","PFOSA","2.64","ng/L","UU","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64","
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1","PFOS","5.47","ng/L","","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","335-76-
2","PFDA","8.61","ng/L","Q","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","39108-34-4","8:2
FTS","7.95","ng/L","","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","2355-31-
9","MeFOSAA","2.64","ng/L","UU","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.6 4",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","2991-50-
6","EtFOSAA","3.01","ng/L","J","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64","
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","2058-94-
8","PFUnA","2.64","ng/L","UU","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64"," "
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","335-77-
3","PFDS","2.64","ng/L","UU","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64",""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","307-55-
1","PFDoA","2.64","ng/L","UU","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64"," "
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","72629-94-
8","PFTrDA","2.64","ng/L","UU","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64", ""
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","376-06-7","PFTeDA","2.64","ng/L","UU","1.45","LOD","","TRG","","","4.22","LOQ","YES","-99","","0.237","0.001","2.64", " "
"FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C3-PFBA","13C3-PFBA","90.5","\%R","","-99","NA","","IS","90.5","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C3-PFPeA","13C3-PFPeA","90.3","\%R","","-99","NA","","IS","90.3","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C3-PFBS","13C3-PFBS","82.5","\%R","","-99","NA","","IS","82.5","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C2-PFHxA","13C2-PFHxA","88.9","\%R","","-99","NA","","IS","88.9","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C4-PFHpA","13C4-PFHpA","90.3","\%R","","-99","NA","","IS","90.3","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","18O2-PFHxS","18O2-PFHxS","89.8","\%R","","-99","NA","","IS","89.8","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C2-6:2 FTS","13C2-6:2 FTS","87.2","\%R","","-99","NA","","IS","87.2","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C2-PFOA","13C2-PFOA","92.3","\%R","","-99","NA","","IS","92.3","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C5-PFNA","13C5-PFNA","77.1","\%R","","-99","NA","","IS","77.1","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C8-PFOSA","13C8-PFOSA","27.9","\%R","H","-99","NA","","IS","27.9","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C8-PFOS","13C8-PFOS","88.8","\%R","","-99","NA","","IS","88.8","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C2-PFDA","13C2-PFDA","73.7","\%R","","-99","NA","","IS","73.7","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C2-8:2 FTS","13C2-8:2 FTS","94.1","\%R","","-99","NA","","IS","94.1","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","d3-MeFOSAA","d3-MeFOSAA","64.9","\%R","","-99","NA","","IS","64.9","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","d5-EtFOSAA","d5-EtFOSAA","71.4","\%R","","-99","NA","","IS","71.4","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C2-PFUnA","13C2-PFUnA","70.7","\%R","","-99","NA","","IS","70.7","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C2-PFDoA","13C2-PFDoA","81.8","\%R","","-99","NA","","IS","81.8","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ461I-20181211","Modified EPA 537","Initial","1804077-03","Vista","13C2-PFTeDA","13C2-PFTeDA","73.8","\%R","","-99","NA","","IS","73.8","","-99","NA","YES","100","","0.237","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","375-22-4","PFBA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","2706-90-3","PFPeA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","375-73-5","PFBS","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","307-24-4","PFHxA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69","
"FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","375-85-9","PFHpA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69"," "
"FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","355-46-4","PFHxS","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","27619-97-2","6:2

FTS","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69",""
"FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","335-67-
1","PFOA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","375-92-
8","PFHpS","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","375-95-1","PFNA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","754-91-6","PFOSA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69"," "
"FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","1763-23-
1","PFOS","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","335-76-
2","PFDA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","39108-34-4","8:2 FTS","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69",""
"FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","2355-31-
9","MeFOSAA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.6 9",""
"FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","2991-50-
6","EtFOSAA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69 " ""
"FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","2058-94-
8","PFUnA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69"," "
"FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","335-77-
3","PFDS","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","307-55-
1","PFDoA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69","
"FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","72629-94-
8","PFTrDA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69", ""
"FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","376-06-
7","PFTeDA","2.69","ng/L","UU","1.47","LOD","","TRG","","","4.31","LOQ","YES","-99","","0.232","0.001","2.69", ""
"FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C3-PFBA","13C3-PFBA","89.5","\%R","","-99","NA","","IS","89.5","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C3-PFPeA","13C3-PFPeA","86.3","\%R","","-99","NA","","IS","86.3","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C3-PFBS","13C3-PFBS","86.4","\%R","","-99","NA","","IS","86.4","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C2-PFHxA","13C2-PFHxA","84.4","\%R","","-99","NA","","IS","84.4","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C4-PFHpA","13C4-PFHpA","86.4","\%R","","-99","NA","","IS","86.4","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","18O2-PFHxS","18O2-PFHxS","93.6","\%R","","-99","NA","","IS","93.6","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C2-6:2 FTS","13C2-6:2 FTS","89.9","\%R","","-99","NA","","IS","89.9","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C2-PFOA","13C2-PFOA","86.3","\%R","","-99","NA","","IS","86.3","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C5-PFNA","13C5-PFNA","78.4","\%R","","-99","NA","","IS","78.4","","-99","NA","YES","100","","0.232","0.001","-99",""
"FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C8-PFOSA","13C8-
PFOSA","27.8","\%R","H","-99","NA","","IS","27.8","","-99","NA","YES","100","","0.232","0.001","-99",""
"FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C8-PFOS","13C8-PFOS","84.4","\%R","","-99","NA","","IS","84.4","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C2-PFDA","13C2-PFDA","66.7","\%R","","-99","NA","","IS","66.7","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C2-8:2 FTS","13C2-8:2 FTS","90.4","\%R","","-99","NA","","IS","90.4","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","d3-MeFOSAA","d3-MeFOSAA","73.1","\%R","","-99","NA","","IS","73.1","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","d5-EtFOSAA","d5-EtFOSAA","74.4","\%R","","-99","NA","","IS","74.4","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C2-PFUnA","13C2-PFUnA","71.1","\%R","","-99","NA","","IS","71.1","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C2-PFDoA","13C2-PFDoA","77.6","\%R","","-99","NA","","IS","77.6","","-99","NA","YES","100","","0.232","0.001","-99","" "FT-PZ464S-20181211","Modified EPA 537","Initial","1804077-04","Vista","13C2-PFTeDA","13C2-PFTeDA","77.0","\%R","","-99","NA","","IS","77.0","","-99","NA","YES","100","","0.232","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","375-22-4","PFBA","2.02","ng/L","J","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","2706-90-
3","PFPeA","4.69","ng/L","","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","375-73-
5","PFBS","2.51","ng/L","UU","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","307-24-
4","PFHxA","5.52","ng/L","","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","375-85-9","PFHpA","3.55","ng/L","J","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","355-46-4","PFHxS","1.99","ng/L","J","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","27619-97-2","6:2
FTS","2.51","ng/L","UU","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51",""
"DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","335-67-
1","PFOA","8.65","ng/L","","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","375-92-8","PFHpS","2.51","ng/L","UU","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","375-95-1","PFNA","46.9","ng/L","","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","754-91-6","PFOSA","2.51","ng/L","UU","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51"," "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","1763-23-1","PFOS","1.60","ng/L","J, Q","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51",""
"DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","335-76-
2","PFDA","2.51","ng/L","UU","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","39108-34-4","8:2
FTS","2.51","ng/L","UU","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51",""
"DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","2355-31-
9","MeFOSAA","2.51","ng/L","UU","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.5 1",""
"DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","2991-50-
6","EtFOSAA","2.51","ng/L","UU","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51 ","
"DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","2058-94-

8","PFUnA","2.51","ng/L","UU","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51"," "
"DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","335-77-
3","PFDS","2.51","ng/L","UU","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","307-55-
1","PFDoA","2.51","ng/L","UU","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51"," "
"DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","72629-94-
8","PFTrDA","2.51","ng/L","UU","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51", ""
"DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","376-06-7","PFTeDA","2.51","ng/L","UU","1.38","LOD","","TRG","","","4.02","LOQ","YES","-99","","0.249","0.001","2.51", ""
"DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C3-PFBA","13C3-
PFBA","90.9","\%R","","-99","NA","","IS","90.9","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C3-PFPeA","13C3-PFPeA","91.7","\%R","","-99","NA","","IS","91.7","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C3-PFBS","13C3-PFBS","85.9","\%R","","-99","NA","","IS","85.9","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C2-PFHxA","13C2-PFHxA","86.2","\%R","","-99","NA","","IS","86.2","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C4-PFHpA","13C4-PFHpA","87.0","\%R","","-99","NA","","IS","87.0","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","18O2-PFHxS","18O2-PFHxS","93.3","\%R","","-99","NA","","IS","93.3","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C2-6:2 FTS","13C2-6:2 FTS","88.3","\%R","","-99","NA","","IS","88.3","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C2-PFOA","13C2-PFOA","87.9","\%R","","-99","NA","","IS","87.9","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C5-PFNA","13C5-PFNA","83.0","\%R","","-99","NA","","IS","83.0","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C8-PFOSA","13C8-PFOSA","32.3","\%R","H","-99","NA","","IS","32.3","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C8-PFOS","13C8-PFOS","83.2","\%R","","-99","NA","","IS","83.2","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C2-PFDA","13C2-PFDA","73.4","\%R","","-99","NA","","IS","73.4","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C2-8:2 FTS","13C2-8:2 FTS","91.8","\%R","","-99","NA","","IS","91.8","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","d3-MeFOSAA","d3-MeFOSAA","68.0","\%R","","-99","NA","","IS","68.0","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","d5-EtFOSAA","d5-EtFOSAA","66.6","\%R","","-99","NA","","IS","66.6","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C2-PFUnA","13C2-
PFUnA","68.1","\%R","","-99","NA","","IS","68.1","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C2-PFDoA","13C2-PFDoA","79.6","\%R","","-99","NA","","IS","79.6","","-99","NA","YES","100","","0.249","0.001","-99","" "DUP01-20181211","Modified EPA 537","Initial","1804077-05","Vista","13C2-PFTeDA","13C2-
PFTeDA","76.6","\%R","","-99","NA","","IS","76.6","","-99","NA","YES","100","","0.249","0.001","-99",""
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","375-22-
4","PFBA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","2706-90-3","PFPeA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","375-73-

5","PFBS","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","307-24-4","PFHxA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46"," "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","375-85-9","PFHpA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46"," "
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","355-46-4","PFHxS","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","27619-97-2","6:2
FTS","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46",""
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","335-67-
1","PFOA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46",""
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","375-92-
8","PFHpS","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","375-95-1","PFNA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","754-91-6","PFOSA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46"," "
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","1763-23-1","PFOS","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","335-76-2","PFDA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","39108-34-4","8:2
FTS","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46",""
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","2355-31-
9","MeFOSAA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.4 6",""
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","2991-50-
6","EtFOSAA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46 " ""
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","2058-94-
8","PFUnA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46","
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","335-77-
3","PFDS","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46",""
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","307-55-
1","PFDoA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46"," "
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","72629-94-
8","PFTrDA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46", ""
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","376-06-7","PFTeDA","2.46","ng/L","UU","1.35","LOD","","TRG","","","3.94","LOQ","YES","-99","","0.254","0.001","2.46", ""
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C3-PFBA","13C3-PFBA","90.3","\%R","","-99","NA","","IS","90.3","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C3-PFPeA","13C3-PFPeA","88.5","\%R","","-99","NA","","IS","88.5","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C3-PFBS","13C3-PFBS","80.3","\%R","","-99","NA","","IS","80.3","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C2-PFHxA","13C2-PFHxA","82.9","\%R","","-99","NA","","IS","82.9","","-99","NA","YES","100","","0.254","0.001","-99",""
"FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C4-PFHpA","13C4-PFHpA","86.3","\%R","","-99","NA","","IS","86.3","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","18O2-PFHxS","18O2-PFHxS","92.4","\%R","","-99","NA","","IS","92.4","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C2-6:2 FTS","13C2-6:2 FTS","96.3","\%R","","-99","NA","","IS","96.3","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C2-PFOA","13C2-PFOA","85.8","\%R","","-99","NA","","IS","85.8","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C5-PFNA","13C5-PFNA","76.6","\%R","","-99","NA","","IS","76.6","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C8-PFOSA","13C8-PFOSA","24.9","\%R","H","-99","NA","","IS","24.9","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C8-PFOS","13C8-PFOS","83.2","\%R","","-99","NA","","IS","83.2","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C2-PFDA","13C2-PFDA","64.2","\%R","","-99","NA","","IS","64.2","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C2-8:2 FTS","13C2-8:2 FTS","90.7","\%R","","-99","NA","","IS","90.7","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","d3-MeFOSAA","d3-MeFOSAA","64.8","\%R","","-99","NA","","IS","64.8","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","d5-EtFOSAA","d5-EtFOSAA","63.2","\%R","","-99","NA","","IS","63.2","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C2-PFUnA","13C2-PFUnA","62.5","\%R","","-99","NA","","IS","62.5","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C2-PFDoA","13C2-PFDoA","71.2","\%R","","-99","NA","","IS","71.2","","-99","NA","YES","100","","0.254","0.001","-99","" "FT-PZ464S-FRB-20181211","Modified EPA 537","Initial","1804077-06","Vista","13C2-PFTeDA","13C2-PFTeDA","68.3","\%R","","-99","NA","","IS","68.3","","-99","NA","YES","100","","0.254","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","375-22-4","PFBA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","2706-90-3","PFPeA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","375-73-5","PFBS","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","307-24-4","PFHxA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50"," "
"B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","375-85-
9","PFHpA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50","
"B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","355-46-4","PFHxS","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","27619-97-2","6:2
FTS","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""
"B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","335-67-
1","PFOA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","375-92-
8","PFHpS","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","375-95-
1","PFNA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","754-91-6","PFOSA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50"," "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","1763-23-

1","PFOS","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","335-76-
2","PFDA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","39108-34-4","8:2 FTS","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","2355-31-9","MeFOSAA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.5 0",""
"B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","2991-50-
6","EtFOSAA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50 " ""
"B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","2058-94-
8","PFUnA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50"," "
"B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","335-77-
3","PFDS","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","307-55-
1","PFDoA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50"," "
"B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","72629-94-
8","PFTrDA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50", ""
"B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","376-06-
7","PFTeDA","2.50","ng/L","UU","1.37","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50", ""
"B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C3-PFBA","13C3-
PFBA","90.6","\%R","","-99","NA","","IS","90.6","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C3-PFPeA","13C3-PFPeA","88.3","\%R","","-99","NA","","IS","88.3","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C3-PFBS","13C3-PFBS","80.3","\%R","","-99","NA","","IS","80.3","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C2-PFHxA","13C2-PFHxA","82.0","\%R","","-99","NA","","IS","82.0","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C4-PFHpA","13C4-PFHpA","86.5","\%R","","-99","NA","","IS","86.5","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","18O2-PFHxS","18O2-PFHxS","93.9","\%R","","-99","NA","","IS","93.9","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C2-6:2 FTS","13C2-6:2 FTS","97.0","\%R","","-99","NA","","IS","97.0","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C2-PFOA","13C2-PFOA","88.0","\%R","","-99","NA","","IS","88.0","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C5-PFNA","13C5-PFNA","77.5","\%R","","-99","NA","","IS","77.5","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C8-PFOSA","13C8-PFOSA","57.8","\%R","","-99","NA","","IS","57.8","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C8-PFOS","13C8-PFOS","89.4","\%R","","-99","NA","","IS","89.4","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C2-PFDA","13C2-PFDA","65.8","\%R","","-99","NA","","IS","65.8","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C2-8:2 FTS","13C2-8:2 FTS","108","\%R","","-99","NA","","IS","108","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","d3-MeFOSAA","d3-MeFOSAA","62.7","\%R","","-99","NA","","IS","62.7","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","d5-EtFOSAA","d5-

EtFOSAA","64.8","\%R","","-99","NA","","IS","64.8","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C2-PFUnA","13C2-
PFUnA","68.1","\%R","","-99","NA","","IS","68.1","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C2-PFDoA","13C2-PFDoA","72.0","\%R","","-99","NA","","IS","72.0","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BLK1","Modified EPA 537","Initial","B8L0144-BLK1","Vista","13C2-PFTeDA","13C2-PFTeDA","65.4","\%R","","-99","NA","","IS","65.4","","-99","NA","YES","100","","0.250","0.001","-99","" "B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","375-22-
4","PFBA","41.2","ng/L","","1.37","LOD","","TRG","103","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50","" "B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","2706-90-
3","PFPeA","41.6","ng/L","","1.37","LOD","","TRG","104","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"," "
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","375-73-
5","PFBS","44.4","ng/L","","1.37","LOD","","TRG","111","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50","" "B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","307-24-
4","PFHxA","42.7","ng/L","","1.37","LOD","","TRG","107","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50", ""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","375-85-
9","PFHpA","39.0","ng/L","","1.37","LOD","","TRG","97.5","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50", ""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","355-46-
4","PFHxS","42.5","ng/L","","1.37","LOD","","TRG","106","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"," "
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","27619-97-2","6:2
FTS","43.0","ng/L","","1.37","LOD","","TRG","107","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","335-67-
1","PFOA","40.1","ng/L","","1.37","LOD","","TRG","100","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"," "
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","375-92-
8","PFHpS","46.1","ng/L","","1.37","LOD","","TRG","115","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"," "
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","375-95-
1","PFNA","44.1","ng/L","","1.37","LOD","","TRG","110","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"," "
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","754-91-
6","PFOSA","41.3","ng/L","","1.37","LOD","","TRG","103","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50", ""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","1763-23-
1","PFOS","42.9","ng/L","","1.37","LOD","","TRG","107","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50","" "B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","335-762","PFDA","43.7","ng/L","","1.37","LOD","","TRG","109","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"," "
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","39108-34-4","8:2
FTS","42.4","ng/L","","1.37","LOD","","TRG","106","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","2355-31-
9","MeFOSAA","40.0","ng/L","","1.37","LOD","","TRG","100","","4.00","LOQ","YES","40.0","","0.250","0.001","2. 50",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","2991-50-
6","EtFOSAA","45.6","ng/L","","1.37","LOD","","TRG","114","","4.00","LOQ","YES","40.0","","0.250","0.001","2.5 0",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","2058-94-
8","PFUnA","43.0","ng/L","","1.37","LOD","","TRG","107","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50", ""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","335-77-

3","PFDS","39.9","ng/L","","1.37","LOD","","TRG","99.8","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"," "
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","307-55-
1","PFDoA","39.9","ng/L","","1.37","LOD","","TRG","99.8","","4.00","LOQ","YES","40.0",","0.250","0.001","2.50", ""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","72629-94-
8","PFTrDA","40.5","ng/L","","1.37","LOD","","TRG","101","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50" ""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","376-06-
7","PFTeDA","40.0","ng/L","","1.37","LOD","","TRG","100","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50 " ""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C3-PFBA","13C3-
PFBA","85.0","\%R","","-99","NA","","IS","85.0","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C3-PFPeA","13C3-
PFPeA","83.6","\%R","","-99","NA","","IS","83.6","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C3-PFBS","13C3-
PFBS","77.1","\%R","","-99","NA","","IS","77.1","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C2-PFHxA","13C2-
PFHxA","81.7","\%R","",--99","NA","","IS","81.7","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C4-PFHpA","13C4-
PFHpA","86.5","\%R","",--99","NA","","IS","86.5","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","18O2-PFHxS","18O2-
PFHxS","85.6","\%R","","-99","NA","","IS","85.6","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C2-6:2 FTS","13C2-6:2
FTS","85.7","\%R","","-99","NA","","IS","85.7","",--99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C2-PFOA","13C2-
PFOA","82.5","\%R","","-99","NA","","IS","82.5","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C5-PFNA","13C5-
PFNA","73.6","\%R","","-99","NA","","IS","73.6","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C8-PFOSA","13C8-
PFOSA","62.4","\%R","",--99","NA",",","IS","62.4","","-99","NA","YES","100",","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C8-PFOS","13C8-
PFOS","80.0","\%R","","-99","NA","","IS","80.0","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C2-PFDA","13C2-
PFDA","64.0","\%R","","-99","NA","","IS","64.0","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C2-8:2 FTS","13C2-8:2
FTS","95.7","\%R","","-99","NA","","IS","95.7","",--99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","d3-MeFOSAA","d3-
MeFOSAA","59.9","\%R","","-99","NA","","IS","59.9","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","d5-EtFOSAA","d5-
EtFOSAA","61.3","\%R","","-99","NA","","IS","61.3","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C2-PFUnA","13C2-
PFUnA","59.7","\%R","",--99","NA","","IS","59.7","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C2-PFDoA","13C2-
PFDoA","65.2","\%R","","-99","NA","","IS","65.2","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-BS1","Modified EPA 537","Initial","B8L0144-BS1","Vista","13C2-PFTeDA","13C2-
PFTeDA","63.0","\%R","","-99","NA","","IS","63.0","","-99","NA","YES","100","","0.250","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","375-22-
4","PFBA","52.1","ng/L","","1.48","LOD","","TRG","102","","4.31","LOQ","YES","43.1","FT-PZ458I-
20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","2706-90-
3","PFPeA","61.4","ng/L","","1.48","LOD","","TRG","101","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","375-73-

5","PFBS","46.6","ng/L","","1.48","LOD","","TRG","105","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","307-24-
4","PFHxA","82.6","ng/L","","1.48","LOD","","TRG","97.9","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","375-85-
9","PFHpA","64.5","ng/L","","1.48","LOD","","TRG","99.8","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","355-46-
4","PFHxS","56.0","ng/L","","1.48","LOD","","TRG","107","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","27619-97-2","6:2
FTS","98.0","ng/L","","1.48","LOD","","TRG","96.9","","4.31","LOQ","YES","43.1","FT-PZ458I-
20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","335-67-
1","PFOA","79.2","ng/L","","1.48","LOD","","TRG","100","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","375-92-
8","PFHpS","47.2","ng/L","","1.48","LOD","","TRG","108","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","375-95-
1","PFNA","513","ng/L","","1.48","LOD","","TRG","70.4","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","754-91-
6","PFOSA","49.4","ng/L","","1.48","LOD","","TRG","115","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","1763-23-
1","PFOS","66.4","ng/L","","1.48","LOD","","TRG","93.8","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","335-76-
2","PFDA","52.6","ng/L","","1.48","LOD","","TRG","107","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","39108-34-4","8:2
FTS","50.7","ng/L","","1.48","LOD","","TRG","96.4","","4.31","LOQ","YES","43.1","FT-PZ458I-
20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","2355-31-
9","MeFOSAA","51.7","ng/L","","1.48","LOD","","TRG","120","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","2991-50-
6","EtFOSAA","57.9","ng/L","","1.48","LOD","","TRG","117","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","2058-94-
8","PFUnA","43.2","ng/L","","1.48","LOD","","TRG","100","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","335-77-
3","PFDS","46.4","ng/L","","1.48","LOD","","TRG","108","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","307-55-
1","PFDoA","43.3","ng/L","","1.48","LOD","","TRG","101","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","72629-94-
8","PFTrDA","44.7","ng/L","","1.48","LOD","","TRG","104","","4.31","LOQ","YES","43.1","FT-PZ458I-
20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","376-06-

7","PFTeDA","45.7","ng/L","","1.48","LOD","","TRG","106","","4.31","LOQ","YES","43.1","FT-PZ458I20181211","0.232","0.001","2.69",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C3-PFBA","13C3-PFBA","87.3","\%R","","-99","NA","","IS","87.3","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C3-PFPeA","13C3-PFPeA","85.6","\%R","","-99","NA","","IS","85.6","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C3-PFBS","13C3-PFBS","77.7","\%R","","-99","NA","","IS","77.7","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C2-PFHxA","13C2-PFHxA","83.2","\%R","","-99","NA","","IS","83.2","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C4-PFHpA","13C4-PFHpA","84.2","\%R","","-99","NA","","IS","84.2","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","18O2-PFHxS","18O2-PFHxS","79.8","\%R","","-99","NA","","IS","79.8","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C2-6:2 FTS","13C2-6:2
FTS","88.0","\%R","","-99","NA","","IS","88.0","","-99","NA","YES","100","FT-PZ458I-
20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C2-PFOA","13C2-
PFOA","87.2","\%R","","-99","NA","","IS","87.2","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C5-PFNA","13C5-PFNA","80.5","\%R","","-99","NA","","IS","80.5","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C8-PFOSA","13C8-PFOSA","50.6","\%R","","-99","NA","","IS","50.6","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C8-PFOS","13C8-PFOS","80.3","\%R","","-99","NA","","IS","80.3","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C2-PFDA","13C2-PFDA","70.3","\%R","","-99","NA","","IS","70.3","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C2-8:2 FTS","13C2-8:2
FTS","101","\%R","","-99","NA","","IS","101","","-99","NA","YES","100","FT-PZ458I-
20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","d3-MeFOSAA","d3-MeFOSAA","58.9","\%R","","-99","NA","","IS","58.9","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","d5-EtFOSAA","d5-
EtFOSAA","68.6","\%R","","-99","NA","","IS","68.6","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C2-PFUnA","13C2-PFUnA","72.1","\%R","","-99","NA","","IS","72.1","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C2-PFDoA","13C2-
PFDoA","74.8","\%R","","-99","NA","","IS","74.8","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MS1","Modified EPA 537","Initial","B8L0144-MS1","Vista","13C2-PFTeDA","13C2-

PFTeDA","71.8","\%R","","-99","NA","","IS","71.8","","-99","NA","YES","100","FT-PZ458I-20181211","0.232","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","375-22-
4","PFBA","50.5","ng/L","","1.46","LOD","","TRG","99.6","2.38","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","2706-90-
3","PFPeA","60.5","ng/L","","1.46","LOD","","TRG","99.9","1.10","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","375-73-
5","PFBS","45.7","ng/L","","1.46","LOD","","TRG","104","0.957","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","307-24-
4","PFHxA","81.9","ng/L","","1.46","LOD","","TRG","97.4","0.512","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","375-85-
9","PFHpA","63.0","ng/L","","1.46","LOD","","TRG","97.6","2.23","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","355-46-
4","PFHxS","52.8","ng/L","","1.46","LOD","","TRG","100","6.76","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","27619-97-2","6:2
FTS","96.1","ng/L","","1.46","LOD","","TRG","93.6","3.46","4.26","LOQ","YES","42.6","FT-PZ458I-
20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","335-67-
1","PFOA","77.7","ng/L","","1.46","LOD","","TRG","97.9","2.12","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","375-92-
8","PFHpS","44.6","ng/L","","1.46","LOD","","TRG","103","4.74","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","375-95-
1","PFNA","525","ng/L","H","1.46","LOD","","TRG","101","35.7","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","754-91-
6","PFOSA","50.0","ng/L","Q","1.46","LOD","","TRG","117","1.72","4.26","LOQ","YES","42.6","FT-PZ458I-
20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","1763-23-
1","PFOS","64.2","ng/L","","1.46","LOD","","TRG","89.7","4.47","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","335-76-
2","PFDA","50.1","ng/L","","1.46","LOD","","TRG","102","4.78","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","39108-34-4","8:2
FTS","49.8","ng/L","","1.46","LOD","","TRG","95.4","1.04","4.26","LOQ","YES","42.6","FT-PZ458I-
20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","2355-31-
9","MeFOSAA","44.9","ng/L","","1.46","LOD","","TRG","105","13.3","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","2991-50-
6","EtFOSAA","52.2","ng/L","","1.46","LOD","","TRG","105","10.8","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","2058-94-
8","PFUnA","38.9","ng/L","","1.46","LOD","","TRG","91.3","9.10","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","335-77-

3","PFDS","45.2","ng/L","","1.46","LOD","","TRG","106","1.87","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","307-55-
1","PFDoA","41.6","ng/L","","1.46","LOD","","TRG","97.7","3.32","4.26","LOQ","YES","42.6","FT-PZ458I-
20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","72629-94-
8","PFTrDA","42.3","ng/L","","1.46","LOD","","TRG","99.2","4.72","4.26","LOQ","YES","42.6","FT-PZ458I20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","376-06-
7","PFTeDA","42.2","ng/L","","1.46","LOD","","TRG","99.0","6.83","4.26","LOQ","YES","42.6","FT-PZ458I-
20181211","0.235","0.001","2.66",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C3-PFBA","13C3-
PFBA","86.5","\%R","","-99","NA","","IS","86.5","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C3-PFPeA","13C3-
PFPeA","83.6","\%R","","-99","NA","","IS","83.6","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C3-PFBS","13C3-
PFBS","77.7","\%R","","-99","NA","","IS","77.7","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C2-PFHxA","13C2-
PFHxA","80.6","\%R","","-99","NA","","IS","80.6","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C4-PFHpA","13C4-
PFHpA","84.4","\%R","","-99","NA","","IS","84.4","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","18O2-PFHxS","18O2-
PFHxS","87.3","\%R","","-99","NA","","IS","87.3","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C2-6:2 FTS","13C2-6:2
FTS","87.9","\%R","","-99","NA","","IS","87.9","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C2-PFOA","13C2-
PFOA","89.9","\%R","","-99","NA","","IS","89.9","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C5-PFNA","13C5-
PFNA","76.9","\%R","","-99","NA","","IS","76.9","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C8-PFOSA","13C8-
PFOSA","46.4","\%R","H","-99","NA","","IS","46.4","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C8-PFOS","13C8-
PFOS","87.4","\%R","","-99","NA","","IS","87.4","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C2-PFDA","13C2-
PFDA","70.9","\%R","","-99","NA","","IS","70.9","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C2-8:2 FTS","13C2-8:2
FTS","108","\%R","","-99","NA","","IS","108","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","d3-MeFOSAA","d3-
MeFOSAA","62.4","\%R","","-99","NA","","IS","62.4","","-99","NA","YES","100","FT-PZ458I-
20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","d5-EtFOSAA","d5-

EtFOSAA","64.4","\%R","","-99","NA","","IS","64.4","","-99","NA","YES","100","FT-PZ458I-20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C2-PFUnA","13C2-PFUnA","69.8","\%R","","-99","NA","","IS","69.8","","-99","NA","YES","100","FT-PZ458I-20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C2-PFDoA","13C2-
PFDoA","73.6","\%R","","-99","NA","","IS","73.6","","-99","NA","YES","100","FT-PZ458I-20181211","0.235","0.001","-99",""
"B8L0144-MSD1","Modified EPA 537","Initial","B8L0144-MSD1","Vista","13C2-PFTeDA","13C2-PFTeDA","72.9","\%R","","-99","NA","","IS","72.9","","-99","NA","YES","100","FT-PZ458I-20181211","0.235","0.001","-99",""
"112608005-WE05","112608005-WE05","FT-PZ458I-20181211","12/11/2018 09:55","AQ","1804077-
01","NM","","2.00","Modified EPA 537","METHOD","Initial","12/19/2018 08:45","12/31/2018
19:47","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B8L0144","B8L0144","NA","S8L0076","1804077","12/13/2018 10:11","01/01/1900 00:00","" "112608005-WE05","112608005-WE05","FT-PZ460I-20181211","12/11/2018 11:25","AQ","180407702","NM","","2.00","Modified EPA 537","METHOD","Initial","12/19/2018 08:45","12/31/2018 19:58","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B8L0144","B8L0144","NA","S8L0076","1804077","12/13/2018 10:11","01/01/1900 00:00","" "112608005-WE05","112608005-WE05","FT-PZ461I-20181211","12/11/2018 12:45","AQ","1804077-
03","NM","","2.00","Modified EPA 537","METHOD","Initial","12/19/2018 08:45","12/31/2018 20:08","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B8L0144","B8L0144","NA","S8L0076","1804077","12/13/2018 10:11","01/01/1900 00:00","" "112608005-WE05","112608005-WE05","FT-PZ464S-20181211","12/11/2018 15:10","AQ","1804077-
04","NM","","2.00","Modified EPA 537","METHOD","Initial","12/19/2018 08:45","12/31/2018 20:19","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B8L0144","B8L0144","NA","S8L0076","1804077","12/13/2018 10:11","01/01/1900 00:00","" "112608005-WE05","112608005-WE05","DUP01-20181211","12/11/2018 12:30","AQ","180407705","NM","","2.00","Modified EPA 537","METHOD","Initial","12/19/2018 08:45","12/31/2018 20:51","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B8L0144","B8L0144","NA","S8L0076","1804077","12/13/2018 10:11","01/01/1900 00:00","" "112608005-WE05","112608005-WE05","FT-PZ464S-FRB-20181211","12/11/2018 15:10","AQ","180407706","NM","","2.00","Modified EPA 537","METHOD","Initial","12/19/2018 08:45","12/31/2018 21:01","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B8L0144","B8L0144","NA","S8L0076","1804077","12/13/2018 10:11","01/01/1900 00:00","" "112608005-WE05","112608005-WE05","B8L0144-BLK1","01/01/1900 00:00","AQ","B8L0144-
BLK1","MB","","-99","Modified EPA 537","METHOD","Initial","12/19/2018 08:45","12/31/2018 18:22","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B8L0144","B8L0144","NA","S8L0076","1804077","01/01/1900 00:00","01/01/1900 00:00","" "112608005-WE05","112608005-WE05","B8L0144-BS1","01/01/1900 00:00","AQ","B8L0144-BS1","LCS","","-99","Modified EPA 537","METHOD","Initial","12/19/2018 08:45","12/31/2018 18:33","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B8L0144","B8L0144","NA","S8L0076","1804077","01/01/1900 00:00","01/01/1900 00:00","" "112608005-WE05","112608005-WE05","B8L0144-MS1","01/01/1900 00:00","AQ","B8L0144-MS1","MS","","-99","Modified EPA 537","METHOD","Initial","12/19/2018 08:45","12/31/2018 18:43","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B8L0144","B8L0144","NA","S8L0076","1804077","01/01/1900 00:00","01/01/1900 00:00","" "112608005-WE05","112608005-WE05","B8L0144-MSD1","01/01/1900 00:00","AQ","B8L0144-MSD1","MSD","","-99","Modified EPA 537","METHOD","Initial","12/19/2018 08:45","12/31/2018 18:54","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B8L0144","B8L0144","NA","S8L0076","1804077","01/01/1900 00:00","01/01/1900 00:00",""

| TO: | K. FRANCISCO | DATE: | JANUARY 25, 2019 |
| :--- | :--- | :--- | :--- |
| FROM: | MICHELLE L. WOEBER | COPIES: | DV FILE |
| SUBJECT: | ORGANIC DATA VALIDATION - POLYFLUOROALKYL SUBSTANCES (PFAS) |  |  |
|  | NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON |  |  |
|  | FORMER FIRE TRAINING AREA |  |  |

SAMPLES: 5/Groundwater/PFAS

| DUP01-20181211 | FT-PZ458l-20181211 | FT-PZ460I-20181211 |
| :--- | ---: | ---: |
| FT-PZ4611-20181211 | FT-PZ464S-20181211 |  |
| 1/Field Reagent Blank (FRB)/PFAS |  |  |

FT-PZ464S-FRB-20181211

## Overview

The sample set for NWIRP Calverton, SDG 1804077 consisted of five (5) groundwater environmental samples and one (1) Field Reagent Blank (FRB). All six (6) samples were analyzed for polyfluoroalkyl substances (PFAS). One field duplicate sample pair was included in this SDG: DUP01-20181211/FT-PZ4601-20181211.

The samples were collected by Tetra Tech, Inc. on December 11, 2018 and analyzed by Vista Analytical Laboratory. The analyses were conducted in compliance with Department of Defense (DoD)/Department of Energy (DOE) Quality Systems Manual (QSM) for Environmental Laboratories version 5.1 PFAS using LC/MS/MS Appendix B Table B-15 (July 2017). The data contained in this SDG was validated via EPA Stage 4 with regard to the following parameters:

*     - Data completeness
*     - Hold times/Sample Preservation
*     - Mass Calibration
* . LC/MS/MS System Tuning and Performance
*     - Mass Spectral Acquisition Rate
*     - Instrument Sensitivity Check
*     - Ion Transition Check
*     - Initia//Continuing Calibrations
* . Laboratory Method/Preparation Blank Results
- Extraction Internal Standard Recoveries
*     - Injection Internal Standard Recoveries
*     - Laboratory Control Sample Recoveries
*     - Matrix Spike/Matrix Spike Duplicate Results
*     - Field Duplicate Precision
*     - Compound Identification
*     - Compound Quantitation
*     - Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, and documentation supporting these findings is presented in Appendix C.

## PEAS

The Percent Recoveries (\%Rs) for the extraction internal standard compound, 13C8-perfluorooctane sulfonamide (13C8-PFOSA), was below the $50 \%$ quality control limit in all samples except sample FT-PZ458I-20181211. The non-detected results reported for the associated compound, perfluorooctane sulfonamide (FOSA), in these samples were qualified as estimated, (UJ). The samples were not re-extracted.

## Additional Comments

The FRB was free of contamination.
Detected results reported below the Limit of Quantitation (LOQ) but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results were reported to the LOD. Executive Summary

Laboratory Performance Issues: Four samples and the FRB had low \%Rs for one extraction internal standard affecting one compound in each sample.

Other Factors Affecting Data Quality: Detected results below the LOQ were estimated.
The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017), EPA Method 537 Modified, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (2017). The text of this report has been formulated to address only those areas affecting data quality.

Tetra Tech, Inc.
Michelle L. Weber
Chemist/Data Validator


Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

## Attachments:

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

## Data Qualifier Definitions

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

| $\mathbf{U}$ | The analyte was analyzed for, but was not detected at a level greater than or equal to <br> the level of the adjusted detection limit. |
| :---: | :--- |
| $\mathbf{J}$ | The result is an estimated quantity. The associated numerical value is the <br> approximate concentration of the analyte in the sample (due either to the quality of <br> the data generated because certain quality control criteria were not met, or the <br> concentration of the analyte was below the reporting limit). |
| $\mathbf{J +}$ | The result is an estimated quantity, but the result may be biased high. |$|$| $\mathbf{J -}$ | The result is an estimated quantity, but the result may be biased low. |
| :---: | :--- |

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

## 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
$\mathrm{G}=$ Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
$J=$ ICP PDS Recovery Noncompliance; MSA's $r<0.995$
$\mathrm{K}=$ ICP Interference - includes ICS \% R Noncompliance
L = Instrument Calibration Range Exceedance
$\mathrm{M}=$ Sample Preservation Noncompliance
$\mathrm{N}=$ 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 x IDL for inorganics and <CRQL for organics)
$\mathrm{Q}=$ Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
$\mathrm{S}=$ Pesticide/PCB Resolution
T = \% Breakdown Noncompliance for DDT and Endrin
$\mathrm{U}=$ RPD between columns/detectors $>40 \%$ for positive results determined via GC/HPLC
$\mathrm{V}=$ Non-linear calibrations; correlation coefficient $\mathrm{r}<0.995$
$\mathrm{W}=$ EMPC result
$\mathrm{X}=$ Signal to noise response drop
$Y=$ Percent solids $<30 \%$
$Z \quad=$ 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

| PROJ_NO: 08005-WE05 | NSAMPLE | DUP01-201812 |  |  | FT-PZ4581-201 | 8121 |  | FT-PZ4601-201 | 18121 |  | FT-PZ4611-201 | 18121 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SDG: 1804077 | LAB_ID | 1804077-05 |  |  | 1804077-01 |  |  | 1804077-02 |  |  | 1804077-03 |  |  |
| FRACTION: PFAS | SAMP_DATE | 12/11/2018 |  |  | 12/11/2018 |  |  | 12/11/2018 |  |  | 12/11/2018 |  |  |
| 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 | FT-PZ4601-201 | 8121 |  |  |  |  |  |  |  |  |  |  |
| PARAMETER |  | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 6:2 FLUOROTELOMER | LFONATE | 2.51 | U |  | 56.2 |  |  | 2.63 | U |  | 182 |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8:2 FLUOROTELOMER S | LFONATE | 2.51 | U |  | 9.15 |  |  | 2.63 | U |  | 7.95 |  |  |
| N-ETHYLPERFLUOROOC | ANE | 2.51 | U |  | 7.4 |  |  | 2.63 | U |  | 3.01 | J | P |
| SULFONAMIDOACETATE | NEFOSA) |  |  |  |  |  |  |  |  |  |  |  |  |
| N-METHYLPERFLUOROO | CTANE | 2.51 | U |  | 2.67 | U |  | 2.63 | U |  | 2.64 | U |  |
| SULFONAMIDOACETATE | NMFOSA) |  |  |  |  |  |  |  |  |  |  |  |  |
| PENTADECAFLUOROOC | ANOIC ACID | 8.65 |  |  | 35.9 |  |  | 9.51 |  |  | 84.1 |  |  |
| PERFLUOROBUTANESUL | FONIC ACID | 2.51 | U |  | 2.67 | U |  | 2.63 | U |  | 2.64 | U |  |
| (PFBS) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PERFLUOROBUTANOIC | CID (PFBA) | 2.02 | J | P | 8.12 |  |  | 2.07 | J | P | 14.7 |  |  |
| PERFLUORODECANESUL | FONIC ACID | 2.51 | U |  | 2.67 | U |  | 2.63 | U |  | 2.64 | U |  |
| PERFLUORODECANOIC | CID (PFDA) | 2.51 | U |  | 6.5 |  |  | 2.63 | U |  | 8.61 |  |  |
| PERFLUORODODECANO | C ACID | 2.51 | U |  | 2.67 | U |  | 2.63 | U |  | 2.64 | U |  |
| PERFLUOROHEPTANES | LFONIC ACID | 2.51 | U |  | 2.67 | U |  | 2.63 | U |  | 2.64 | U |  |
| (PFHPS) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PERFLUOROHEPTANOIC | ACID (PFHPA) | 3.55 | J | P | 21.5 |  |  | 3.63 | J | P | 60 |  |  |
| PERFLUOROHEXANESU | FONIC ACID | 1.99 | J | P | 10.1 |  |  | 1.76 | J | P | 2.21 | J | P |
| (PFHXS) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PERFLUOROHEXANOIC | CID (PFHXA) | 5.52 |  |  | 40.4 |  |  | 5.96 |  |  | 99.5 |  |  |
| PERFLUORONONANOIC | CID (PFNA) | 46.9 |  |  | 482 |  |  | 48.6 |  |  | 2020 |  |  |
| PERFLUOROOCTANE SUL | FONAMIDE | 2.51 | UJ | N | 2.67 | U |  | 2.63 | UJ | N | 2.64 | UJ | N |
| (FOSA) | - |  |  |  |  |  |  |  |  |  |  |  |  |
| PERFLUOROOCTANESU | FONIC ACID | 1.6 | J | P | 26 |  |  | 2.52 | J | P | 5.47 |  |  |
| (PFOS) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PERFLUOROPENTANOIC | ACID (PFPEA) | 4.69 |  |  | 17.9 |  |  | 4.57 |  |  | 31.3 |  |  |
| PERFLUOROTETRADEC | NOIC ACID | 2.51 | U |  | 2.67 | U |  | 2.63 | U |  | 2.64 | U |  |
| (PFTEA) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PERFLUOROTRIDECANO | C ACID | 2.51 | U |  | 2.67 | U |  | 2.63 | U |  | 2.64 | U |  |
| (PFTRIA) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PERFLUOROUNDECANO | ACID | 2.51 | U |  | 2.67 | U |  | 2.63 | U |  | 2.64 | U |  |



APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

| Sample ID: FT-PZ458I-20181211 |  |  |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-$ WE05 <br> SDG: \# WE05 |  | Matrix: <br> Date C | d: | ter $8 \text { 09:55 }$ |  | tory Data mple: eceived: | $\begin{aligned} & 1804077-0 \\ & \text { 13-Dec-18 } \end{aligned}$ | $10: 11$ | Column: | BEH C18 |  |
| Analyte | CAS Number | Conc. (ng/L) | DL | LOD | LOQ | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | 8.12 | 1.46 | 2.67 | 4.28 |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFPeA | 2706-90-3 | 17.9 | 1.46 | 2.67 | 4.28 |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFBS | 375-73-5 | ND | 1.46 | 2.67 | 4.28 | U | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFHxA | 307-24-4 | 40.4 | 1.46 | 2.67 | 4.28 |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFHpA | 375-85-9 | 21.5 | 1.46 | 2.67 | 4.28 |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFHxS | 355-46-4 | 10.1 | 1.46 | 2.67 | 4.28 |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| 6:2 FTS | 27619-97-2 | 56.2 | 1.46 | 2.67 | 4.28 |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFOA | 335-67-1 | 35.9 | 1.46 | 2.67 | 4.28 |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFHpS | 375-92-8 | ND | 1.46 | 2.67 | 4.28 | U | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFNA | 375-95-1 | 482 | 1.46 | 2.67 | 4.28 |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFOSA | 754-91-6 | ND | 1.46 | 2.67 | 4.28 | U | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFOS | 1763-23-1 | 26.0 | 1.46 | 2.67 | 4.28 |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFDA | 335-76-2 | 6.50 | 1.46 | 2.67 | 4.28 |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| 8:2 FTS | 39108-34-4 | 9.15 | 1.46 | 2.67 | 4.28 |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| MeFOSAA | 2355-31-9 | ND | 1.46 | 2.67 | 4.28 | U | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| EtFOSAA | 2991-50-6 | 7.40 | 1.46 | 2.67 | 4.28 |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFUnA | 2058-94-8 | ND | 1.46 | 2.67 | 4.28 | U | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFDS | 335-77-3 | ND | 1.46 | 2.67 | 4.28 | U | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFDoA | 307-55-1 | ND | 1.46 | 2.67 | 4.28 | U | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFTrDA | 72629-94-8 | ND | 1.46 | 2.67 | 4.28 | U | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| PFTeDA | 376-06-7 | ND | 1.46 | 2.67 | 4.28 | U | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| Labeled Standards | Type | \% Recovery |  | Limits |  | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 87.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| 13C3-PFPeA | IS | 85.5 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| 13C3-PFBS | IS | 81.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| 13C2-PFHxA | IS | 83.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| 13C4-PFHpA | IS | 88.1 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| 1802-PFHxS | IS | 96.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| 13C2-6:2 FTS | IS | 83.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| 13C2-PFOA | IS | 86.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| 13C5-PFNA | IS | 80.1 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| 13C8-PFOSA | IS | 82.1 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| 13C8-PFOS | IS | 83.8 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |
| 13C2-PFDA | IS | 72.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.234 L | 31-Dec-18 19:47 | 1 |



| Sample ID: FT-PZ460I-20181211 |  |  |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-$ WE05 <br> SDG: \# WE05 |  | Matrix: <br> Date C | d: | ter $811: 25$ |  | tory Data mple: eceived: | $\begin{aligned} & 1804077-0 \\ & \text { 13-Dec-18 } \end{aligned}$ | $10: 11$ | Column: | BEH C18 |  |
| Analyte | CAS Number | Conc. (ng/L) | DL | LOD | LOQ | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | 2.07 | 1.44 | 2.63 | 4.21 | J | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFPeA | 2706-90-3 | 4.57 | 1.44 | 2.63 | 4.21 |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFBS | 375-73-5 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFHxA | 307-24-4 | 5.96 | 1.44 | 2.63 | 4.21 |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFHpA | 375-85-9 | 3.63 | 1.44 | 2.63 | 4.21 | J | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFHxS | 355-46-4 | 1.76 | 1.44 | 2.63 | 4.21 | J | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 6:2 FTS | 27619-97-2 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFOA | 335-67-1 | 9.51 | 1.44 | 2.63 | 4.21 |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFHpS | 375-92-8 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFNA | 375-95-1 | 48.6 | 1.44 | 2.63 | 4.21 |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFOSA | 754-91-6 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFOS | 1763-23-1 | 2.52 | 1.44 | 2.63 | 4.21 | J | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFDA | 335-76-2 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 8:2 FTS | 39108-34-4 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| MeFOSAA | 2355-31-9 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| EtFOSAA | 2991-50-6 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFUnA | 2058-94-8 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFDS | 335-77-3 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFDoA | 307-55-1 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFTrDA | 72629-94-8 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFTeDA | 376-06-7 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| Labeled Standards | Type | \% Recovery |  | Limits |  | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 88.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C3-PFPeA | IS | 87.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C3-PFBS | IS | 79.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C2-PFHxA | IS | 80.1 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C4-PFHpA | IS | 88.7 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 1802-PFHxS | IS | 90.2 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C2-6:2 FTS | IS | 101 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C2-PFOA | IS | 86.6 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C5-PFNA | IS | 78.5 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C8-PFOSA | IS | 40.0 |  | 50-150 |  | H | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C8-PFOS | IS | 84.6 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C2-PFDA | IS | 74.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |



| Sample ID: FT-PZ461I-20181211 |  |  |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-$ WE05 <br> SDG: \# WE05 |  | Matrix <br> Date | d: | ter $12: 45$ |  | tory Data mple: eceived: | $\begin{aligned} & 1804077-0 \\ & 13-\text { Dec-18 } \end{aligned}$ | $\begin{aligned} & 3 \\ & 10: 11 \end{aligned}$ | Column: | BEH C18 |  |
| Analyte | CAS Number | Conc. (ng/L) | DL | LOD | LOQ | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | 14.7 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFPeA | 2706-90-3 | 31.3 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFBS | 375-73-5 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFHxA | 307-24-4 | 99.5 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFHpA | 375-85-9 | 60.0 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFHxS | 355-46-4 | 2.21 | 1.45 | 2.64 | 4.22 | J, Q | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 6:2 FTS | 27619-97-2 | 182 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFOA | 335-67-1 | 84.1 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFHpS | 375-92-8 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFNA | 375-95-1 | 2020 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFOSA | 754-91-6 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFOS | 1763-23-1 | 5.47 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFDA | 335-76-2 | 8.61 | 1.45 | 2.64 | 4.22 | Q | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 8:2 FTS | 39108-34-4 | 7.95 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| MeFOSAA | 2355-31-9 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| EtFOSAA | 2991-50-6 | 3.01 | 1.45 | 2.64 | 4.22 | J | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFUnA | 2058-94-8 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFDS | 335-77-3 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFDoA | 307-55-1 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFTrDA | 72629-94-8 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFTeDA | 376-06-7 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| Labeled Standards | Type | \% Recovery |  | Limits |  | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 90.5 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C3-PFPeA | IS | 90.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C3-PFBS | IS | 82.5 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C2-PFHxA | IS | 88.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C4-PFHpA | IS | 90.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 1802-PFHxS | IS | 89.8 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C2-6:2 FTS | IS | 87.2 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C2-PFOA | IS | 92.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C5-PFNA | IS | 77.1 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C8-PFOSA | IS | 27.9 |  | 50-150 |  | H | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C8-PFOS | IS | 88.8 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C2-PFDA | IS | 73.7 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |



| Sample ID: FT-PZ464S-20181211 |  |  |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-$ WE05 <br> SDG: \# WE05 |  | Matrix: <br> Date C | d: | ter $15: 10$ |  | tory Data mple: eceived: | $\begin{aligned} & 1804077-0 \\ & \text { 13-Dec-18 } \end{aligned}$ | $10: 11$ | Column: | BEH C18 |  |
| Analyte | CAS Number | Conc. (ng/L) | DL | LOD | LOQ | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFPeA | 2706-90-3 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFBS | 375-73-5 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFHxA | 307-24-4 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFHpA | 375-85-9 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFHxS | 355-46-4 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 6:2 FTS | 27619-97-2 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFOA | 335-67-1 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFHpS | 375-92-8 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFNA | 375-95-1 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFOSA | 754-91-6 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFOS | 1763-23-1 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFDA | 335-76-2 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 8:2 FTS | 39108-34-4 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| MeFOSAA | 2355-31-9 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| EtFOSAA | 2991-50-6 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFUnA | 2058-94-8 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFDS | 335-77-3 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFDoA | 307-55-1 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFTrDA | 72629-94-8 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFTeDA | 376-06-7 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| Labeled Standards | Type | \% Recovery |  | Limits |  | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 89.5 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C3-PFPeA | IS | 86.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C3-PFBS | IS | 86.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C2-PFHxA | IS | 84.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C4-PFHpA | IS | 86.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 1802-PFHxS | IS | 93.6 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C2-6:2 FTS | IS | 89.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C2-PFOA | IS | 86.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C5-PFNA | IS | 78.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C8-PFOSA | IS | 27.8 |  | 50-150 |  | H | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C8-PFOS | IS | 84.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C2-PFDA | IS | 66.7 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |



| Sample ID: DUP01-20181211 |  |  |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-$ WE05 <br> SDG: \# WE05 |  | Matrix: <br> Date C | d: | ter $12: 30$ |  | tory Data mple: eceived: | $\begin{aligned} & 1804077-0 \\ & 13-\text { Dec-18 } \end{aligned}$ | $10: 11$ | Column: | BEH C18 |  |
| Analyte | CAS Number | Conc. (ng/L) | DL | LOD | LOQ | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | 2.02 | 1.38 | 2.51 | 4.02 | J | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFPeA | 2706-90-3 | 4.69 | 1.38 | 2.51 | 4.02 |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFBS | 375-73-5 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFHxA | 307-24-4 | 5.52 | 1.38 | 2.51 | 4.02 |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFHpA | 375-85-9 | 3.55 | 1.38 | 2.51 | 4.02 | J | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFHxS | 355-46-4 | 1.99 | 1.38 | 2.51 | 4.02 | J | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 6:2 FTS | 27619-97-2 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFOA | 335-67-1 | 8.65 | 1.38 | 2.51 | 4.02 |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFHpS | 375-92-8 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFNA | 375-95-1 | 46.9 | 1.38 | 2.51 | 4.02 |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFOSA | 754-91-6 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFOS | 1763-23-1 | 1.60 | 1.38 | 2.51 | 4.02 | J, Q | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFDA | 335-76-2 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 8:2 FTS | 39108-34-4 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| MeFOSAA | 2355-31-9 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| EtFOSAA | 2991-50-6 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFUnA | 2058-94-8 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFDS | 335-77-3 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFDoA | 307-55-1 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFTrDA | 72629-94-8 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFTeDA | 376-06-7 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| Labeled Standards | Type | \% Recovery |  | Limits |  | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 90.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C3-PFPeA | IS | 91.7 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C3-PFBS | IS | 85.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C2-PFHxA | IS | 86.2 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C4-PFHpA | IS | 87.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 1802-PFHxS | IS | 93.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C2-6:2 FTS | IS | 88.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C2-PFOA | IS | 87.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C5-PFNA | IS | 83.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C8-PFOSA | IS | 32.3 |  | 50-150 |  | H | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C8-PFOS | IS | 83.2 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C2-PFDA | IS | 73.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |


| Sample ID: DUP01-20181211 |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-$ WE05 <br> SDG: \# WE05 |  | Matrix: <br> Date Collected: | Groundwater 11-Dec-18 12:30 | Laboratory Data <br> Lab Sample: <br> Date Received: | $\begin{aligned} & \text { 1804077-0 } \\ & \text { 13-Dec-18 } \end{aligned}$ | $\begin{aligned} & 5 \\ & 10: 11 \end{aligned}$ | Column: | BEH C18 |  |
| Labeled Standards | Type | \% Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C2-8:2 FTS | IS | 91.8 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| d3-MeFOSAA | IS | 68.0 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| d5-EtFOSAA | IS | 66.6 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C2-PFUnA | IS | 68.1 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C2-PFDoA | IS | 79.6 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C2-PFTeDA | IS | 76.6 | 50-150 |  B8L0144 19-Dec-18 0.249 L $\quad$ 31-Dec-18 20:51 <br> When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both <br> linear and branched isomers. Only the linear isomer is reported for all other <br> analytes.    |  |  |  |  |  |
| DL - Detection Limit | LOD - Limit of Detection LOQ - Limit of quantitation | Results reported to the DL. |  | When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes. |  |  |  |  |  |


| Sample ID: FT-PZ464S-FRB-20181211 |  |  |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-$ WE05 <br> SDG: \# WE05 |  | Matrix: <br> Date C | ed: | $15: 10$ |  | tory Data mple: eceived: | $\begin{aligned} & 1804077-0 \\ & \text { 13-Dec-18 } \end{aligned}$ | $10: 11$ | Column: | BEH C18 |  |
| Analyte | CAS Number | Conc. (ng/L) | DL | LOD | LOQ | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFPeA | 2706-90-3 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFBS | 375-73-5 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFHxA | 307-24-4 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFHpA | 375-85-9 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFHxS | 355-46-4 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 6:2 FTS | 27619-97-2 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFOA | 335-67-1 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFHpS | 375-92-8 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFNA | 375-95-1 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFOSA | 754-91-6 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFOS | 1763-23-1 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFDA | 335-76-2 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 8:2 FTS | 39108-34-4 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| MeFOSAA | 2355-31-9 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| EtFOSAA | 2991-50-6 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFUnA | 2058-94-8 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFDS | 335-77-3 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFDoA | 307-55-1 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFTrDA | 72629-94-8 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFTeDA | 376-06-7 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| Labeled Standards | Type | \% Recovery |  | Limits |  | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 90.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C3-PFPeA | IS | 88.5 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C3-PFBS | IS | 80.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C2-PFHxA | IS | 82.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C4-PFHpA | IS | 86.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 18O2-PFHxS | IS | 92.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C2-6:2 FTS | IS | 96.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C2-PFOA | IS | 85.8 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C5-PFNA | IS | 76.6 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C8-PFOSA | IS | 24.9 |  | 50-150 |  | H | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C8-PFOS | IS | 83.2 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C2-PFDA | IS | 64.2 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |



APPENDIX C
SUPPORT DOCUMENTATION

## NWIRP CALVERTON

SDG 1804077

## SAMPLE ID COMPOUND

## FT-PZ461I-20181211 (1804077-03)

PFNA
INTERNAL STANDARD (IS) CONCENTRATION 12.5

AREA $\quad 4.39 \mathrm{E}+05$
IS AREA
WEIGHT/VOLUME (WT)

INITIAL CALIBRATION CURVE $(y)=-2.05618 E-5^{*} x^{\wedge} 2+1.26573^{*} x+-0.0640136$
QUADRATIC EQUATION: $\quad x=\frac{-b \pm \sqrt{b^{2}-4 a c}}{2 a} \quad \mathrm{x}=\quad 4.79 \mathrm{E}+02$
$-2.05618 \mathrm{E}-0$ * $^{*} x^{\wedge} 2+1.26573^{*} x+-0.0640136=601.7$
$-2.05618 \mathrm{E}-05^{*} x^{\wedge} 2+1.26573^{*} x+-601.76401=0$

Where:

| $a$ | $-2.06 \mathrm{E}-05$ |
| :--- | ---: |
| $b$ | 1.26573 |
| $c$ | -601.76401 |
| $b^{\wedge} 2-4 a c$ | 1.552579028 |
| SQRT(b^2-4ac) | 1.246025292 |
|  |  |
| CONCENTRATION (x/WT) | $2021.764348 \mathrm{ng} / \mathrm{L}$ |
| REPORTED CONCENTRATION | $2020 \mathrm{ng} / \mathrm{L}$ |

## Name: 181231M1_58, Date: 31-Dec-2018, Time: 20:08:42, ID: 1804077-03 FT-PZ461I-20181211 0.23672, Description: FT-PZ461I-20181211

|  | \# Name | Trace | Area | IS Area | WtVol | Mean | RT | Response | Conc. | \%Rec | Ion Ratio | Ratio Out? |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 PFBA | 213.0 > 168.8 | 2.15 e3 | 6.64e3 | 0.237 |  | 1.30 | 4.04 | 14.6758 |  |  |  |  |
| 2 | 2 PFPeA | $263.1>218.9$ | 5.05 e 3 | 8.30 e3 | 0.237 |  | 2.58 | 7.62 | 31.3067 |  |  |  |  |
| 3 | 3 PFBS | $299.0>79.7$ |  | 1.17 e 3 | 0.237 |  |  |  |  |  |  |  |  |
| 4 | 5 PFHxA | $313>269$ | 2.83 e 4 | 6.06e3 | 0.237 |  | 3.49 | 23.3 | 99.5252 |  | 14.1 | NO |  |
| 5 | 7 PFHpA | 363.0 > 318.9 | 1.32 e 4 | 7.85 e 3 | 0.237 |  | 4.14 | 21.0 | 60.0497 |  | 14.0 | NO |  |
| 6 | 36 13C3-PFBA | $216.1>171.8$ | 6.64 e 3 | 1.01e4 | 0.237 | 0.727 | 1.29 | 8.22 | 47.7813 | 90.5 |  |  |  |
| 7 | 37 13C3-PFPeA | 266. $>221.8$ | 8.30 e3 | 1.80 e 4 | 0.237 | 0.511 | 2.58 | 5.77 | 47.6985 | 90.3 |  |  |  |
| 8 | 38 13C3-PFBS | 302. > 98.8 | 1.17 e 3 | 2.84 e 3 | 0.237 | 0.497 | 2.91 | 5.13 | 43.5398 | 82.5 |  |  |  |
| 9 | 40 13C2-PFHxA | $315>270$ | 6.06e3 | 1.80 e 4 | 0.237 | 0.947 | 3.49 | 4.21 | 18.7760 | 88.9 |  |  |  |
| 10 | 41 13C4-PFHpA | 367.2 > 321.8 | 7.85 e 3 | 1.80 e 4 | 0.237 | 0.484 | 4.14 | 5.46 | 47.6672 | 90.3 |  |  |  |
| 11 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 12 | 8 L-PFHxS | $398.9>79.6$ | 8.40 e 1 | 1.06 e 3 | 0.237 |  | 4.27 | 0.994 | 2.2120 |  | 3.71 | YES |  |
| 13 | 68 Total PFHxS | $398.9>79.6$ | 8.40 e 1 | 1.06 e 3 | 0.237 |  |  | 0.994 | 2.2120 |  |  |  |  |
| 14 | 10 6:2 FTS | $427.1>407$ | 1.53 e 4 | 2.52 e3 | 0.237 |  | 4.57 | 76.1 | 181.7415 |  | 3.06 | NO |  |
| 15 | 11 L-PFOA | 412.8 > 368.9 | $3.32 e 4$ | 1.41 e 4 | 0.237 |  | 4.63 | 29.4 | 84.1034 |  | 3.32 | NO |  |
| 16 | 69 Total PFOA | 412.8 > 368.9 | 3.32 e 4 | 1.41 e 4 | 0.237 |  |  | 29.4 | 84.1034 |  |  |  |  |
| 17 | 42 1802-PFHxS | 403.0 > 102.6 | 1.06 e 3 | 2.84 e 3 | 0.237 | 0.414 | 4.27 | 4.65 | 47.4315 | 89.8 |  |  |  |
| 18 | 42 18O2-PFHxS | $403.0>102.6$ | 1.06 e 3 | 2.84 e3 | 0.237 | 0.414 | 4.27 | 4.65 | 47.4315 | 89.8 |  |  |  |
| 19 | 43 13C2-6:2 FTS | $428.9>80.9$ | 2.52 e3 | 3.14 e 3 | 0.237 | 0.920 | 4.58 | 10.0 | 46.0556 | 87.2 |  |  |  |
| 20 | 44 13C2-PFOA | 414.9 > 369.7 | 1.41 e 4 | 2.25 e 4 | 0.237 | 0.678 | 4.63 | 7.82 | 48.7410 | 92.3 |  |  |  |
| 21 | 44 13C2-PFOA | 414.9 > 369.7 | 1.41 e 4 | 2.25 e 4 | 0.237 | 0.678 | 4.63 | 7.82 | 48.7410 | 92.3 |  |  |  |
| 22 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 23 | 13 PFHpS | $449>80.0$ | 7.71 e 0 | 2.89 e 3 | 0.237 |  | 4.73 | 0.0333 | 0.3862 |  | 3.51 | YES |  |
| 24 | 14 PFNA | 463.0 > 418.8 | 4.39 e 5 | $9.12 e 3$ | 0.237 |  | 5.06 | 602 | 2023.6605 |  | 4.58 | NO |  |
| 25 | 15 PFOSA | $497.9>77.9$ |  | 1.16 e 3 | 0.237 |  |  |  |  |  |  |  |  |
| 26 | 16 L-PFOS | $498.9>79.9$ | 3.17 e 2 | 2.89 e 3 | 0.237 |  | 5.15 | 1.37 | 5.4723 |  | 3.00 | NO |  |
| 27 | 70 Total PFOS | 498.9 > 79.9 | 3.17 e 2 | 2.89 e 3 | 0.237 |  |  | 1.37 | 5.4723 |  |  |  |  |
| 28 | 47 13C8-PFOS | $507.0>79.9$ | 2.89e3 | 3.14 e 3 | 0.237 | 1.038 | 5.15 | 11.5 | 46.9134 | 88.8 |  |  |  |
| 29 | 45 13C5-PFNA | 468.2 > 422.9 | 9.12 e3 | 1.25 e4 | 0.237 | 0.949 | 5.06 | 9.14 | 40.7007 | 77.1 |  |  |  |
| 30 | 46 13C8-PFOSA | $506.1>77.7$ | 1.16 e 3 | 2.18 e 4 | 0.237 | 0.190 | 5.10 | 0.663 | 14.7477 | 27.9 |  |  |  |
| 31 | 47 13C8-PFOS | $507.0>79.9$ | 2.89 e 3 | 3.14 e 3 | 0.237 | 1.038 | 5.15 | 11.5 | 46.9134 | 88.8 |  |  |  |
| 32 | 47 13C8-PFOS | $507.0>79.9$ | 2.89 e 3 | 3.14 e 3 | 0.237 | 1.038 | 5.15 | 11.5 | 46.9134 | 88.8 |  |  |  |
| 33 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 34 | 18 PFDA | $513>468.8$ | 2.35 e 3 | 1.16 e 4 | 0.237 |  | 5.44 | 2.54 | 8.6116 |  | 8.98 | YES |  |
| 35 | 19 8:2 FTS | $527>506.9$ | 7.45 e 2 | 3.28 e 3 | 0.237 |  | 5.41 | 2.84 | 7.9536 |  | 2.49 | NO |  |
| 36 | 21 L-MeFOSAA | $570>419$ |  | 2.27 e 3 | 0.237 |  |  |  |  |  |  |  | AD 1/2/2019 |
| 37 |  | 570. $>419$ | 0.00 e 0 | 2.27 e 3 | 0.237 |  |  | 0.000 |  |  |  | Page | of 638 |

ANALYTE
PENTADECAFLUOROOCTANOIC ACID (PFOA)
PERFLUOROBUTANOIC ACID (PFBA)
PERFLUOROHEPTANOIC ACID (PFHPA)
PERFLUOROHEXANESULFONIC ACID (PFHXS)
PERFLUOROHEXANOIC ACID (PFHXA)
PERFLUORONONANOIC ACID (PFNA) PERFLUOROOCTANESULFONIC ACID (PFOS) PERFLUOROPENTANOIC ACID (PFPEA)

ORIGINAL DUPLICATE

|  |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: |
| 9.51 | 8.65 | 1.44 | 9.47 | FALSE |
| 2.07 | 2.02 | 1.44 | 2.44 | FALSE |
| 3.63 | 3.55 | 1.44 | 2.23 | FALSE |
| 1.76 | 1.99 | 1.44 | 12.27 | FALSE |
| 5.96 | 5.52 | 1.44 | 7.67 | FALSE |
| 48.6 | 46.9 | 1.44 | 3.56 | FALSE |
| 2.52 | 1.6 | 1.44 | 44.66 | TRUE |
| 4.57 | 4.69 | 1.44 | 2.59 | FALSE |


| ORIGINAL SAMPLE CONC >2xRL | DUPLICATE SAMPLE CONC >2xRL | DIFFERENCE >2xRL |
| :---: | :---: | :---: |
| TRUE | TRUE | FALSE |
| FALSE | FALSE | FALSE |
| TRUE | True | FALSE |
| FALSE | FALSE | FALSE |
| TRUE | TRUE | FALSE |
| true | true | FALSE |
| FALSE | FALSE | FALSE |
| TRUE | TRUE | FALSE |

## SDG 180407

FT-PZ4601-20181211/DUP01-20181211

Vista
Analytical Laboratory

CHAIN OF CUSTODY

## For Laboratory UsaOnly

Work Order \#: 1804077
_Temp: 2.0
Storage ID $\qquad$ Storage Secured: Yes $\square$ No $\square$



## Sample Log-In Checklist

Vista Work Order \#: $\qquad$ Page \# $\qquad$ 1 TAT $\qquad$


|  | YES | NO | NA |
| :--- | :---: | :---: | :---: |
| Adequate Sample Volume Received? | $\checkmark$ |  |  |
| Holding Time Acceptable? | $\checkmark$ |  |  |
| Shipping Containers) Intact? | $\checkmark$ |  |  |
| Shipping Custody Seals Intact? | $\checkmark$ |  |  |
| Shipping Documentation Present? | Trk\# (3/315224.5 39 O | $\checkmark$ |  |
| Airbill | $\checkmark$ |  |  |
| Sample Container Intact? | $\checkmark$ |  |  |
| Sample Custody Seals Intact? |  |  | $\checkmark$ |
| Chain of Custody / Sample Documentation Present? | $\checkmark$ |  |  |
| COC Anomaly/Sample Acceptance Form completed? |  | $\checkmark$ | $\checkmark$ |



## Comments:

## SDG Number \# WE05

## Vista Work Order No. 1804077

Case Narrative

## Sample Condition on Receipt:

Five groundwater samples and one aqueous sample 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:

## PFAS Isotope Dilution Method

The samples were extracted and analyzed for a selected list of PFAS using the PFAS Isotope Dilution Method (Modified EPA Method 537). The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

## Holding Times

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

## Quality Control

The Initial Calibration 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.

As requested, an MS/MSD was performed on sample "FT-PZ458I-20181211". The MS/MSD recoveries for all analytes were within the acceptance criteria. The RPD was out of the acceptance criteria for PFNA. All other RPDs were within the aceptance criteria.

The labeled standard recoveries outside the acceptance criteria are listed in the table below.
QC Anomalies

| LabNumber | SampleName | Analysis | Analyte | Flag |
| :--- | :--- | :--- | :--- | :--- |
| $1804077-02$ | FT-PZ460I-20181211 | PFAS Isotope Dilution Method | 13C8-PFOSA | H |
| $1804077-03$ | FT-PZ461I-20181211 | PFAS Isotope Dilution Method | 13C8-PFOSA | 40.0 |
| $1804077-04$ | FT-PZ464S-20181211 | PFAS Isotope Dilution Method | 13C8-PFOSA | H |
| $1804077-05$ | DUP01-20181211 | PFAS Isotope Dilution Method | 13C8-PFOSA | H |
| $1804077-06$ | FT-PZ464S-FRB-20181211 | PFAS Isotope Dilution Method | 13C8-PFOSA | 27.8 |
| B8L0144-MSD1 | B8L0144-MSD1 | PFAS Isotope Dilution Method | 13C8-PFOSA | 32.3 |

$\mathrm{H}=$ Recovery was outside laboratory acceptance criteria.

In addition, the laboratory QC officer must read and sign a copy of the Quality Assurance Review Form displayed on the next page of this Attachment. Electronic deliverables are not considered to be complete without the accompanying Quality Assurance Review Form.
 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 $(9 / 6) 673-1520$ if there are any questions or problems with the enclosed electronic deliverables.

Signature
 Date: $01 / 04 / 19$

Revision 9
IS
08/18/16

## DATA QUALIFIERS \& ABBREVIATIONS

B This compound was also detected in the method blank
Conc. Concentration
D Dilution
DL Detection limit
E The associated compound concentration exceeded the calibration range of the instrument

H Recovery and/or RPD was outside laboratory acceptance limits
Chemical Interference
J The amount detected is below the Reporting Limit/LOQ
LOD Limits of Detection
LOQ Limits of Quantitation
M Estimated Maximum Possible Concentration (CA Region 2 projects only)
NA Not applicable
ND Not Detected

Q Ion ratio outside of $\mathbf{7 0 - 1 3 0 \%}$ of Standard Ratio. (DOD PFAS projects only)
TEQ Toxic Equivalency
U Not Detected (specific projects only)

* See Cover Letter

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

## Sample Inventory Report

| Vista <br> Sample ID | Client <br> Sample ID | Sampled | Received | Components/Containers |
| :---: | :---: | :---: | :---: | :---: |
| 1804077-01 | FT-PZ4581-20181211 | MS/MSD11-Dec-18 09:55 | 13-Dec-18 10:11 | HDPE Bottle, 250 mL |
|  |  |  |  | HDPE Bottle, 250 mL |
|  |  |  |  | HDPE Bottle, 250 mL |
|  |  |  |  | HDPE Bottle, 250 mL |
|  |  |  |  | HDPE Bottle, 250 mL |
|  |  |  |  | HDPE Bottle, 250 mL |
| 1804077-02 | FT-PZ4601-20181211 | 11-Dec-18 11:25 | 13-Dec-18 10:11 | HDPE Bottle, 250 mL |
|  |  |  |  | HDPE Bottle, 250 mL |
| 1804077-03 | FT-PZ4611-20181211 | 11-Dec-18 12:45 | 13-Dec-18 10:11 | HDPE Bottle, 250 mL |
|  |  |  |  | HDPE Bottle, 250 mL |
| 1804077-04 | FT-PZ464S-20181211 | 11-Dec-18 15:10 | 13-Dec-18 10:11 | HDPE Bottle, 250 mL |
|  |  |  |  | HDPE Bottle, 250 mL |
| 1804077-05 | DUP01-20181211 | 11-Dec-18 12:30 | 13-Dec-18 10:11 | HDPE Bottle, 250 mL |
|  |  |  |  | HDPE Bottle, 250 mL |
| 1804077-06 | FT-PZ464S-FRB-20181211 | 11-Dec-18 15:10 | 13-Dec-18 10:11 | HDPE Bottle, 250 mL |
|  |  |  |  | HDPE Bottle, 250 mL |

Method: 537M PFAS DOD (LOQ as mRL)
PREPARATION BENCH SHEET

## B8L0144

Chemist: H2
Prep Date: $12 / 19 / 18$
Prep Time: $8: 45$
Prepared using:
Sonication
$\square$ Shaker $\triangle$ SPE ExtractionCentrifuge ID: $\qquad$



## Batch: B8L0144

## Matrix: Aqueous

| LabNumber | WetWeight (Initial) | $\begin{gathered} \text { \% Solids } \\ \text { (Extraction Solids) } \end{gathered}$ | DryWeight | Final | Extracted | Ext By | Spike | SpikeAmount | ClientMatrix | Analysis |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1804061-01 | $0.11058 v^{\prime}$ | NA | $N$ N | 1000 | 19-Dec-18 08:45 | HNR |  |  | QC Water | 537M PFAS DOD (LOQ as |
| 1804061-02 | 0.11084 , | T | T | 1000 | 19-Dec-18 08:45 | HNR |  |  | QC Water | 537M PFAS DOD (LOQ as |
| 1804061-03 | 0.11701 |  |  | 1000 | 19-Dec-18 08:45 | HNR |  |  | QC Water | 537M PFAS DOD (LOQ as |
| 1804061-04 | 0.11792 |  |  | 1000 | 19-Dec-18 08:45 | HNR |  |  | QC Water | 537M PFAS DOD (LOQ as |
| 1804077-01 | 0.2338 |  |  | 1000 | 19-Dec-18 08:45 | HNR |  |  | Groundwater | 537M PFAS DOD (LOQ as |
| 1804077-02 | 0.23758 |  |  | 1000 | 19-Dec-18 08:45 | HNR |  |  | Groundwater | 537M PFAS DOD (LOQ as |
| 1804077-03 | 0.23672 |  |  | 1000 | 19-Dec-18 08:45 | HNR |  |  | Groundwater | 537M PFAS DOD (LOQ as |
| 1804077-04 | 0.23223 |  |  | 1000 | 19-Dec-18 08:45 | HNR |  |  | Groundwater | 537M PFAS DOD (LOQ as |
| 1804077-05 | 0.24868 V |  |  | 1000 | 19-Dec-18 08:45 | HNR |  |  | Groundwater | 537M PFAS DOD (LOQ as |
| 1804077-06 | 0.25357 |  |  | 1000 | 19-Dec-18 08:45 | HNR |  |  | Aqueous | 537M PFAS DOD (LOQ as |
| B8L0144-BLK1 | $0.25{ }^{\prime}$ |  |  | 1000 | 19-Dec-18 08:45 | HNR |  |  |  | QC |
| B8L0144-BS1 | $0.25{ }^{\prime}$ |  |  | 1000 | 19-Dec-18 08:45 | HNR | 18L0304 | $10{ }^{\prime}$ |  | QC |
| B8L0144-MS1 | 0.23194 |  |  | 1000 | 19-Dec-18 08:45 | HNR | 18L0304 | , $10 \sqrt{ }$ |  | QC |
| B8L0144-MSD1 | 0.23493 | $\downarrow$ | $\checkmark$ | 1000 | 19-Dec-18 08:45 | HNR | 18L0304 | 10 V |  | QC |


| Sample ID: FT-PZ460I-20181211 |  |  |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-$ WE05 <br> SDG: \# WE05 |  | Matrix: <br> Date C | d: | ter $811: 25$ |  | tory Data mple: eceived: | $\begin{aligned} & 1804077-0 \\ & \text { 13-Dec-18 } \end{aligned}$ | $10: 11$ | Column: | BEH C18 |  |
| Analyte | CAS Number | Conc. (ng/L) | DL | LOD | LOQ | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | 2.07 | 1.44 | 2.63 | 4.21 | J | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFPeA | 2706-90-3 | 4.57 | 1.44 | 2.63 | 4.21 |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFBS | 375-73-5 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFHxA | 307-24-4 | 5.96 | 1.44 | 2.63 | 4.21 |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFHpA | 375-85-9 | 3.63 | 1.44 | 2.63 | 4.21 | J | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFHxS | 355-46-4 | 1.76 | 1.44 | 2.63 | 4.21 | J | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 6:2 FTS | 27619-97-2 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFOA | 335-67-1 | 9.51 | 1.44 | 2.63 | 4.21 |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFHpS | 375-92-8 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFNA | 375-95-1 | 48.6 | 1.44 | 2.63 | 4.21 |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFOSA | 754-91-6 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFOS | 1763-23-1 | 2.52 | 1.44 | 2.63 | 4.21 | J | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFDA | 335-76-2 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 8:2 FTS | 39108-34-4 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| MeFOSAA | 2355-31-9 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| EtFOSAA | 2991-50-6 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFUnA | 2058-94-8 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFDS | 335-77-3 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFDoA | 307-55-1 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFTrDA | 72629-94-8 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| PFTeDA | 376-06-7 | ND | 1.44 | 2.63 | 4.21 | U | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| Labeled Standards | Type | \% Recovery |  | Limits |  | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 88.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C3-PFPeA | IS | 87.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C3-PFBS | IS | 79.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C2-PFHxA | IS | 80.1 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C4-PFHpA | IS | 88.7 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 1802-PFHxS | IS | 90.2 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C2-6:2 FTS | IS | 101 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C2-PFOA | IS | 86.6 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C5-PFNA | IS | 78.5 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C8-PFOSA | IS | 40.0 |  | 50-150 |  | H | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C8-PFOS | IS | 84.6 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |
| 13C2-PFDA | IS | 74.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.238 L | 31-Dec-18 19:58 | 1 |


| Sample ID: FT-PZ461I-20181211 |  |  |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-$ WE05 <br> SDG: \# WE05 |  | Matrix <br> Date | d: | ter $12: 45$ |  | tory Data mple: eceived: | $\begin{aligned} & 1804077-0 \\ & 13-\text { Dec-18 } \end{aligned}$ | $\begin{aligned} & 3 \\ & 10: 11 \end{aligned}$ | Column: | BEH C18 |  |
| Analyte | CAS Number | Conc. (ng/L) | DL | LOD | LOQ | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | 14.7 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFPeA | 2706-90-3 | 31.3 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFBS | 375-73-5 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFHxA | 307-24-4 | 99.5 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFHpA | 375-85-9 | 60.0 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFHxS | 355-46-4 | 2.21 | 1.45 | 2.64 | 4.22 | J, Q | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 6:2 FTS | 27619-97-2 | 182 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFOA | 335-67-1 | 84.1 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFHpS | 375-92-8 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFNA | 375-95-1 | 2020 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFOSA | 754-91-6 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFOS | 1763-23-1 | 5.47 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFDA | 335-76-2 | 8.61 | 1.45 | 2.64 | 4.22 | Q | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 8:2 FTS | 39108-34-4 | 7.95 | 1.45 | 2.64 | 4.22 |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| MeFOSAA | 2355-31-9 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| EtFOSAA | 2991-50-6 | 3.01 | 1.45 | 2.64 | 4.22 | J | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFUnA | 2058-94-8 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFDS | 335-77-3 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFDoA | 307-55-1 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFTrDA | 72629-94-8 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| PFTeDA | 376-06-7 | ND | 1.45 | 2.64 | 4.22 | U | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| Labeled Standards | Type | \% Recovery |  | Limits |  | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 90.5 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C3-PFPeA | IS | 90.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C3-PFBS | IS | 82.5 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C2-PFHxA | IS | 88.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C4-PFHpA | IS | 90.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 1802-PFHxS | IS | 89.8 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C2-6:2 FTS | IS | 87.2 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C2-PFOA | IS | 92.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C5-PFNA | IS | 77.1 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C8-PFOSA | IS | 27.9 |  | 50-150 |  | H | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C8-PFOS | IS | 88.8 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |
| 13C2-PFDA | IS | 73.7 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.237 L | 31-Dec-18 20:08 | 1 |


| Sample ID: FT-PZ464S-20181211 |  |  |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-$ WE05 <br> SDG: \# WE05 |  | Matrix: <br> Date C | d: | ter $15: 10$ |  | tory Data mple: eceived: | $\begin{aligned} & 1804077-0 \\ & \text { 13-Dec-18 } \end{aligned}$ | $10: 11$ | Column: | BEH C18 |  |
| Analyte | CAS Number | Conc. (ng/L) | DL | LOD | LOQ | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFPeA | 2706-90-3 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFBS | 375-73-5 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFHxA | 307-24-4 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFHpA | 375-85-9 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFHxS | 355-46-4 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 6:2 FTS | 27619-97-2 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFOA | 335-67-1 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFHpS | 375-92-8 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFNA | 375-95-1 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFOSA | 754-91-6 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFOS | 1763-23-1 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFDA | 335-76-2 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 8:2 FTS | 39108-34-4 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| MeFOSAA | 2355-31-9 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| EtFOSAA | 2991-50-6 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFUnA | 2058-94-8 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFDS | 335-77-3 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFDoA | 307-55-1 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFTrDA | 72629-94-8 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| PFTeDA | 376-06-7 | ND | 1.47 | 2.69 | 4.31 | U | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| Labeled Standards | Type | \% Recovery |  | Limits |  | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 89.5 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C3-PFPeA | IS | 86.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C3-PFBS | IS | 86.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C2-PFHxA | IS | 84.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C4-PFHpA | IS | 86.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 18O2-PFHxS | IS | 93.6 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C2-6:2 FTS | IS | 89.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C2-PFOA | IS | 86.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C5-PFNA | IS | 78.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C8-PFOSA | IS | 27.8 |  | 50-150 |  | H | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C8-PFOS | IS | 84.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |
| 13C2-PFDA | IS | 66.7 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.232 L | 31-Dec-18 20:19 | 1 |


| Sample ID: DUP01-20181211 |  |  |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-$ WE05 <br> SDG: \# WE05 |  | Matrix: <br> Date C | d: | ter $12: 30$ |  | tory Data mple: eceived: | $\begin{aligned} & 1804077-0 \\ & 13-\text { Dec-18 } \end{aligned}$ | $10: 11$ | Column: | BEH C18 |  |
| Analyte | CAS Number | Conc. (ng/L) | DL | LOD | LOQ | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | 2.02 | 1.38 | 2.51 | 4.02 | J | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFPeA | 2706-90-3 | 4.69 | 1.38 | 2.51 | 4.02 |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFBS | 375-73-5 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFHxA | 307-24-4 | 5.52 | 1.38 | 2.51 | 4.02 |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFHpA | 375-85-9 | 3.55 | 1.38 | 2.51 | 4.02 | J | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFHxS | 355-46-4 | 1.99 | 1.38 | 2.51 | 4.02 | J | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 6:2 FTS | 27619-97-2 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFOA | 335-67-1 | 8.65 | 1.38 | 2.51 | 4.02 |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFHpS | 375-92-8 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFNA | 375-95-1 | 46.9 | 1.38 | 2.51 | 4.02 |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFOSA | 754-91-6 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFOS | 1763-23-1 | 1.60 | 1.38 | 2.51 | 4.02 | J, Q | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFDA | 335-76-2 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 8:2 FTS | 39108-34-4 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| MeFOSAA | 2355-31-9 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| EtFOSAA | 2991-50-6 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFUnA | 2058-94-8 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFDS | 335-77-3 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFDoA | 307-55-1 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFTrDA | 72629-94-8 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| PFTeDA | 376-06-7 | ND | 1.38 | 2.51 | 4.02 | U | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| Labeled Standards | Type | \% Recovery |  | Limits |  | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 90.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C3-PFPeA | IS | 91.7 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C3-PFBS | IS | 85.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C2-PFHxA | IS | 86.2 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C4-PFHpA | IS | 87.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 1802-PFHxS | IS | 93.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C2-6:2 FTS | IS | 88.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C2-PFOA | IS | 87.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C5-PFNA | IS | 83.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C8-PFOSA | IS | 32.3 |  | 50-150 |  | H | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C8-PFOS | IS | 83.2 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |
| 13C2-PFDA | IS | 73.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.249 L | 31-Dec-18 20:51 | 1 |


| Sample ID: FT-PZ464S-FRB-20181211 |  |  |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-$ WE05 <br> SDG: \# WE05 |  | Matrix: <br> Date C | ed: | $15: 10$ |  | tory Data mple: eceived: | $\begin{aligned} & 1804077-0 \\ & \text { 13-Dec-18 } \end{aligned}$ | $10: 11$ | Column: | BEH C18 |  |
| Analyte | CAS Number | Conc. (ng/L) | DL | LOD | LOQ | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFPeA | 2706-90-3 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFBS | 375-73-5 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFHxA | 307-24-4 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFHpA | 375-85-9 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFHxS | 355-46-4 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 6:2 FTS | 27619-97-2 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFOA | 335-67-1 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFHpS | 375-92-8 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFNA | 375-95-1 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFOSA | 754-91-6 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFOS | 1763-23-1 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFDA | 335-76-2 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 8:2 FTS | 39108-34-4 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| MeFOSAA | 2355-31-9 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| EtFOSAA | 2991-50-6 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFUnA | 2058-94-8 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFDS | 335-77-3 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFDoA | 307-55-1 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFTrDA | 72629-94-8 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| PFTeDA | 376-06-7 | ND | 1.35 | 2.46 | 3.94 | U | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| Labeled Standards | Type | \% Recovery |  | Limits |  | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 90.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C3-PFPeA | IS | 88.5 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C3-PFBS | IS | 80.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C2-PFHxA | IS | 82.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C4-PFHpA | IS | 86.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 18O2-PFHxS | IS | 92.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C2-6:2 FTS | IS | 96.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C2-PFOA | IS | 85.8 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C5-PFNA | IS | 76.6 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C8-PFOSA | IS | 24.9 |  | 50-150 |  | H | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C8-PFOS | IS | 83.2 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |
| 13C2-PFDA | IS | 64.2 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.254 L | 31-Dec-18 21:01 | 1 |


| Sample ID: Method Blank |  |  |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-W E 05$ |  | Matrix: | Aqueous |  |  | tory Data mple: | B8L0144- |  | Column: | BEH C18 |  |
| Analyte | CAS Number | Conc. (ng/L) | DL | LOD | LOQ | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFPeA | 2706-90-3 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFBS | 375-73-5 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFHxA | 307-24-4 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFHpA | 375-85-9 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFHxS | 355-46-4 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 6:2 FTS | 27619-97-2 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFOA | 335-67-1 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFHpS | 375-92-8 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFNA | 375-95-1 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFOSA | 754-91-6 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFOS | 1763-23-1 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFDA | 335-76-2 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 8:2 FTS | 39108-34-4 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| MeFOSAA | 2355-31-9 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| EtFOSAA | 2991-50-6 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFUnA | 2058-94-8 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFDS | 335-77-3 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFDoA | 307-55-1 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFTrDA | 72629-94-8 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| PFTeDA | 376-06-7 | ND | 1.37 | 2.50 | 4.00 | U | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| Labeled Standards | Type | \% Recovery |  | Limits |  | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 90.6 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C3-PFPeA | IS | 88.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C3-PFBS | IS | 80.3 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C2-PFHxA | IS | 82.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C4-PFHpA | IS | 86.5 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 1802-PFHxS | IS | 93.9 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C2-6:2 FTS | IS | 97.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C2-PFOA | IS | 88.0 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C5-PFNA | IS | 77.5 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C8-PFOSA | IS | 57.8 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C8-PFOS | IS | 89.4 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C2-PFDA | IS | 65.8 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C2-8:2 FTS | IS | 108 |  | 50-150 |  |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |

Analytical Laboratory

| Sample ID: Method Blank |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data  <br> Name: Tetra Tech <br> Project: $112608005-W E 05$ |  | Matrix: | Aqueous | Laboratory Data Lab Sample: | B8L0144 |  | Column: | BEH C18 |  |
| Labeled Standards | Type | \% Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| d3-MeFOSAA | IS | 62.7 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| d5-EtFOSAA | IS | 64.8 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C2-PFUnA | IS | 68.1 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C2-PFDoA | IS | 72.0 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| 13C2-PFTeDA | IS | 65.4 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:22 | 1 |
| DL - Detection Limit L | LOD - Limit of Detection $\quad$ Results reported to the DL. LOQ - Limit of quantitation | Results reported to the DL. |  | When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes. |  |  |  |  |  |



Work Order 1804077

Analytical Laboratory

| Sample ID: OPR |  |  |  |  |  |  | PFAS Isotope Dilution Method |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Client Data |  |  |  | Laboratory Data |  |  |  |  |  |
| $\begin{array}{ll} \text { Name: } & \text { Tetra Tech } \\ \text { Project: } & \text { 112608005-WE05 } \end{array}$ | Matrix: | Aqueous |  | Sample: | B8L0144 | BS1 | Column: | BEH C18 |  |
| Labeled Standards | Type | \% Rec | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| d3-MeFOSAA | IS | 59.9 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:33 | 1 |
| d5-EtFOSAA | IS | 61.3 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:33 | 1 |
| 13C2-PFUnA | IS | 59.7 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:33 | 1 |
| 13C2-PFDoA | IS | 65.2 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:33 | 1 |
| 13C2-PFTeDA | IS | 63.0 | 50-150 |  | B8L0144 | 19-Dec-18 | 0.250 L | 31-Dec-18 18:33 | 1 |



Work Order 1804077

Analytical Laboratory

| Sample ID: FT-PZ458I-20181211 |  |  |  |  |  |  |  | PFAS | soto | e Dilution Met | thod |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name: <br> Project: <br> Matrix: | Tetra Tech 112608005-WE05 Aqueous |  | Lab Sample: QC Batch: Samp Size: |  | B8L0144-MS1/B8L0144-MSD1 <br> B8L0144 <br> 0.232/0.235 L | MSD <br> Ouals | Limits | Source Lab Sample: <br> Date Extracted: Column: |  | $\begin{aligned} & \text { 1804077-01 } \\ & \text { 19-Dec-18 } \\ & \text { BEH C18 } \end{aligned}$ |  |
| Labeled Standards |  | Type | $\begin{gathered} \text { MS } \\ \text { \% Rec } \end{gathered}$ | $\begin{gathered} \text { MS } \\ \text { Quals } \end{gathered}$ | $\begin{gathered} \hline \text { MSD } \\ \text { \% Rec } \end{gathered}$ |  |  | MS Analyzed | $\begin{gathered} \hline \text { MS } \\ \text { Dil } \end{gathered}$ | $\begin{gathered} \hline \text { MSD } \\ \text { Analyzed } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { MSD } \\ \text { Dil } \end{gathered}$ |
| 13C2-8:2 |  | IS | 101 |  | 108 |  | 50-150 | 31-Dec-18 18:43 | 1 | 31-Dec-18 18:54 | 1 |
| d3-MeFO |  | IS | 58.9 |  | 62.4 |  | 50-150 | 31-Dec-18 18:43 | 1 | 31-Dec-18 18:54 | 1 |
| d5-EtFO |  | IS | 68.6 |  | 64.4 |  | 50-150 | 31-Dec-18 18:43 | 1 | 31-Dec-18 18:54 | 1 |
| 13C2-PF |  | IS | 72.1 |  | 69.8 |  | 50-150 | 31-Dec-18 18:43 | 1 | 31-Dec-18 18:54 | 1 |
| 13C2-PF |  | IS | 74.8 |  | 73.6 |  | 50-150 | 31-Dec-18 18:43 | 1 | 31-Dec-18 18:54 | 1 |
| 13C2-PF |  | IS | 71.8 |  | 72.9 |  | 50-150 | 31-Dec-18 18:43 | 1 | 31-Dec-18 18:54 | 1 |

## Name: 181231M1_56, Date: 31-Dec-2018, Time: 19:47:31, ID: 1804077-01 FT-PZ458I-20181211 0.2338, Description: FT-PZ458I-20181211

|  | \# Name | Trace | Area | IS Area | Wt/Vol | Mean | RT | Response | Conc. | \%Rec | Ion Ratio | Ratio Out? |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 PFBA | 213.0 > 168.8 | 1.05 e 3 | 6.05 e 3 | 0.234 |  | 1.30 | 2.17 | 8.1232 |  |  |  |  |
| 2 | 2 PFPeA | $263.1>218.9$ | 2.60 e3 | 7.59 e 3 | 0.234 |  | 2.58 | 4.29 | 17.9320 |  |  |  |  |
| 3 | 3 PFBS | 299.0 > 79.7 | 4.28 e 1 | 1.08 e 3 | 0.234 |  | 2.92 | 0.495 | 1.2833 |  | 3.24 | NO |  |
| 4 | 5 PFHxA | $313>269$ | 1.02 e 4 | 5.46 e 3 | 0.234 |  | 3.49 | 9.38 | 40.3784 |  | 14.9 | NO |  |
| 5 | 7 PFHpA | 363.0 > 318.9 | 4.38 e 3 | 7.41 e 3 | 0.234 |  | 4.14 | 7.40 | 21.4622 |  | 15.9 | NO |  |
| 6 | 36 13C3-PFBA | $216.1>171.8$ | 6.05 e 3 | 9.56 e 3 | 0.234 | 0.727 | 1.30 | 7.91 | 46.5373 | 87.0 |  |  |  |
| 7 | 37 13C3-PFPeA | 266. $>221.8$ | 7.59 e 3 | 1.74 e 4 | 0.234 | 0.511 | 2.58 | 5.46 | 45.7301 | 85.5 |  |  |  |
| 8 | 38 13C3-PFBS | 302. > 98.8 | 1.08 e 3 | 2.67 e 3 | 0.234 | 0.497 | 2.92 | 5.06 | 43.4843 | 81.3 |  |  |  |
| 9 | 40 13C2-PFHxA | $315>270$ | 5.46 e 3 | 1.74 e 4 | 0.234 | 0.947 | 3.49 | 3.93 | 17.7438 | 83.0 |  |  |  |
| 10 | 41 13C4-PFHpA | 367.2 > 321.8 | 7.41e3 | 1.74 e 4 | 0.234 | 0.484 | 4.14 | 5.33 | 47.1178 | 88.1 |  |  |  |
| 11 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 12 | 8 L-PFHxS | $398.9>79.6$ | 4.00 e 2 | 1.06 e 3 | 0.234 |  | 4.27 | 4.72 | 10.0686 |  | 2.05 | NO |  |
| 13 | 68 Total PFHxS | $398.9>79.6$ | 4.00 e 2 | 1.06 e 3 | 0.234 |  |  | 4.72 | 10.0686 |  |  |  |  |
| 14 | 10 6:2 FTS | $427.1>407$ | 4.34 e 3 | 2.32 e3 | 0.234 |  | 4.57 | 23.4 | 56.2092 |  | 3.24 | NO |  |
| 15 | 11 L-PFOA | 412.8 > 368.9 | 1.31 e 4 | 1.32 e 4 | 0.234 |  | 4.63 | 12.4 | 35.9361 |  | 3.29 | NO |  |
| 16 | 69 Total PFOA | 412.8 > 368.9 | 1.31 e 4 | 1.32 e 4 | 0.234 |  |  | 12.4 | 35.9361 |  |  |  |  |
| 17 | 42 18O2-PFHxS | $403.0>102.6$ | 1.06 e 3 | 2.67 e 3 | 0.234 | 0.414 | 4.27 | 4.96 | 51.3078 | 96.0 |  |  |  |
| 18 | 42 18O2-PFHxS | 403.0 > 102.6 | 1.06 e 3 | 2.67 e 3 | 0.234 | 0.414 | 4.27 | 4.96 | 51.3078 | 96.0 |  |  |  |
| 19 | 43 13C2-6:2 FTS | $428.9>80.9$ | 2.32 e3 | 3.03 e 3 | 0.234 | 0.920 | 4.58 | 9.58 | 44.5349 | 83.3 |  |  |  |
| 20 | 44 13C2-PFOA | 414.9 > 369.7 | 1.32 e 4 | 2.25 e 4 | 0.234 | 0.678 | 4.63 | 7.29 | 45.9968 | 86.0 |  |  |  |
| 21 | 44 13C2-PFOA | 414.9 > 369.7 | 1.32 e 4 | 2.25 e 4 | 0.234 | 0.678 | 4.63 | 7.29 | 45.9968 | 86.0 |  |  |  |
| 22 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 23 | 13 PFHpS | $449>80.0$ | 2.64 e 1 | 2.63 e3 | 0.234 |  | 4.74 | 0.126 | 0.8542 |  | 2.08 | NO |  |
| 24 | 14 PFNA | 463.0 > 418.8 | 1.32 e 5 | 1.16 e 4 | 0.234 |  | 5.06 | 142 | 482.4186 |  | 4.78 | NO |  |
| 25 | 15 PFOSA | $497.9>77.9$ |  | 3.35 e 3 | 0.234 |  |  |  |  |  |  |  |  |
| 26 | 16 L-PFOS | $498.9>79.9$ | 1.40 e 3 | 2.63 e3 | 0.234 |  | 5.14 | 6.64 | 25.9902 |  | 2.63 | NO |  |
| 27 | 70 Total PFOS | 498.9 > 79.9 | 1.40 e 3 | 2.63 e3 | 0.234 |  |  | 6.64 | 25.9902 |  |  |  |  |
| 28 | 47 13C8-PFOS | $507.0>79.9$ | 2.63 e3 | 3.03 e3 | 0.234 | 1.038 | 5.14 | 10.9 | 44.8079 | 83.8 |  |  |  |
| 29 | 45 13C5-PFNA | 468.2 > 422.9 | 1.16 e 4 | 1.52 e 4 | 0.234 | 0.949 | 5.06 | 9.50 | 42.8357 | 80.1 |  |  |  |
| 30 | 46 13C8-PFOSA | $506.1>77.7$ | 3.35 e 3 | 2.15 e 4 | 0.234 | 0.190 | 5.10 | 1.95 | 43.8768 | 82.1 |  |  |  |
| 31 | 47 13C8-PFOS | $507.0>79.9$ | 2.63 e3 | 3.03 e 3 | 0.234 | 1.038 | 5.14 | 10.9 | 44.8079 | 83.8 |  |  |  |
| 32 | 47 13C8-PFOS | $507.0>79.9$ | 2.63 e3 | 3.03 e3 | 0.234 | 1.038 | 5.14 | 10.9 | 44.8079 | 83.8 |  |  |  |
| 33 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 34 | 18 PFDA | $513>468.8$ | 1.78 e 3 | 1.17 e 4 | 0.234 |  | 5.44 | 1.90 | 6.4994 |  | 5.86 | NO |  |
| 35 | 19 8:2 FTS | $527>506.9$ | 7.90 e 2 | 3.06 e 3 | 0.234 |  | 5.41 | 3.23 | 9.1542 |  | 2.43 | NO |  |
| 36 | 21 L-MeFOSAA | $570>419$ |  | 2.13 e 3 | 0.234 |  |  |  |  |  |  |  | 1/2/2019 |
| 37 |  | 570. $>419$ | 0.00e0 | 2.13 e 3 | 0.234 |  |  | 0.000 |  |  |  | Page | of 638 |

Last Altered: Wednesday, January 02, 2019 17:34:01 Pacific Standard Time
Wednesday, January 02, 2019 17:34:14 Pacific Standard Time

Name: 181231M1_56, Date: 31-Dec-2018, Time: 19:47:31, ID: 1804077-01 FT-PZ458I-20181211 0.2338, Description: FT-PZ4581-20181211

|  | \# Name | Trace | Area | IS Area | Wt/Vol | Mean | RT | Response | Conc. | \%Rec | Ion Ratio | Ratio Out? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 38 | 25 PFUdA | 563.0 > 518.9 | 3.33 e 1 | 1.48e4 | 0.234 |  | 5.77 | 0.0281 | 0.0467 |  | 3.95 | YES |
| 39 | 48 13C2-PFDA | $515.1>469.9$ | 1.17 e 4 | 1.73 e 4 | 0.234 | 0.937 | 5.44 | 8.43 | 38.5017 | 72.0 |  |  |
| 40 | 49 13C2-8:2 FTS | $529.1>508.7$ | 3.06 e 3 | 3.03 e 3 | 0.234 | 1.110 | 5.41 | 12.6 | 48.7099 | 91.1 |  |  |
| 41 | $50 \mathrm{~d} 3-\mathrm{N}-\mathrm{MeFOSAA}$ | $573.3>419$ | 2.13 e 3 | 2.15 e 4 | 0.234 | 0.161 | 5.59 | 1.24 | 32.9831 | 61.7 |  |  |
| 42 | $50 \mathrm{~d} 3-\mathrm{N}-\mathrm{MeFOSAA}$ | $573.3>419$ | 2.13 e 3 | 2.15 e 4 | 0.234 | 0.161 | 5.59 | 1.24 | 32.9831 | 61.7 |  |  |
| 43 | 51 13C2-PFUdA | $565>519.8$ | 1.48 e 4 | 2.15 e 4 | 0.234 | 1.022 | 5.77 | 8.64 | 36.1580 | 67.6 |  |  |
| 44 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 45 | 23 L-EtFOSAA | $584.1>419$ | 6.33 e 2 | 2.94 e 3 | 0.234 |  | 5.60 | 2.69 | 7.4037 |  | 1.11 | NO |
| 46 | 72 Total N-EtFOSAA | $584.1>419$ | 6.33 e 2 | 2.94 e 3 | 0.234 |  |  | 2.69 | 7.4037 |  |  |  |
| 47 | 26 PFDS | $598.8>79.9$ |  | 2.63 e3 | 0.234 |  |  |  |  |  |  |  |
| 48 | 27 PFDoA | $612.9>569.0$ |  | 1.51 e 4 | 0.234 |  |  |  |  |  |  |  |
| 49 | 29 PFTrDA | $662.9>618.9$ |  | 1.51 e 4 | 0.234 |  |  |  |  |  |  |  |
| 50 | $52 \mathrm{~d} 5-\mathrm{N}-\mathrm{EtFOSAA}$ | $589.3>419$ | 2.94 e 3 | 2.15 e 4 | 0.234 | 0.223 | 5.75 | 1.71 | 32.8063 | 61.4 |  |  |
| 51 | $52 \mathrm{~d} 5-\mathrm{N}-\mathrm{EtFOSAA}$ | $589.3>419$ | 2.94 e 3 | 2.15 e 4 | 0.234 | 0.223 | 5.75 | 1.71 | 32.8063 | 61.4 |  |  |
| 52 | 51 13C2-PFUdA | $565>519.8$ | 1.48 e 4 | 2.15 e 4 | 0.234 | 1.022 | 5.77 | 8.64 | 36.1580 | 67.6 |  |  |
| 53 | 53 13C2-PFDoA | $615.0>569.7$ | 1.51 e 4 | 1.73 e 4 | 0.234 | 1.076 | 6.05 | 10.9 | 43.2230 | 80.8 |  |  |
| 54 | 53 13C2-PFDoA | $615.0>569.7$ | 1.51 e 4 | 1.73 e 4 | 0.234 | 1.076 | 6.05 | 10.9 | 43.2230 | 80.8 |  |  |
| 55 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 56 | 30 PFTeDA | 713.0 > 669.0 |  | 1.07 e 4 | 0.234 |  |  |  |  |  |  |  |
| 57 | 73 TCDA | $498.3>106.9$ |  |  | 0.234 | 2.789 |  |  |  |  |  |  |
| 58 | 60 13C4-PFBA | 217. $>172$ | 9.56 e 3 | 9.56 e 3 | 0.234 | 1.000 | 1.29 | 12.5 | 53.4645 | 100.0 |  |  |
| 59 | 61 13C5-PFHxA | $318>272.9$ | 1.74 e 4 | 1.74 e 4 | 0.234 | 1.000 | 3.49 | 12.5 | 53.4645 | 100.0 |  |  |
| 60 | 62 13C3-PFHxS | $401.8>79.9$ | 2.67 e 3 | 2.67 e 3 | 0.234 | 1.000 | 4.27 | 12.5 | 53.4645 | 100.0 |  |  |
| 61 | 55 13C2-PFTeDA | $715.1>669.7$ | 1.07 e 4 | 2.15 e 4 | 0.234 | 0.677 | 6.52 | 6.25 | 39.4488 | 73.8 |  |  |
| 62 | 47 13C8-PFOS | $507.0>79.9$ | 2.63 e3 | 3.03 e 3 | 0.234 | 1.038 | 5.14 | 10.9 | 44.8079 | 83.8 |  |  |
| 63 | 63 13C8-PFOA | $420.9>376$ | 2.25 e 4 | 2.25 e 4 | 0.234 | 1.000 | 4.62 | 12.5 | 53.4645 | 100.0 |  |  |
| 64 | 64 13C9-PFNA | $472.2>426.9$ | 1.52 e 4 | 1.52 e 4 | 0.234 | 1.000 | 5.06 | 12.5 | 53.4645 | 100.0 |  |  |
| 65 | 65 13C4-PFOS | $503>79.9$ | 3.03 e 3 | 3.03 e 3 | 0.234 | 1.000 | 5.14 | 12.5 | 53.4645 | 100.0 |  |  |
| 66 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 67 | 66 13C6-PFDA | $519.1>473.7$ | 1.73 e 4 | 1.73 e 4 | 0.234 | 1.000 | 5.44 | 12.5 | 53.4645 | 100.0 |  |  |
| 68 | 67 13C7-PFUdA | $570.1>524.8$ | 2.15 e 4 | 2.15 e 4 | 0.234 | 1.000 | 5.77 | 12.5 | 53.4645 | 100.0 |  |  |

## Name: 181231M1_57, Date: 31-Dec-2018, Time: 19:58:04, ID: 1804077-02 FT-PZ460I-20181211 0.23758, Description: FT-PZ460I-20181211

|  | \# Name | Trace | Area | IS Area | Wt/Vol | Mean | RT | Response | Conc. | \%Rec | Ion Ratio | Ratio Out? |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 PFBA | $213.0>168.8$ | 2.64 e 2 | 6.58 e 3 | 0.238 |  | 1.30 | 0.501 | 2.0711 |  |  |  |  |
| 2 | 2 PFPeA | $263.1>218.9$ | 7.23 e 2 | 8.38 e 3 | 0.238 |  | 2.58 | 1.08 | 4.5697 |  |  |  |  |
| 3 | 3 PFBS | $299.0>79.7$ |  | 1.19 e 3 | 0.238 |  |  |  |  |  |  |  |  |
| 4 | 5 PFHxA | $313>269$ | 1.60 e 3 | 5.71 e 3 | 0.238 |  | 3.49 | 1.40 | 5.9570 |  | 16.3 | NO |  |
| 5 | 7 PFHpA | $363.0>318.9$ | 8.10 e 2 | 8.06 e 3 | 0.238 |  | 4.15 | 1.25 | 3.6287 |  | 14.3 | NO |  |
| 6 | 36 13C3-PFBA | $216.1>171.8$ | 6.58 e 3 | 1.02 e 4 | 0.238 | 0.727 | 1.30 | 8.03 | 46.4776 | 88.3 |  |  |  |
| 7 | 37 13C3-PFPeA | 266. > 221.8 | 8.38 e 3 | 1.88 e 4 | 0.238 | 0.511 | 2.58 | 5.57 | 45.9085 | 87.3 |  |  |  |
| 8 | 38 13C3-PFBS | 302. > 98.8 | 1.19 e 3 | 2.99 e 3 | 0.238 | 0.497 | 2.91 | 4.97 | 42.0227 | 79.9 |  |  |  |
| 9 | 40 13C2-PFHxA | $315>270$ | 5.71 e 3 | 1.88 e 4 | 0.238 | 0.947 | 3.49 | 3.80 | 16.8667 | 80.1 |  |  |  |
| 10 | 41 13C4-PFHpA | $367.2>321.8$ | 8.06e3 | 1.88 e 4 | 0.238 | 0.484 | 4.15 | 5.36 | 46.6456 | 88.7 |  |  |  |
| 11 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 12 | 8 L-PFHxS | $398.9>79.6$ | 6.95 e 1 | 1.12 e 3 | 0.238 |  | 4.27 | 0.778 | 1.7587 |  | 2.52 | NO |  |
| 13 | 68 Total PFHxS | $398.9>79.6$ | 6.95 e 1 | 1.12 e 3 | 0.238 |  |  | 0.778 | 1.7587 |  |  |  |  |
| 14 | 10 6:2 FTS | $427.1>407$ | 6.87 e 1 | 2.88 e 3 | 0.238 |  | 4.58 | 0.298 | 0.8018 |  | 2.07 | NO |  |
| 15 | 11 L-PFOA | $412.8>368.9$ | 3.72 e 3 | 1.38 e 4 | 0.238 |  | 4.63 | 3.37 | 9.5118 |  | 3.05 | NO |  |
| 16 | 69 Total PFOA | $412.8>368.9$ | 3.72 e 3 | 1.38 e 4 | 0.238 |  |  | 3.37 | 9.5118 |  |  |  |  |
| 17 | 42 18O2-PFHxS | $403.0>102.6$ | 1.12 e 3 | 2.99 e 3 | 0.238 | 0.414 | 4.28 | 4.67 | 47.4815 | 90.2 |  |  |  |
| 18 | 42 18O2-PFHxS | $403.0>102.6$ | 1.12 e 3 | 2.99 e 3 | 0.238 | 0.414 | 4.28 | 4.67 | 47.4815 | 90.2 |  |  |  |
| 19 | 43 13C2-6:2 FTS | $428.9>80.9$ | 2.88e3 | 3.10 e 3 | 0.238 | 0.920 | 4.58 | 11.6 | 53.1275 | 101.0 |  |  |  |
| 20 | 44 13C2-PFOA | $414.9>369.7$ | 1.38 e 4 | 2.35 e 4 | 0.238 | 0.678 | 4.63 | 7.34 | 45.5425 | 86.6 |  |  |  |
| 21 | 44 13C2-PFOA | $414.9>369.7$ | 1.38 e 4 | 2.35 e 4 | 0.238 | 0.678 | 4.63 | 7.34 | 45.5425 | 86.6 |  |  |  |
| 22 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 23 | 13 PFHpS | $449>80.0$ |  | 2.72 e 3 | 0.238 |  |  |  |  |  |  |  |  |
| 24 | 14 PFNA | $463.0>418.8$ | 1.36 e 4 | 1.17 e 4 | 0.238 |  | 5.06 | 14.5 | 48.6036 |  | 4.90 | NO |  |
| 25 | 15 PFOSA | $497.9>77.9$ |  | 1.67 e 3 | 0.238 |  |  |  |  |  |  |  |  |
| 26 | 16 L-PFOS | $498.9>79.9$ | 1.31 e 2 | 2.72 e 3 | 0.238 |  | 5.14 | 0.600 | 2.5202 |  | 2.85 | NO |  |
| 27 | 70 Total PFOS | $498.9>79.9$ | 1.31 e 2 | 2.72 e 3 | 0.238 |  |  | 0.600 | 2.5202 |  |  |  |  |
| 28 | 47 13C8-PFOS | $507.0>79.9$ | 2.72 e 3 | 3.10 e 3 | 0.238 | 1.038 | 5.14 | 11.0 | 44.5263 | 84.6 |  |  |  |
| 29 | 45 13C5-PFNA | $468.2>422.9$ | 1.17 e 4 | 1.57 e 4 | 0.238 | 0.949 | 5.06 | 9.32 | 41.3258 | 78.5 |  |  |  |
| 30 | 46 13C8-PFOSA | $506.1>77.7$ | 1.67 e 3 | 2.19 e 4 | 0.238 | 0.190 | 5.10 | 0.950 | 21.0578 | 40.0 |  |  |  |
| 31 | 47 13C8-PFOS | $507.0>79.9$ | 2.72 e 3 | 3.10 e 3 | 0.238 | 1.038 | 5.14 | 11.0 | 44.5263 | 84.6 |  |  |  |
| 32 | 47 13C8-PFOS | $507.0>79.9$ | 2.72 e 3 | 3.10 e 3 | 0.238 | 1.038 | 5.14 | 11.0 | 44.5263 | 84.6 |  |  |  |
| 33 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 34 | 18 PFDA | $513>468.8$ | 3.81 e 1 | 1.26 e 4 | 0.238 |  | 5.45 | 0.0378 | 0.0671 |  | 114 | YES |  |
| 35 | 19 8:2 FTS | $527>506.9$ |  | 3.23 e 3 | 0.238 |  |  |  |  |  |  |  | AD 1/2/2019 |
| 36 | 21 L-MeFOSAA | $570>419$ |  | 2.24 e 3 | 0.238 |  |  |  |  |  |  |  | AD 1/2/2019 |
| 37 | Fwarkat | 570. $>419$ | 0.00e0 | 2.24 e 3 | 0.238 |  |  | 0.000 |  |  |  | Page | of 638 |

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Last Altered: Wednesday, January 02, 2019 17:36:01 Pacific Standard Time
Wednesday, January 02, 2019 17:36:25 Pacific Standard Time

## Name: 181231M1_57, Date: 31-Dec-2018, Time: 19:58:04, ID: 1804077-02 FT-PZ460I-20181211 0.23758, Description: FT-PZ460I-20181211

|  | \# Name | Trace | Area | IS Area | Wt Vol | Mean | RT | Response | Conc. | \%Rec | Ion Ratio | Ratio Out? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 38 | 25 PFUdA | 563.0 > 518.9 |  | 1.60e4 | 0.238 |  |  |  |  |  |  |  |
| 39 | 48 13C2-PFDA | $515.1>469.9$ | 1.26 e 4 | 1.82 e 4 | 0.238 | 0.937 | 5.45 | 8.67 | 38.9596 | 74.0 |  |  |
| 40 | 49 13C2-8:2 FTS | $529.1>508.7$ | 3.23 e3 | 3.10 e 3 | 0.238 | 1.110 | 5.41 | 13.0 | 49.3993 | 93.9 |  |  |
| 41 | $50 \mathrm{~d} 3-\mathrm{N}-\mathrm{MeFOSAA}$ | $573.3>419$ | 2.24 e 3 | 2.19 e 4 | 0.238 | 0.161 | 5.59 | 1.27 | 33.3866 | 63.5 |  |  |
| 42 | $50 \mathrm{~d} 3-\mathrm{N}-\mathrm{MeFOSAA}$ | $573.3>419$ | 2.24 e 3 | 2.19 e 4 | 0.238 | 0.161 | 5.59 | 1.27 | 33.3866 | 63.5 |  |  |
| 43 | 51 13C2-PFUdA | $565>519.8$ | 1.60 e 4 | 2.19 e 4 | 0.238 | 1.022 | 5.77 | 9.10 | 37.4839 | 71.2 |  |  |
| 44 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 45 | 23 L-EtFOSAA | $584.1>419$ |  | 3.27 e 3 | 0.238 |  |  |  |  |  |  |  |
| 46 | 72 Total N-EtFOSAA | $584.1>419$ | 0.00 e 0 | 3.27 e 3 | 0.238 |  |  | 0.000 |  |  |  |  |
| 47 | 26 PFDS | $598.8>79.9$ |  | 2.72 e 3 | 0.238 |  |  |  |  |  |  |  |
| 48 | 27 PFDoA | $612.9>569.0$ |  | 1.57 e 4 | 0.238 |  |  |  |  |  |  |  |
| 49 | 29 PFTrDA | $662.9>618.9$ |  | 1.57 e 4 | 0.238 |  |  |  |  |  |  |  |
| 50 | $52 \mathrm{~d} 5-\mathrm{N}$-EtFOSAA | $589.3>419$ | 3.27 e 3 | 2.19 e 4 | 0.238 | 0.223 | 5.75 | 1.87 | 35.2223 | 66.9 |  |  |
| 51 | $52 \mathrm{~d} 5-\mathrm{N}-\mathrm{EtFOSAA}$ | $589.3>419$ | 3.27 e 3 | 2.19 e 4 | 0.238 | 0.223 | 5.75 | 1.87 | 35.2223 | 66.9 |  |  |
| 52 | 51 13C2-PFUdA | $565>519.8$ | 1.60 e 4 | 2.19 e 4 | 0.238 | 1.022 | 5.77 | 9.10 | 37.4839 | 71.2 |  |  |
| 53 | 53 13C2-PFDoA | $615.0>569.7$ | 1.57 e 4 | 1.82e4 | 0.238 | 1.076 | 6.06 | 10.8 | 42.1235 | 80.1 |  |  |
| 54 | 53 13C2-PFDoA | $615.0>569.7$ | 1.57 e 4 | 1.82 e 4 | 0.238 | 1.076 | 6.06 | 10.8 | 42.1235 | 80.1 |  |  |
| 55 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 56 | 30 PFTeDA | $713.0>669.0$ | 4.51 e 1 | 1.05 e 4 | 0.238 |  | 6.51 | 0.0536 | 0.1858 |  | 42.2 | YES |
| 57 | 73 TCDA | $498.3>106.9$ |  |  | 0.238 | 2.789 |  |  |  |  |  |  |
| 58 | 60 13C4-PFBA | 217. $>172$ | 1.02 e 4 | 1.02 e 4 | 0.238 | 1.000 | 1.29 | 12.5 | 52.6139 | 100.0 |  |  |
| 59 | 61 13C5-PFHxA | $318>272.9$ | 1.88 e 4 | 1.88 e 4 | 0.238 | 1.000 | 3.49 | 12.5 | 52.6139 | 100.0 |  |  |
| 60 | 62 13C3-PFHxS | $401.8>79.9$ | 2.99 e 3 | 2.99 e 3 | 0.238 | 1.000 | 4.28 | 12.5 | 52.6139 | 100.0 |  |  |
| 61 | 55 13C2-PFTeDA | $715.1>669.7$ | 1.05 e 4 | 2.19 e 4 | 0.238 | 0.677 | 6.52 | 6.00 | 37.2636 | 70.8 |  |  |
| 62 | 47 13C8-PFOS | $507.0>79.9$ | 2.72 e3 | 3.10 e 3 | 0.238 | 1.038 | 5.14 | 11.0 | 44.5263 | 84.6 |  |  |
| 63 | 63 13C8-PFOA | $420.9>376$ | 2.35 e 4 | 2.35 e 4 | 0.238 | 1.000 | 4.63 | 12.5 | 52.6139 | 100.0 |  |  |
| 64 | 64 13C9-PFNA | 472.2 > 426.9 | 1.57 e 4 | 1.57 e 4 | 0.238 | 1.000 | 5.06 | 12.5 | 52.6139 | 100.0 |  |  |
| 65 | 65 13C4-PFOS | $503>79.9$ | 3.10 e 3 | 3.10 e 3 | 0.238 | 1.000 | 5.14 | 12.5 | 52.6139 | 100.0 |  |  |
| 66 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 67 | 66 13C6-PFDA | $519.1>473.7$ | 1.82 e 4 | 1.82 e 4 | 0.238 | 1.000 | 5.45 | 12.5 | 52.6139 | 100.0 |  |  |
| 68 | $67.13 C 7-P F U d A$ | $570.1>524.8$ | 2.19 e 4 | 2.19 e 4 | 0.238 | 1.000 | 5.77 | 12.5 | 52.6139 | 100.0 |  |  |

## Name: 181231M1_58, Date: 31-Dec-2018, Time: 20:08:42, ID: 1804077-03 FT-PZ461I-20181211 0.23672, Description: FT-PZ461I-20181211

|  | \# Name | Trace | Area | IS Area | WtVol | Mean | RT | Response | Conc. | \%Rec | Ion Ratio | Ratio Out? |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 PFBA | 213.0 > 168.8 | 2.15 e3 | 6.64e3 | 0.237 |  | 1.30 | 4.04 | 14.6758 |  |  |  |  |
| 2 | 2 PFPeA | $263.1>218.9$ | 5.05 e 3 | 8.30 e3 | 0.237 |  | 2.58 | 7.62 | 31.3067 |  |  |  |  |
| 3 | 3 PFBS | $299.0>79.7$ |  | 1.17 e 3 | 0.237 |  |  |  |  |  |  |  |  |
| 4 | 5 PFHxA | $313>269$ | 2.83 e 4 | 6.06e3 | 0.237 |  | 3.49 | 23.3 | 99.5252 |  | 14.1 | NO |  |
| 5 | 7 PFHpA | 363.0 > 318.9 | 1.32 e 4 | 7.85 e 3 | 0.237 |  | 4.14 | 21.0 | 60.0497 |  | 14.0 | NO |  |
| 6 | 36 13C3-PFBA | $216.1>171.8$ | 6.64 e 3 | 1.01e4 | 0.237 | 0.727 | 1.29 | 8.22 | 47.7813 | 90.5 |  |  |  |
| 7 | 37 13C3-PFPeA | 266. $>221.8$ | 8.30 e3 | 1.80 e 4 | 0.237 | 0.511 | 2.58 | 5.77 | 47.6985 | 90.3 |  |  |  |
| 8 | 38 13C3-PFBS | 302. > 98.8 | 1.17 e 3 | 2.84 e 3 | 0.237 | 0.497 | 2.91 | 5.13 | 43.5398 | 82.5 |  |  |  |
| 9 | 40 13C2-PFHxA | $315>270$ | 6.06e3 | 1.80 e 4 | 0.237 | 0.947 | 3.49 | 4.21 | 18.7760 | 88.9 |  |  |  |
| 10 | 41 13C4-PFHpA | 367.2 > 321.8 | 7.85 e 3 | 1.80 e 4 | 0.237 | 0.484 | 4.14 | 5.46 | 47.6672 | 90.3 |  |  |  |
| 11 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 12 | 8 L-PFHxS | $398.9>79.6$ | 8.40 e 1 | 1.06 e 3 | 0.237 |  | 4.27 | 0.994 | 2.2120 |  | 3.71 | YES |  |
| 13 | 68 Total PFHxS | $398.9>79.6$ | 8.40 e 1 | 1.06 e 3 | 0.237 |  |  | 0.994 | 2.2120 |  |  |  |  |
| 14 | 10 6:2 FTS | $427.1>407$ | 1.53 e 4 | 2.52 e3 | 0.237 |  | 4.57 | 76.1 | 181.7415 |  | 3.06 | NO |  |
| 15 | 11 L-PFOA | 412.8 > 368.9 | $3.32 e 4$ | 1.41 e 4 | 0.237 |  | 4.63 | 29.4 | 84.1034 |  | 3.32 | NO |  |
| 16 | 69 Total PFOA | 412.8 > 368.9 | 3.32 e 4 | 1.41 e 4 | 0.237 |  |  | 29.4 | 84.1034 |  |  |  |  |
| 17 | 42 1802-PFHxS | 403.0 > 102.6 | 1.06 e 3 | 2.84 e 3 | 0.237 | 0.414 | 4.27 | 4.65 | 47.4315 | 89.8 |  |  |  |
| 18 | 42 18O2-PFHxS | $403.0>102.6$ | 1.06 e 3 | 2.84 e3 | 0.237 | 0.414 | 4.27 | 4.65 | 47.4315 | 89.8 |  |  |  |
| 19 | 43 13C2-6:2 FTS | $428.9>80.9$ | 2.52 e3 | 3.14 e 3 | 0.237 | 0.920 | 4.58 | 10.0 | 46.0556 | 87.2 |  |  |  |
| 20 | 44 13C2-PFOA | 414.9 > 369.7 | 1.41 e 4 | 2.25 e 4 | 0.237 | 0.678 | 4.63 | 7.82 | 48.7410 | 92.3 |  |  |  |
| 21 | 44 13C2-PFOA | 414.9 > 369.7 | 1.41 e 4 | 2.25 e 4 | 0.237 | 0.678 | 4.63 | 7.82 | 48.7410 | 92.3 |  |  |  |
| 22 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 23 | 13 PFHpS | $449>80.0$ | 7.71 e 0 | 2.89 e 3 | 0.237 |  | 4.73 | 0.0333 | 0.3862 |  | 3.51 | YES |  |
| 24 | 14 PFNA | 463.0 > 418.8 | 4.39 e 5 | $9.12 e 3$ | 0.237 |  | 5.06 | 602 | 2023.6605 |  | 4.58 | NO |  |
| 25 | 15 PFOSA | $497.9>77.9$ |  | 1.16 e 3 | 0.237 |  |  |  |  |  |  |  |  |
| 26 | 16 L-PFOS | $498.9>79.9$ | 3.17 e 2 | 2.89 e 3 | 0.237 |  | 5.15 | 1.37 | 5.4723 |  | 3.00 | NO |  |
| 27 | 70 Total PFOS | 498.9 > 79.9 | 3.17 e 2 | 2.89 e 3 | 0.237 |  |  | 1.37 | 5.4723 |  |  |  |  |
| 28 | 47 13C8-PFOS | $507.0>79.9$ | 2.89e3 | 3.14 e 3 | 0.237 | 1.038 | 5.15 | 11.5 | 46.9134 | 88.8 |  |  |  |
| 29 | 45 13C5-PFNA | 468.2 > 422.9 | 9.12 e3 | 1.25 e4 | 0.237 | 0.949 | 5.06 | 9.14 | 40.7007 | 77.1 |  |  |  |
| 30 | 46 13C8-PFOSA | $506.1>77.7$ | 1.16 e 3 | 2.18 e 4 | 0.237 | 0.190 | 5.10 | 0.663 | 14.7477 | 27.9 |  |  |  |
| 31 | 47 13C8-PFOS | $507.0>79.9$ | 2.89 e 3 | 3.14 e 3 | 0.237 | 1.038 | 5.15 | 11.5 | 46.9134 | 88.8 |  |  |  |
| 32 | 47 13C8-PFOS | $507.0>79.9$ | 2.89 e 3 | 3.14 e 3 | 0.237 | 1.038 | 5.15 | 11.5 | 46.9134 | 88.8 |  |  |  |
| 33 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 34 | 18 PFDA | $513>468.8$ | 2.35 e 3 | 1.16 e 4 | 0.237 |  | 5.44 | 2.54 | 8.6116 |  | 8.98 | YES |  |
| 35 | 19 8:2 FTS | $527>506.9$ | 7.45 e 2 | 3.28 e 3 | 0.237 |  | 5.41 | 2.84 | 7.9536 |  | 2.49 | NO |  |
| 36 | 21 L-MeFOSAA | $570>419$ |  | 2.27 e 3 | 0.237 |  |  |  |  |  |  |  | AD 1/2/2019 |
| 37 |  | 570. $>419$ | 0.00 e 0 | 2.27 e 3 | 0.237 |  |  | 0.000 |  |  |  | Page | of 638 |

## Name: 181231M1_58, Date: 31-Dec-2018, Time: 20:08:42, ID: 1804077-03 FT-PZ461I-20181211 0.23672, Description: FT-PZ461I-20181211

|  | \# Name | Trace | Area | IS Area | Wt Vol | Mean | RT | Response | Conc. | \%Rec | Ion Ratio | Ratio Out? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 38 | 25 PFUdA | 563.0 > 518.9 |  | 1.58 e 4 | 0.237 |  |  |  |  |  |  |  |
| 39 | 48 13C2-PFDA | $515.1>469.9$ | 1.16 e 4 | 1.67 e 4 | 0.237 | 0.937 | 5.45 | 8.63 | 38.9165 | 73.7 |  |  |
| 40 | 49 13C2-8:2 FTS | $529.1>508.7$ | 3.28 e 3 | 3.14 e 3 | 0.237 | 1.110 | 5.41 | 13.1 | 49.6891 | 94.1 |  |  |
| 41 | $50 \mathrm{~d} 3-\mathrm{N}-\mathrm{MeFOSAA}$ | $573.3>419$ | 2.27 e 3 | 2.18 e 4 | 0.237 | 0.161 | 5.59 | 1.30 | 34.2493 | 64.9 |  |  |
| 42 | $50 \mathrm{~d} 3-\mathrm{N}-\mathrm{MeFOSAA}$ | $573.3>419$ | 2.27 e 3 | 2.18 e 4 | 0.237 | 0.161 | 5.59 | 1.30 | 34.2493 | 64.9 |  |  |
| 43 | 51 13C2-PFUdA | $565>519.8$ | 1.58 e 4 | 2.18 e 4 | 0.237 | 1.022 | 5.77 | 9.03 | 37.3343 | 70.7 |  |  |
| 44 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 45 | 23 L-EtFOSAA | $584.1>419$ | 2.85 e 2 | 3.47 e 3 | 0.237 |  | 5.60 | 1.03 | 3.0091 |  | 1.34 | NO |
| 46 | 72 Total N-EtFOSAA | $584.1>419$ | 2.85 e 2 | 3.47 e 3 | 0.237 |  |  | 1.03 | 3.0091 |  |  |  |
| 47 | 26 PFDS | $598.8>79.9$ |  | 2.89e3 | 0.237 |  |  |  |  |  |  |  |
| 48 | 27 PFDoA | $612.9>569.0$ |  | 1.47 e 4 | 0.237 |  |  |  |  |  |  |  |
| 49 | 29 PFTrDA | $662.9>618.9$ |  | 1.47 e 4 | 0.237 |  |  |  |  |  |  |  |
| 50 | $52 \mathrm{~d} 5-\mathrm{N}$-EtFOSAA | $589.3>419$ | 3.47 e 3 | 2.18 e 4 | 0.237 | 0.223 | 5.75 | 1.99 | 37.7082 | 71.4 |  |  |
| 51 | $52 \mathrm{~d} 5-\mathrm{N}-\mathrm{EtFOSAA}$ | $589.3>419$ | 3.47 e 3 | 2.18 e 4 | 0.237 | 0.223 | 5.75 | 1.99 | 37.7082 | 71.4 |  |  |
| 52 | 51 13C2-PFUdA | $565>519.8$ | 1.58 e 4 | 2.18 e 4 | 0.237 | 1.022 | 5.77 | 9.03 | 37.3343 | 70.7 |  |  |
| 53 | 53 13C2-PFDoA | $615.0>569.7$ | 1.47 e 4 | 1.67 e 4 | 0.237 | 1.076 | 6.06 | 11.0 | 43.1967 | 81.8 |  |  |
| 54 | 53 13C2-PFDoA | $615.0>569.7$ | 1.47 e 4 | 1.67 e 4 | 0.237 | 1.076 | 6.06 | 11.0 | 43.1967 | 81.8 |  |  |
| 55 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 56 | 30 PFTeDA | 713.0 > 669.0 | 3.32 e 1 | 1.09 e 4 | 0.237 |  | 6.52 | 0.0380 | 0.1438 |  | 6.63 | YES |
| 57 | 73 TCDA | $498.3>106.9$ |  |  | 0.237 | 2.789 |  |  |  |  |  |  |
| 58 | 60 13C4-PFBA | 217. $>172$ | 1.01 e 4 | 1.01e4 | 0.237 | 1.000 | 1.29 | 12.5 | 52.8050 | 100.0 |  |  |
| 59 | 61 13C5-PFHxA | $318>272.9$ | 1.80 e 4 | 1.80 e 4 | 0.237 | 1.000 | 3.49 | 12.5 | 52.8050 | 100.0 |  |  |
| 60 | 62 13C3-PFHxS | $401.8>79.9$ | 2.84 e 3 | 2.84 e 3 | 0.237 | 1.000 | 4.27 | 12.5 | 52.8050 | 100.0 |  |  |
| 61 | 55 13C2-PFTeDA | $715.1>669.7$ | 1.09 e 4 | 2.18 e 4 | 0.237 | 0.677 | 6.51 | 6.25 | 38.9920 | 73.8 |  |  |
| 62 | 47 13C8-PFOS | $507.0>79.9$ | 2.89e3 | 3.14 e 3 | 0.237 | 1.038 | 5.15 | 11.5 | 46.9134 | 88.8 |  |  |
| 63 | 63 13C8-PFOA | $420.9>376$ | 2.25 e 4 | 2.25 e 4 | 0.237 | 1.000 | 4.63 | 12.5 | 52.8050 | 100.0 |  |  |
| 64 | 64 13C9-PFNA | 472.2 > 426.9 | 1.25 e 4 | 1.25 e4 | 0.237 | 1.000 | 5.06 | 12.5 | 52.8050 | 100.0 |  |  |
| 65 | 65 13C4-PFOS | $503>79.9$ | 3.14 e 3 | 3.14 e 3 | 0.237 | 1.000 | 5.15 | 12.5 | 52.8050 | 100.0 |  |  |
| 66 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 67 | 66 13C6-PFDA | $519.1>473.7$ | 1.67 e 4 | 1.67 e 4 | 0.237 | 1.000 | 5.44 | 12.5 | 52.8050 | 100.0 |  |  |
| 68 | $67.13 C 7-P F U d A$ | $570.1>524.8$ | 2.18 e 4 | 2.18 e 4 | 0.237 . | 1.000 | 5.77 | 12.5 | 52.8050 | 100.0 |  |  |

## Name: 181231M1_59, Date: 31-Dec-2018, Time: 20:19:20, ID: 1804077-04 FT-PZ464S-20181211 0.23223, Description: FT-PZ464S-20181211

|  | \# Name | Trace | Area | IS Area | Wt/Vol | Mean | RT | Response | Conc. | \%Rec | Ion Ratio | Ratio Out? |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 PFBA | $213.0>168.8$ |  | 6.83 e 3 | 0.232 |  |  |  |  |  |  |  |  |
| 2 | 2 PFPeA | $263.1>218.9$ | 2.45 e 1 | 8.71 e 3 | 0.232 |  | 2.58 | 0.0352 | 0.3243 |  |  |  |  |
| 3 | 3 PFBS | $299.0>79.7$ |  | 1.24 e 3 | 0.232 |  |  |  |  |  |  |  |  |
| 4 | 5 PFHxA | $313>269$ | 1.11 e 2 | 6.31 e 3 | 0.232 |  | 3.48 | 0.0877 | 0.3954 |  | 136 | YES |  |
| 5 | 7 PFHpA | $363.0>318.9$ | 7.15 e 1 | 8.26 e 3 | 0.232 |  | 4.14 | 0.108 | 0.3726 |  | 17.3 | NO |  |
| 6 | 36 13C3-PFBA | $216.1>171.8$ | 6.83e3 | 1.05 e 4 | 0.232 | 0.727 | 1.30 | 8.13 | 48.1519 | 89.5 |  |  |  |
| 7 | 37 13C3-PFPeA | 266. $>221.8$ | 8.71 e 3 | 1.97 e 4 | 0.232 | 0.511 | 2.58 | 5.51 | 46.4533 | 86.3 |  |  |  |
| 8 | 38 13C3-PFBS | 302. $>98.8$ | 1.24 e 3 | 2.88 e 3 | 0.232 | 0.497 | 2.91 | 5.37 | 46.5023 | 86.4 |  |  |  |
| 9 | 40 13C2-PFHxA | $315>270$ | 6.31 e 3 | 1.97 e 4 | 0.232 | 0.947 | 3.49 | 4.00 | 18.1625 | 84.4 |  |  |  |
| 10 | 41 13C4-PFHpA | $367.2>321.8$ | 8.26 e 3 | 1.97 e 4 | 0.232 | 0.484 | 4.14 | 5.23 | 46.5276 | 86.4 |  |  |  |
| 11 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 12 | 8 L-PFHxS | $398.9>79.6$ | 1.32 e 1 | 1.12 e 3 | 0.232 |  | 4.27 | 0.148 | 0.4652 |  | 0.844 | YES |  |
| 13 | 68 Total PFHxS | $398.9>79.6$ | 1.32 e 1 | 1.12 e 3 | 0.232 |  |  | 0.148 | 0.4652 |  |  |  |  |
| 14 | 10 6:2 FTS | $427.1>407$ |  | 2.76 e 3 | 0.232 |  |  |  |  |  |  |  |  |
| 15 | 11 L-PFOA | $412.8>368.9$ | 3.51 e 2 | 1.40 e 4 | 0.232 |  | 4.62 | 0.314 | 0.8094 |  | 3.83 | NO |  |
| 16 | 69 Total PFOA | $412.8>368.9$ | 3.51 e 2 | 1.40 e 4 | 0.232 |  |  | 0.314 | 0.8094 |  |  |  |  |
| 17 | 42 18O2-PFHxS | $403.0>102.6$ | 1.12 e 3 | 2.88 e 3 | 0.232 | 0.414 | 4.27 | 4.84 | 50.3827 | 93.6 |  |  |  |
| 18 | 42 18O2-PFHxS | $403.0>102.6$ | 1.12 e 3 | 2.88 e 3 | 0.232 | 0.414 | 4.27 | 4.84 | 50.3827 | 93.6 |  |  |  |
| 19 | 43 13C2-6:2 FTS | $428.9>80.9$ | 2.76 e 3 | 3.34 e 3 | 0.232 | 0.920 | 4.57 | 10.3 | 48.4117 | 89.9 |  |  |  |
| 20 | 44 13C2-PFOA | 414.9 > 369.7 | 1.40 e 4 | 2.39 e 4 | 0.232 | 0.678 | 4.62 | 7.31 | 46.4435 | 86.3 |  |  |  |
| 21 | 44 13C2-PFOA | $414.9>369.7$ | 1.40 e 4 | 2.39 e 4 | 0.232 | 0.678 | 4.62 | 7.31 | 46.4435 | 86.3 |  |  |  |
| 22 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 23 | 13 PFHpS | $449>80.0$ |  | 2.92 e 3 | 0.232 |  |  |  |  |  |  |  |  |
| 24 | 14 PFNA | $463.0>418.8$ | 2.83 e 2 | 1.26 e 4 | 0.232 |  | 5.06 | 0.280 | 1.1718 |  | 4.06 | NO |  |
| 25 | 15 PFOSA | $497.9>77.9$ |  | 1.15 e 3 | 0.232 |  |  |  |  |  |  |  |  |
| 26 | 16 L-PFOS | $498.9>79.9$ |  | 2.92 e 3 | 0.232 |  |  |  |  |  |  |  |  |
| 27 | 70 Total PFOS | $498.9>79.9$ | 0.00e0 | 2.92 e 3 | 0.232 |  |  | 0.000 |  |  |  |  |  |
| 28 | 47 13C8-PFOS | $507.0>79.9$ | 2.92 e 3 | 3.34 e 3 | 0.232 | 1.038 | 5.14 | 10.9 | 45.4313 | 84.4 |  |  |  |
| 29 | 45 13C5-PFNA | $468.2>422.9$ | 1.26 e 4 | 1.69 e 4 | 0.232 | 0.949 | 5.06 | 9.30 | 42.2198 | 78.4 |  |  |  |
| 30 | 46 13C8-PFOSA | $506.1>77.7$ | 1.15 e 3 | 2.18 e 4 | 0.232 | 0.190 | 5.10 | 0.659 | 14.9515 | 27.8 |  |  |  |
| 31 | 47 13C8-PFOS | $507.0>79.9$ | 2.92 e 3 | 3.34 e 3 | 0.232 | 1.038 | 5.14 | 10.9 | 45.4313 | 84.4 |  |  |  |
| 32 | 47 13C8-PFOS | $507.0>79.9$ | 2.92e3 | 3.34 e 3 | 0.232 | 1.038 | 5.14 | 10.9 | 45.4313 | 84.4 |  |  |  |
| 33 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 34 | 18 PFDA | $513>468.8$ |  | 1.17 e 4 | 0.232 |  |  |  |  |  |  |  |  |
| 35 | 19 8:2 FTS | $527>506.9$ |  | 3.35 e 3 | 0.232 |  |  |  |  |  |  |  | AD 1/2/2019 |
| 36 | 21 L-MeFOSAA | $570>419$ |  | 2.56 e 3 | 0.232 |  |  |  |  |  |  |  | AD 1/2/2019 |
| 37 |  | 570. $>419$ | 0.00e0 | 2.56 e 3 | 0.232 |  |  | 0.000 |  |  |  | Page 1 | of 638 |

## Name: 181231M1_59, Date: 31-Dec-2018, Time: 20:19:20, ID: 1804077-04 FT-PZ464S-20181211 0.23223, Description: FT-PZ464S-20181211

| \# Name | Trace | Area | IS Area | Wt/Vol RRF Mean |  | RT | Response | Conc. | \%Rec | Ion Ratio | Ratio Out? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 25 PFUdA | $563.0>518.9$ | 2.71 e 1 | 1.58 e 4 | 0.232 |  | 5.77 | 0.0214 | 0.0185 |  | 68.7 | YES |
| 48 13C2-PFDA | $515.1>469.9$ | 1.17 e 4 | 1.88 e 4 | 0.232 | 0.937 | 5.44 | 7.81 | 35.8781 | 66.7 |  |  |
| 49 13C2-8:2 FTS | $529.1>508.7$ | 3.35 e 3 | 3.34 e 3 | 0.232 | 1.110 | 5.41 | 12.5 | 48.6481 | 90.4 |  |  |
| 50 d3-N-MeFOSAA | $573.3>419$ | 2.56 e 3 | 2.18 e 4 | 0.232 | 0.161 | 5.59 | 1.47 | 39.3226 | 73.1 |  |  |
| 50 d3-N-MeFOSAA | $573.3>419$ | 2.56 e 3 | 2.18 e 4 | 0.232 | 0.161 | 5.59 | 1.47 | 39.3226 | 73.1 |  |  |
| 51 13C2-PFUdA | $565>519.8$ | 1.58 e 4 | 2.18 e 4 | 0.232 | 1.022 | 5.77 | 9.08 | 38.2595 | 71.1 |  |  |
| -1 |  |  |  |  |  |  |  |  |  |  |  |
| 23 L-EtFOSAA | $584.1>419$ |  | 3.61 e 3 | 0.232 |  |  |  |  |  |  |  |
| 72 Total N-EtFOSAA | $584.1>419$ | 0.00e0 | 3.61 e 3 | 0.232 |  |  | 0.000 |  |  |  |  |
| 26 PFDS | $598.8>79.9$ |  | 2.92 e 3 | 0.232 |  |  |  |  |  |  |  |
| 27 PFDoA | $612.9>569.0$ |  | 1.57 e 4 | 0.232 |  |  |  |  |  |  |  |
| 29 PFTrDA | $662.9>618.9$ |  | 1.57 e 4 | 0.232 |  |  |  |  |  |  |  |
| $52 \mathrm{~d} 5-\mathrm{N}-\mathrm{EtFOSAA}$ | $589.3>419$ | 3.61 e3 | 2.18 e 4 | 0.232 | 0.223 | 5.75 | 2.07 | 40.0310 | 74.4 |  |  |
| 52 d5-N-EtFOSAA | $589.3>419$ | 3.61 e3 | 2.18 e 4 | 0.232 | 0.223 | 5.75 | 2.07 | 40.0310 | 74.4 |  |  |
| 51 13C2-PFUdA | $565>519.8$ | 1.58 e 4 | 2.18 e 4 | 0.232 | 1.022 | 5.77 | 9.08 | 38.2595 | 71.1 |  |  |
| 53 13C2-PFDoA | $615.0>569.7$ | 1.57 e 4 | 1.88 e 4 | 0.232 | 1.076 | 6.06 | 10.4 | 41.7623 | 77.6 |  |  |
| 53 13C2-PFDoA | $615.0>569.7$ | 1.57 e 4 | 1.88 e 4 | 0.232 | 1.076 | 6.06 | 10.4 | 41.7623 | 77.6 |  |  |
| $-1$ |  |  |  |  |  |  |  |  |  |  |  |
| 30 PFTeDA | $713.0>669.0$ |  | 1.14 e 4 | 0.232 |  |  |  |  |  |  |  |
| 73 TCDA | $498.3>106.9$ |  |  | 0.232 | 2.789 |  |  |  |  |  |  |
| 60 13C4-PFBA | 217. $>172$ | 1.05 e 4 | 1.05 e 4 | 0.232 | 1.000 | 1.29 | 12.5 | 53.8259 | 100.0 |  |  |
| 61 13C5-PFHxA | $318>272.9$ | 1.97 e 4 | 1.97 e 4 | 0.232 | 1.000 | 3.49 | 12.5 | 53.8259 | 100.0 |  |  |
| 62 13C3-PFHxS | $401.8>79.9$ | 2.88 e 3 | 2.88 e 3 | 0.232 | 1.000 | 4.27 | 12.5 | 53.8259 | 100.0 |  |  |
| 55 13C2-PFTeDA | $715.1>669.7$ | 1.14 e 4 | 2.18 e 4 | 0.232 | 0.677 | 6.52 | 6.52 | 41.4533 | 77.0 |  |  |
| 47 13C8-PFOS | $507.0>79.9$ | 2.92 e 3 | 3.34 e 3 | 0.232 | 1.038 | 5.14 | 10.9 | 45.4313 | 84.4 |  |  |
| 63 13C8-PFOA | $420.9>376$ | 2.39 e 4 | 2.39 e 4 | 0.232 | 1.000 | 4.62 | 12.5 | 53.8259 | 100.0 |  |  |
| 64 13C9-PFNA | $472.2>426.9$ | 1.69 e 4 | 1.69 e 4 | 0.232 | 1.000 | 5.06 | 12.5 | 53.8259 | 100.0 |  |  |
| 65 13C4-PFOS | $503>79.9$ | 3.34 e 3 | 3.34 e 3 | 0.232 | 1.000 | 5.14 | 12.5 | 53.8259 | 100.0 |  |  |
| -1 |  |  |  |  |  |  |  |  |  |  |  |
| 66 13C6-PFDA | $519.1>473.7$ | 1.88 e 4 | 1.88 e 4 | 0.232 | 1.000 | 5.44 | 12.5 | 53.8259 | 100.0 |  |  |
| 67 13C7-PFUdA | $570.1>524.8$ | 2.18 e 4 | 2.18 e 4 | 0.232 | 1.000 | 5.77 | 12.5 | 53.8259 | 100.0 |  |  |

## Name: 181231M1_62, Date: 31-Dec-2018, Time: 20:51:04, ID: 1804077-05 DUP01-20181211 0.24868, Description: DUP01-20181211

|  | \# Name | Trace | Area | IS Area | Wt/Vol | Mean | RT | Response | Conc. | \%Rec | Ion Ratio | Ratio Out? |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 PFBA | 213.0 > 168.8 | 2.59 e 2 | 6.30 e 3 | 0.249 |  | 1.30 | 0.514 | 2.0232 |  |  |  |  |
| 2 | 2 PFPeA | $263.1>218.9$ | 7.37 e 2 | 7.92 e 3 | 0.249 |  | 2.58 | 1.16 | 4.6903 |  |  |  |  |
| 3 | 3 PFBS | 299.0 > 79.7 |  | 1.16 e 3 | 0.249 |  |  |  |  |  |  |  |  |
| 4 | 5 PFHxA | $313>269$ | 1.50 e 3 | 5.52e3 | 0.249 |  | 3.48 | 1.36 | 5.5169 |  | 13.0 | NO |  |
| 5 | 7 PFHpA | 363.0 > 318.9 | 7.32 e 2 | 7.12 e 3 | 0.249 |  | 4.14 | 1.29 | 3.5501 |  | 18.8 | NO |  |
| 6 | 36 13C3-PFBA | $216.1>171.8$ | 6.30 e 3 | 9.54 e 3 | 0.249 | 0.727 | 1.30 | 8.26 | 45.6713 | 90.9 |  |  |  |
| 7 | 37 13C3-PFPeA | 266. $>221.8$ | 7.92 e3 | 1.69 e 4 | 0.249 | 0.511 | 2.58 | 5.86 | 46.0995 | 91.7 |  |  |  |
| 8 | 38 13C3-PFBS | 302. > 98.8 | 1.16 e 3 | 2.71 e 3 | 0.249 | 0.497 | 2.91 | 5.34 | 43.1571 | 85.9 |  |  |  |
| 9 | 40 13C2-PFHxA | $315>270$ | 5.52e3 | 1.69 e 4 | 0.249 | 0.947 | 3.49 | 4.09 | 17.3397 | 86.2 |  |  |  |
| 10 | 41 13C4-PFHpA | 367.2 > 321.8 | 7.12 e 3 | 1.69 e 4 | 0.249 | 0.484 | 4.14 | 5.26 | 43.7232 | 87.0 |  |  |  |
| 11 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 12 | 8 L-PFHxS | $398.9>79.6$ | 7.80 e 1 | 1.05 e 3 | 0.249 |  | 4.27 | 0.933 | 1.9852 |  | 1.73 | NO |  |
| 13 | 68 Total PFHxS | $398.9>79.6$ | 7.80 e 1 | 1.05 e 3 | 0.249 |  |  | 0.933 | 1.9852 |  |  |  |  |
| 14 | 10 6:2 FTS | $427.1>407$ | 5.55 e 1 | 2.50 e3 | 0.249 |  | 4.57 | 0.277 | 0.7192 |  | 1.66 | NO |  |
| 15 | 11 L-PFOA | 412.8 > 368.9 | 3.21 e 3 | 1.25 e4 | 0.249 |  | 4.63 | 3.21 | 8.6507 |  | 3.10 | NO |  |
| 16 | 69 Total PFOA | 412.8 > 368.9 | 3.21 e 3 | 1.25 e 4 | 0.249 |  |  | 3.21 | 8.6507 |  |  |  |  |
| 17 | 42 1802-PFHxS | 403.0 > 102.6 | 1.05 e 3 | 2.71 e3 | 0.249 | 0.414 | 4.27 | 4.82 | 46.8750 | 93.3 |  |  |  |
| 18 | 42 18O2-PFHxS | $403.0>102.6$ | 1.05 e 3 | 2.71 e 3 | 0.249 | 0.414 | 4.27 | 4.82 | 46.8750 | 93.3 |  |  |  |
| 19 | 43 13C2-6:2 FTS | $428.9>80.9$ | 2.50 e3 | 3.08 e 3 | 0.249 | 0.920 | 4.58 | 10.2 | 44.3983 | 88.3 |  |  |  |
| 20 | 44 13C2-PFOA | 414.9 > 369.7 | 1.25 e 4 | 2.09 e 4 | 0.249 | 0.678 | 4.63 | 7.45 | 44.1850 | 87.9 |  |  |  |
| 21 | 44 13C2-PFOA | 414.9 > 369.7 | 1.25 e 4 | 2.09 e 4 | 0.249 | 0.678 | 4.63 | 7.45 | 44.1850 | 87.9 |  |  |  |
| 22 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 23 | 13 PFHpS | $449>80.0$ |  | 2.66 e 3 | 0.249 |  |  |  |  |  |  |  |  |
| 24 | 14 PFNA | $463.0>418.8$ | 1.27 e 4 | 1.08 e 4 | 0.249 |  | 5.06 | 14.7 | 46.9286 |  | 4.57 | NO |  |
| 25 | 15 PFOSA | $497.9>77.9$ |  | 1.18 e 3 | 0.249 |  |  |  |  |  |  |  |  |
| 26 | 16 L-PFOS | $498.9>79.9$ | 8.06 e 1 | 2.66 e 3 | 0.249 |  | 5.15 | 0.380 | 1.6037 |  | 4.22 | YES |  |
| 27 | 70 Total PFOS | 498.9 > 79.9 | 8.06 e 1 | 2.66 e3 | 0.249 |  |  | 0.380 | 1.6037 |  |  |  |  |
| 28 | 47 13C8-PFOS | $507.0>79.9$ | 2.66 e 3 | 3.08 e 3 | 0.249 | 1.038 | 5.15 | 10.8 | 41.8163 | 83.2 |  |  |  |
| 29 | 45 13C5-PFNA | 468.2 > 422.9 | 1.08 e 4 | 1.37 e 4 | 0.249 | 0.949 | 5.06 | 9.85 | 41.7379 | 83.0 |  |  |  |
| 30 | 46 13C8-PFOSA | $506.1>77.7$ | 1.18 e 3 | 1.92 e 4 | 0.249 | 0.190 | 5.10 | 0.767 | 16.2448 | 32.3 |  |  |  |
| 31 | 47 13C8-PFOS | $507.0>79.9$ | 2.66 e 3 | 3.08 e 3 | 0.249 | 1.038 | 5.15 | 10.8 | 41.8163 | 83.2 |  |  |  |
| 32 | 47 13C8-PFOS | $507.0>79.9$ | 2.66 e 3 | 3.08 e 3 | 0.249 | 1.038 | 5.15 | 10.8 | 41.8163 | 83.2 |  |  |  |
| 33 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 34 | 18 PFDA | $513>468.8$ | 6.05 e 0 | 1.07e4 | 0.249 |  | 5.45 | 0.00705 |  |  | 3.65 | NO |  |
| 35 | 19 8:2 FTS | $527>506.9$ |  | 3.13 e3 | 0.249 |  |  |  |  |  |  |  |  |
| 36 | 21 L-MeFOSAA | $570>419$ |  | 2.09 e 3 | 0.249 |  |  |  |  |  |  |  | D 1/2/2019 |
| 37 |  | 570. $>419$ | 0.00e0 | 2.09 e 3 | 0.249 |  |  | 0.000 |  |  |  | Page 1 | of 638 |

## Name: 181231M1_62, Date: 31-Dec-2018, Time: 20:51:04, ID: 1804077-05 DUP01-20181211 0.24868, Description: DUP01-20181211

|  | \# Name | Trace | Area | IS Area | Wt Vol | Mean | RT | Response | Conc. | \%Rec | Ion Ratio | Ratio Out? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 38 | 25 PFUdA | $563.0>518.9$ | 4.25 e 1 | 1.33 e 4 | 0.249 |  | 5.77 | 0.0398 | 0.0910 |  | 38.8 | YES |
| 39 | 48 13C2-PFDA | $515.1>469.9$ | 1.07 e 4 | 1.56 e 4 | 0.249 | 0.937 | 5.44 | 8.60 | 36.9019 | 73.4 |  |  |
| 40 | 49 13C2-8:2 FTS | $529.1>508.7$ | 3.13 e 3 | 3.08 e 3 | 0.249 | 1.110 | 5.41 | 12.7 | 46.1235 | 91.8 |  |  |
| 41 | $50 \mathrm{~d} 3-\mathrm{N}-\mathrm{MeFOSAA}$ | $573.3>419$ | 2.09 e 3 | 1.92 e 4 | 0.249 | 0.161 | 5.59 | 1.37 | 34.1723 | 68.0 |  |  |
| 42 | $50 \mathrm{~d} 3-\mathrm{N}-\mathrm{MeFOSAA}$ | $573.3>419$ | 2.09 e 3 | 1.92 e 4 | 0.249 | 0.161 | 5.59 | 1.37 | 34.1723 | 68.0 |  |  |
| 43 | 51 13C2-PFUdA | $565>519.8$ | 1.33 e 4 | 1.92 e 4 | 0.249 | 1.022 | 5.77 | 8.70 | 34.2438 | 68.1 |  |  |
| 44 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 45 | 23 L-EtFOSAA | $584.1>419$ |  | 2.85 e 3 | 0.249 |  |  |  |  |  |  |  |
| 46 | 72 Total N-EtFOSAA | $584.1>419$ | 0.00e0 | 2.85 e 3 | 0.249 |  |  | 0.000 |  |  |  |  |
| 47 | 26 PFDS | $598.8>79.9$ |  | 2.66 e 3 | 0.249 |  |  |  |  |  |  |  |
| 48 | 27 PFDoA | $612.9>569.0$ |  | 1.34 e 4 | 0.249 |  |  |  |  |  |  |  |
| 49 | 29 PFTrDA | $662.9>618.9$ |  | 1.34 e 4 | 0.249 |  |  |  |  |  |  |  |
| 50 | $52 \mathrm{~d} 5-\mathrm{N}-\mathrm{EtFOSAA}$ | $589.3>419$ | 2.85 e 3 | 1.92 e 4 | 0.249 | 0.223 | 5.75 | 1.86 | 33.4919 | 66.6 |  |  |
| 51 | $52 \mathrm{~d} 5-\mathrm{N}-\mathrm{EtFOSAA}$ | $589.3>419$ | 2.85 e 3 | 1.92 e 4 | 0.249 | 0.223 | 5.75 | 1.86 | 33.4919 | 66.6 |  |  |
| 52 | 51 13C2-PFUdA | $565>519.8$ | 1.33 e 4 | 1.92 e 4 | 0.249 | 1.022 | 5.77 | 8.70 | 34.2438 | 68.1 |  |  |
| 53 | 53 13C2-PFDoA | $615.0>569.7$ | 1.34 e 4 | 1.56 e 4 | 0.249 | 1.076 | 6.06 | 10.7 | 40.0093 | 79.6 |  |  |
| 54 | 53 13C2-PFDoA | $615.0>569.7$ | 1.34 e 4 | 1.56 e 4 | 0.249 | 1.076 | 6.06 | 10.7 | 40.0093 | 79.6 |  |  |
| 55 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 56 | 30 PFTeDA | $713.0>669.0$ |  | 9.94e3 | 0.249 |  |  |  |  |  |  |  |
| 57 | 73 TCDA | $498.3>106.9$ |  |  | 0.249 | 2.789 |  |  |  |  |  |  |
| 58 | 60 13C4-PFBA | 217. > 172 | 9.54 e 3 | 9.54 e 3 | 0.249 | 1.000 | 1.29 | 12.5 | 50.2654 | 100.0 |  |  |
| 59 | 61 13C5-PFHxA | $318>272.9$ | 1.69 e 4 | 1.69 e 4 | 0.249 | 1.000 | 3.49 | 12.5 | 50.2654 | 100.0 |  |  |
| 60 | 62 13C3-PFHxS | $401.8>79.9$ | 2.71 e 3 | 2.71 e 3 | 0.249 | 1.000 | 4.27 | 12.5 | 50.2654 | 100.0 |  |  |
| 61 | 55 13C2-PFTeDA | $715.1>669.7$ | 9.94 e 3 | 1.92 e 4 | 0.249 | 0.677 | 6.51 | 6.49 | 38.5170 | 76.6 |  |  |
| 62 | 47 13C8-PFOS | $507.0>79.9$ | 2.66 e 3 | 3.08 e 3 | 0.249 | 1.038 | 5.15 | 10.8 | 41.8163 | 83.2 |  |  |
| 63 | 63 13C8-PFOA | $420.9>376$ | 2.09 e 4 | 2.09 e 4 | 0.249 | 1.000 | 4.63 | 12.5 | 50.2654 | 100.0 |  |  |
| 64 | 64 13C9-PFNA | $472.2>426.9$ | 1.37 e 4 | 1.37 e 4 | 0.249 | 1.000 | 5.06 | 12.5 | 50.2654 | 100.0 |  |  |
| 65 | 65 13C4-PFOS | $503>79.9$ | 3.08 e 3 | 3.08 e 3 | 0.249 | 1.000 | 5.15 | 12.5 | 50.2654 | 100.0 |  |  |
| 66 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 67 | 66 13C6-PFDA | $519.1>473.7$ | 1.56 e 4 | 1.56 e 4 | 0.249 | 1.000 | 5.44 | 12.5 | 50.2654 | 100.0 |  |  |
| 68 | 67 13C7-PFUdA | $570.1>524.8$ | 1.92 e 4 | 1.92 e 4 | 0.249 | 1.000 | 5.77 | 12.5 | 50.2654 | 100.0 |  |  |

## Name: 181231M1_63, Date: 31-Dec-2018, Time: 21:01:42, ID: 1804077-06 FT-PZ464S-FRB-20181211 0.25357, Description: FT-PZ464S-FRB-20181211



## Name: 181231M1_63, Date: 31-Dec-2018, Time: 21:01:42, ID: 1804077-06 FT-PZ464S-FRB-20181211 0.25357, Description: FT-PZ464S-FRB-20181211

|  | \# Name | Trace | Area | IS Area | WtVol | Mean | RT | Response | Conc. | \%Rec | Ion Ratio | Ratio Out? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 38 | 25 PFUdA | 563.0 > 518.9 | 5.07e1 | 1.32 e 4 | 0.254 |  | 5.77 | 0.0478 | 0.1206 |  | 176 | YES |
| 39 | 48 13C2-PFDA | $515.1>469.9$ | 1.01 e 4 | 1.68 e 4 | 0.254 | 0.937 | 5.44 | 7.52 | 31.6652 | 64.2 |  |  |
| 40 | 49 13C2-8:2 FTS | $529.1>508.7$ | 3.23 e3 | 3.21 e 3 | 0.254 | 1.110 | 5.41 | 12.6 | 44.7345 | 90.7 |  |  |
| 41 | $50 \mathrm{~d} 3-\mathrm{N}-\mathrm{MeFOSAA}$ | $573.3>419$ | 2.16 e 3 | 2.08 e 4 | 0.254 | 0.161 | 5.59 | 1.30 | 31.9640 | 64.8 |  |  |
| 42 | $50 \mathrm{~d} 3-\mathrm{N}-\mathrm{MeFOSAA}$ | $573.3>419$ | 2.16 e 3 | 2.08 e 4 | 0.254 | 0.161 | 5.59 | 1.30 | 31.9640 | 64.8 |  |  |
| 43 | 51 13C2-PFUdA | $565>519.8$ | 1.32 e 4 | 2.08 e 4 | 0.254 | 1.022 | 5.77 | 7.98 | 30.7891 | 62.5 |  |  |
| 44 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 45 | 23 L-EtFOSAA | $584.1>419$ |  | 2.93 e3 | 0.254 |  |  |  |  |  |  |  |
| 46 | 72 Total N-EtFOSAA | $584.1>419$ | 0.00 e 0 | 2.93 e3 | 0.254 |  |  | 0.000 |  |  |  |  |
| 47 | 26 PFDS | $598.8>79.9$ |  | 2.77 e 3 | 0.254 |  |  |  |  |  |  |  |
| 48 | 27 PFDoA | $612.9>569.0$ |  | 1.29 e 4 | 0.254 |  |  |  |  |  |  |  |
| 49 | 29 PFTrDA | $662.9>618.9$ |  | 1.29 e 4 | 0.254 |  |  |  |  |  |  |  |
| 50 | $52 \mathrm{~d} 5-\mathrm{N}$-EtFOSAA | $589.3>419$ | 2.93 e3 | 2.08 e 4 | 0.254 | 0.223 | 5.75 | 1.76 | 31.1607 | 63.2 |  |  |
| 51 | $52 \mathrm{~d} 5-\mathrm{N}-\mathrm{EtFOSAA}$ | $589.3>419$ | 2.93 e3 | 2.08 e 4 | 0.254 | 0.223 | 5.75 | 1.76 | 31.1607 | 63.2 |  |  |
| 52 | 51 13C2-PFUdA | $565>519.8$ | 1.32 e 4 | 2.08 e 4 | 0.254 | 1.022 | 5.77 | 7.98 | 30.7891 | 62.5 |  |  |
| 53 | 53 13C2-PFDoA | $615.0>569.7$ | 1.29 e 4 | 1.68 e 4 | 0.254 | 1.076 | 6.05 | 9.57 | 35.0839 | 71.2 |  |  |
| 54 | 53 13C2-PFDoA | $615.0>569.7$ | 1.29 e 4 | 1.68 e 4 | 0.254 | 1.076 | 6.05 | 9.57 | 35.0839 | 71.2 |  |  |
| 55 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 56 | 30 PFTeDA | 713.0 > 669.0 |  | 9.61 e3 | 0.254 |  |  |  |  |  |  |  |
| 57 | 73 TCDA | $498.3>106.9$ |  |  | 0.254 | 2.789 |  |  |  |  |  |  |
| 58 | 60 13C4-PFBA | 217. $>172$ | 9.99 e 3 | 9.99 e 3 | 0.254 | 1.000 | 1.30 | 12.5 | 49.2961 | 100.0 |  |  |
| 59 | 61 13C5-PFHxA | $318>272.9$ | 1.83 e 4 | 1.83 e 4 | 0.254 | 1.000 | 3.49 | 12.5 | 49.2961 | 100.0 |  |  |
| 60 | 62 13C3-PFHxS | $401.8>79.9$ | 2.84 e 3 | 2.84 e 3 | 0.254 | 1.000 | 4.27 | 12.5 | 49.2961 | 100.0 |  |  |
| 61 | 55 13C2-PFTeDA | $715.1>669.7$ | 9.61 e 3 | 2.08 e 4 | 0.254 | 0.677 | 6.51 | 5.79 | 33.6916 | 68.3 |  |  |
| 62 | 47 13C8-PFOS | $507.0>79.9$ | 2.77 e 3 | 3.21 e 3 | 0.254 | 1.038 | 5.14 | 10.8 | 40.9961 | 83.2 |  |  |
| 63 | 63 13C8-PFOA | $420.9>376$ | $2.22 e 4$ | $2.22 e 4$ | 0.254 | 1.000 | 4.63 | 12.5 | 49.2961 | 100.0 |  |  |
| 64 | 64 13C9-PFNA | 472.2 > 426.9 | 1.56 e 4 | 1.56 e 4 | 0.254 | 1.000 | 5.06 | 12.5 | 49.2961 | 100.0 |  |  |
| 65 | 65 13C4-PFOS | $503>79.9$ | 3.21 e 3 | 3.21 e 3 | 0.254 | 1.000 | 5.14 | 12.5 | 49.2961 | 100.0 |  |  |
| 66 | -1 |  |  |  |  |  |  |  |  |  |  |  |
| 67 | 66 13C6-PFDA | $519.1>473.7$ | 1.68 e 4 | 1.68 e 4 | 0.254 | 1.000 | 5.44 | 12.5 | 49.2961 | 100.0 |  |  |
| 68 | $67.13 C 7-P F U d A$ | $570.1>524.8$ | 2.08 e 4 | 2.08 e 4 | 0.254 | 1.000 | 5.77 | 12.5 | 49.2961 | 100.0 |  |  |

# Quantify Sample Summary Report 

Vista Analytical Laboratory
Dataset: $\quad$ F:\Projects\PFAS.PRO\Results\181231M1\181231M1-IIS AREAS.qld
Last Altered: Wednesday, January 02, 2019 08:35:23 Pacific Standard Time
Printed: Wednesday, January 02, 2019 08:37:58 Pacific Standard Time

Name: 181231M1_54, Date: 31-Dec-2018, Time: 19:26:20, ID: 1804061-03 BP-TT-AOC22-MW04-FRB-20181210 0.11701, Description: BP-TT-AOC22-MW04-FRB-20181210

|  | \# Name | ID | Area | \%Rec | Area Out |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 13C4-PFBA | 1804061-03 BP-TT-AOC22-MW04-FRB... | 1.28 e 4 | 158.8 | YES |
| 2 | 2 13C5-PFHxA | 1804061-03 BP-TT-AOC22-MW04-FRB... | 2.37 e 4 | 155.6 | YES |
| 3 | 3 13C3-PFHxS | 1804061-03 BP-TT-AOC22-MW04-FRB... | 3.63 e 3 | 175.0 | YES |
| 4 | 4 13C8-PFOA | 1804061-03 BP-TT-AOC22-MW04-FRB... | 3.00 e 4 | 157.3 | YES |
| 5 | 5 13C9-PFNA | 1804061-03 BP-TT-AOC22-MW04-FRB... | 2.08 e 4 | 163.6 | YES |
| 6 | 6 13C4-PFOS | 1804061-03 BP-TT-AOC22-MW04-FRB... | 3.97 e 3 | 164.7 | YES |
| 7 | 7 13C6-PFDA | 1804061-03 BP-TT-AOC22-MW04-FRB... | 2.37 e 4 | 156.5 | YES |
| 8 | 8 13C7-PFUdA | 1804061-03 BP-TT-AOC22-MW04-FRB... | 2.72 e 4 | 157.7 | YES |

Name: 181231M1_55, Date: 31-Dec-2018, Time: 19:36:53, ID: 1804061-04 BP-MH-SW4001-FRB-20181211 0.11792, Description: BP-MH-SW4001-FRB-20181211

|  | \# Name | ID | Area | \%Rec | Area Out |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 13C4-PFBA | 1804061-04 BP-MH-SW4001-FRB-201... | 1.11 e 4 | 138.1 | NO |
| 2 | 2 13C5-PFHxA | 1804061-04 BP-MH-SW4001-FRB-201... | 2.05 e 4 | 134.5 | NO |
| 3 | 3 13C3-PFHxS | 1804061-04 BP-MH-SW4001-FRB-201... | 3.06 e 3 | 147.2 | NO |
| 4 | 4 13C8-PFOA | 1804061-04 BP-MH-SW4001-FRB-201... | 2.43 e 4 | 127.6 | NO |
| 5 | 5 13C9-PFNA | 1804061-04 BP-MH-SW4001-FRB-201... | 1.76 e 4 | 137.9 | NO |
| 6 | 6 13C4-PFOS | 1804061-04 BP-MH-SW4001-FRB-201... | 3.42 e 3 | 141.8 | NO |
| 7 | 7 13C6-PFDA | 1804061-04 BP-MH-SW4001-FRB-201... | 1.94 e 4 | 128.0 | NO |
| 8 | 8 13C7-PFUdA | 1804061-04 BP-MH-SW4001-FRB-201... | 2.39 e 4 | 138.6 | NO |

Name: 181231M1_56, Date: 31-Dec-2018, Time: 19:47:31, ID: 1804077-01 FT-PZ458I-20181211 0.2338, Description: FT-PZ458I-20181211

|  | \# Name | ID | Area | \%Rec | Area Out |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 13C4-PFBA | 1804077-01 FT-PZ458I-20181211 0.2338 | 9.56 e 3 | 118.4 | NO |
| 2 | 2 13C5-PFHxA | 1804077-01 FT-PZ458I-20181211 0.2338 | 1.74 e 4 | 113.8 | NO |
| 3 | 3 13C3-PFHxS | 1804077-01 FT-PZ458I-20181211 0.2338 | 2.67 e 3 | 128.7 | NO |
| 4 | 4 13C8-PFOA | 1804077-01 FT-PZ458I-20181211 0.2338 | 2.25 e 4 | 118.2 | NO |
| 5 | 5 13C9-PFNA | 1804077-01 FT-PZ458I-20181211 0.2338 | 1.52 e 4 | 119.4 | NO |
| 6 | 6 13C4-PFOS | 1804077-01 FT-PZ458I-20181211 0.2338 | 3.03 e 3 | 125.3 | NO |
| 7 | 7 13C6-PFDA | 1804077-01 FT-PZ458I-20181211 0.2338 | 1.73 e 4 | 114.3 | NO |
| 8 | 8 13C7-PFUdA | 1804077-01 FT-PZ458I-20181211 0.2338 | 2.15 e 4 | 124.5 | NO |

Name: 181231M1_57, Date: 31-Dec-2018, Time: 19:58:04, ID: 1804077-02 FT-PZ460I-20181211 0.23758, Description: FT-PZ4601-20181211

|  | \# Name | ID | Area | \%Rec | Area Out |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 13C4-PFBA | 1804077-02 FT-PZ4601-20181211 0.237... | 1.02 e 4 | 126.9 | NO |
| 2 | 2 13C5-PFHxA | 1804077-02 FT-PZ4601-20181211 0.237... | 1.88 e 4 | 123.1 | NO |
| 3 | 3 13C3-PFHxS | 1804077-02 FT-PZ460I-20181211 0.237... | 2.99 e 3 | 143.8 | NO |
| 4 | 4 13C8-PFOA | 1804077-02 FT-PZ460I-20181211 0.237... | 2.35 e 4 | 123.0 | NO |
| 5 | 5 13C9-PFNA | 1804077-02 FT-PZ460I-20181211 0.237... | 1.57 e 4 | 123.2 | NO |
| 6 | 6 13C4-PFOS | 1804077-02 FT-PZ460I-20181211 0.237... | 3.10 e 3 | 128.4 | NO |
| 7 | 7 13C6-PFDA | 1804077-02 FT-PZ460I-20181211 0.237... | 1.82 e 4 | 120.1 | NO |
| 8 | 8 13C7-PFUdA | 1804077-02 FT-PZ460I-20181211 0.237... | 2.19 e 4 | 127.0 | NO |

Quantify Sample Summary Report
Vista Analytical Laboratory
Dataset: F:\Projects\PFAS.PRO\Results\181231M1\181231M1-IIS AREAS.qld
Last Altered: Wednesday, January 02, 2019 08:35:23 Pacific Standard Time
Printed: Wednesday, January 02, 2019 08:37:58 Pacific Standard Time

Name: 181231M1_58, Date: 31-Dec-2018, Time: 20:08:42, ID: 1804077-03 FT-PZ461I-20181211 0.23672, Description: FT-PZ461I-20181211

|  | \# Name | ID | Area | \%Rec | Area Out |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 13C4-PFBA | 1804077-03 FT-PZ461I-20181211 0.236... | 1.01 e 4 | 125.1 | NO |
| 2 | 2 13C5-PFHxA | 1804077-03 FT-PZ461I-20181211 0.236... | 1.80 e 4 | 117.8 | NO |
| 3 | 3 13C3-PFHxS | 1804077-03 FT-PZ461I-20181211 0.236... | 2.84 e 3 | 136.9 | NO |
| 4 | 4 13C8-PFOA | 1804077-03 FT-PZ461I-20181211 0.236... | 2.25 e 4 | 118.2 | NO |
| 5 | 5 13C9-PFNA | 1804077-03 FT-PZ461I-20181211 0.236... | 1.25 e 4 | 97.9 | NO |
| 6 | 6 13C4-PFOS | 1804077-03 FT-PZ461I-20181211 0.236... | 3.14 e 3 | 130.1 | NO |
| 7 | 7 13C6-PFDA | 1804077-03 FT-PZ461I-20181211 0.236... | 1.67 e 4 | 110.4 | NO |
| 8 | 8 13C7-PFUdA | 1804077-03 FT-PZ461I-20181211 0.236... | 2.18 e 4 | 126.4 | NO |

Name: 181231M1_59, Date: 31-Dec-2018, Time: 20:19:20, ID: 1804077-04 FT-PZ464S-20181211 0.23223, Description: FT-PZ464S-20181211

|  | \# Name | ID | Area | \%Rec | Area Out |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 13C4-PFBA | 1804077-04 FT-PZ464S-20181211 0.23... | 1.05 e 4 | 130.1 | NO |
| 2 | 2 13C5-PFHxA | 1804077-04 FT-PZ464S-20181211 0.23... | 1.97 e 4 | 129.4 | NO |
| 3 | 3 13C3-PFHxS | 1804077-04 FT-PZ464S-20181211 0.23... | 2.88 e 3 | 138.8 | NO |
| 4 | 4 13C8-PFOA | 1804077-04 FT-PZ464S-20181211 0.23... | 2.39 e 4 | 125.1 | NO |
| 5 | 5 13C9-PFNA | 1804077-04 FT-PZ464S-20181211 0.23... | 1.69 e 4 | 132.9 | NO |
| 6 | 6 13C4-PFOS | 1804077-04 FT-PZ464S-20181211 0.23... | 3.34 e 3 | 138.3 | NO |
| 7 | 7 13C6-PFDA | 1804077-04 FT-PZ464S-20181211 0.23... | 1.88 e 4 | 123.8 | NO |
| 8 | 8 13C7-PFUdA | 1804077-04 FT-PZ464S-20181211 0.23... | 2.18 e 4 | 126.2 | NO |

Name: 181231M1_60, Date: 31-Dec-2018, Time: 20:29:53, 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: 181231M1_61, Date: 31-Dec-2018, Time: 20:40:31, ID: ST181231M1-5 PFC CS3 18L2606, Description: PFC CS3 18L2606

|  | \# Name | ID | Area | \%Rec | Area Out |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 13C4-PFBA | ST181231M1-5 PFC CS3 18L2606 | 9.96 e 3 | 123.5 | NO |
| 2 | 2 13C5-PFHxA | ST181231M1-5 PFC CS3 18L2606 | 1.82 e 4 | 119.3 | NO |
| 3 | 3 13C3-PFHxS | ST181231M1-5 PFC CS3 18L2606 | 2.66 e 3 | 128.1 | NO |
| 4 | 4 13C8-PFOA | ST181231M1-5 PFC CS3 18L2606 | 2.16 e 4 | 113.3 | NO |
| 5 | 5 13C9-PFNA | ST181231M1-5 PFC CS3 18L2606 | 1.59 e 4 | 125.2 | NO |
| 6 | 6 13C4-PFOS | ST181231M1-5 PFC CS3 18L2606 | 2.80 e 3 | 115.9 | NO |
| 7 | 7 13C6-PFDA | ST181231M1-5 PFC CS3 18L2606 | 1.73 e 4 | 114.1 | NO |
| 8 | 8 13C7-PFUdA | ST181231M1-5 PFC CS3 18L2606 | 1.97 e 4 | 114.4 | NO |

# Quantify Sample Summary Report 

Vista Analytical Laboratory
Dataset: $\quad$ F:\Projects\PFAS.PRO\Results\181231M1\181231M1-IIS AREAS.qld
Last Altered: Wednesday, January 02, 2019 08:35:23 Pacific Standard Time
Printed: Wednesday, January 02, 2019 08:37:58 Pacific Standard Time

Name: 181231M1_62, Date: 31-Dec-2018, Time: 20:51:04, ID: 1804077-05 DUP01-20181211 0.24868, Description: DUP01-20181211

|  | \# Name | ID | Area | \%Rec | Area Out |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 13C4-PFBA | 1804077-05 DUP01-20181211 0.24868 | 9.54 e 3 | 118.2 | NO |
| 2 | 2 13C5-PFHxA | 1804077-05 DUP01-20181211 0.24868 | 1.69 e 4 | 110.8 | NO |
| 3 | 3 13C3-PFHxS | 1804077-05 DUP01-20181211 0.24868 | 2.71 e 3 | 130.5 | NO |
| 4 | 4 13C8-PFOA | 1804077-05 DUP01-20181211 0.24868 | 2.09 e 4 | 109.7 | NO |
| 5 | 5 13C9-PFNA | 1804077-05 DUP01-20181211 0.24868 | 1.37 e 4 | 107.8 | NO |
| 6 | 6 13C4-PFOS | 1804077-05 DUP01-20181211 0.24868 | 3.08 e 3 | 127.5 | NO |
| 7 | 7 13C6-PFDA | 1804077-05 DUP01-20181211 0.24868 | 1.56 e 4 | 103.0 | NO |
| 8 | 8 13C7-PFUdA | 1804077-05 DUP01-20181211 0.24868 | 1.92 e 4 | 111.0 | NO |

Name: 181231M1_63, Date: 31-Dec-2018, Time: 21:01:42, ID: 1804077-06 FT-PZ464S-FRB-20181211 0.25357, Description: FT-PZ464S-FRB-20181211

|  | \# Name | ID | Area | \%Rec | Area Out |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | $113 C 4-P F B A$ | $1804077-06 ~ F T-P Z 464 S-F R B-20181211 \ldots$ | 9.99 e 3 | 123.8 | NO |
| 2 | $213 C 5-P F H x A$ | $1804077-06$ FT-PZ464S-FRB-20181211... | 1.83 e 4 | 119.8 | NO |
| 3 | $313 C 3-P F H x S$ | $1804077-06$ FT-PZ464S-FRB-20181211... | 2.84 e 3 | 136.5 | NO |
| 4 | $413 C 8-P F O A$ | $1804077-06$ FT-PZ464S-FRB-20181211... | $2.22 e 4$ | 116.1 | NO |
| 5 | $513 C 9-P F N A$ | $1804077-06$ FT-PZ464S-FRB-20181211... | 1.56 e 4 | 122.4 | NO |
| 6 | $613 C 4-P F O S$ | $1804077-06 ~ F T-P Z 464 S-F R B-20181211 \ldots$ | $3.21 e 3$ | 132.9 | NO |
| 7 | $713 C 6-P F D A$ | $1804077-06 ~ F T-P Z 464 S-F R B-20181211 \ldots$ | $1.68 e 4$ | 111.2 | NO |
| 8 | $813 C 7-P F U d A$ | $1804077-06 ~ F T-P Z 464 S-F R B-20181211 \ldots$ | 2.08 e 4 | 120.3 | NO |

Name: 181231M1_64, Date: 31-Dec-2018, Time: 21:12:14, ID: B8L0194-BLK1 Method Blank 0.125, Description: Method Blank

|  | \# Name | ID | Area | \%Rec | Area Out |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | $113 C 4-P F B A$ | B8L0194-BLK1 Method Blank 0.125 | 7.25 e 3 | 89.8 | NO |
| 2 | $213 C 5-P F H x A$ | B8L0194-BLK1 Method Blank 0.125 | 1.34 e 4 | 87.8 | NO |
| 3 | $313 C 3-P F H x S$ | B8L0194-BLK1 Method Blank 0.125 | 2.05 e 3 | 98.7 | NO |
| 4 | $413 C 8-P F O A$ | B8L0194-BLK1 Method Blank 0.125 | 1.64 e 4 | 86.1 | NO |
| 5 | $513 C 9-P F N A$ | B8L0194-BLK1 Method Blank 0.125 | 1.14 e 4 | 89.3 | NO |
| 6 | $613 C 4-P F O S$ | B8L0194-BLK1 Method Blank 0.125 | 2.29 e 3 | 94.9 | NO |
| 7 | $713 C 6-P F D A$ | B8L0194-BLK1 Method Blank 0.125 | 1.29 e 4 | 85.4 | NO |
| 8 | $813 C 7-P F U d A$ | B8L0194-BLK1 Method Blank 0.125 | 1.52 e 4 | 87.9 | NO |

Name: 181231M1_65, Date: 31-Dec-2018, Time: $21: 22: 53$, ID: B8L0194-BS1 OPR 0.125, Description: OPR

|  | \# Name | ID | Area | \%Rec | Area Out |
| :--- | :--- | :--- | :--- | ---: | :--- |
| 1 | $113 C 4-P F B A$ | B8L0194-BS1 OPR 0.125 | 8.14 e 3 | 100.8 | NO |
| 2 | $213 C 5-P F H x A$ | B8L0194-BS1 OPR 0.125 | 1.42 e 4 | 93.1 | NO |
| 3 | $313 C 3-P F H x S$ | B8L0194-BS1 OPR 0.125 | 2.38 e 3 | 114.8 | NO |
| 4 | $413 C 8-P F O A$ | B8L0194-BS1 OPR 0.125 | 1.40 e 4 | 73.3 | NO |
| 5 | $513 C 9-P F N A$ | B8L0194-BS1 OPR 0.125 | 1.01 e 4 | 79.1 | NO |
| 6 | $613 C 4-P F O S$ | B8L0194-BS1 OPR 0.125 | 2.61 e 3 | 108.2 | NO |
| 7 | $713 C 6-P F D A$ | B8L0194-BS1 OPR 0.125 | 1.15 e 4 | 76.0 | NO |
| 8 | $813 C 7-P F U d A$ | B8L0194-BS1 OPR 0.125 | 1.53 e 4 | 88.6 | NO |

## TUNE CHECKS

|  | TUNE Check QUCM) 12-29-18 |  |
| :--- | :--- | :--- |
| Calibration Report - MS1 Static | 20181229 | Page 1 of 6 |
| Printed: $\quad$ Sat Dec 29 11:12:53 2018 |  |  |

Data file: STATMS1 - Calibrated

22 matches of 23 tested references


Reference: c:lmasslynx|reflESI Calibration TQ ResCal.ref

$$
\text { Mean residual }=0.0317 \mathrm{amu}
$$




## Calibration Report - MS1 Scanning

Printed:
Sat Dec 29 11:14:02 2018

Data file: SCNMS1-Calibrated
23 matches of 23 tested references


Reference: c:Imasslynx\refIESI Calibration TQ ResCal.ref Mean residual $=0.033 \mathrm{amu}$


Printed:

## Sat Dec 29 11:15:13 2018



Reference: c:Imasslynx\reflESI Calibration TQ ResCal.ref
Mean residual $=0.0621 \mathrm{amu}$


Residual Polynomial order $=4$
RMS residual $=0.0867 \mathrm{amu}$


Calibration Report - MS2 Static
Printed:

## Sat Dec 29 11:16:21 2018

Data file: STATMS2 - Calibrated 22 matches of 23 tested references
Reference: c:Imasslynx\refIESI Calibration TQ ResCal.ref Mean residual $=0.00866 \mathrm{amu}$



Calibration Report - MS2 Scanning

## Printed: $\quad$ Sat Dec 29 11:17:30 2018



Reference: c:Imasslynx\reflESI Calibration TQ ResCal.ref
Mean residual $=0.0294 \mathrm{amu}$



Calibration Report - MS2 Scan Speed Compensation
Printed:
Sat Dec 29 11:18:56 2018


Twecherk Q4 (M) 12-31-18
Calibration Verification Report - MS1 Static
Printed: Mon Dec 31 09:32:30 2018


Reference: c:lmasslynx|refIESI Calibration TQ ResCal.ref
Mean residual $=0.0587 \mathrm{amu}$


Calibration Verification Report - MS1 Scanning
Printed: Mon Dec 31 09:33:39 2018

Data file: SCNMS1V - Calibrated
23 matches of 23 tested references


Reference: c:\masslynx\reflESI Calibration TQ ResCal.ref


Printed: Mon Dec 31 09:34:50 2018

Data file: FASTMS1V - Calibrated
23 matches of 23 tested references


Reference: c:Imasslynx\refIESI Calibration TQ ResCal.ref
Mean residual $=0.0984 \mathrm{amu}$


Calibration Verification Report - MS2 Static
Printed: Mon Dec 31 09:35:58 2018
Data file: STATMS2V - Calibrated

Reference: c:Imasslynx\reflESI Calibration TQ ResCal.ref
Mean residual $=0.0511 \mathrm{amu}$


Calibration Verification Report - MS2 Scanning
Printed: Mon Dec 31 09:37:07 2018


Reference: c:ImasslynxIreflESI Calibration TQ ResCal.ref
Mean residual $=0.128 \mathrm{amu}$


Printed: Mon Dec 31 09:38:33 2018


Reference: c:ImasslynxIreflESI Calibration TQ ResCal.ref


| Dataset: | Untitled | INITIAL CALIBRATION |
| :--- | :--- | :--- |
|  |  |  |
| Last Altered: | Saturday, December 29, 2018 19:30:34 Pacific Standard Time |  |
| Printed: | Saturday, December 29, 2018 19:30:45 Pacific Standard Time |  |

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_122918.mdb 29 Dec 2018 16:19:21 Calibration: F:IProjects\PFAS.PROICurveDB\C18_VAL-PFAS_Q4_12-29-18.cdb 29 Dec 2018 16:11:46

## Compound name: PFBA



Method: F:\Projects\PFAS.PROMMethDB\PFAS_FULL_80C_122918.mdb 29 Dec 2018 16:19:21
Calibration: F:\Projects\PFAS.PRO\CurveDB\C̄18_VAL-PFĀS_Q4_12-29-18.cdb 29 Dec 2018 16:11:46

## Compound name: PFBA

Correlation coefficient: $r=0.999959, r^{\wedge} 2=0.999917$,
Calibration curve: 1.18588 * $\mathrm{X}+-0.0823146$
Response type: Internal Std (Ref 36 ), Area * (IS Conc. / IS Area)
12 2 2 $12 / 29 / 18$
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Compound name: PFPeA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999938$,
Calibration curve: $2.48403 e-005$ * $x^{\wedge} 2+1.03326$ * $x+-0.0426493$
Response type: Internal Std (Ref 37 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered:
Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed:
Saturday, December 29, 2018 17:17:13 Pacific Standard Time

## Compound name: PFBS

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999730$
Calibration curve: $0.00021041^{*} x^{\wedge} 2+2.07254^{*} x+-0.127278$
Response type: Internal Std (Ref 38 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Compound name: 4:2 FTS

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999772$
Calibration curve: $-0.00286531^{*} x^{\wedge} 2+1.14289{ }^{*} x+-0.0200174$
Response type: Internal Std (Ref 39), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

|  |  | \# Name | Type | Std. Cone | RT | Area | IS Area | Riesponse | Conc. | \%Dev | Conc Flag | CoD | Conflag | $x$-excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | [2+45 | 1 181229M2_2 | Standard | 0.250 | 3.50 | 88.219 | 4144.418 | 0.266 | 0.3 | 0.2 | NO | 1.000 | NO | bb |
| 2 |  | 2181229 Mz 3 | Standard | 0.500 | 3.50 | 166.096 | 3846.208 | 0.540 | 0.5 | -1.9 | NO | 1.000 | NO | bb |
| 3 |  | 3 181229M2_4 | Standard | 1.000 | 3.50 | 334.568 | 3826.278 | 1.093 | 1.0 | -2.4 | NO | 1.000 | NO | bb |
| 4 |  | 4 181229M2_5 | Standard | 2.000 | 3.50 | 690.112 | 3745.440 | 2.303 | 2.0 | 2.2 | NO | 1.000 | NO | bb |
| 5 |  | 5 181229M2_6 | Standard | 5.000 | 3.50 | 1737.767 | 3896.034 | 5.575 | 5.0 | -0.9 | NO | 1.000 | NO | bb |
| 6 |  | $6181229 \mathrm{M2}$ _7 | Standard | 10.000 | 3.50 | 3461.939 | 3747.443 | 11.548 | 10.4 | 3.9 | NO | 1.000 | NO | bb |
| $17$ |  | 7 181229M2_8 | Standard | 50.000 | 3.50 | 15735.150 | 3992.553 | 49.264 | 49.2 | -1.6 | NO | 1.000 | NO | bb |
| 8 |  | 8 181229M2_9 | Standard | 100.000 | 3.50 | 29305.051 | 4263.229 | 85.924 | 100.5 | 0.5 | NO | 1.000 | NO | bb |
| 9 |  | 9 181229M2_10 | Standard | 250.000 | 3.50 | 57212.391 | 5230.245 | 136.734 |  |  | NO | 1.000 | NO | $b 6 \times 1$ |
| 10 | \% | 10 181229M2_11 | Standard | 500.000 | 3.50 | 104122.813 | 6853.290 | 189.914 |  |  | NO | 1.000 | NO | bbxI |

Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered:
Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed:
Saturday, December 29, 2018 17:17:13 Pacific Standard Time

## Compound name: PFHxA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999886$
Calibration curve: -0.000171925 * $x^{\wedge} 2+0.995181$ * $x+-0.00364292$
Response type: Internal Std (Ref 40 ), Area * ( IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None


## Compound name: PFPeS

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999381$
Calibration curve: $-0.000173322{ }^{*} x^{\wedge} 2+1.78673^{*} x+-0.37064$
Response type: Internal Std (Ref 38 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

|  | \# Name | Type | We Sta. Conc | FT | Area | IS Area: | Fiesponise. | Concer | \% Dev | Conc. Flag | Wume CoD | Cob Flag | $x=$ exchinded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $1:{ }^{1 / 5}$ | 1 181229M2_2 | Standard | 0.250 | 3.80 | 62.046 | 1527.155 | 0.508 | 0.5 | 96.7 | YES | 0.999 | NO | bbx |
| 2 | $2181229 \mathrm{M} 2 \_3$ | Standard | 0.500 | 3.81 | 72.979 | 1540.521 | 0.592 | 0.5 | 7.8 | NO | 0.999 | NO | bb |
| 3. | 3 181229M2_4 | Standard | 1.000 | 3.81 | 169.905 | 1562.691 | 1.359 | 1.0 | -3.2 | NO | 0.999 | NO | bb |
| $4$ | 4 181229M2_5 | Standard | 2.000 | 3.80 | 409.441 | 1488.365 | 3.439 | 2.1 | 6.6 | NO | 0.999 | NO | bb |
| 5 | 5 181229M2_6 | Standard | 5.000 | 3.80 | 980.611 | 1551.050 | 7.903 | 4.6 | -7.3 | NO | 0.999 | NO | bb |
| 6 | 6181229 M 2 _7 | Standard | 10.000 | 3.80 | 2063.432 | 1471.292 | 17.531 | 10.0 | 0.3 | NO | 0.999 | NO | bb |
| $7$ | 7 181229M2_8 | Standard | 50.000 | 3.80 | 9930.264 | 1462.293 | 84.886 | 47.9 | -4.1 | NO | 0.999 | NO | bb |
| $8$ | 8 181229M2_9 | Standard | 100.000 | 3.80 | 19293.520 | 1405.650 | 171.571 | 97.1 | -2.9 | NO | 0.999 | NO | bb |
| $9$ | 9 181229M2_10 | Standard | 250.000 | 3.80 | 41104.926 | 1139.932 | 450.739 | 259.0 | 3.6 | NO | 0.999 | NO | bb |
| $10 \times 3$ | 10 181229M2_11 | Standard | 500.000 | 3.80 | 77046.516 | 1141.903 | 843.400 | 496.1 |  | NO | 0.999 | NO | bb |

Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qid
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed:
Saturday, December 29, 2018 17:17:13 Pacific Standard Time

## Compound name: PFHpA

Correlation coefficient: $\mathrm{r}=0.999939, \mathrm{r}^{\wedge} 2=0.999877$
Calibration curve: 1.47858 * $x+-0.0196842$
Response type: Internal Std (Ref 41), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Compound name: L-PFHxS

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999709$
Calibration curve: $-9.74234 e-005^{*} x^{\wedge} 2+2.03406^{*} x+-0.0714373$
Response type: Internal Std ( Ref 42 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: $1 / x$, Axis trans: None

|  | \# Name | Typer | Std. Cond | FTI | Area | IS Area | Response | Conc. | \% \% Oev | ConorFlag | COD | CoDFlag | x=excludad |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 181229M2_2 | Standard | 0.250 | . 4.36 | 47.996 | 1262.780 | 0.475 | 0.3 | 7.5 | NO | 1.000 | NO | MM |
| 2 | 2 181229M2_3 | Standard | 0.500 | 4.36 | 91.823 | 1244.552 | 0.922 | 0.5 | -2.3 | NO | 1.000 | NO | MM |
| 3 | 3 181229M2_4 | Standard | 1.000 | 4.36 | 180.724 | 1298.589 | 1.740 | 0.9 | -11.0 | NO | 1.000 | NO | MM |
| 4 | 4 181229M2_5 | Standard | 2.000 | 4.36 | 389.475 | 1178.653 | 4.131 | 2.1 | 3.3 | NO | 1.000 | NO | MM |
| ${ }^{p}$ | 5 181229M2_6 | Standard | 5.000 | 4.36 | 942.838 | 1276.862 | 9.230 | 4.6 | -8.5 | NO | 1.000 | NO | MM |
| 6 | 6181229 M 2 _7 | Standard | 10.000 | 4.36 | 1961.566 | 1261.164 | 19.442 | 9.6 | -4.0 | NO | 1.000 | NO | MM |
| $7$ | 7 181229M2_8 | Standard | 50.000 | 4.36 | 9824.964 | 1181.315 | 103.962 | 51.3 | 2.5 | NO | 1.000 | NO | MM |
| 8t | 8 181229M2_9 | Standard | 100.000 | 4.36 | 18578.162 | 1181.546 | 196.545 | 97.1 | -2.9 | NO | 1.000 | NO | MM |
| $9$ | 9 181229M2_10 | Standard | 250.000 | 4.36 | 40411.582 | 989.524 | 510.493 | 254.1 | 1.6 | NO | 1.000 | NO | MM |
| $10$ | 10 181229M2_11 | Standard | 500.000 | 4.36 | 77863.609 | 983.657 | 989.466 | 498.4 | -0.3 | NO | 1.000 | NO | MM |

Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29; 2018 16:19:24 Pacific Standard Time
Printed:
Saturday, December 29, 2018 17:17:13 Pacific Standard Time

## Compound name: 6:2 FTS

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999927$
Calibration curve: $-0.000482516^{*} x^{\wedge} 2+1.79085{ }^{*} x+-0.0431136$
Response type: Internal Std (Ref 43 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: $1 / x$, Axis trans: None

|  | \# Name | Type | Sta. Conc | $8 T$ | Area | IS Area | Hesponise | Conc. | \%Dev | Conc. Flag | Cob | CoD Flag | x=6xcluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 181229M2_2 | Standard | 0.250 | 4.66 | 117.281 | 3345.705 | 0.438 | 0.3 | 7.5 | NO | 1.000 | NO | bb |
| 2 | $2181229 \mathrm{M2} 3$ | Standard | 0.500 | 4.66 | 201.720 | 3256.189 | 0.774 | 0.5 | -8.7 | NO | 1.000 | NO | bb |
|  | 3 181229M2_4 | Standard | 1.000 | 4.67. | 475.444 | 3306.510 | 1.797 | 1.0 | 2.8 | NO | 1.000 | NO | bb |
| 4 . | 4 181229M2_5 | Standard | 2.000 | 4.66 | 866.033 | 3145.370 | 3.442 | 1.9 | -2.7 | NO | 1.000 | NO | bb |
| 5. | 5 181229M2_6 | Standard | 5.000 | 4.67 | 2066.181 | 3174.227 | 8.137 | 4.6 | -8.5 | NO | 1.000 | NO | bb |
| 6 | $6181229 \mathrm{M2}$-7 | Standard | 10.000 | 4.67 | 4354.919 | 3058.315 | 17.800 | 10.0 | -0.1 | NO | 1.000 | NO | bb |
| 7. | 7 181229M2_8 | Standard | 50.000 | 4.67 | 20958.795 | 2978.305 | 87.964 | 49.8 | -0.4 | NO | 1.000 | NO | bb |
| 8 8.ty | 8181229 M 2 _9 | Standard | 100.000 | 4.66 | 36994.273 | 2654.524 | 174.204 | 100.0 | -0.0 | NO | 1.000 | NO | bb |
| 9 9 | 9 181229M2_10 | Standard | 250.000 | 4.66 | 76307.469 | 2271.882 | 419.847 | 251.5 | 0.6 | NO | 1.000 | NO | bb |
| $10^{\circ}$ | 10 181229M2_11 | Standard | 500.000 | 4.67 | 138165.953 | 2232.428 | 773.631 | 499.1 | -0.2 | NO | 1.000 | NO | bb |

## Compound name: L-PFOA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999851$
Calibration curve: $-6.34381 \mathrm{e}-005{ }^{*} x^{\wedge} 2+1.47701$ * $x+0.0362127$
Response type: Internal Std (Ref 44 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Dataset:
F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered: $\quad$ Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:17:13 Pacific Standard Time

## Compound name: PFHpS

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999813$
Calibration curve: $1.51699 \mathrm{e}-005^{*} \mathrm{x}^{\wedge} 2+0.85266$ * $\mathrm{x}+\mathrm{-}^{0.044668}$
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 | RI | Area | IS Area | Response | Conc. | \%Dev | Cone. Flag | CoD | Cod flag | x=exclurded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15\% | 1 181229M2_2 | Standard | 0.250 | 4.82 | 41.959 | 3779.517 | 0.139 | 0.2 | -13.9 | NO | 1.000 | NO | bb |
| $2{ }^{2}$ | 2 181229M2_3 | Standard | 0.500 | 4.82 | 104.305 | 3249.811 | 0.401 | 0.5 | 4.6 | NO | 1.000 | NO | bb |
| 3 3) | 3 181229M2_4 | Standard | 1.000 | 4.82 | 225.014 | 3501.057 | 0.803 | 1.0 | -0.5 | NO | 1.000 | NO | bb |
| 4 | 4 181229M2_5 | Standard | 2.000 | 4.82 | 448.468 | 3287.353 | 1.705 | 2.1 | 2.6 | NO | 1.000 | NO | bb |
| 5 | 5181229 M 2 _6 | Standard | 5.000 | 4.83 | 1166.806 | 3543.938 | 4.115 | 4.9 | -2.4 | NO | 1.000 | NO | bb |
| 6 | 6181229 M 2 _7 | Standard | 10.000 | 4.83 | 2479.615 | 3262.650 | 9.500 | 11.2 | 11.9 | NO | 1.000 | NO | bb |
| 7. | 7 181229M2_8 | Standard | 50.000 | 4.83 | 11742.918 | 3507.401 | 41.850 | 49.1 | -1.8 | NO | 1.000 | NO | bb |
| 8 | 8 181229M2_9 | Standard | 100.000 | 4.82 | 22875.717 | 3365.886 | 84.954 | 99.5 | -0.5 | NO | 1.000 | NO | bb |
| 9 9 \% | 9 181229M2_10 | Standard | 250.000 | 4.82 | 48197.277 | 2811.474 | 214.288 | 250.3 | 0.1 | NO | 1.000 | NO | bb |
| 10 \% | $10181229 \mathrm{M} 2 \_11$ | Standard | 500.000 | 4.83 | 92877.242 | 2699.230 | 430.110 | 500.0 | 0.0 | NO | 1.000 | NO | bb |

## Compound name: PFNA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999915$
Calibration curve: $-2.05618 \mathrm{e}-005^{*} x^{\wedge} 2+1.26573^{*} x+-0.0640136$
Response type: Internal Std (Ref 45 ), Area * (IS Conc. I IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

| 5 | \# Name | Type | Std.Conc | PT | Area | IS Area | Response | Conc: | Fobev |  | Cone Flag | Cob | Cob Flag | $x$-excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.4.ty | 1 181229M2_2 | Standard | 0.250 | 5.15 | 414.647 | 17629.832 | 0.294 | 0.3 | 13.1 |  | NO | 1.000 | NO | bb |
| 2. | 2 181229M2_3 | Standard | 0.500 | 5.15 | 781.095 | 17409.248 | 0.561 | 0.5 | -1.3 |  | NO | 1.000 | NO | bb |
| $3$ | 3 181229M2_4 | Standard | 1.000 | 5.15 | 1694.039 | 18135.689 | 1.168 | 1.0 | -2.7 |  | NO | 1.000 | NO | bb |
| 4 | 4 181229M2_5 | Standard | 2.000 | 5.15 | 3221.002 | 17345.088 | 2.321 | 1.9 | -5.8 |  | NO | 1.000 | NO | bb |
| 5 \% | 5 181229M2_6 | Standard | 5.000 | 5.16 | 8124.937 | 17095.766 | 5.941 | 4.7 | -5.1 |  | NO | 1.000 | NO | bb |
| 6 | $6181229 \mathrm{M} 2 \_7$ | Standard | 10.000 | 5.15 | 17271.658 | 16737.436 | 12.899 | 10.2 | 2.4 |  | NO | 1.000 | NO | bb |
|  | 7 181229M2_8 | Standard | 50.000 | 5.16 | 81839.773 | 16546.188 | 61.827 | 48.9 | -2.1 |  | NO | 1.000 | NO | bb |
| $18$ | 8 181229M2_9 | Standard | . 100.000 | 5.15 | 164571.203 | 16046.554 | 128.198 | 101.5 | 1.5 |  | NO | 1.000 | NO | bb |
| 9 | 9 181229M2_10 | Standard | 250.000 | 5.15 | 344898.531 | 13695.215 | 314.798 | 249.8 | -0.1 |  | NO | 1.000 | NO | bb |
| 10 1\% | $10181229 \mathrm{M} 2 \ldots 11$ | Standard | 500.000 | 5.16 | 642196.000 | 12791.653 | 627.554 | 499.9 | -0.0 | / | NO | 1.000 | NO | bb |

Quantify Compound Summary Report MassLynx MassLynx V4.1 SCN94
Vista Analytical Laboratory
Dataset:

| F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld |  |
| :--- | :--- |
| Last Altered: | Saturday, December 29, 2018 16:19:24 Pacific Standard Time |
| Printed: | Saturday, December 29, 2018.17:17:13 Pacific Standard Time |

Compound name: PFOSA
Coefficient of Determination: R^2 $=0.998926$
Calibration curve: $0.000275834{ }^{*} x^{\wedge} 2+1.11214{ }^{*} x+0.0389668$
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 | - K Sta Conc | RT | Area | IS Area | Response | Conc: | \% Dev | Conc. Flag | COO | CoDFlag | $x=$ exclided |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 181229M2_2 | Standard | 0.250 | 5.19 | 101.129 | 4615.137 | 0.274 | 0.2 | -15.5 | NO | 0.999 | NO | bb |
| 2 | 2 181229M2_3 | Standard | 0.500 | 5.19 | 219.165 | 4368.309 | 0.627 | 0.5 | 5.8 | NO | 0.999 | NO | bb |
| 3. ${ }^{\text {a }}$ | 3 181229M2_4 | Standard | 1.000 | 5.19 | 384.726 | 4449.304 | 1.081 | 0.9 | -6.3 | NO | 0.999 | NO | bb |
| 4 | 4 181229M2_5 | Standard | 2.000 | 5.19 | 824.062 | 4170.515 | 2.470 | 2.2 | 9.2 | NO | 0.999 | NO | bb |
| 5. | 5181229 M 2 _6 | Standard | 5.000 | 5.20 | 1860.238 | 4506.877 | 5.159 | 4.6 | -8.0 | NO | 0.999 | NO | bb |
| 6 | 6181229 M 2 _7 | Standard | 10.000 | 5.19 | 4114.539 | 4195.290 | 12.259 | 11.0 | 9.6 | NO | 0.999 | NO | bb |
| 7. | 7 181229M2_8 | Standard | 50.000 | 5.20 | 19854.988 | 4198.639 | 59.111 | 52.4 | 4.9 | NO | 0.999 | NO | bb |
| 8 | 8 181229M2_9 | Standard | 100.000 | 5.19 | 37972.340 | 3996.380 | 118.771 | 104.1 | 4.1 | NO | 0.999 | NO | bb |
| 9 | 9 181229M2_10 | Standard | 250.000 | 5.19 | 84175.289 | 3741.253 | 281.240 | 238.7 | -4.5 | NO | 0.999 | NO | bb |
| 10 | 10 181229M2_11 | Standard | 500.000 | 5.20 | 172027.766 | 3408.612 | 630.857 | 504.2 | 0.8 | NO | 0.999 | NO | bb |

## Compound name: L-PFOS

Correlation coefficient: $\mathrm{r}=0.999657, \mathrm{r}^{\wedge} 2=0.999314$
Calibration curve: 1.10276 * $x+-0.060196$
Response type: Internal Std ( Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

|  | \# Name: | Type | Std Conc | RT | Area | 2 IS Area | Fiesponse | Conc. | \%Dev | Conc. Frag | CoD | CoD Fiag | x=exclured |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 181229M2_2 | Standard | 0.250 | 5.24 | 70.745 | 3779.517 | 0.234 | 0.3 | 6.7 | NO | 0.999 | NO | MM |
| $2{ }^{2}$ | 2 181229M2_3 | Standard | 0.500 | 5.24 | 129.394 | 3249.811 | 0.498 | 0.5 | 1.2 | NO | 0.999 | NO | MM |
| $3{ }^{3}$ | 3 181229M2_4 | Standard | 1.000 | 5.24 | 295.746 | 3501.057 | 1.056 | 1.0 | 1.2 | NO | 0.999 | NO | MM |
| 4 | 4 181229M2_5 | Standard | 2.000 | 5.24 | 504.690 | 3287.353 | 1.919 | 1.8 | -10.3 | NO | 0.999 | NO | MM |
| 5.4MEMx | 5 181229M2_6 | Standard | 5.000 | 5.24 | 1413.601 | 3543.938 | 4.986 | 4.6 | -8.5 | NO | 0.999 | NO | MM |
| 6 | 6181229 M 2 _7 | Standard | 10.000 | 5.24 | 2776.826 | 3262.650 | 10.639 | 9.7 | -3.0 | NO | 0.999 | NO | MM |
| $7$ | 7 181229M2_8 | Standard | 50.000 | 5.24 | 14340.026 | 3507.401 | 51.106 | 46.4 | -7.2 | NO | 0.999 | NO | MM |
| 8 | 8 181229M2_9 | Standard | 100.000 | 5.23 | 28406.238 | 3365.886 | 105.493 | 95.7 | -4.3 | NO | 0.999 | NO | MM |
| 9\% Whutit | 9 181229M2_10 | Standard | 250.000 | 5.23 | 62637.730 | 2811.474 | 278.492 | 252.6 | 1.0 | NO | 0.999 | NO | MM |
| 10 L | 10 181229M2_11 | Standard | 500.000 | 5.24 | 120522.742 | 2699.230 | 558.135 | 506.2 | 1.2 | NO | 0.999 | NO | MM |

Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered: $\quad$ Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: $\quad$ Saturday, December 29, 2018 17:17:13 Pacific Standard Time

## Compound name: PFDA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999598$
Calibration curve: $-0.00012428^{*} x^{\wedge} 2+1.23984^{*} x+0.0179882$
Response type: Internal Std (Ref 48 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

|  | \# Name | Type | Sta. Conc | RT | Area | IS Area | Respornse | Conc: | \% Dev | Conc.Flag | CoD | CoD flag | x=excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 181229M2_2 | Standard | 0.250 | 5.52 | 466.227 | 18333.279 . | 0.318 | 0.2 | -3:2 | NO | 1.000 | NO | bb |
| 2 | 2 181229M2_3 | Standard | 0.500 | 5.53 | 871.188 | 17810.100 | 0.611 | 0.5 | -4.3 | NO | 1.000 | NO | bb |
| 3 | $3181229 \mathrm{M} 2 \_4$ | Standard | 1.000 | 5.53 | 1988.713 | 18748.252 | 1.326 | 1.1 | 5.5 | NO | 1.000 | NO | bb |
| 4 | 4 181229M2_5 | Standard | 2.000 | 5.53 | 3680.050 | 17760.555 | 2.590 | 2.1 | 3.7 | NO | 1.000 | NO | MM |
| $5$ | 5 181229M2_6 | Standard | 5.000 | 5.53 | 8739.215 | 18609.666 | 5.870 | 4.7 | -5.6 | NO | 1.000 | NO | bb |
| 6 | $6181229 \mathrm{M2}$ _7 | Standard | 10.000 | 5.53 | 18320.480 | 17647.195 | 12.977 | 10.5 | 4.6 | NO | 1.000 | NO | bb |
| 7. | 7181229 ML _8 | Standard | 50.000 | 5.53 | 93043.516 | 18481.264 | 62.931 | 51.0 | 2.0 | NO | 1.000 | NO | bb |
| 8 | 8 181229M2_9 | Standard | 100.000 | 5.52 | 166862.109 | 17766.760 | 117.398 | 95.6 | -4.4 | NO | 1.000 | NO | bb |
| 9, | 9 181229M2_10 | Standard | 250.000 | 5.52 | 367016.219 | 14900.956 | 307.880 | 254.8 | 1.9 | NO | 1.000 | NO | bb |
| $10$ | 10 181229M2_11 | Standard | 500.000 | 5.53 | 707503.688 | 15066.822 | 586.972 | 498.3 | -0.3 | NO | 1.000 | NO | bb |

## Compound name: 8:2 FTS

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.998842$
Calibration curve: $-0.00395163^{*} x^{\wedge} 2+1.52796{ }^{*} x+-0.023333$
Response type: Internal Std (Ref 49 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


| Dataset: | F:IProjects\PFAS.PRO\Results1181229M2\181229M2-CRV.qld |
| :--- | :--- |
| Last Altered: | Saturday, December 29, 2018 16:19:24 Pacific Standard Time |
| Printed: | Saturday, December 29, 2018 17:17:13 Pacific Standard Time |

## Compound name: PFNS

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999544$
Calibration curve: $4.38436 e-005^{*} x^{\wedge} 2+0.721731^{*} x+-0.0176607$
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 | 3 Sta Conc | RT | Area | IS Area | Response | Conc. | \%Dev | Conc. Flag | Cob | CoD Flag | $x=$ excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 181229M2_2 | Standard | d 0.250 | 5.59 | 55.499 | 3779.517 | 0.184 | 0.3 | 11.5 | NO | 1.000 | NO | bb |
| 2 | 2 181229M2_3 | Standard | d 0.500 | 5.59 | 76.303 | 3249.811 | 0.293 | 0.4 | -13.8 | No | 1.000 | NO | bb |
| 3 | 3 181229M2_4 | Standard | d 1.000 | 5.59 | 188.561 | 3501.057 | 0.673 | 1.0 | -4.3 | NO | 1.000 | NO | bb |
| 4 | 4181229 M 2.5 | Standard | d 2.000 | 5.59 | 390.420 | 3287.353 | 1.485 | 2.1 | 4.1 | NO | 1.000 | NO | bb |
| 5 | 5181229 M 2 _6 | Standard | d 5.000 | 5.59 | 944.833 | 3543.938 | 3.333 | 4.6 | -7.2 | NO | 1.000 | NO | bb |
| 6 6 | 6181229 M 2 _7 | Standard | 1 10.000 | 5.59 | 2145.610 | 3262.650 | 8.220 | 11.4 | 14.1 | No | 1.000 | No | bb |
| $7 \times$ | 7 181229M2_8 | Standard | d 50.000 | 5.59 | 9722.271 | 3507.401 | 34.649 | 47.9 | -4.2 | NO | 1.000 | NO | bb |
| 8 | 8 181229M2_9 | Standard | d 100.000 | 5.59 | 19249.816 | 3365.886 | 71.489 | 98.5 | -1.5 | NO | 1.000 | NO | bb |
|  | 9181229 Mz _10 | Standard | d 250.000 | 5.59 | 41879.941 | - 2811.474 | 186.201 | 254.1 | 1.6 | No | 1.000 | No | bb |
| $10 \times$ | 10 181229M2_11 | Standard | d 500.000 | 5.59 | 80035.797 | 2699.230 | 370.642 | 498.5 | -0.3 | NO | 1.000 | NO | bb |

## Compound name: L-MeFOSAA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999460$
Calibration curve: $-0.000615975^{*} x^{\wedge} 2+2.71861^{*} x+-0.197701$
Response type: Internal Std (Ref 50 ), Area * (IS Conc./ IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None


## Compound name: L-EtFOSAA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999330$
Calibration curve: $-0.000297179^{*} x^{\wedge} 2+1.63616^{*} x+-0.138937$
Response type: Internal Std (Ref 52 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Dataset: F:IProjectsIPFAS.PROXResults181229M21181229M2-CRV.qId
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: $\quad$ Saturday, December 29, 2018 17:17:32 Pacific Standard Time

Method: F:\Projects\PFAS.PROMethDB\PFAS_FULL_80C_122918.mdb 29 Dec 2018 16:19:21
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_12-29-18.cdb 29 Dec 2018 16:11:46

## Compound name: PFUdA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999605$
Calibration curve: - 0.000140506 * $x^{\wedge} 2+1.00549$ * x + 0.0170739
Response type: Internal Std (Ref 51 ), Area * ( IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Compound name: PFDS

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999807$
Calibration curve: $3.73793 \mathrm{e}-005^{*} x^{\wedge} 2+0.97975{ }^{*} x+0.0349328$
Response type: Internal Std (Ref 47), Area * (IS Conc. /IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed:
Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: PFDoA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.998288$
Calibration curve: $6.01615 e-005^{*} x^{\wedge} 2+1.23933^{*} x+0.0755586$
Response type: Internal Std ( Ref 53 ), 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 181229M2_2 | Standard | 0.250 | 6.13 | 688.841 | 21289.002 | 0.404 | 0.3 | 6.2 | NO | 0.998 | NO | db |
| 2 | 2 181229M2_3 | Standard | 0.500 | 6.13 | 1122.862 | 21591.773 | 0.650 | 0.5 | -7.3 | NO | 0.998 | NO | db |
| 3.1\% | $3181229 \mathrm{M} 2 \_4$ | Standard | 1.000 | 6.13 | 2139.218 | 21868.477 | 1.223 | 0.9 | -7.4 | NO | 0.998 | NO | MM |
| 4 | 4 181229M2_5 | Standard | 2.000 | 6.13 | 4306.797 | 21463.510 | 2.508 | 2.0 | -1.9 | NO | 0.998 | NO | db |
| 5 | $5181229 \mathrm{M} 2 \_6$ | Standard | 5.000 | 6.13 | 10378.861 | 21392.531 | 6.065 | 4.8 | -3.4 | NO | 0.998 | NO | bb |
| 6 | 6181229 M 2 _7 | Standard | 10.000 | 6.13 | 22467.320 | 20506.854 | 13.695 | 11.0 | 9.8 | NO | 0.998 | NO | bb |
| 7 | 7 181229M2_8 | Standard | 50.000 | 6.13 | 105379.227 | 20979.084 | 62.788 | 50.5 | 1.0 | NO | 0.998 | NO | bb |
| B | 8 181229M2_9 | Standard | 100.000 | 6.13 | 205824.500 | 19182.238 | 134.124 | 107.6 | 7.6 | NO | 0.998 | NO | bb |
| 9 9 | 9 181229M2_10 | Standard | 250.000 | 6.13 | 401274.906 | 16961.480 | 295.725 | 235.9 | -5.7 | NO | 0.998 | NO | bb |
| 10, | 10 181229M2_11 | Standard | 500.000 | 6.13 | 841893.875 | 16397.900 | 641.770 | 505.4 | 1.1 | NO | 0.998 | NO | bb |

## Compound name: N -MeFOSA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999873$
Calibration curve: $-7.67446 e-005^{*} x^{\wedge} 2+1.06457^{*} x+-0.290547$
Response type: Internal Std (Ref 54 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

| $4$ | \# Name | Type | Stdi. Cone | RT: | Area | IS Area | Resporise | Coner: | \%Dev | Conc. Fla | COD | Canflag | $x=$ excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. ${ }^{\text {2 }}$ - | 1 181229M2_2 | Standard | 1.250 | 6.02 | 115.547 | 12621.090 | 1.373 | 1.6 | 25.0 | NO | 1.000 | NO | bbx $r^{\prime}$ |
| 2 | 2 181229M2_3 | Standard | 2.500 | 6.02 | 144.521 | 12654.397 | 1.713 | 1.9 | -24.7 | NO | 1.000 | NO | MM |
| 3. | 3 181229M2_4 | Standard | 5.000 | 6.02 | 473.469 | 12658.471 | 5.610 | 5.5 | 10.9 | NO | 1.000 | NO | bb |
| 4*: | 4 181229M2_5 | Standard | 10.000 | 6.02 | 842.703 | 12509.367 | 10.105 | 9.8 | -2.3 | NO | 1.000 | NO | bb |
| 5. | $5181229 \mathrm{M} 2 \ldots 6$ | Standard | 25.000 | 6.02 | 2240.157 | 12757.665 | 26.339 | 25.1 | 0.2 | NO | 1.000 | NO | MM |
| 6 | 6181229 M 2 _7 | Standard | 50.000 | 6.02 | 4568.990 | 12436.209 | 55.109 | 52.2 | 4.5 | NO | 1.000 | NO | bb |
| Th=\% | 7 181229M2_8 | Standard | 250.000 | 6.03 | 22085.996 | 12513.576 | 264.744 | 253.6 | 1.4 | NO | 1.000 | NO | bb |
| 8 | 8 181229M2_9 | Standard | 500.000 | 6.02 | 41778.664 | 12295.774 | 509.671 | 496.8 | -0.6 | NO | 1.000 | NO | bb |
| 9 | $9181229 \mathrm{M} 2 \_10$ | Standard | 1250.000 | 6.02 | 90390.789 | 11254.236 | 1204.757 | 1243.4 | -0.5 | NO | 1.000 | NO | bb |
| 10 Hew | 10 181229M2_11 | Standard | 2500.000 | 6.02 | 179966.609 | 12357.221 | 2184.552 | 2504.5 | 0.2 | NO | 1.000 | NO | bb |

Dataset: F:IProjects\PFAS.PROXResults\181229M2\181229M2-CRV.ald

## Compound name: PFTrDA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999651$
Calibration curve: -0.000168068 * $x^{\wedge} 2+1.36737^{*} x+-0.0524968$
Response type: Internal Std (Ref 53 ), 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. | 96 Dey | Conc Flag | CoD | CoD Flag | $x=$ excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 181229M2_2 | Standard | 0.250 | 6.38 | 628.611 | 21289.002 | 0.369 | 0.3 | 23.3 | NO | 1.000 | NO | bb |
| 2 |  |  | 181229M2_3 | Standard | 0.500 | 6.38 | 1109.053 | 21591.773 | 0.642 | 0.5 | 1.6 | NO | 1.000 | NO | MM |
| 3 |  |  | 181229M2_4 | Standard | 1.000 | 6.38 | 2157.508 | 21868.477 | 1.233 | 0.9 | -6.0 | NO | 1.000 | NO | bb |
| 4 |  |  | 4181229 M 2 _5 | Standard | 2.000 | 6.38 | 4438.015 | 21463.510 | 2.585 | 1.9 | -3.5 | NO | 1.000 | NO | MM |
|  |  |  | 181229M2_6 | Standard | 5.000 | 6.38 | 10181.512 | 21392.531 | 5.949 | 4.4. | -12.2 | NO | 1.000 | NO | bb |
| 6 |  |  | 181229M2_7 | Standard | 10.000 | 6.38 | 21913.488 | 20506.854 | 13.357 | 9.8 | -1.8 | NO | 1.000 | NO | bb |
| 7 |  |  | 181229M2_8 | Standard | 50.000 | 6.38 | 108679.578 | 20979.084 | 64.755 | 47.7 | -4.7 | NO | 1.000 | NO | bb |
| 8 |  |  | 181229M2_9 | Standard | 100.000 | 6.38 | 213023.844 | 19182.238 | 138.816 | 102.9 | 2.9 | NO | 1.000 | NO | bb |
| 9 |  |  | 181229M2_10 | Standard | 250.000 | 6.37 | 452052.906 | 16961.480 | 333.147 | 251.4 | 0.6 | NO | 1.000 | NO | bb |
| 10 | \% \% |  | 181229M2_11 | Standard | 500.000 | 6.38 | 839904.875 | 16397.900 | 640.253 | 498.9 | -0.2 | NO | 1.000 | NO | bb |

## Compound name: PFTeDA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999777$
Calibration curve: $-0.000266468{ }^{*} x^{\wedge} 2+1.54118{ }^{*} x+-0.0144695$
Response type: Internal Std (Ref 55 ), Area * (IS Conc./ IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

|  | \# Namedmermex | Type | Std. Conc | RT | Area | IS Area | Response | Conc: | \%DEV |  | Conc. Flag | Con | CoD flag | x=exchided |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 181229M2_2 | Standard | 0.250 | 6.59 | 484.958 | 15258.116 | 0.397 | 0.3 | 6.9 |  | NO | 1.000 | NO | bb |
| 2.4 | 2 181229M2_3 | Standard | 0.500 | 6.59 | 954.472 | 15397.475 | 0.775 | 0.5 | 2.4 |  | NO | 1.000 | NO | bb |
| 3. | 3 181229M2_4 | Standard | 1.000 | 6.59 | 2015.141 | 15912.354 | 1.583 | 1.0 | 3.7 |  | NO | 1.000 | NO | bb |
| 4 | 4 181229M2_5 | Standard | 2.000 | 6.59 | 3561.852 | 15850.765 | 2.809 | 1.8 | -8.4 |  | NO | 1.000 | NO | bb |
| 5 | 5181229 M 2 _6 | Standard | 5.000 | 6.59 | 8774.581 | 15699.008 | 6.987 | 4.5 | -9.1 |  | NO | 1.000 | NO | bb |
| 6 | $6181229 \mathrm{M2}$ _7 | Standard | 10.000 | 6.59 | 19160.564 | 15327.062 | 15.626 | 10.2 | 1.7 |  | NO | 1.000 | NO | db |
| 7.t\% ${ }^{\text {\% }}$ | 7 181229M2_8 | Standard | 50.000 | 6.59 | 92946.547 | 14824.271 | 78.374 | 51.3 | 2.6 |  | NO | 1.000 | NO | bb |
| 8 | 8 181229M2_9 | Standard | 100.000 | 6.58 | 175031.266 | 14240.232 | 153.642 | 101.5 | 1.5 |  | NO | 1.000 | NO | bb |
| 9 \% | 9 181229M2_10 | Standard | 250.000 | 6.58 | 378027.719 | 13028.257 | 362.700 | 245.8 | -1.7 |  | NO | 1.000 | NO | bb |
| $10$ | 10 181229M2_11 | Standard | 500.000 | 6.59 | 724313.625 | 12819.135 | 706.282 | 501.8 | 0.4 | / | NO | 1.000 | NO | bb |

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Printed: Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: N-EtFOSA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999877$
Calibration curve: $-5.11801 \mathrm{e}-005^{*} x^{\wedge} 2+0.894711^{*} x+-0.201133$
Response type: Internal Std (Ref 56 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

|  | \# Name | Type | Sta. Cone | RT | Area | IS Area | Response | Conc: | \% Dev | Conc. Flag | CoD | CoD Flag | x-exclided |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \% | 1 181229M2_2 | Standard | 1.250 | 6.45 | 127.661 | 19827.086 | 0.966 | 1.3 | 4.3 | NO | 1.000 | NO | bb |
| 24]: | 2 181229M2_3 | Standard | 2.500 | 6.45 | 273.315 | 19567.529 | 2.095 | 2.6 | 2.7 | NO | 1.000 | NO | bb |
| 3.354 | 3 181229M2_4. | Standard | 5.000 | 6.45 | 547.736 | 20097.615 | 4.088 | 4.8 | -4.1 | NO | 1.000 | NO | bb |
| 4 4, | 4 181229M2_5 | Standard | 10.000 | 6.45 | 1129.888 | 19396.691 | 8.738 | 10.0 | -0.0 | NO | 1.000 | NO | bb |
| 5 | 5 181229M2_6 | Standard | 25.000 | 6.45 | 2687.954 | 19452.674 | 20.727 | 23.4 | -6.3 | NO | 1.000 | NO | bb |
|  | 6181229 M 2 _7 | Standard | 50.000 | 6.45 | 5771.542 | 18560.945 | 46.643 | 52.5 | 5.0 | NO | 1.000 | NO | bb |
| 7. | 7 181229M2_8 | Standard | 250.000 | 6.46 | 27183.637 | 18805.291 | 216.830 | 246.0 | -1.6 | NO | 1.000 | NO | bb |
|  | 8 181229M2_9 | Standard | 500.000 | 6.45 | 53261.805 | 18549.777 | 430.694 | 495.7 | -0.9 | NO | 1.000 | NO | bb |
| 9 | 9 181229M2_10 | Standard | 1250.000 | 6.45 | 116004.789 | 16590.273 | 1048.851 | 1263.9 | 1.1 | NO | 1.000 | NO | bb |
| 10 | 10 181229M2_11 | Standard | 2500.000 | 6.45 | 216242.719 | 16960.805 | 1912.433 | 2493.3 | -0.3/ | NO | 1.000 | NO | bb |

## Compound name: PFHxDA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999851$
Calibration curve: $-0.000203732^{\star} x^{\wedge} 2+0.591879 * x+0.0308005$
Response type: Internal Std (Ref 57 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

|  | F Name | Type | Stre Conc | R | Area | 18 Area | Response | Conce: | 9Dev: | Conc. Flag | ¢ 60 | CoDFlag | x=excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12: | 1 181229M2_2 | Standard | 0.250 | 6.90 | 307.167 | 8257.102 | 0.186 | 0.3 | 4.9 | NO | 1.000 | NO | bb |
| $2{ }^{2}$ | 2 181229M2_3 | Standard | 0.500 | 6.90 | 530.672 | 7752.461 | 0.342 | 0.5 | 5.3 | NO | 1.000 | NO | bb |
| 3-5\% | 3 181229M2_4 | Standard | 1.000 | 6.90 | 1087.593 | 8331.125 | 0.653 | 1.1 | 5.1 | NO | 1.000 | NO | bb |
| 4 | 4 181229M2_5 | Standard | 2.000 | 6.90 | 1756.336 | 8182.507 | 1.073 | 1.8 | -11.9 | NO | 1.000 | NO | bb |
| 5 | 5 181229M2_6 | Standard | 5.000 | 6.90 | 4611.253 | 8048.759 | 2.865 | 4.8 | -4.1 | NO | 1.000 | NO | bb |
| 6.:\#y | $6181229 \mathrm{M2}$ _7 | Standard | 10.000 | 6.90 | 9167.246 | 7638.526 | 6.001 | 10.1 | 1.2 | NO | 1.000 | NO | bb |
| 7 | 7 181229M2_8 | Standard | 50.000 | 6.90 | 47917.969 | 8217.959 | 29.154 | 50.1 | 0.1 | NO | 1.000 | NO | bb |
| $8$ | 8 181229M2_9 | Standard | 100.000 | 6.90 | 89794.445 | 7983.649 | 56.236 | 98.3 | -1.7 | NO | 1.000 | NO | bb |
| 9 | 9 181229M2_10 | Standard | 250.000 | 6.89 | 195961.453 | 7152.856 | 136.981 | 253.5 | 1.4 | NO | 1.000 | NO | bb |
|  | 10 181229M2_11 | Standard | 500.000 | 6.90 | 366838.844 | 7505.951 | 244.365 | 498.3 | -0.3 | NO | 1.000 | NO | bb |

Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: PFODA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999861$
Calibration curve: $-0.000193725^{*} x^{\wedge} 2+0.816848{ }^{*} x+-0.0115201$
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

| W4 ${ }^{2}$ | \# Narre | Type | Sti. Cone | RTI | Area. | IS Area | Response | Conc: | \% Dev | Conc. Flag | COD | Cob Flag | $x=0$ clided |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1\% | 1 181229M2_? | Standard | 0.250 | 7.12 | 291.174 | 8257.102 | 0.176 | 0.2 | -8.0 | NO | 1.000 | NO | bb |
| 2 | 2 181229M2_3 | Standard | 0.500 | 7.12 | 610.831 | 7752.461 | 0.394 | 0.5 | -0.7 | NO | 1.000 | NO | bb |
| 3 | 3181229 M 2 _4 | Standard | 1.000 | 7.12 | 1408.195 | 8331.125 | 0.845 | 1.0 | 4.9 | NO | 1.000 | NO | bb |
| $4{ }^{3}$ | 4 181229M2_5 | Standard | 2.000 | 7.12 | 2572.524 | 8182.507 | 1.572 | 1.9 | -3.0 | NO | 1.000 | NO | bb |
| 5. | 5 181229M2_6 | Standard | 5.000 | 7.12 | 6418.727 | 8048.759 | 3.987 | 4.9 | -2.0 | NO | 1.000 | NO | bb |
| $6$ | 6 181229M2_7 | Standard | 10.000 | 7.12 | 13097.438 | 7638.526 | 8.573 | 10.5 | 5.4 | NO | 1.000 | NO | bb |
|  | 7 181229M2_8 | Standard | 50.000 | 7.12 | 65105.164 | 8217.959 | 39.612 | 49.1 | -1.8 | NO | 1.000 | NO | bb |
| 8 | 8 181229M2_9 | Standard | 100.000 | 7.12 | 125625.203 | 7983.649 | 78.677 | 98.6 | -1.4 | NO | 1.000 | NO | bb |
| $9{ }^{9} 5$ | 9 181229M2_10 | Standard | 250.000 | 7.12 | 278208.500 | 7152.856 | 194.474 | 253.3 | 1.3 | NO | 1.000 | NO | bb |
| $10 \pm \pm$ | 10 181229M2_11 | Standard | 500.000 | 7.12 | 539030.500 | 7505.951 | 359.069 | 498.5 | -0.3 | NO | 1.000 | NO | bb |

## Compound name: N-MeFOSE

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999889$
Calibration curve: $2.8345 \mathrm{e}-006{ }^{*} x^{\wedge} 2+0.943779{ }^{*} x+-0.37283$
Response type: Internal Std (Ref 58 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qid
Last Altered: $\quad$ Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: $\quad$ Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: N-EtFOSE

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999680$
Calibration curve: $-8.56872 \mathrm{e}-006^{*} x^{\wedge} 2+1.1842$ * $x+-0.30516$
Response type: Internal Std ( Ref 59 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Compound name: 13C3-PFBA
Response Factor: 0.727158
RRF SD: 0.010805, Relative SD: 1.48593
Response type: Internal Std (Ref 60 ), Area * (IS Conc. / IS Area)
Curve type: RF


Dataset: $\quad$ F:IProjects\PFAS.PRO\ResultsI181229M2\181229M2-CRV.qld
Last Altered:
Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed:
Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: 13C3-PFPeA

Response Factor: 0.510898
RRF SD: 0.0146166, Relative SD: 2.86097
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: RF

|  | \# Name | Trpe | Sta. Conc | fT | Area | IS Area | Response | Conc. | \%Dev | Conc. Flag | Col) | CoD Flag | $x=$ excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 181229M2_2 | Standard | 12.500 | 2.71 | 10395.385 | 20688.014 | 6.281 | 12.3 | -1.6 | NO |  | NO | bb |
| $2{ }^{2}$ W | 2 181229M2_3 | Standard | 12.500 | 2.71 | 10287.158 | 20363.910 | 6.315 | 12.4 | -1.1 | NO |  | NO | bb |
| $3{ }^{3}$ | 3 181229M2_4 | Standard | 12.500 | 2.71 | 10481.588 | 20927.277 | 6.261 | 12.3 | -2.0 | NO |  | NO | bb |
| 4 | 4 181229M2_5 | Standard | 12.500 | 2.71 | 10216.553 | 19880.570 | 6.424 | 12.6 | 0.6 | NO |  | NO | bb |
| 5.2 | 5 181229M2_6 | Standard | 12.500 | 2.71 | 10204.046 | 20331.012 | 6.274 | 12.3 | -1.8 | NO |  | NO | bb . |
| $6$ | $6181229 \mathrm{M} 2 \_7$ | Standard | 12.500 | 2.71 | 9618.445 | 19072.498 | 6.304 | 12.3 | -1.3 | NO |  | NO | bb |
| $17$ | 7 181229M2_8 | Standard | 12.500 | 2.70 | 9993.211 | 19563.260 | 6.385 | 12.5 | -0.0 | NO |  | NO | bb |
| 8e\% | 8181229 M 2 _9 | Standard | 12.500 | 2.71 | 9627.538 | 19408.055 | 6.201 | 12.1 | -2.9 | NO |  | NO | bb |
| 92\% ${ }^{2}$ | 9 181229M2_10 | Standard | 12.500 | 2.71 | 8516.557 | 15978.792 | 6.662 | 13.0 | 4.3 | NO |  | NO | bb |
| 10 | 10 181229M2_11 | Standard | 12.500 | 2.71 | 8859.089 | 16390.385 | 6.756 | 13.2 | 5.8 | NO |  | NO | bb |

## Compound name: 13C3-PFBS

Response Factor: 0.497461
RRF SD: 0.0141996, Relative SD: 2.85441
Response type: Internal Std (Ref 62 ), Area * ( IS Conc. / IS Area)
Curve type: RF


## Dataset:

F:IProjects\PFAS.PRO\Results\181229M21181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: 13C2-4:2 FTS

Response Factor: 1.31089
RRF SD: 0.102573, Relative SD: 7.82468
Response type: Internal Std (Ref 62 ), Area * (IS Conc. / IS Area)
Curve type: RF

|  | \# Name | Type | Stde Conc | RT: | Area | IS Area | Response | Conc. | \% $\%$ Dev | Cone. Flag | COD | CoDflag | x-excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 1 181229M2_2 | Standard | 12.500 | 3.50 | 4144.418 | 3158.170 | 16.404 | 12.5 | 0.1 | NO |  | NO | bb |
| 2: | 2 181229M2_3 | Standard | 12.500 | 3.50 | 3846.208 | 3041.456 | 15.807 | 12.1 | -3.5 | NO. |  | NO | bb |
| 3 | 3181229 M 2 _ 4 | Standard | 12.500 | 3.50 | 3826.278 | 3168.282 | 15.096 | 11.5 | -7.9 | NO |  | NO | bb |
| 4 | 4 181229M2_5 | Standard | 12.500 | 3.50 | 3745.440 | 3120.733 | 15.002 | 11.4 | -8.4 | NO |  | NO | bb |
| $5$ | 5 181229M2_6 | Standard | 12.500 | 3.50 | 3896.034 | 3065.540 | 15.886 | 12.1 | -3.0 | NO |  | NO | bb . |
| 6 |  | Standard | 12.500 | 3.50 | 3747.443 | 2827.255 | 16.568 | 12.6 | 1.1 | NO |  | NO | bb |
| $7$ | 7 181229M2_8 | Standard | 12.500 | 3.50 | 3992.553 | 2859.046 | 17.456 | 13.3 | 6.5 | NO |  | NO | bb |
| 8 | 8 181229M2_9 | Standard | 12.500 | 3.50 | 4263.229 | 2824.194 | 18.869 | 14.4 | 15.2 | NO |  | NO | bb |
| 9 | 9 181229M2_10 | Standard | 12.500 | 3.50 | 5230.245 | 2374.699 | 27.531 | 21.0 | 68.0 | NO |  | NO | bbX - |
| 10 相 | 10 181229M2_11 | Standard | 12.500 | 3.50 | 6853.290 | 2289.244 | 37.421 | 28.5 | 128.4 | NO |  | NO | bbX - |

## Compound name: 13C2-PFHxA

Response Factor: 0.947375
RRF SD: 0.0351014, Relative SD: 3.70512
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: RF

|  |  | \# Name | Type | Stal Cone | RT | Area | IS Area | Response | Conc. | \%Dev | Conc. Fiag | con | cobrlag | $x$ excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 1 181229M2_2 | Standard | 5.000 | 3.59 | 7600.956 | 20688.014 | 4.593 | 4.8 | -3.0 | NO |  | NO | bb |
| 2 |  | 2 181229M2_3 | Standard | 5.000 | 3.59 | 7650.732 | 20363.910 | 4.696 | 5.0 | -0.9 | NO |  | NO | bb |
| 3 |  | $3181229 \mathrm{M} 2 \_4$ | Standard | 5.000 | 3.59 | 7756.406 | 20927.277. | 4.633 | 4.9 | -2.2 | NO |  | NO | bb |
| 4 |  | 4 181229M2_5 | Standard | 5.000 | 3.59 | 7374.592 | 19880.570 | 4.637 | 4.9 | -2.1 | NO |  | NO | bb |
| 5 |  | 5 181229M2_6 | Standard | 5.000 | 3.59 | 7533.261 | 20331.012 | 4.632 | 4.9 | -2.2 | NO |  | NO | bb |
| 6 |  | 6 181229M2_7 | Standard | 5.000 | 3.59 | 7328.587 | 19072.498 | 4.803 | 5.1 | 1.4 | NO |  | NO | bb |
| 7. | \% | 7 181229M2_8 | Standard | 5.000 | 3.59 | 7336.411 | 19563.260 | 4.688 | 4.9 | -1.0 | NO |  | NO | bb |
| 8 | \% ${ }^{\text {\% }}$ | 8 181229M2_9 | Standard | 5.000 | 3.59 | 7181.619 | 19408.055 | 4.625 | 4.9 | -2.4 | NO |  | NO | bb |
| 9 |  | 9 181229M2_10 | Standard | 5.000 | 3.59 | 6273.787 | 15978.792 | 4.908 | 5.2 | 3.6 | NO |  | NO | bb |
| 10 | \% | 10 181229M2_11 | Standard | 5.000 | 3.59 | 6758.698 | 16390.385 | 5.154 | 5.4 | 8.8 | NO |  | NO | bb |

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## Compound name: 13C4-PFHpA

Response Factor: 0.483946
RRF SD: 0.0112027, Relative SD: 2.31488
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: RF

| \% |  | \# Name (tydu | Type | Sta Conc | RT | Area | 15 Area | Response | Conc. | \%Dev | Conc flages CoD | Cob Flag | x-excluided |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 1 181229M2_2 | Standard | 12.500 | 4.22 | 10070.699 | 20688.014 | 6.085 | 12.6 | 0.6 | NO | NO | bb |
| 2 |  | 2 181229M2_3 | Standard | 12.500 | 4.23 | 9782.876 | 20363.910 | 6.005 | 12.4 | -0.7 | NO | NO | bb |
| 3 |  | 3 181229M2_4 | Standard | 12.500 | 4.23 | 10384.069 . | 20927.277 | 6.202 | 12.8 | 2.5 | NO | NO | bb |
| 4 |  | 4 181229M2_5 | Standard | 12.500 | 4.22 | 9814.389 | 19880.570 | 6.171 | 12.8 | 2.0 | NO | NO | bb |
| 5 |  | 5 181229M2_6 | Standard | 12.500 | 4.23 | 9885.493 | 20331.012 | 6.078 | 12.6 | 0.5 | NO | NO | bb |
| 6 |  | $6181229 \mathrm{M} 2 \_7$ | Standard | 12.500 | 4.23 | 9237.949 | 19072.498 | 6.054 | 12.5 | 0.1 | NO | NO | bb |
| 7. |  | 7 181229M2_8 | Standard | 12.500 | 4.23 | 9592.961 | 19563.260 | 6.129 | 12.7 | 1.3 | NO | NO | bb |
|  | T | 8 181229M2_9 | Standard | 12.500 | 4.23 | 9054.301 | 19408.055 | 5.832 | 12.0 | -3.6 | NO | NO | bb |
| 9 |  | 9 181229M2_10 | Standard | 12.500 | 4.23 | 7863.701 | 15978.792 | 6.152 | 12.7 | 1.7 | NO | NO | bb |
| 10 |  | 10 181229M2_11 | Standard | 12.500 | 4.23 | 7585.454 | 16390.385 | 5.785 | 12.0 | -4.4 | NO | NO | bb |

## Compound name: 1802-PFHxS

Response Factor: 0.413712
RRF SD: 0.0178468, Relative SD: 4.31381
Response type: Internal Std (Ref 62), Area * (IS Conc. / IS Area)
Curve type: RF


Last Altered: $\quad$ Saturday, December 29, 2018 16:19:24 Pacific Standard Time
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## Compound name: 13C2-6:2 FTS

Response Factor: 0.92042
RRF SD: 0.0511038, Relative SD: 5.55222
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area )
Curve type: RF


## Compound name: 13C2-PFOA

Response Factor: 0.677997
RRF SD: 0.0164355, Relative SD: 2.42413
Response type: Internal Std (Ref 63 ), Area * (IS Conc. / IS Area )
Curve type: RF


Last Altered: • Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: 13C5-PFNA

Response Factor: 0.948865
RRF SD: 0.0192552, Relative SD: 2.02929
Response type: Internal Std (Ref 64 ), Area * (IS Conc. / IS Area)
Curve type: RF

|  | 4 Name | A. Type | - - | Std. Conc | RT | Area | 4 IS Area | Fesporse | Conc: | \%Dev | Conc. Flag | CoD | Cod flag | $x=$ excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1\% | 1 181229M2_2 | Standard |  | 12.500 | 5.15 | 17629.832 | 19040.746 | 11.574 | 12.2 | -2.4 | NO |  | NO | bb |
| 2 2.15 | 2 181229M2_3 | Standard |  | 12.500 | 5.15 | 17409.248 | 18485.146 | 11.772 | 12.4 | -0.7 | NO |  | NO | bb |
| 3. | $3181229 \mathrm{M} 2 \_4$ | Standard |  | 12.500 | 5.15 | 18135.689 | 18466.064 | 12.276 | 12.9 | 3.5 | NO |  | NO | bb |
| $4$ | 4 181229M2_5 | Standard |  | 12.500 | 5.15 | 17345.088 | 18024.973 | 12.029 | 12.7 | 1.4 | NO |  | NO- | bb |
| $5$ | 5 181229M2_6 | Standard |  | 12.500 | 5.16 | 17095.766 | 18631.014 | 11.470 | 12.1 | -3.3 | NO |  | NO | bb |
|  | $6181229 \mathrm{M} 2 \_7$ | Standard |  | 12.500 | 5.15 | 16737.436 | 17413.998 | 12.014 | 12.7 | 1.3 | NO |  | NO | bb |
| 7 | 7 181229M2_8 | Standard |  | 12.500 | 5.16 | 16546.188 | 17644.561 | 11.722 | 12.4 | -1.2 | NO |  | NO | bb |
| $8$ | 8 181229M2_9 | Standard |  | 12.500 | 5.15 | 16046.554 | 16690.217 | 12.018 | 12.7 | 1.3 | NO |  | NO | bb |
| 9 9 WE | 9181229 M 2 _10 | Standard |  | 12.500 | 5.15 | 13695.215 | 14512.769 | 11.796 | 12.4 | -0.5 | NO |  | NO | bb |
| 10 \% | 10 181229M2_11 | Standard |  | 12.500 | 5.15 | 12791.653 | 13394.848 | 11.937 | 12.6 | 0.6 | NO |  | NO | bb |

## Compound name: 13C8-PFOSA

Response Factor: 0.189857
RRF SD: 0.00882042 , Relative SD: 4.64581
Response type: Internal Std (Ref 67 ), Area * (IS Conc. / IS Area)
Curve type: RF

|  |  | \# Name | Type | Std. Conc | RT | Area | 15 Area | Piesponse | Conc. | 9\%0ev | Conc. Flag | CoD | CoD Fiag | $x=$ excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 1 181229M2_2 | Standard | 12.500 | 5.19 | 4615.137 | 24031.391 | 2.401 | 12.6 | 1.2 | NO |  | NO | bb |
| 2 |  | 2 181229M2_3 | Standard | 12.500 | 5.19 | 4368.309 | 23929.412 | 2.282 | 12.0 | -3.8 | NO |  | NO | bb |
| 3 |  | $3181229 \mathrm{M} 2 \_4$ | Standard | 12.500 | 5.19 | 4449.304 | 23793.148 | 2.337 | 12.3 | -1.5 | NO |  | NO | bb |
| 4 |  | 4 181229M2_5 | Standard | 12.500 | 5.19 | 4170.515 | 23467.891 | 2.221 | 11.7 | -6.4 | NO |  | NO | bb |
| 5 |  | 5 181229M2_6 | Standard | 12.500 | 5.19 | 4506.877 | 23787.354 | 2.368 | 12.5 | -0.2 | NO |  | NO | bb |
| 6 |  | 6 181229M2_7 | Standard | 12.500 | 5.19 | 4195.290 | 22139.613 | 2.369 | 12.5 | -0.2 | NO |  | NO | bb |
| 7 | \%rex | 7 181229M2_8 | Standard | 12.500 | 5.19 | 4198.639 | 22484.193 | 2.334 | 12.3 | -1.6 | NO |  | NO | bb |
| 8 |  | 8 181229M2_9 | Standard | 12.500 | 5.19 | 3996.380 | 21697.707 | 2.302 | 12.1 | -3.0 | NO |  | NO | bb |
| 9 | Withil | 9 181229M2_10 | Standard | 12.500 | 5.19 | 3741.253 | 18154.252 | 2.576 | 13.6 | 8.5 | NO |  | NO | bb |
| 10 | W: | 10 181229M2_11 | Standard | 12.500 | 5.19 | 3408.612 | 16765.828 | 2.541 | 13.4 | 7.1 | NO |  | NO | bb |

Dataset:
F:IProjects\PFAS.PRO\Results\181229M21181229M2-CRV.qld
Last Altered: $\quad$ Saturday, December 29, 2018 16:19:24 Pacific Standard Time

## Printed:

Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: 13C8-PFOS

Response Factor: 1.0376
RRF SD: 0.0544238 , Relative SD: 5.24519
Response type: Internal Std (Ref 65 ), Area * (IS Conc. / IS Area )
Curve type: RF


## Compound name: 13C2-PFDA

## Response Factor: 0.9368

RRF SD: 0.0397106, Relative SD: 4.23897
Response type: Internal Std (Ref 66 ), Area * (IS Conc. / IS Area )
Curve type: RF

|  | \# Name | Type | W | Std Conc | RT | Area | IS Area | Response | Conc. | \% Dev | Conc. Flag | Cod | cob Flag | $x=$ excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1.181229M2_2 | Standard |  | 12.500 | 5.53 | 18333.279 | 20001.045 | 11.458 | 12.2 | -2.2 | NO |  | NO | bb |
| 2 | 2 181229M2_3 | Standard |  | 12.500 | 5.52 | 17810.100 | 19894.260 | 11.190 | 11.9 | -4.4 | NO |  | NO | bb |
| 3 | 3 181229M2_4 | Standard |  | 12.500 | 5.53 | 18748.252 | 20526.646 | 11.417 | 12.2 | -2.5 | NO |  | NO | bb |
| 4 | 4 181229M2_5 | Standard |  | 12.500 | 5.53 | 17760.555 | 19587.316 | 11.334 | 12.1 | -3.2 | NO |  | NO | bb |
| 5 | 5 181229M2_6 | Standard |  | 12.500 | 5.53 | 18609.666 | 20167.748 | 11.534 | 12.3 | -1.5 | NO |  | NO. | bb |
| $6$ | 6181229 M 2 _7 | Standard |  | 12.500 | 5.53 | 17647.195 | 19285.479 | 11.438 | 12.2 | -2.3 | NO |  | NO | bb |
| $7$ | 7 181229M2_8 | Standard |  | 12.500 | 5.53 | 18481.264 | 19207.580 | 12.027 | 12.8 | 2.7 | NO |  | NO | bb |
| 8 | 8 181229M2_9 | Standard |  | - 12.500 | 5.52 | 17766.760 | 18184.455 | 12.213 | 13.0 | 4.3 | NO |  | NO | bb |
| $9$ | 9 181229M2_10 | Standard |  | 12.500 | 5.52 | 14900.956 | 15942.367 | 11.683 . | 12.5 | -0.2 | NO |  | NO | bb |
|  | 10181229 M 2 _11 | Standard |  | 12.500 | 5.53 | 15066.822 | 14708.543 | 12.804 | 13.7 | 9.3 | NO |  | NO | bb |


| Quantify Compound Summary Report <br> Vista Analytical Laboratory |
| :--- |
| Dataset: F:IProjectsIPFAS.PRO\Results\181229M21181229M2-CRV.qld <br> Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time <br> Printed: Saturday, December 29, 2018 17:17:32 Pacific Standard Time |

Compound name: 13C2-8:2 FTS
Response Factor: 1.10974
RRF SD: 0.13258, Relative SD: 11.9469
Response type: Internal Std (Ref 65 ), Area * (IS Conc. / IS Area)
Curve type: RF

|  | \# Name: | Type | Std Conc | RT | Area | IS Area | Response | Conc: | QDev | Conc Flag | COD | CoDFlag | x=excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 1 181229M2_2 | Standard | 12.500 | 5.50 | 3570.586 | 3491.388 | 12.784 | 11.5 | -7.8 | NO |  | NO | bb |
| 2 | 2181229 M 2 _3 | Standard | 12.500 | 5.50 | 3638.608 | 3380.016 | 13.456 | 12.1 | -3.0 | NO |  | NO | bb |
| 3 | 3 181229M2_4 | Standard | 12.500 | 5.50 | 3552.131 | 3457.015 | 12.844 | 11.6 | -7.4 | NO |  | NO | bb |
| $4$ | 4 181229M2_5 | Standard | 12.500 | 5.50 | 3342.833 | 3417.326 | 12.228 | 11.0 | -11.9 | NO |  | NO | bb |
| $15$ | 5 181229M2_6 | Standard | 12.500 | 5.50 | 3512.961 | 3242.304 | 13.543 | 12.2 | -2.4 | NO |  | NO | bb |
| $6$ | 6 181229M2_7 | Standard | 12.500 | 5.50 | 3485.349 | 3193.801 | 13.641 | 12.3 | -1.7 | NO |  | NO | bb |
| $7$ | 7 181229M2_8 | Standard | 12.500 | 5.50 | 4000.156 | 3318.294 | 15.069 | 13.6 | 8.6 | NO |  | NO | bb |
| $8$ | 8 181229M2_9 | Standard | 12.500 | 5.50 | 4203.653 | 3018.229 | 17.409 | 15.7 | 25.5 | NO |  | NO | bb |
| $9 \times$ | 9 181229M2_10 | Standard | 12.500 | 5.50 | 5004.237 | 2621.531 | 23.861 | 21.5 | 72.0 | NO |  | NO | bbX |
| 10 最 | 10 181229M2_11 | Standard | 12.500 | 5.50 | 6849.592 | 2704.564 | 31.658 | 28.5 | 128.2 | NO |  | NO | bbX |

## Compound name: d3-N-MeFOSAA

Response Factor: 0.160686
RRF SD: 0.00994891, Relative SD: 6.19154
Response type: Internal Std (Ref 67 ), Area * (IS Conc. / IS Area)
Curve type: RF


Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed:
Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: 13C2-PFUdA

Response Factor: 1.02173
RRF SD: 0.0320776 , Relative SD: 3.13954
Response type: Internal Std (Ref 67 ), Area * (IS Conc. / IS Area)
Curve type: RF

|  | \# Name | Type | Sid. Conc | RT: | Area | WIS Area | Response | Conc. | Dev | Conce Flag | CoD | Cod fla | x=xcluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MT: | 1 181229M2_2 | Standard | 12.500 | 5.85 | 23739.340 | 24031.391 | 12.348 | 12.1 | -3.3 | NO |  | NO | bb |
| $2{ }^{2}$ | 2 181229M2_3 | Standard | 12.500 | 5.85 | 23214.604 | 23929.412 | 12.127 | 11.9 | -5.1 | NO |  | NO | bb |
| 3 | 3 181229M2_4 | Standard | 12.500 | 5.85 | 24451.715 | 23793.148 | 12.846 | 12.6 | 0.6 | NO |  | NO | bb |
| 4 | 4 181229M2_5 | Standard | 12.500 | 5.85 | 23883.965 | 23467.891 | 12.722 | 12.5 | -0.4 | NO |  | NO | bb |
| 5 | 5 181229M2_6 | Standard | 12.500 | 5.85 | 24185.852 | 23787.354 | 12.709 | 12.4 | -0.5 | NO |  | NO | bb |
| 6 | $6181229 \mathrm{M2}$ _7 | Standard | 12.500 | 5.85 | 23192.795 | 22139.613 | 13.095 | 12.8 | 2.5 | NO |  | NO | bb |
| 7. | 7 181229M2_8 | Standard | 12.500 | 5.85 | 23517.455 | 22484.193 | 13.074 | 12.8 | 2.4 | NO |  | NO | bb |
| 8\% | 8 181229M2_9 | Standard | 12.500 | 5.85 | 21556.801 | 21697.707 | 12.419 | 12.2 | -2.8 | NO |  | NO | bb |
| $9{ }^{9}$ | 9 181229M2_10 | Standard | 12.500 | 5.85 | 18727.865 | 18154.252 | 12.895 | 12.6 | 1.0 | NO |  | NO | bb |
| 10 - | 10 181229M2_11 | Standard | 12.500 | 5.85 | 18082.311 | 16765.828 | 13.482 | 13.2 | 5.6 | NO |  | NO | MM |

## Compound name: d5-N-EtFOSAA

## Response Factor: 0.2229

RRF SD: 0.00679929 , Relative SD: 3.05037
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: RF


Dataset: F:IProjectsIPFAS.PROXResults\181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed:
Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: 13C2-PFDoA

Response Factor: 1.07608
RRF SD: 0.0196785 , Relative SD: 1.82872
Response type: Internal Std (Ref 66 ), Area * (IS Conc. / IS Area)
Curve type: RF

| Le |  | \# Name ${ }^{\text {a }}$ | Type | Std. Conc | RT | Area | IS Area | Pesponse | Conc: | \%Dev | Conc. Fiag | CoD | CoDFI | $x=$ excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 4 | 1 181229M2_2 | Standard | 12.500 | 6.14 | 21289.002 | 20001.045 | 13.305 | 12.4 | -1.1 | NO |  | NO | bb |
| 2 |  | 2 181229M2_3 | Standard | 12.500 | 6.13 | 21591.773 | 19894.260 | 13.567 | 12.6 | 0.9 | NO |  | NO | bb |
| 3 |  | 3 181229M2_4 | Standard | 12.500 | 6.14 | 21868.477 | 20526.646 | 13.317 | 12.4 | -1.0 | NO |  | NO | bb |
| 4 |  | 4 181229M2_5 | Standard | 12.500 | 6.14 | 21463.510 | 19587.316 | 13.697 | 12.7 | 1.8 | NO |  | NO | bb |
| 5. |  | 5 181229M2_6 | Standard | 12.500 | 6.14 | 21392.531 | 20167.748 | 13.259 | 12.3 | -1.4 | NO |  | NO | bb |
| 6. |  | 6 181229M2_7 | Standard | 12.500 | 6.14 | 20506.854 | 19285.479 | 13.292 | 12.4 | -1.2. | NO |  | NO | bb |
| 7 |  | 7 181229M2_8 | Standard | 12.500 | 6.14 | 20979.084 | 19207.580 | 13.653 | 12.7 | 1.5 | NO |  | NO | bb |
| 8 |  | 8 181229M2_9 | Standard | 12.500 | 6.13 | 19182.238 | 18184.455 | 13.186 | 12.3 | -2.0 | NO |  | NO | bb |
| 9 |  | 9 181229M2_10 | Standard | 12.500 | 6.13 | 16961.480 | 15942.367 | 13.299 | 12.4 | -1.1 | NO |  | NO | bb |
| 10 | 1 - ${ }^{2}$ \% | 10 181229M2_11. | Standard | 12.500 | 6.14 | 16397.900 | 14708.543 | 13.936 | 13.0 | 3.6 | NO |  | NO | bb |

## Compound name: d3-N-MeFOSA

## Response Factor: 0.0474777

RRF SD: 0.00543643 , Relative SD: 11.4505
Response type: Internal Std ( Ref 67 ), Area * ( IS Conc. / IS Area)
Curve type: RF

|  | 7 Name | Type | Sta Conc | PT | Area | IS Area | Response | Conc: | \% Dev | Conc. Flag | CoD | Con Flag | $x=$ excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \% 4 | 1 181229M2_2 | Standard | 150.000 | 6.05 | 12621.090 | 24031.391 | 6.565 | 138.3 | -7.8 | NO |  | NO | bb |
| 2 | 2 181229M2_3 | Standard | 150.000 | 6.05 | 12654.397 | 23929.412 | 6.610 | 139.2 | -7.2 | NO |  | NO | bb |
| $3$ | 3 181229M2_4 | Standard | 150.000 | 6.05 | 12658.471 | 23793.148 | 6.650 | 140.1 | -6.6 | NO |  | NO | bb |
| $4{ }^{4}$ \% | 4 181229M2_5 | Standard | 150.000 | 6.05 | 12509.367 | 23467.891 | 6.663 | 140.3 | -6.4 | NO |  | NO | bb |
| 5 5: | 5 181229M2_6 | Standard | 150.000 | 6.05 | 12757.665 | 23787.354 | 6.704 | 141.2 | -5.9 | NO |  | NO | bb |
| 6. | $6181229 \mathrm{M} 2 \ldots 7$ | Standard | 150.000 | 6.05 | 12436.209 | 22139.613 | 7.021 | 147.9 | -1.4 | NO |  | NO | bb |
| 7. | 7 181229M2_8 | Standard | 150.000 | 6.05 | 12513.576 | 22484.193 | 6.957 | 146.5 | -2.3 | NO |  | NO | bb |
| 8 | 8 181229M2_9 | Standard | 150.000 | 6.05 | 12295.774 | 21697.707 | 7.084 | 149.2 | -0.5 | NO |  | NO | $b b$ |
| 9 | 9 181229M2_10 | Standard | 150.000 | 6.04 | 11254.236 | 18154.252 | 7.749 | 163.2 | 8.8 | NO |  | NO | bb |
| $10 \%$ | $10181229 \mathrm{M} 2 \_11$ | Standard | 150.000 | 6.05 | 12357.221 | 16765.828 | 9.213 | 194.1 | 29.4 | NO |  | NO | bb |

# Quantify Compound Summary Report 

## Compound name: 13C2-PFTeDA

Response Factor: 0.677271
RRF SD: 0.0388089 , Relative SD: 5.73019
Response type: Internal Std (Ref 67 ), Area * (IS Conc. / IS Area)
Curve type: RF

| $25$ | \# Name | Type | Std. Conc | RT | Area | IS Area | Response | Conc. | \% Dev | Conc. Flag | Cob | CoDFl | $x=$ excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 181.229M2_2 | Standard | 12.500 | 6.59 | 15258.116 | 24031.391 | 7.937 | 11.7 | -6.3 | NO |  | NO | bb |
| 2 | 2 181229M2_3 | Standard | 12.500 | 6.59 | 15397.475 | 23929.412 | 8.043 | 11.9 | -5.0 | NO |  | NO | bb |
| 3 | 3 181229M2_4 | Standard | 12.500 | 6.59 | 15912.354 | 23793.148 | 8.360 | 12.3 | -1.3 | NO |  | NO | bb |
|  | 4 181229M2_5 | Standard | 12.500 | 6.59 | 15850.765 | 23467.891 | 8.443 | 12.5 | -0.3 | NO |  | NO | bb |
| 5 | 5 181229M2_6 | Standard | 12.500 | 6.59 | 15699.008 | 23787.354 | 8.250 | 12.2 | -2.6 | NO |  | NO | bb |
| 6: | $6181229 \mathrm{M} 2 \ldots 7$ | Standard | 12.500 | 6.59 | 15327.062 | 22139.613 | 8.654 | 12.8 | 2.2 | NO |  | NO | bb |
| 7.1. | 7 181229M2_8 | Standard | 12.500 | 6.59 | 14824.271 | 22484.193 | 8.241 | 12.2 | -2.7 | NO |  | NO | bb |
| 8: | 8 181229M2_9 | Standard | 12.500 | 6.59 | 14240.232 | 21697.707 | 8:204 | 12.1 | -3.1 | NO |  | NO | bb |
| 9 ${ }^{2}$ | 9 181229M2_10 | Standard | 12.500 | 6.58 | 13028.257 | 1.8154 .252 | 8.971 | 13.2 | 6.0 | NO |  | NO | bb |
| 10. | 10 181229M2_11 | Standard | 12.500 | 6.59 | 12819.135 | 16765.828 | 9.557 | 14.1 | 12.9 | NO |  | NO | bb |

## Compound name: d5-N-ETFOSA

## Response Factor: 0.0715573

RRF SD: 0.00505175 , Relative SD: 7.05972
Response type: Internal Std (Ref 67 ), Area * (IS Conc. / IS Area)
Curve type: RF

|  | \# Name | Type | Std. Cone | RT | Area | IS Area | Response | Conc. | \%Dev | Conc. Flag | Cod | Cob Flag | $x=$ excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 181229M2_2 | Standard | 150.000 | 6.47 | . 19827.086 | 24031.391 | 10.313 | 144.1 | -3.9 | NO |  | NO | bb |
| 2. ${ }^{2}$ | 2181229 M 2 _3 | Standard | 150.000 | 6.47 | 19567.529 | 23929.412 | 10.221 | 142.8 | -4.8 | NO |  | NO | bb |
| 3 \% | 3 181229M2_4 | Standard | 150.000 | 6.47 | 20097.615 | 23793.148 | 10.559 | 147.6 | -1.6 | NO |  | NO | bb |
| 4 | 4 181229M2_5 | Standard | 150.000 | 6.47 | 19396.691 | 23467.891 | 10.332 | 144.4 | -3.7 | NO |  | NO | bb |
| 5. | 5 181229M2_6 | Standard | 150.000 | 6.47 | 19452.674 | 23787.354 | 10.222 | 142.9 | -4.8 | NO |  | NO | bb |
| 6 | 6181229 M 2 _7 | Standard | 150.000 | 6.47 | 18560.945 | 22139.613 | 10.479 | 146.4 | -2.4 | NO |  | NO | bb |
| 7 | 7 181229M2_8 | Standard | 150.000 | 6.47 | 18805.291 | 22484.193 | 10.455 | 146.1 | -2.6 | NO |  | NO | bb |
| 8 | 8181229 M 2 _9 | Standard | 150.000 | 6.47 | 18549.777 | 21697.707 | 10.686 | 149.3 | -0.4 | NO |  | NO | bb |
| $9$ | 9 18.1229M2_10 | Standard | 150.000 | 6.47 | 16590.273 | 18154.252 | 11.423 | 159.6 | 6.4 | NO |  | NO | bb |
| 10 | 10 181229M2_11 | Standard | 150.000 | 6.47 | 16960.805 | 16765.828 | 12.645 | 176.7 | 17.8 | NO |  | NO | bb |

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## Compound name: 13C2-PFHxDA

Response Factor: 0.906228
RRF SD: 0.0888313, Relative SD: 9.80232
Response type: Internal Std ( Ref 67 ), Area * ( IS Conc. / IS Area)
Curve type: RF

|  | \# Name | Type | Std. Cone | FT | Area | WHISArea | Response | Conc. | YDev | Conc. Flag | CoD | CoD Flag | x-excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 181229M2_2 | Standard | 5.000 | 6.90 | 8257.102 | 24031.391 | 4.295 | 4.7 | -5.2 | NO |  | NO | bb |
| 2 | 2 181229M2_3 | Standard | 5.000 | 6.89 | 7752.461 | 23929.412 | 4.050 | 4.5 | -10.6 | NO |  | NO | bb |
| 3 | $3181229 \mathrm{M} 2 \_4$ | Standard | 5.000 | 6.90 | 8331.125 | 23793.148 | 4.377 | 4.8 | -3.4 | NO |  | NO. | bb |
| $4$ | 4 181229M2_5 | Standard | 5.000 | 6.90 | 8182.507 | 23467.891 | 4.358 | 4.8 | -3.8 | NO |  | NO | bb |
| $5$ | $5181229 \mathrm{M} 2 \_6$ | Standard | 5.000 | 6.89 | 8048.759 | 23787.354 | 4.230 | 4.7 | -6.7 | NO |  | NO | bb |
| 6 | 6181229 M 2 _7 | Standard | 5.000 | 6.90 | 7638.526 | 22139.613 | 4.313 | 4.8 | -4.8 | NO |  | NO | bb |
| 7 | 7 181229M2_8 | Standard | 5.000 | 6.90 | 8217.959 | 22484.193 | 4.569 | 5.0 | 0.8 | NO |  | NO | bb |
| $8$ | 8 181229M2_9 | Standard | 5.000 | 6.90 | 7983.649 | 21697.707 | 4.599 | 5.1 | 1.5 | NO |  | NO | bb |
| 9 ${ }^{\text {a }}$ | 9 181229M2_10 | Standard | 5.000 | 6.89 | 7152.856 | 18154.252 | 4.925 | 5.4 | 8.7 | NO |  | NO | bb |
| 10 | $10181229 \mathrm{M} 2 \ldots 11$ | Standard | 5.000 | 6.90 | 7505.951 | 16765.828 | 5.596 | 6.2 | 23.5 | NO |  | NO | bb |

## Compound name: d7-N-MeFOSE

Response Factor: 0.0391277
RRF SD: 0.00499635 , Relative SD: 12.7693
Response type: Internal Std (Ref 67 ), Area * (IS Conc. / IS Area)
Curve type: RF

|  | \# Name | Type | Std: Conc | PT | Area | IS Area | Fesponse | Conc. | \% Dev | Conc Flag | Cod | Con Frag | X=exclimed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $1181229 \mathrm{M} 2{ }^{\text {_ }}$ 2 | Standard | 150.000 | 6.67 | 10575.484 | 24031.391 | 5.501 | 140.6 | -6.3 | NO |  | NO | bb |
| 2 | 2 181229M2_3 | Standard | 150.000 | 6.67 | 10029.321 | 23929.412 | 5.239 | 133.9 | -10.7 | NO |  | NO | bb |
| 3. | 3 181229M2_4 | Standard | 150.000 | 6.67 | 10565.968 | 23793.148 | 5.551 | 141.9 | -5.4 | NO |  | NO | bb |
| 4 | 4 181229M2_5 | Standard | 150.000 | 6.67 | 10135.638 | 23467.891 | 5.399 | 138.0 | -8.0 | NO |  | NO | bb |
| 5 | 5 181229M2_6 | Standard | 150.000 | 6.67 | 10549.587 | 23787.354 | 5.544 | 141.7 | -5.5 | NO |  | NO | bb |
| 6 6: | 6181229 M 2 _7 | Standard | 150.000 | 6.67 | 9960.941 | 22139.613 | 5.624 | 143.7 | -4.2 | NO |  | NO | bb |
| $7$ | 7 181229M2_8 | Standard | 150.000 | 6.67 | 10341.105 | 22484.193 | 5.749 | 146.9 | -2.0 | NO |  | NO | bb |
| 8\% | 8 181229M2_9 | Standard | 150.000 | 6.67 | 10181.245 | 21697.707 | 5.865 | 149.9 | -0.1 | NO |  | NO | bb |
| $9$ | 9 181229M2_10 | Standard | 150.000 | 6.67 | 9330.401 | 18154.252 | 6.424 | 164.2 | 9.5 | NO |  | NO | bb |
| 10.4 | 10 181229M2_11 | Standard | 150.000 | 6.67 | 10455.917 | 16765.828 | 7.796 | 199.2 | 32.8 | NO |  | NO | bb |

Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
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## Compound name: d9-N-EtFOSE

Response Factor: 0.0382157
RRF SD: 0.00472405, Relative SD: 12.3616
Response type: Internal Std (Ref 67 ), Area * (IS Conc. / IS Area)
Curve type: RF

| $4$ | \# Name | Type | Std. Cone | RT | Area | IS Area | Response | Cone. | 90Dev | Conc. Flag | Cob | Coff Flag | x=excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 | 1 181229M2_2 | Standard | 150.000 | 6.82 | . 10246.797 | 24031.391 | 5.330 | 139.5 | -7.0 | NO |  | NO | bb |
| 2 | 2181229 Mz _3 | Standard | 150.000 | 6.82 | 10151.709 | 23929.412 | 5.303 | 138.8 | -7.5 | NO |  | NO | bb |
| 3 | 3 181229M2_4 | Standard | 150.000 | 6.82 | 10494.368 | 23793.148 | 5.513 | 144.3 | -3.8 | NO |  | NO | bb |
| 4 | 4 181229M2_5 | Standard | 150.000 | 6.82 | 10125.364 | 23467.891 | 5.393 | 141.1 | -5.9 | NO |  | NO | bb |
| $5 \pm$ | 5 181229M2_6 | Standard | 150.000 | 6.82 | 10073.060 | 23787.354 | 5.293 | 138.5 | -7.7 | NO |  | NO | bb |
| $6$ | 6181229 M 2 _7 | Standard | 150.000 | 6.82 | 9551.333 | 22139.613 | 5.393 | 141.1 | -5.9 | NO |  | NO | bb |
|  | $7181229 \mathrm{M} 2 \_8$ | Standard | 150.000 | 6.82 | 9877.409 | 22484.193 | 5.491 | 143.7 | -4.2 | NO |  | NO | bb |
| $8$ | 8 181229M2_9 | Standard | 150.000 | 6.81 | 9851.597 | 21697.707 | 5.675 | 148.5 | -1.0 | NO |  | No | bb |
| $9$ | 9 181229M2_10 | Standard | 150.000 | 6.82 | 9322.468 | 18154.252 | 6.419 | 168.0 | 12.0 | NO |  | NO | bb |
| 10 \%em | 10 181229M2_11 | Standard | 150.000 | 6.82 | 10076.250 | 16765.828 | 7.512 | 196.6 | 31.1 | NO |  | NO | bb |

## Compound name: 13C4-PFBA

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

|  | 4 Name | Typeety | Stu, Conc | RT | Area | IS Area | Fiesponse | Conc: | \% ${ }^{\text {dev }}$ | Conc Flag | Cob | CoDiflag | x=excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| . | 1 181229M2_2 | Standard | 12.500 | 1.45 | 10490.901 | 10490.901 | 12.500 | 12.5 | 0.0 | NO |  | NO | MM |
| 2 | 2 181229M2_3 | Standard | 12.500 | 1.45 | 9790.347 | 9790.347 | 12.500 | 12.5 | 0.0 | NO |  | NO | MM |
| 3 3 ${ }^{\text {\% }}$ | $3181229 \mathrm{M2}$ _4 | Standard | 12.500 | 1.45 | 10031.507 | 10031.507 | 12.500 | 12.5 | 0.0 | NO |  | NO | MM |
| $4$ | 4 181229M2_5 | Standard | 12.500 | 1.45 | 10190.665 | 10190.665 | 12.500 | 12.5 | 0.0 | NO |  | NO | MM |
| $5$ | 5 181229M2_6 | Standard | 12.500 | 1.45 | 10414.141 | 10414.141 | 12.500 | 12.5 | 0.0 | NO |  | NO | MM |
| 6 | 6181229 M 2 _7 | Standard | 12.500 | 1.45 | 10251.719 | 10251.719 | 12.500 | 12.5 | 0.0 | NO |  | NO | MM |
| $7$ | $7181229 \mathrm{M} 2 \_8$ | Standard | 12.500 | 1.45 | 10420.172 | 10420.172 | 12.500 | 12.5 | 0.0 | NO |  | NO | MM |
| $8$ | 8 181229M2_9 | Standard | 12.500 | 1.45 | 10210.263 | 10210.263 | 12.500 | 12.5 | 0.0 | NO |  | NO | MM |
| 9 | 9 181229M2_10 | Standard | 12.500 | 1.45 | 9616.428 | 9616.428 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 10.5 | 10 181229M2_11 | Standard | 12.500 | 1.45 | 8837.932 | 8837.932 | 12.500 | 12.5 | 0.0 | NO |  | NO | MM |

Dataset: F:IProjects\PFAS.PROXResults\181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: 13C5-PFHxA

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


## Compound name: 13C3-PFHxS

Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 62 ), Area * (IS Conc. / IS Area)
Curve type: RF


Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.gld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed:
Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: 13C8-PFOA

Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std ( Ref 63 ), Area * (IS Conc. / IS Area)
Curve type: RF


## Compound name: 13C9-PFNA

Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 64 ), Area * (IS Conc. / IS Area)
Curve type: RF

|  | \# Name | Type | Std Conc | PT | Area | 15 Area | Response | Conc: | \% Dev | Conc. Flag | Cob | CoD Frag | $x=$ excluder |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 Whatwim | 1 181229M2_2 | Standard | 12.500 | 5.15 | 19040.746 | 19040.746 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 2 | 2 181229M2_3 | Standard | $12.500^{\circ}$ | 5.15 | 18485.146 | 18485.146 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 3:14 | 3 181229M2_4 | Standard | 12.500 | 5.15 | 18466.064 | 18466.064 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $4$ | 4 181229M2_5 | Standard | 12.500 | 5.15 | 18024.973 | 18024.973 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $5$ | 5 181229M2_6 | Standard | 12.500 | 5.16 | 18631.014 | 18631.014 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 6 | 6181229 M 2 _7 | Standard | 12.500 | 5.15 | 17413.998 | 17413.998 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 7 | 7 181229M2_8 | Standard | 12.500 | 5.16 | 17644.561 | 17644.561 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $8$ | 8 181229M2_9 | Standard | 12.500 | 5.15 | 16690.217 | 16690.217 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 9 | 9 181229M2_10 | Standard | 12.500 | 5.15 | 14512.769 | 14512.769 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 10 \% | 10 181229M2_11 | Standard | 12.500 | 5.15 | 13394.848 | 13394.848 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |

Last Altered: Printed:

Saturday, December 29, 2018 16:19:24 Pacific Standard Time Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: 13C4-PFOS

Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 65 ), Area * (IS Conc. / IS Area)
Curve type: RF

|  | \# Name | Type | Sta Conc | RT | Area | IS Area | Resporise | Conc. | \%Dey | Conc Flag | C0D | CoD Flag | $x$-exclurded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 181229M2_2 | Standard | 12.500 | 5.23 | 3491.388 | 3491.388 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 2 ${ }^{2}$ | 2181229 M 2 _3 | Standard | 12.500 | 5.23 | 3380.016 | 3380.016 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 3. | 3 181229M2_4 | Standard | 12.500 | 5.24 | 3457.015 | 3457.015 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
|  | 4 181229M2_5 | Standard | 12.500 | 5.24 | 3417.326 | 3417.326 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 5.4.3\% | 5 181229M2_6 | Standard | 12.500 | 5.24 | 3242.304 | 3242.304 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
|  | 6181229 M 2 _7 | Standard | 12.500 | 5.24 | 3193.801 | 3193.801 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 7: ${ }^{\text {P }}$ | 7 181229M2_8 | Standard | 12.500 | 5.24 | 3318.294 | 3318.294 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $8$ | 8 181229M2_9 | Standard | 12.500 | 5.23 | 3018.229 | 3018.229 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $9{ }^{9}$ | 9 181229M2_10 | Standard | 12.500 | 5.23 | 2621.531 | 2621.531 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 10. | 10 181229M2_11 | Standard | 12.500 | 5.24 | 2704.564 | 2704.564 | 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 66 ), Area * (IS Conc. / IS Area)
Curve type: RF

|  | \# Name | Type | Std Cone | FT | Area | 1 S Area | Response | Conc. | \% \% Dey | Conc Flag | Weme CoD | Cod Flag | x=excluced |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 12\% | 1 181229M2_2 | Standard | 12.500 | 5.52 | 20001.045 | 20001.045 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $12$ | 2 181229M2_3 | Standard | 12.500 | 5.52 | 19894.260 | 19894.260 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 3: | 3 181229M2_4 | Standard | 12.500 | 5.53 | 20526.646 | 20526.646 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $4$ | 4 181229M2_5 | Standard | 12.500 | 5.53 | 19587.316 | 19587.316 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $5$ | 5 181229M2_6 | Standard | 12.500 | 5.53 | 20167.748 | 20167.748 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $6$ | $6181229 \mathrm{M} 2 \ldots 7$ | Standard | 12.500 | 5.53 | 19285.479 | 19285.479 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $7$ | 7 181229M2_8 | Standard | 12.500 | 5.53 | 19207.580 | 19207.580 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $8$ | $8181229 \mathrm{M} 2 \_9$ | Standard | 12.500 | 5.53 | 18184.455 | 18184.455 | 12.500 | 12.5 | 0.0 | NO |  | NO | MM |
| 19 | 9 181229M2_10 | Standard | 12.500 | 5.52 | 15942.367 | 15942.367 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $10$ | 10 181229M2_11 | Standard | 12.500 | 5.53 | 14708.543 | 14708.543 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |

Dataset:
F:\Projects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered:
Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:17:32 Pacific Standard Time

## Compound name: 13C7-PFUdA

Response Factor: 1
RRF SD: 0 , Relative SD: 0
Response type: Internal Std (Ref 67 ), Area * (IS Conc. / IS Area)
Curve type: RF

|  | \# Name | Type | Std. Conc | RT | Area | 18 Area | Response | Conc. | 9.Dev | Conc. Flag | Cod | Cod Flag | $x=$ excluded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | $1181229 \mathrm{M} 2 \ldots$ | Standard | 12.500 | 5.85 | 24031.391 | 24031.391 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 2 | 2181229 M 2 _3 | Standard | 12.500 | 5.85 | 23929.412 | 23929.412 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 3 | 3 181229M2_4 | Standard | 12.500 | 5.85 | 23793.148 | 23793.148 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $4{ }^{4}$ | 4 181229M2_5 | Standard | 12.500 | 5.85 | 23467.891 | 23467.891 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 5. | 5 181229M2 6 | Standard | 12.500 | 5.85 | 23787.354 | 23787.354 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 6.5020 | 6 181229M2_7 | Standard | 12.500 | 5.85 | 22139.613 | 22139.613 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
|  | 7 181229M2_8 | Standard | 12.500 | 5.85 | 22484.193 | 22484.193 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 8. | 8 181229M2_9 | Standard | 12.500 | 5.85 | 21697.707 | 21697.707 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| $9$ | 9 181229M2_10 | Standard | 12.500 | 5.85 | 18154.252 | 18154.252 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |
| 10. | 10 181229M2_11 | Standard | 12.500 | 5.85 | 16765.828 | 16765.828 | 12.500 | 12.5 | 0.0 | NO |  | NO | bb |

Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:18:57 Pacific Standard Time

Method: F:|Projects|PFAS.PROMMethDBXPFAS FULL 80C 122918.mdb 29 Dec 2018 16:19:21
Calibration: F:|Projects|PFAS.PRO|CurveDBIC18_VAL-PFAS_Q4_12-29-18.cdb 29 Dec 2018 16:11:46
Name: 181229M2_2, Date: 29-Dec-2018, Time: 13:24:43, ID: ST181229M2-1 PFC CS-2 18L2601, Description: PFC CS-2 18L2601


Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:19:54 Pacific Standard Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_122918.mdb 29 Dec 2018 16:19:21
Calibration: F:IProjects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_12-29-18.cdb 29 Dec 2018 16:11:46
Name: 181229M2_2, Date: 29-Dec-2018, Time: 13:24:43, ID: ST181229M2-1 PFC CS-2 18L2601, Description: PFC CS-2 18L2601

|  | \# Name | IS\# | Cob | CoD Flag | 9/RSD |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11:5\% | 25 PFUdA | 51 | 0.9996 | NO |  |
| 2. ${ }^{\text {2 }}$ | 26 PFDS | 47 | 0.9998 | NO |  |
| 3 | 27 PFDoA | 53 | 0.9983 | NO |  |
| 4 | 28 N-MeFOSA | 54 | 0.9999 | NO |  |
| 5. | 29 PFiTrDA | 53 | 0.9997 | NO |  |
| 6. | 30 PFTeDA | 55 | 0.9998 | NO |  |
|  | 31 N -EtFOSA | 56 | 0.9999 | NO |  |
| 8 | 32 PFHxDA | 57 | 0.9999 | NO |  |
| 9 \% | 33 PFODA | 57 | 0.9999 | NO |  |
| 10 | $34 \mathrm{~N}-\mathrm{MeFOSE}$ | 58 | 0.9999 | NO |  |
| 11 | 35 N -EtFOSE | 59 | 0.9997 | NO |  |
| 12 | 3613 C -PFBA | 60 |  | NO | 1.486 |
| 13 | 37 13C3-PFPeA | 61 |  | NO | 2.861 |
| 14. ${ }^{\text {² }}$ | 38 13C3-PFBS | 62 |  | NO | 2.854 |
| 15 | 39 13C2-4:2 FTS | 62 |  | NO | 7.825 |
| 16. | 40 13C2-PFHxA | 61 |  | NO | 3.705 |
| 17 | 41 13C4-PFHpA | 61 |  | NO | 2.315 |
| 18. | 42 18O2-PFHxS | 62 |  | NO | 4.314 |
| 19 | 43 13C2-6:2 FTS | 65 |  | NO | 5.552 |
| 20 | 44 13C2-PFOA | 63 |  | NO | 2.424 |
| 21 | 45 13C5-PFNA | 64 |  | NO | 2.029 |
| 22.4 | 46 13C8-PFOSA | 67 |  | NO | 4.646 |
| 23.15\%䜌 | 47 13C8-PFOS | 65 |  | NO | 5.245 |
| 24 | 48 13C2-PFDA | 66 |  | NO | 4.239 |
| 25 | 49 13C2-8:2 FTS | 65 |  | NO | 11.947 |
| 26 | $50 \mathrm{~d} 3-\mathrm{N}-\mathrm{MeFOSAA}$ | 67 |  | NO | 6.192 |
| 27 | 51 13C2-PFUdA | 67 |  | NO | 3.140 |
| 28 | $52 \mathrm{~d} 5-\mathrm{N}-\mathrm{EtFOSAA}$ | 67 |  | NO | 3.050 |
| 29.11\% | 53 13C2-PFDoA | 66 |  | NO | 1.829 |
| 30 \% | 54 d3-N-MeFOSA | 67 |  | NO | 11.451 |
| 31 | 55 13C2-PFTeDA | 67 |  | NO | 5.730 |
| 32. | 56 d5-N-ETFOSA | 67 |  | NO | 7.060 |

Dataset: F:IProjects\PFAS.PRO\Results\181229M21181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:19:54 Pacific Standard Time

Name: 181229M2_2, Date: 29-Dec-2018, Time: 13:24:43, ID: ST181229M2-1 PFC CS-2 18L2601, Description: PFC CS-2 18L2601


| Quantify Sample Summary Report $\quad$ MassLynx MassLynx V4.1 SCN945 SCN960 |  |
| :--- | :--- |
| Vista Analytical Laboratory |  |
| Dataset: | F:IProjectsIPFAS.PRO\Results1181229M2\181229M2-CRV.qld |
| Last Altered: | Saturday, December 29, 2018 16:19:24 Pacific Standard Time |
| Printed: | Saturday, December 29, 2018 16:23:20 Pacific Standard Time |

Method: F:IProjects\PFAS.PRO\MethDB\PFAS_FULL_80C_122918.mdb 29 Dec 2018 16:19:21 Calibration: F:IProjectsIPFAS.PROICurveDBIC-18_VAL-PFAS_Q4_12-29-18.cdb 29 Dec 2018 16:11:46

Name: 181229M2_7, Date: 29-Dec-2018, Time: 14:17:39, ID: ST181229M2-6 PFC CS3 18L2606, Description: PFC CS3 18L2606


| Dataset: | F:IProjectsIPFAS.PRO\ResultsI181229M2\181229M2-CRV.qld |
| :--- | :--- |
| Last Altered: | Saturday, December 29, 2018 16:19:24 Pacific Standard Time |
| Printed: | Saturday, December 29, 2018 16:23:37 Pacific Standard Time |

Method: F:|Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_122918.mdb 29 Dec 2018 16:19:21

## Calibration: F:|Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_12-29-18.cdb 29 Dec 2018 16:11:46

Name: 181229M2_7, Date: 29-Dec-2018, Time: 14:17:39, ID: ST181229M2-6 PFC CS3 18L2606, Description: PFC CS3 18L2606

| 5 | Name | Ion Ratio: | Ratic out? |
| :---: | :---: | :---: | :---: |
| 1 1te | PFUdA | 11.337 | NO |
| 2 | PFDS | 1.775 | NO |
| 3 | PFDoA | 10.018 | NO |
| $4{ }^{\text {4, }}$ | N-MeFOSA | 1.553 | NO |
| 5 - | PFTrDA | 27.371 | NO |
| 6 | PFTeDA | 13.530 | NO |
| 7 7-5 | N-EIFOSA | 1.602 | NO |
| 8 8 | PFHxDA | 25.375 | NO |
| $9{ }^{9}$ | PFODA |  |  |
| 10 | N-MeFOSE |  |  |
| $11 \times$ | N-EtFOSE |  |  |

Vista Analytical Laboratory Q1
Dataset: F:IProjects\PFAS.PRO\Resultsl181229M21181229M2-CRV.qld
Last Altered: $\quad$ Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:00 Pacific Standard Time

Method: F:\Projects\PFAS.PROWethDB\PFAS_FULL_80C_122918.mdb 29 Dec 2018 16:19:21
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_12-29-18.cdb 29 Dec 2018 16:11:46
Compound name: PFBA
Correlation coefficient: $\mathrm{r}=0.999959, \mathrm{r}^{\wedge} 2=0.999917$
Calibration curve: $1.18588^{*} x+-0.0823146$
Response type: Internal Std (Ref 36 ), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Quantity Calibration Report

MassLynx MassLynx V4.1 SCN945 SCN960

| Dataset: | F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld |
| :--- | :--- |
|  |  |
| Last Altered: | Saturday, December 29, 2018 16:19:24 Pacific Standard Time |
| Printed: | Saturday, December 29, 2018 17:21:00 Pacific Standard Time |

Compound name: PFPeA
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999938$
Calibration curve: $2.48403 e-005^{*} x^{\wedge} 2+1.03326^{*} x+-0.0426493$
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Dataset: $\quad$ F:IProjects\PFAS.PRO\Resultsi181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:00 Pacific Standard Time

Compound name: PFBS
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999730$
Calibration curve: $0.00021041^{*} x^{\wedge} 2+2.07254^{*} x+-0.127278$
Response type: Internal Std (Ref 38 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:00 Pacific Standard Time

Compound name: 4:2 FTS
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999772$
Calibration curve: $-0.00286531^{*} x^{\wedge} 2+1.14289^{*} x+-0.0200174$
Response type: Internal Std (Ref 39), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Vista Analytical Laboratory Q1

Dataset:
F:IProjectsIPFAS.PROTResults\181229M21181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:00 Pacific Standard Time

## Compound name: PFHxA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999886$
Calibration curve: $-0.0001719255^{*} x^{\wedge} 2+0.995181 * x+-0.00364292$
Response type: Internal Std (Ref 40 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None


## Vista Analytical Laboratory Q1

## Dataset:

F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Satürday, December 29, 2018 17:21:00 Pacific Standard Time

## Compound name: PFPeS

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999381$
Calibration curve: $-0.0001733222^{*} x^{\wedge} 2+1.78673$ * $x+-0.37064$
Response type: Internal Std (Ref 38), Area * IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.ald

Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:00 Pacific Standard Time

Compound name: PFHpA
Correlation coefficient: $\mathrm{r}=0.999939, \mathrm{r}^{\wedge} 2=0.999877$
Calibration curve: 1.47858 * $x+-0.0196842$
Response type: Internal Std (Ref 41), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Dataset: F:IProjectsIPFAS.PRO\Results 1 181229M21181229M2-CRV.qld

Last Altered:
Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:00 Pacific Standard Time

## Compound name: L-PFHxS

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999709$
Calibration curve: $-9.74234 e-005^{*} x^{\wedge} 2+2.03406{ }^{*} x+-0.0714373$
Response type: Internal Std ( Ref 42 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None


## Dataset:

F:IProjects\PFAS.PRO\Results\181229M21181229M2-CRV.qld
$\begin{array}{ll}\text { Last Altered: } & \text { Saturday, December 29, } 2018 \text { 16:19:24 Pacific Standard Time } \\ \text { Printed: } & \text { Saturday, December 29, } 2018 \text { 17:21:00 Pacific Standard Time }\end{array}$

Compound name: 6:2 FTS
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999927$
Calibration curve: $-0.000482516{ }^{*} x^{\wedge} 2+1.79085^{*} x+-0.0431136$
Response type: Internal Std (Ref 43 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None


## Dataset:

F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
$\begin{array}{ll}\text { Last Altered: } & \text { Saturday, December 29, } 2018 \text { 16:19:24 Pacific Standard Time } \\ \text { Printed: } & \text { Saturday, December 29, } 2018 \text { 17:21:00 Pacific Standard Time }\end{array}$

## Compound name: L-PFOA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999851$
Calibration curve: $-6.34381 e-005 * x^{\wedge} 2+1.47701^{*} x+0.0362127$
Response type: Internal Std (Ref 44 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Dataset: F:IProjectsIPFAS.PRO\Results\181229M2\181229M2-CRV.qid

Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:00 Pacific Standard Time

## Compound name: PFHpS

Coefficient of Determination: $R^{\wedge} 2=0.999813$
Calibration curve: $1.51699 e-005^{*} x^{\wedge} 2+0.85266$ * $x+-0.044668$
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Dataset:
F:IProjects\PFAS.PRO\Results\181229M21181229M2-CRV.qld
$\begin{array}{ll}\text { Last Altered: } & \text { Saturday, December 29, } 2018 \text { 16:19:24 Pacific Standard Time } \\ \text { Printed: } & \text { Saturday, December 29, } 2018 \text { 17:21:00 Pacific Standard Time }\end{array}$

Compound name: PFNA
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999915$
Calibration curve: $-2.05618 \mathrm{e}-005^{*} x^{\wedge} 2+1.26573^{*} x+-0.0640136$
Response type: Internal Std (Ref 45 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Dataset:
F:IProjectsIPFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:00 Pacific Standard Time

## Compound name: PFOSA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.998926$
Calibration curve: $0.000275834{ }^{*} x^{\wedge} 2+1.11214^{*} x+0.0389668$
Response type: Internal Std (Ref 46 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Dataset:
$\begin{array}{ll}\text { Last Altered: } & \text { Saturday, December 29, } 2018 \text { 16:19:24 Pacific Standard Time } \\ \text { Printed: } & \text { Saturday, December 29, } 2018 \text { 17:21:00 Pacific Standard Time }\end{array}$

Compound name: L-PFOS
Correlation coefficient: $r=0.999657, \mathrm{r}^{\wedge} 2=0.999314$
Calibration curve: 1.10276 * $x+-0.060196$
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None


## Dataset: F:IProjects\PFAS.PRO\Results\181229M21181229M2-CRV.qid

Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: $\quad$ Saturday, December 29, 2018 17:21:00 Pacific Standard Time

Compound name: PFDA
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999598$
Calibration curve: $-0.00012428{ }^{*} x^{\wedge} 2+1.23984^{*} x+0.0179882$
Response type: Internal Std (Ref 48 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Vista Analytical Laboratory Q1

Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: . Saturday, December 29, 2018 17:21:00 Pacific Standard Time

Compound name: 8:2 FTS
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.998842$
Calibration curve: $-0.00395163^{*} x^{\wedge} 2+1.52796^{*} x+-0.023333$
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: $1 / x$, Axis trans: None


Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.ald
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:00 Pacific Standard Time

Compourid name: PFNS
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999544$
Calibration curve: $4.38436 e-005^{*} x^{\wedge} 2+0.721731^{*} x+-0.0176607$
Response type: Internal Std (Ref 47), Area *. (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Dataset: F:IProjectsIPFAS.PRO\Results\181229M21181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:00 Pacific Standard Time

Compound name: L-MeFOSAA
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999460$
Calibration curve: $-0.000615975^{*} x^{\wedge} 2+2.71861 * x+-0.197701$
Response type: Internal Std (Ref 50 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: $1 / \mathrm{x}$, Axis trans: None


Dataset: . F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:00 Pacific Standard Time

Compound name: L-EtFOSAA
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999330$
Calibration curve: $-0.000297179^{*} x^{\wedge} 2+1.63616$ * $x+-0.138937$
Response type: Internal Std (Ref 52 ), Area* (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld

Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:08 Pacific Standard Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_122918.mdb 29 Dec 2018 16:19:21
Calibration: F:\Projects\PFAS.PRO\CurveDBIC18_VAL-PFAS_Q4_12-29-18.cdb 29 Dec 2018 16:11:46
Compound name: PFUdA
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999605$
Calibration curve: $-0.000140506{ }^{*} x^{\wedge} 2+1.005499^{*} x+0.0170739$
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Work Order 1804077
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## Dataset:

## F:IProjects\PFAS.PROXResults\181229M21181229M2-CRV.qld

Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:08 Pacific Standard Time

Compound name: PFDS
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999807$
Calibration curve: $3.73793 \mathrm{e}-005^{*} x^{\wedge} 2+0.97975^{*} x+0.0349328$
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Quantify Calibration Report <br> Vista Analytical Laboratory Q1

Dataset: $\quad$ F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qid
Last Altered: $\quad$ Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:08 Pacific Standard Time

## Compound name: PFDoA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.998288$
Calibration curve: $6.01615 e-005^{*} x^{\wedge} 2+1.239333^{*} x+0.0755586$
Response type: Internal Std (Ref 53 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:08 Pacific Standard Time

Compound name: N-MeFOSA
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999873$
Calibration curve: $-7.67446 \mathrm{e}-005^{*} \mathrm{x}^{\wedge} 2+1.06457^{*} \mathrm{x}+-0.290547$
Response type: Internal Std (Ref 54 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None


## Quantify Calibration Report

## Dataset: F:IProjects\PFAS.PROXResults\181229M21181229M2-CRV.qld

Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:08 Pacific Standard Time

Compound name: PFTrDA
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999651$
Calibration curve: $-0.000168068{ }^{*} x^{\wedge} 2+1.36737^{*} x+-0.0524968$
Response type: Internal Std (Ref 53 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Dataset: F:IProjects\PFAS.PRO\Results(181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:08 Pacific Standard Time

Compound name: PFTeDA
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999777$
Calibration curve: $-0.000266468^{*} x^{\wedge} 2+1.54118$ * $x+-0.0144695$
Response type: Internal Std (Ref 55 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Dataset: F:IProjects\PFAS.PRO\Results\181229M21181229M2-CRV.qld

Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:08 Pacific Standard Time

Compound name: N-EtFOSA
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999877$
Calibration curve: $-5.11801 \mathrm{e}-005^{*} x^{\wedge} 2+0.894711^{*} x+-0.201133$
Response type: Internal Std (Ref 56 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld

Last Altered: $\quad$ Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:08 Pacific Standard Time

## Compound name: PFHxDA

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999851$
Calibration curve: $-0.000203732^{*} x^{\wedge} 2+0.591879 * x+0.0308005$
Response type: Internal Std (Ref 57 ), Area * ( IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Dataset: F:IProjects\PFAS.PRO\Results\181229M2\181229M2-CRV.qld
Last Altered: Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:08 Pacific Standard Time

Compound name: PFODA
Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999861$
Calibration curve: $-0.000193725{ }^{*} x^{\wedge} 2+0.816848 * x+-0.0115201$
Response type: Internal Std ( Ref 57 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None


Dataset: . F:IProjects\PFAS.PRO\Resultsl181229M2\181229M2-CRV.qld
Last Altered:
Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:08 Pacific Standard Time

Compound name: N-MeFOSE
Coefficient of Determination: $R^{\wedge} 2=0.999889$
Calibration curve: $2.8345 e-006{ }^{*} x^{\wedge} 2+0.943779 * x+-0.37283$
Response type: Internal Std (Ref 58 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


## Vista Analytical Laboratory Q1

## Dataset: F.IProjectsIPFAS.PRO\Results1181229M2181229M2-CRV.qld

Last Altered: $\quad$ Saturday, December 29, 2018 16:19:24 Pacific Standard Time
Printed: Saturday, December 29, 2018 17:21:08 Pacific Standard Time

## Compound name: N-EtFOSE

Coefficient of Determination: $\mathrm{R}^{\wedge} 2=0.999680$
Calibration curve: $-8.56872 \mathrm{e}-006^{*} x^{\wedge} 2+1.1842$ * $x+-0.30516$
Response type: Internal Std (Ref 59 ), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None


Last Altered: Saturday, December 29, 2018 16:27:01 Pacific Standard Time
Printed: Saturday, December 29, 2018 16:27:32 Pacific Standard Time

Name: 181229M2_13, Date: 29-Dec-2018, Time: 15:21:11, ID: ICV181229M2-1 PFC ICV 18L2611, Description: PFC ICV 18L2611


Dataset:
F:IProjects\PFAS.PRO\Results\181229M21181229M2-ICV.qld
Last Altered: Saturday, December 29, 2018 16:27:01 Pacific Standard Time Printed: Saturday, December 29, 2018 16:27:32 Pacific Standard Time (A) Compounds not present in ICV

Name: 181229M2_13, Date: 29-Dec-2018, Time: 15:21:11, ID: ICV181229M2-1 PFC ICV 18L2611, Description: PFC ICV $18 L 2611$


| Dataset: | F:IProjects\PFAS.PRO\Results1181229M2\181229M2-ICV.qld |
| :--- | :--- |
| Last Altered: | Saturday, December 29, 2018 16:27:01 Pacific Standard Time |
| Printed: | Saturday, December 29, 2018 16:27:32 Pacific Standard Time |

Name: 181229M2_13, Date: 29-Dec-2018, Time: 15:21:11, ID: ICV181229M2-1 PFC ICV 18L2611, Description: PFC ICV 18L2611

|  | \# Name | Trace | Area | 15 Area | muvol | RT | Response | Conc. | \%Rec | Recovery | Ion Ratio | Ratio Out? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 73 | 67 13C7-PFUdA | $570.1>524.8$ | 23903.389 | 23903.389 | 1.00 | 5.85 | 12.500 | 12.5 | 100.0 | NO |  |  |


| Dataset: | Untitled |
| :--- | :--- |
| Last Altered: | Wednesday, January 02, 2019 07:51:01 Pacific Standard Time |
| Printed: | Wednesday, January 02, 2019 07:51:05 Pacific Standard Time |

Method: F:|Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_123118.mdb 02 Jan 2019 07:48:45 Calibration: F:IProjects\PFAS.PROICurveDBIC18_VAL-PFĀS_Q4_12-29-18.cdb 29 Dec 2018 16:11:46

## Compound name: PFBA

|  |  | \# Name |  | Acq.Date | Acg. ${ }^{\text {Ime }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 1 181231M1_1 | IPA | 31-Dec-18 | 10:02:41 |
| 2 |  | 2 181231M1_2 | ST181231M1-1 PFC CSO 18 L 2603 | 31-Dec-18 | 10:13:16 |
| 3 |  | 3 181231M1_3 | IPA | 31-Dec-18 | 10:23:54 |
| 4 |  | 4 181231M1_4 | B8L0157-MSD2 Matrix Spike Dup 0.11657 | 31-Dec-18 | 10:34:29 |
| 5 | * | 5 181231M1_5 | 1804115-01 REEPEF11950.11841 | 31-Dec-18 | 10:45:05 |
| 6 | \% | 6 181231M1_6 | 1804115-02 REEPAR11950.11397 | 31-Dec-18 | 10:55:37 |
| 7 | 4, \%e\% | 7 181231M1_7 | 1804115-03 REEPAR5086 0.11943 | 31-Dec-18 | 11:06:16 |
| 8 |  | 8 181231M1_8 | 1804115-04 REEPAC11950.11474 | 31-Dec-18 | 11:16:50 |
| 9 |  | 9 181231M1_9 | 1804115-06 REEPEF 12010.11807 | 31-Dec-18 | 11:27:28 |
| 10 | 0 | 10 181231M1_10 | 1804115-07 REEPAR12010.11961 | 31-Dec-18 | 11:38:00 |
| 11 | 1 | 11 181231M1_11 | 1804115-08 REEPAC12010.11473 | 31-Dec-18 | 11:48:39 |
| 12 | 2 | 12 181231M1_12 | 1804115-09 REEPIN12010.11328 | 31-Dec-18 | 11:59:11 |
| 3 |  | 13 181231M1_13 | 1804115-10 REEPEF1200 0.11376 | 31-Dec-18 | 12:09:49 |
| 14 | 4. | 14 181231M1_14 | 1804115-11 REEPAR1200 0.11471 | 31-Dec-18 | 12:20:22 |
| 5 |  | 15 181231M1_15 | IPA | 31-Dec-18 | 12:31:00 |
| 16 |  | 16 181231M1_16 | ST181231M1-2 PFC CS3 18 L 2606 | 31-Dec-18 | 12:41:34 |
| 7 |  | 17 181231M1_17 | 1804115-12 REEPAC1200 0.11754 | 31-Dec-18 | 12:52:15 |
| 18 |  | 18 181231M1_18 | 1804115-13 REEPIN1200 0.11773 | 31-Dec-18 | 13:02:51 |
| 19 | 9 | 19 181231M1_19 | 1804115-14 REEPIN5088 0.11834 | 31-Dec-18 | 13:13:23 |
| 0 |  | 20 181231M1_20 | 1804075-04 REEPDW14140.11451 | 31-Dec-18 | 13:26:07 |
|  |  | 21 181231M1_21 | 1804115-15 REEPEF12020.11843 | 31-Dec-18 | 13:36:41 |
| 2 |  | 22 181231M1_22 | 1804115-16 REEPAR12020.11966 | 31-Dec-18 | 13:47:20 |
| 23 | 3 | 23 181231M1_23 | 1804115-17 REEPAC12020.11518 | 31-Dec-18 | 13:57:59 |
| 24 | 4 | 24 181231M1_24 | 1804115-18 REEPAC5089 0.11488 | 31-Dec-18 | 14:08:31 |
| 25 |  | 25 181231M1_25 | 1804115-19 REEPIN12020.11737 | 31-Dec-18 | 14:19:10 |
| 26 | 6 | 26 181231M1_26 | B8L0180-BLK1 Method Blank 0.125 | 31-Dec-18 | 14:29:43 |
| 27 | 7 | 27 181231M1_27 | B8L0180-BS1 OPR 0.125 | 31-Dec-18 | 14:40:21 |
| 28 | 8 | 28 181231M1_28 | B8L0180-MS1 Matrix Spike 0.10414 | 31-Dec-18 | 14:50:53 |
| 29 | 9 | 29 181231M1_29 | B8L0180-MSD1 Matrix Spike Dup 0.11309 | 31-Dec-18 | 15:01:31 |
| 30 | 0 | 30 181231M1_30 | 1804060-01 BP-TT-AOC22-MW04-20181210 0.10904 | 31-Dec-18 | 15:12:04 |
|  |  | 31 181231M1_31 | IPA | 31-Dec-18 | 15:22:42 |
| 32 | 2 \% | 32 181231M1_32 | ST181231M1-3 PFC CS3 18L2606 | 31-Dec-18 | 15:33:16 |

## Compound name: PFBA

|  | \# Name | 10 | Acq Date | Acq.Time |
| :---: | :---: | :---: | :---: | :---: |
| 33 | 33 181231M1_33 | 1804060-02 BP-FW-MW01-20181210 0.11521 | 31-Dec-18 | 15:43:46 |
| 34 | 34 181231M1_34 | 1804060-03 BPS1-TT-MW308S-20181210 0.11735 | 31-Dec-18 | 15:54:24 |
| 35 | 35 181231M1_35 | 1804060-04 BP-FW-MW02-2081211 0.11344 | 31-Dec-18 | 16:05:03 |
| 36 | 36 181231M1_36 | 1804060-05 BP-FW-MW03-20181211 0.11657 | 31-Dec-18 | 16:15:41 |
| 37 | 37 181231M1_37 | 1804060-06 BPS1-TT-MW307D-201812110.11368 | 31-Dec-18 | 16:26:14 |
| 38 | 38 181231M1_38 | 1804060-07 BP-Dup06-20181211 0.11094 | 31-Dec-18 | 16:36:53 |
| 39 | 39 181231M1_39 | 1804116-01 G76-20181213 0.10513 | 31-Dec-18 | 16:47:27 |
| 40 | 40 181231M1_40 | 1804116-02 FB-20181213 0.11471 | 31-Dec-18 | 16:58:05 |
| 41 | 41 181231M1_41 | 1804144-01 REEPDW1417 0.11326 | 31-Dec-18 | 17:08:38 |
| 42 | 42 181231M1_42 | 1804144-02 REEPDW14180.11102 | 31-Dec-18 | 17:19:16 |
| 43 | 43 181231M1_43 | 1804144-03 REEPDW1419 0.11089 | 31-Dec-18 | 17:29:50 |
| 44 | 44 181231M1_44 | IPA | 31-Dec-18 | 17:40:19 |
| 45 | 45 181231M1_45 | ST181231M1-4 PFC CS3 18L2606 | 31-Dec-18 | 17:50:58 |
| 46 | 46 181231M1_46 | 1804144-04 REEPDW1420 0.11339 | 31-Dec-18 | 18:01:30 |
| 47 | 47 181231M1_47 | 1804144-05 REEPDW590 0.11043 | 31-Dec-18 | 18:12:09 |
| 48 | 48 181231M1_48 | B8L0144-BLK1 Method Blank 0.25 | 31-Dec-18 | 18:22:41 |
| 49 | 49 181231M1_49 | B8L0144-BS1 OPR 0.25 | 31-Dec-18 | 18:33:20 |
| 50 | 50 181231M1_50 | B8L0144-MS1 Matrix Spike 0.23194 | 31-Dec-18 | 18:43:53 |
| 51 | 51 181231M1_51 | B8L0144-MSD1 Matrix Spike Dup 0.23493 | 31-Dec-18 | 18:54:31 |
| 52 | 52 181231M1_52 | 1804061-01 BP-TT-AOC22-MW 10-FRB-201812080.11058 | 31-Dec-18 | 19:05:04 |
| 53 | 53 181231M1_53 | 1804061-02 BPS1-TT-MW3111-FRB-20181209 0.11084 | 31-Dec-18 | 19:15:42 |
| 54 | 54 181231M1_54 | 1804061-03 BP-TT-AOC22-MW04-FRB-20181210 0.11701 | 31-Dec-18 | 19:26:20 |
| 55 | 55 181231M1_55 | 1804061-04 BP-MH-SW4001-FRB-20181211 0.11792 | 31-Dec-18 | 19:36:53 |
| 56 | 56 181231M1_56 | 1804077-01 FT-PZ4581-20181211 0.2338 | 31-Dec-18 | 19:47:31 |
| 57 | 57 181231M1_57 | 1804077-02 FT-PZ4601-201812110.23758 | 31-Dec-18 | 19:58:04 |
| 58 | 58 181231M1_58 | 1804077-03 FT-PZ4611-20181211 0.23672 | 31-Dec-18 | 20:08:42 |
| 59. | 59 181231M1_59 | 1804077-04 FT-PZ464S-201812110.23223 | 31-Dec-18 | 20:19:20 |
| 60 | 60 181231M1_60 | IPA | 31-Dec-18 | 20:29:53 |
| 61 | 61 181231M1_61 | ST181231M1-5 PFC CS3 18L2606 | 31-Dec-18 | 20:40:31 |
| 62 | 62 181231M1_62 | 1804077-05 DUP01-201812110.24868 | 31-Dec-18 | 20:51:04 |
| 63 | 63 181231M1_63 | 1804077-06 FT-PZ464S-FRB-20181211 0.25357 | 31-Dec-18 | 21:01:42 |
| 64 | 64 181231M1_64 | B8L0194-BLK1 Method Blank 0.125 | 31-Dec-18 | 21:12:14 |
| 65 | 65 181231M1_65 | B8L0194-BS1 OPR 0.125 | 31-Dec-18 | 21:22:53 |
| 66 | 66 181231M1_66 | 1804053-01RE1 Dover Wastewater Facility Eff. After | 31-Dec-18 | 21:33:26 |
| 67 | 67 181231M1_67 | B8L0152-BLK1 Method Blank 0.25 | 31-Dec-18 | 21:44:05 |
| 68 - ${ }^{6}$ | 68 181231M1_68 | B8L0152-BS1 OPR 0.25 | 31-Dec-18 | 21:54:38 |

Dataset: Untitled

Last Altered: Wednesday, January 02, 2019 07:51:01 Pacific Standard Time
Printed:
Wednesday, January 02, 2019 07:51:05 Pacific Standard Time

## Compound name: PFBA



Last Altered: Wednesday, January 02, 2019 07:51:01 Pacific Standard Time
Printed: Wednesday, January 02, 2019 07:51:05 Pacific Standard Time

## Compound name: PFBA

|  | \# Name | 10. | Acq. Date | Acq. Time |
| :---: | :---: | :---: | :---: | :---: |
| 105 | 1... 181231M1_105 | IPA | 01-Jan-19 | 04:26:43 |
| 106 | 1... 181231M1_106 | ST181231M1-8 PFC CS3 18L2606 | 01-Jan-19 | 04:37:22 |
| 107 | 1... 181231M1_107 | 1804141-05 FB1812131440LEM 0.22972 | 01-Jan-19 | 04:47:56 |
| 108 | 1... 181231.M1_108 | 1804141-09 EB1812131600LEM 0.22901 | 01-Jan-19 | 04:58:34 |
| 109 | 1... 181231M1_109 | 1804141-10 CL01MW1 1812140955LEM 0.23476 | 01-Jan-19 | 05:09:06 |
| 110 | 1... 181231M1_110 | 1804141-11 CL01MW21812141100LEM 0.23518 | 01-Jan-19 | 05:19:44 |
| 111 | 1... 181231M1_111 | 1804141-12 FD1812141115LEM 0.23646 | 01-Jan-19 | 05:30:18 |
| 112 | 1... 181231M1_112 | 1804141-13 CL01MW41812141220LEM 0.22953 | 01-Jan-19 | 05:40:56 |
| 113 | 1... 181231M1_113 | 1804141-14 CL01MW31812141325LEM 0.24134 | 01-Jan-19 | 05:51:29 |
| 114 | 1... 181231M1_114 | 1804142-05 CL01DR21812131035SK 0.22294 | 01-Jan-19 | 06:02:07 |
| 115 | 1... 181231M1_115 | 1804142-10 CL01SW51812131235SK 0.2163 | 01-Jan-19 | 06:12:40 |
| 116 | 1... 181231M1_116 | 1803583-05@50X BS1810310830GC-A 0.12089 | 01-Jan-19 | 06:23:18 |
| 117 | 1... 181231M1_117 | IPA | 01-Jan-19 | 06:33:50 |
| 118 | 1... 181231M1_118 | B8L0208-BLK1 Method Blank 0.125 | 01-Jan-19 | 06:44:29 |
| 119 | 1... 181231M1_119 | B8L0208-BS1 OPR 0.125 | 01-Jan-19 | 06:54:59 |
| 120 | 1... 181231M1_120 | 1804132-01RE1 Cooling Tower Blowdown 0.10964 | 01-Jan-19 | 07:05:38 |
| 121 | 1... 181231M1_121 | 1804132-02RE1 Pump Station 120.11289 | 01-Jan-19 | 07:16:11 |
| 122 | 1... 181231M1_122 | IPA | 01-Jan-19 | 07:26:49 |
| 123 | 1... 181231M1_123 | ST181231M1-9 PFC CS3 18L2606 | 01-Jan-19 | 07:37:21 |
| 124 | 1... 181231M1_124 | 1804132-03RE1 Boiler Dup 0.11539 | 01-Jan-19 | 07:48:00 |
| 125 | 1... 181231M1_125 | 1804132-04RE1 Boiler Blow Down 0.11329 | 01-Jan-19 | 07:58:32 |
| 126 | 1... 181231M1_126 | 1804132-05RE1 Inlet 0.11744 | 01-Jan-19 | 08:09:10 |
| 27 | 1... 181231M1_127 | 1804132-06RE1 Cooling Tower Dup 0.11207 | 01-Jan-19 | 08:19:42 |
| 128 | 1... 181231M1_128 | 1804132-07RE1 Field Blank 0.1158 | 01-Jan-19 | 08:30:21 |
| 129 | 1... 181231M1_129 | 1804169-01 RAW-IRELAND 0.11355 | 01-Jan-19 | 08:40:53 |
| 130 | 1... 181231M1_130 | 1804169-02 GAC-HIGH-IRELAND 0.11795 | 01-Jan-19 | 08:51:32 |
| 131 | 1... 181231M1_131 | 1804169-03 1X-HIGH-IRELAND 0.11379 | 01-Jan-19 | 09:02:04 |
| 132 | 1... 181231M1_132 | 1804171-01 S-1 0.11171 | 01-Jan-19 | 09:12:42 |
| 133 | 1... 181231M1_133 | 1804171-02 S-2 0.11547 | 01-Jan-19 | 09:23:15 |
| 134 | 1... 181231M1_134 | 1804171-03 S-3 0.11757 | 01-Jan-19 | 09:33:54 |
| 135 | 1... 181231M1_135 | IPA | 01-Jan-19 | 09:44:32 |
| 136 | 1... 181231M1_136 | ST181231M1-10 PFC CS3 18 L 2606 | 01-Jan-19 | 09:55:05 |


| Dataset: | F:IProjects\PFAS.PRO\Results\181231M1\181231M1-45.qld |
| :--- | :--- |
| Last Altered: | Wednesday, January 02, 2019 08:07:00 Pacific Standard Time |
| Printed: | Wednesday, January 02, 2019 08:07:03 Pacific Standard Time |

Name: 181231M1_45, Date: 31-Dec-2018, Time: 17:50:58, ID: ST181231M1-4 PFC CS3 18L2606, Description: PFC CS3 18L2606

|  | \# Name | Trace | Area | IS Area | wivol | RT. | Response | Conce | \%RRec | Recovery | Ion Ratio | Ratio OUIT: |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 PFBA | $213.0>168.8$ | 5482.832 | 5797.271 | 1.00 | 1.32 | 11.822 | 10.0 | 100.4 | NO |  |  |  |
| 2 | 2 PFPeA | $263.1>218.9$ | 8359.353 | 9992.146 | 1.00 | 2.58 | 10.457 | 10.2 | 101.6 | NO |  |  |  |
| 3 | 3 PFBS | $299.0>79.7$ | 2493.114 | 1414.998 | 1.00 | 2.91 | 22.024 | 10.7 | 106.8 | NO | 3.169 | NO |  |
| 4 | 4 4:2 FTS | $327.2>307.2$ | 3535.987 | 3960.798 | 1.00 | 3.40 | 11.159 | 10.0 | 100.3 | NO | 1.796 | NO |  |
| 5 | 5 PFHXA | $313>269$ | 14797.602 | 7282.850 | 1.00 | 3.48 | 10.159 | 10.2 | 102.3 | NO | 14.071 | NO |  |
| 6 . | 6 PFPeS | $349.1>80.1$ | 1922.729 | 1414.998 | 1.00 | 3.70 | 16.985 | 9.7 | 97.2 | NO | 1.659 | NO |  |
| 7 | 36 13C3-PFBA | $216.1>171.8$ | 5797.271 | 7487.160 | 1.00 | 1.33 | 9.679 | 13.3 | 106.5 | NO |  |  |  |
| 8 | 37 13C3-PFPeA | 266. > 221.8 | 9992.146 | 19779.764 | 1.00 | 2.58 | 6.315 | 12.4 | 98.9 | NO |  |  |  |
| 9 ${ }^{\text {a }}$ | 38 13C3-PFBS | 302. $>98.8$ | 1414.998 | 2922.698 | 1.00 | 2.91 | 6.052 | 12.2 | 97.3 | NO |  |  |  |
| 10 | 39 13C2-4:2 FTS | $329.2>308.9$ | 3960.798 | 2922.698 | 1.00 | 3.40 | 16.940 | 12.9 | 103.4 | NO |  |  |  |
| 11. | 40 13C2-PFHxA | $315>270$ | 7282.850 | . 19779.764 | 1.00 | 3.49 | 4.602 | 4.9 | 97.2 | NO |  |  |  |
| 12\% | 38 13C3-PFBS | 302. > 98.8 | 1414.998 | 2922.698 | 1.00 | 2.91 | 6.052 | 12.2 | 97.3 | NO |  |  |  |
| 13.5 | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 14. | 10 6:2 FTS | $427.1>407$ | 4512.272 | 3037.379 | 1.00 | 4.58 | 18.570 | 10.4 | 104.2 | NO | 3.030 | NO |  |
| 15 \% | 7 PFHpA | $363.0>318.9$ | 11008.230 | 9401.326 | 1.00 | 4.15 | 14.637 | 9.9 | 99.1 | NO | 13.363 | NO |  |
| 16 \% | 8 L-PFHxS | $398.9>79.6$ | 1974.940 | 1245.625 | 1.00 | 4.28 | 19.819 | 9.8 | 97.8 | NO | 1.793 | NO |  |
| 17 | 11 L-PFOA | $412.8>368.9$ | 20549.586 | 17727.439 | 1.00 | 4.63 | 14.490 | 9.8 | 97.9 | NO | 3.112 | NO |  |
| 18 | 13 PFHpS | $449>80.0$ | 2343.744 | 3118.468 | 1.00 | 4.74 | 9.395 | 11.1 | 110.7 | NO | 1.973 | NO |  |
| 19 | 14 PFNA | $463.0>418.8$ | 16553.273 | 16332.004 | 1.00 | 5.06 | 12.669 | 10.1 | 100.6 | NO | 4.436 | NO |  |
| 20 家 | 43 13C2-6:2 FTS | $428.9>80.9$ | 3037.379 | 3158.903 | 1.00 | 4.58 | 12.019 | 13.1 | 104.5 | NO |  |  |  |
| $21$ | 41 13C4-PFHpA | $367.2>321.8$ | 9401.326 | 19779.764 | 1.00 | 4.15 | 5.941 | 12.3 | 98.2 | NO |  |  |  |
| 22. | 42 1802-PFHxS | $403.0>102.6$ | 1245.625 | 2922.698 | 1.00 | 4.28 | 5.327 | 12.9 | 103.0 | NO |  |  |  |
| $23$ | 44 13C2-PFOA | $414.9>369.7$ | 17727.439 | 24085.984 | 1.00 | 4.63 | 9.200 | 13.6 | 108.6 | NO |  |  |  |
| 24 | 47 13C8-PFOS | $507.0>79.9$ | 3118.468 | 3158.903 | 1.00 | 5.15 | 12.340 | 11.9 | 95.1 | NO |  |  |  |
| 25 | 45 13C5-PFNA | $468.2>422.9$ | 16332.004 | 16768.844 | 1.00 | 5.06 | 12.174 | 12.8 | 102.6 | NO |  |  |  |
| $26$ | -1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 27: | 15 PFOSA | $497.9>77.9$ | 4573.172 | 5250.269 | 1.00 | 5.10 | 10.888 | 9.7 | 97.3 | NO | 28.368 | NO |  |
| 28. | 16 L-PFOS | $498.9>79.9$ | 2800.115 | 3118.468 | 1.00 | 5.15 | 11.224 | 10.2 | 102.3 | NO | 2.017 | NO | $12 / 19$ |
| 29 | 18 PFDA | $513>468.8$ | 19393.260 | 17567.658 | 1.00 | 5.45 | 13.799 | 11.1 | 111. | NO | 5.997 | NO | 11 |
| 30. | 19 8:2 FTS | $527>506.9$ | 4492.854 | 3556.193 | 1.00 | 5.41 | 15.792 | 10.6 | 106.4 | NO | 2.468 | NO |  |
| $31=3$ | 20 PFNS | $549.1>80.1$ | 1903.654 | 3118.468 | 1.00 | 5.51 | 7.631 | 10.6 | 105.9 | NO | 1.694 | NO |  |
| 32. | 21 L-MeFOSAA | $570>419$ | 7583.406 | 3341.901 | 1.00 | 5.60 | 28.365 | 10.5 | 105.3 | NO | 2.316 | NO |  |
| 33 : | 46 13C8-PFOSA | $506.1>77.7$ | 5250.269 | 23313.270 | 1.00 | 5.11 | 2.815 | 14.8 | 118.6 | NO |  |  | 1 |
| 34 \% | 47 13C8-PFOS | $507.0>79.9$ | 3118.468 | 3158.903 | 1.00 | 5.15 | 12.340 | 11.9 | 95.1 | NO |  |  | ${ }^{2}$ |
| $35 \%$ | 48 13C2-PFDA | $515.1>469.9$ | 17567.658 | 18911.303 | 1.00 | 5.45 | 11.612 | 12.4 | 99.2 | NO |  |  |  |
| 36 . H , | 49 13C2-8:2 FTS | $529.1>508.7$ | 3556.193 | 3158.903 | 1.00 | 5.41 | 14.072 | 12.7 | 101.4 | NO |  |  |  |

Name: 181231M1_45, Date: 31-Dec-2018, Time: 17:50:58, ID: ST181231M1-4 PFC CS3 18L2606, Description: PFC CS3 18L2606


Dataset: F:IProjects\PFAS.PRO\Results\181231M1\181231M1-45.qld
Last Altered: Wednesday, January 02, 2019 08:07:00 Pacific Standard Time
Printed:
Wednesday, January 02, 2019 08:07:03 Pacific Standard Time

## Name: 181231M1_45, Date: 31-Dec-2018, Time: 17:50:58, ID: ST181231M1-4 PFC CS3 18L2606, Description: PFC CS3 $18 L 2606$

|  | \# Name | Trace | Area | IS Area | wivol | RT | Response | Conc. | \% Riec | Recover | lon Ratio | Ratio Out? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 73 | 67 13C7-PFUdA | $570.1>524.8$ | 23313.270 | 23313.270 | 1.00 | 5.77 | 12.500 | 12.5 | 100.0 | NO |  |  |

Dataset: F:IProjects\PFAS.PROIResults\181231M1\181231M1-61.qld
Last Altered: Wednesday, January 02, 2019 08:08:22 Pacific Standard Time Printed: Wednesday, January 02, 2019 08:08:35 Pacific Standard Time

Name: 181231M1_61, Date: 31-Dec-2018, Time: 20:40:31, ID: ST181231M1-5 PFC CS3 18L2606, Description: PFC CS3 $18 L 2606$


| Dataset: | F:IProjects\PFAS.PRO\Resultsl181231M1\181231M1-61.qld |
| :--- | :--- |
| Last Altered: | Wednesday, January 02, 2019 08:08:22 Pacific Standard Time |
| Printed: | Wednesday, January 02, 2019 08:08:35 Pacific Standard Time |

Name: 181231M1_61, Date: 31-Dec-2018, Time: 20:40:31, ID: ST181231M1-5 PFC CS3 18L2606, Description: PFC CS3 18L2606


Name: 181231M1_61, Date: 31-Dec-2018, Time: 20:40:31, ID: ST181231M1-5 PFC CS3 18L2606, Description: PFC CS3 18L2606

|  | \# Name | Trace | Area | IS Area | wivol | BT | Response | Conc: | \%Reg | Recover -- IonRatio | Rate Out? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 73 | 67 13C7-PFUdA | $570.1>524.8$ | 19749.115 | 19749.115 | 1.00 | 5.77 | 12.500 | 12.5 | 100.0 | NO |  |



Name: 181231M1_77, Date: 31-Dec-2018, Time: 23:30:02, ID: ST181231M1-6 PFC CS3 18L2606, Description: PFC CS3 18L2606


| Dataset: | F:IProjects\PFAS.PRO\Results\181231M1\181231M1-77.qld |
| :--- | :--- |
|  |  |
| Last Altered: | Wednesday, January 02, 2019 08:12:14 Pacific Standard Time |
| Printed: | Wednesday, January 02, 2019 08:12:31 Pacific Standard Time |

Name: 181231M1_77, Date: 31-Dec-2018, Time: 23:30:02, ID: ST181231M1-6 PFC CS3 18L2606, Description: PFC CS3 18L2606

Dataset: $\quad$ F:IProjects\PFAS.PRO\Results1181231M1 1181231M1-77.qid

| Last Altered: | Wednesday, January 02, 2019 08:12:14 Pacific Standard Time |
| :--- | :--- |
| Printed: | Wednesday, January 02, 2019 08:12:31 Pacific Standard Time |

Name: 181231M1_77, Date: 31-Dec-2018, Time: 23:30:02, ID: ST181231M1-6 PFC CS3 18L2606, Description: PFC CS3 18L2606


