NAVFAC
Naval Facilities Engineering Command

Groundwater Sample Results, Electronic Data Deliverable, Data Validation Report, Sample Location Report, SDG C095296

NS

Treasure Island, CA

April 2021

CONTRACT ID	DO CTO NUMBER	PHASE	INSTALLATION ID	SAMPLE NAME	ANALYTICAL METHOD	LAB NAME	CONTRACTOR NAME	LEACHATE METHOD	SAMPLE BASIS	EXTRACTION METHOD	RESULT TYPE	SAMPLE MEDIUM	CLEANUP METHOD	QC LEVEL	LEACHATE DATE	LEACHATE TIME	EXTRACTION DATE	EXTRACTION TIME	ANALYSIS DATE	ANALYSIS TIME	LAB SAMPLE ID	LAB REPORT DATE	LAB REPORT NUMBER	FILTER SIZE	DILUTION	RUN NUMBER	PERCENT MOISTURE	PERCENT LIPID	ANALYTE ID	PARNAME
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			375-95-1	PERFLUORONONANOIC ACID (PFNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			335-67-1	PERFLUOROOCTANOIC ACID (PFOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			1763-23-1	PERFLUOROOCTANESULFONIC ACID (PFOS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			376-06-7	PERFLUOROTETRADECANOIC ACID (PFTEDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			72629-94-8	PERLUOROTRIDECANOIC ACID (PFTRA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			2058-94-8	PERFLUOROUNDECANOIC ACID (PFUNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	04:34:00	MLP506		C095296		1.00	1			4151-50-2	N-ETHYLPERFLUORO-1-OCTANESULFONAMIDE (N-ETFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	04:34:00	MLP506		C095296		1.00	1			31506-32-8	N-METHYLPERFLUORO-1-OCTANESULFONAMIDE (N-MEFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:52:00	MLP506		C095296		1.00	1			375-73-5	PERFLUOROBUTANESULFONIC ACID (PFBS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:52:00	MLP506		C095296		1.00	1			335-76-2	PERFLUORODECANOIC ACID (PFDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:52:00	MLP506		C095296		1.00	1			307-55-1	PERFLUORODODECANOIC ACID (PFDOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:52:00	MLP506		C095296		1.00	1			375-85-9	PERFLUOROHEPTANOIC ACID (PFHPA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:52:00	MLP506		C095296		1.00	1			307-24-4	PERFLUOROHEXANOIC ACID (PFHXA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:52:00	MLP506		C095296		1.00	1			355-46-4	PERFLUOROHEXANESULFONIC ACID (PFHXS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:52:00	MLP506		C095296		1.00	1			375-95-1	PERFLUORONONANOIC ACID (PFNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:52:00	MLP506		C095296		1.00	1			335-67-1	PERFLUOROOCTANOIC ACID (PFOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:52:00	MLP506		C095296		1.00	1			1763-23-1	PERFLUOROOCTANESULFONIC ACID (PFOS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:52:00	MLP506		C095296		1.00	1			376-06-7	PERFLUOROTETRADECANOIC ACID (PFTEDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			2058-94-8	PERFLUOROUNDECANOIC ACID (PFUNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			4151-50-2	N-ETHYLPERFLUORO-1-OCTANESULFONAMIDE (N-ETFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			31506-32-8	N-METHYLPERFLUORO-1-OCTANESULFONAMIDE (N-MEFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			375-73-5	PERFLUOROBUTANESULFONIC ACID (PFBS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			335-76-2	PERFLUORODECANOIC ACID (PFDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			307-55-1	PERFLUORODODECANOIC ACID (PFDOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			375-85-9	PERFLUOROHEPTANOIC ACID (PFHPA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			307-24-4	PERFLUOROHEXANOIC ACID (PFHXA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW36-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:45:00	MLP505		C095296		1.00	1			355-46-4	PERFLUOROHEXANESULFONIC ACID (PFHXS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:52:00	MLP506		C095296		1.00	1			72629-94-8	PERLUOROTRIDECANOIC ACID (PFTRA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	QCFB-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:50	20200422	02:52:00	MLP506		C095296		1.00	1			2058-94-8	PERFLUOROUNDECANOIC ACID (PFUNA)
N6247316C2018	0000	QTR220	SITE 00006	06-MW33-0420	6020A	EMAX LABORATORIES	NOREAS, INC.	NONE	F	FLDFLT	000			3			20200428	11:20:00	20200429	14:10:00	20D145-01				1	1			7440-38-2	ARSENIC
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			4151-50-2	N-ETHYLPERFLUORO-1-OCTANESULFONAMIDE (N-ETFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			31506-32-8	N-METHYLPERFLUORO-1-OCTANESULFONAMIDE (N-MEFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			375-73-5	PERFLUOROBUTANESULFONIC ACID (PFBS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			335-76-2	PERFLUORODECANOIC ACID (PFDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			307-55-1	PERFLUORODODECANOIC ACID (PFDOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			375-85-9	PERFLUOROHEPTANOIC ACID (PFHPA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			307-24-4	PERFLUOROHEXANOIC ACID (PFHXA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			355-46-4	PERFLUOROHEXANESULFONIC ACID (PFHXS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			375-95-1	PERFLUORONONANOIC ACID (PFNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			335-67-1	PERFLUOROOCTANOIC ACID (PFOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			1763-23-1	PERFLUOROOCTANESULFONIC ACID (PFOS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			376-06-7	PERFLUOROTETRADECANOIC ACID (PFTEDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			72629-94-8	PERLUOROTRIDECANOIC ACID (PFTRA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW25-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	03:45:00	MLP496		C095296		1.00	1			2058-94-8	PERFLUOROUNDECANOIC ACID (PFUNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			4151-50-2	N-ETHYLPERFLUORO-1-OCTANESULFONAMIDE (N-ETFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			31506-32-8	N-METHYLPERFLUORO-1-OCTANESULFONAMIDE (N-MEFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			375-73-5	PERFLUOROBUTANESULFONIC ACID (PFBS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			335-76-2	PERFLUORODECANOIC ACID (PFDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			307-55-1	PERFLUORODODECANOIC ACID (PFDOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			375-85-9	PERFLUOROHEPTANOIC ACID (PFHPA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			307-24-4	PERFLUOROHEXANOIC ACID (PFHXA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			355-46-4	PERFLUOROHEXANESULFONIC ACID (PFHXS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			375-95-1	PERFLUORONONANOIC ACID (PFNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			335-67-1	PERFLUOROOCTANOIC ACID (PFOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			1763-23-1	PERFLUOROOCTANESULFONIC ACID (PFOS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			376-06-7	PERFLUOROTETRADECANOIC ACID (PFTEDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			72629-94-8	PERLUOROTRIDECANOIC ACID (PFTRA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW26-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:12:00	MLP497		C095296		1.00	1			2058-94-8	PERFLUOROUNDECANOIC ACID (PFUNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:26:00	MLP498		C095296		1.00	1			4151-50-2	N-ETHYLPERFLUORO-1-OCTANESULFONAMIDE (N-ETFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:26:00	MLP498		C095296		1.00	1			31506-32-8	N-METHYLPERFLUORO-1-OCTANESULFONAMIDE (N-MEFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:26:00	MLP498		C095296		1.00	1			375-73-5	PERFLUOROBUTANESULFONIC ACID (PFBS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:26:00	MLP498		C095296		1.00	1			335-76-2	PERFLUORODECANOIC ACID (PFDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:26:00	MLP498		C095296		1.00	1			307-55-1	PERFLUORODODECANOIC ACID (PFDOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:26:00	MLP498		C095296		1.00	1			375-85-9	PERFLUOROHEPTANOIC ACID (PFHPA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:26:00	MLP498		C095296		1.00	1			307-24-4	PERFLUOROHEXANOIC ACID (PFHXA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:26:00	MLP498		C095296		1.00	1			355-46-4	PERFLUOROHEXANESULFONIC ACID (PFHXS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:26:00	MLP498		C095296		1.00	1			375-95-1	PERFLUORONONANOIC ACID (PFNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:26:00	MLP498		C095296		1.00	1			335-67-1	PERFLUOROOCTANOIC ACID (PFOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:26:00	MLP498		C095296		1.00	1			1763-23-1	PERFLUOROOCTANESULFONIC ACID (PFOS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	04:20:00	MLP498		C095296		1.00	1			376-06-7	PERFLUOROTETRADECANOIC ACID (PFTEDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	04:20:00	MLP498		C095296		1.00	1			72629-94-8	PERLUOROTRIDECANOIC ACID (PFTRA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW30-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:48	20200422	00:26:00	MLP498		C095296		1.00	1			2058-94-8	PERFLUOROUNDECANOIC ACID (PFUNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			4151-50-2	N-ETHYLPERFLUORO-1-OCTANESULFONAMIDE (N-ETFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			31506-32-8	N-METHYLPERFLUORO-1-OCTANESULFONAMIDE (N-MEFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			375-73-5	PERFLUOROBUTANESULFONIC ACID (PFBS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			335-76-2	PERFLUORODECANOIC ACID (PFDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			307-55-1	PERFLUORODODECANOIC ACID (PFDOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			375-85-9	PERFLUOROHEPTANOIC ACID (PFHPA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			307-24-4	PERFLUOROHEXANOIC ACID (PFHXA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			355-46-4	PERFLUOROHEXANESULFONIC ACID (PFHXS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			375-95-1	PERFLUORONONANOIC ACID (PFNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			335-67-1	PERFLUOROOCTANOIC ACID (PFOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			1763-23-1	PERFLUOROOCTANESULFONIC ACID (PFOS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			376-06-7	PERFLUOROTETRADECANOIC ACID (PFTEDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			72629-94-8	PERLUOROTRIDECANOIC ACID (PFTRA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW31-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	00:40:00	MLP499		C095296		1.00	1			2058-94-8	PERFLUOROUNDECANOIC ACID (PFUNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			4151-50-2	N-ETHYLPERFLUORO-1-OCTANESULFONAMIDE (N-ETFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			31506-32-8	N-METHYLPERFLUORO-1-OCTANESULFONAMIDE (N-MEFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			375-73-5	PERFLUOROBUTANESULFONIC ACID (PFBS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			335-76-2	PERFLUORODECANOIC ACID (PFDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			307-55-1	PERFLUORODODECANOIC ACID (PFDOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			375-85-9	PERFLUOROHEPTANOIC ACID (PFHPA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			307-24-4	PERFLUOROHEXANOIC ACID (PFHXA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			355-46-4	PERFLUOROHEXANESULFONIC ACID (PFHXS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			375-95-1	PERFLUORONONANOIC ACID (PFNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			335-67-1	PERFLUOROOCTANOIC ACID (PFOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			1763-23-1	PERFLUOROOCTANESULFONIC ACID (PFOS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			376-06-7	PERFLUOROTETRADECANOIC ACID (PFTEDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			72629-94-8	PERLUOROTRIDECANOIC ACID (PFTRA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:01:00	MLP500		C095296		5.00	1			2058-94-8	PERFLUOROUNDECANOIC ACID (PFUNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			4151-50-2	N-ETHYLPERFLUORO-1-OCTANESULFONAMIDE (N-ETFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			31506-32-8	N-METHYLPERFLUORO-1-OCTANESULFONAMIDE (N-MEFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			375-73-5	PERFLUOROBUTANESULFONIC ACID (PFBS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			335-76-2	PERFLUORODECANOIC ACID (PFDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			307-55-1	PERFLUORODODECANOIC ACID (PFDOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			375-85-9	PERFLUOROHEPTANOIC ACID (PFHPA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			307-24-4	PERFLUOROHEXANOIC ACID (PFHXA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			355-46-4	PERFLUOROHEXANESULFONIC ACID (PFHXS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			375-95-1	PERFLUORONONANOIC ACID (PFNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			335-67-1	PERFLUOROOCTANOIC ACID (PFOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			1763-23-1	PERFLUOROOCTANESULFONIC ACID (PFOS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			376-06-7	PERFLUOROTETRADECANOIC ACID (PFTEDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			72629-94-8	PERLUOROTRIDECANOIC ACID (PFTRA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW32-0420 DUP	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:28:00	MLP501		C095296		5.00	1			2058-94-8	PERFLUOROUNDECANOIC ACID (PFUNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:49:00	MLP502		C095296		2.00	1			4151-50-2	N-ETHYLPERFLUORO-1-OCTANESULFONAMIDE (N-ETFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		RA0	W		4			20200422	15:27:58	20200423	04:27:00	MLP502		C095296		1.00	1			31506-32-8	N-METHYLPERFLUORO-1-OCTANESULFONAMIDE (N-MEFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:49:00	MLP502		C095296		2.00	1			375-73-5	PERFLUOROBUTANESULFONIC ACID (PFBS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:49:00	MLP502		C095296		2.00	1			335-76-2	PERFLUORODECANOIC ACID (PFDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:49:00	MLP502		C095296		2.00	1			307-55-1	PERFLUORODODECANOIC ACID (PFDOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:49:00	MLP502		C095296		2.00	1			375-85-9	PERFLUOROHEPTANOIC ACID (PFHPA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:49:00	MLP502		C095296		2.00	1			307-24-4	PERFLUOROHEXANOIC ACID (PFHXA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:49:00	MLP502		C095296		2.00	1			355-46-4	PERFLUOROHEXANESULFONIC ACID (PFHXS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:49:00	MLP502		C095296		2.00	1			375-95-1	PERFLUORONONANOIC ACID (PFNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:49:00	MLP502		C095296		2.00	1			335-67-1	PERFLUOROOCTANOIC ACID (PFOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:49:00	MLP502		C095296		2.00	1			1763-23-1	PERFLUOROOCTANESULFONIC ACID (PFOS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:49:00	MLP502		C095296		2.00	1			376-06-7	PERFLUOROTETRADECANOIC ACID (PFTEDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:49:00	MLP502		C095296		2.00	1			72629-94-8	PERLUOROTRIDECANOIC ACID (PFTRA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW33-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		DL1	W		4			20200421	14:45:49	20200422	01:49:00	MLP502		C095296		2.00	1			2058-94-8	PERFLUOROUNDECANOIC ACID (PFUNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			4151-50-2	N-ETHYLPERFLUORO-1-OCTANESULFONAMIDE (N-ETFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			31506-32-8	N-METHYLPERFLUORO-1-OCTANESULFONAMIDE (N-MEFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			375-73-5	PERFLUOROBUTANESULFONIC ACID (PFBS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			335-76-2	PERFLUORODECANOIC ACID (PFDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			307-55-1	PERFLUORODODECANOIC ACID (PFDOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			375-85-9	PERFLUOROHEPTANOIC ACID (PFHPA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			307-24-4	PERFLUOROHEXANOIC ACID (PFHXA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			355-46-4	PERFLUOROHEXANESULFONIC ACID (PFHXS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			375-95-1	PERFLUORONONANOIC ACID (PFNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			335-67-1	PERFLUOROOCTANOIC ACID (PFOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			1763-23-1	PERFLUOROOCTANESULFONIC ACID (PFOS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			376-06-7	PERFLUOROTETRADECANOIC ACID (PFTEDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			72629-94-8	PERLUOROTRIDECANOIC ACID (PFTRA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW34-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:10:00	MLP503		C095296		1.00	1			2058-94-8	PERFLUOROUNDECANOIC ACID (PFUNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			4151-50-2	N-ETHYLPERFLUORO-1-OCTANESULFONAMIDE (N-ETFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			31506-32-8	N-METHYLPERFLUORO-1-OCTANESULFONAMIDE (N-MEFOSA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			375-73-5	PERFLUOROBUTANESULFONIC ACID (PFBS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			335-76-2	PERFLUORODECANOIC ACID (PFDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			307-55-1	PERFLUORODODECANOIC ACID (PFDOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			375-85-9	PERFLUOROHEPTANOIC ACID (PFHPA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			307-24-4	PERFLUOROHEXANOIC ACID (PFHXA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			355-46-4	PERFLUOROHEXANESULFONIC ACID (PFHXS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			375-95-1	PERFLUORONONANOIC ACID (PFNA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			335-67-1	PERFLUOROOCTANOIC ACID (PFOA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			1763-23-1	PERFLUOROOCTANESULFONIC ACID (PFOS)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			376-06-7	PERFLUOROTETRADECANOIC ACID (PFTEDA)
N6247316C2018	0000	QTR2 20	TREASURE ISLAND NS	06-MW35-0420	537 MOD	MAXXAM ANALYTICAL	NOREAS, INC.	NONE	NA		000	W		4			20200421	14:45:49	20200422	02:31:00	MLP504		C095296		1.00	1			72629-94-8	PERLUOROTRIDECANOIC ACID (PFTRA)

ANALYTE_VALUE	ORIGINAL_ANALYTE_VALUE	RESULT_UNITS	LAB_QUALIFIER	VALIDATOR_QUALIFIER	FINAL_QUALIFIER	DETECTED	QC_COLUMN_TYPE	ANALYSIS_RESULT_TYPE	RADIOLOGICAL_ERROR	RESULT_NARRATIVE	RETENTION_TIME	QC_CONTROL_LIMIT_CODE	QC_ACCURACY_UPPER	QC_ACCURACY_LOWER	CONTROL_LIMIT_DATE	RELATIVE_PCT_DIFF	QC_NARRATIVE	MDL	CDL	IDL	PQL	CRQL	DETECTION_LIMIT	VALIDATOR_DET_LIMIT	VALIDATOR_MDL	DL	LOD	LOQ	SDG	LEACH_LOT	METHOD_BATCH	PREP_BATCH	RUN_BATCH	ANALYSIS_BATCH	VALIDATOR_NAME
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0049					0.020			0.0049	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.081	0.081	UG L				Y	PR	TRG										0.0074					0.020			0.0074	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.77	0.77	UG L				Y	PR	TRG										0.0052					0.020			0.0052	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0067					0.020			0.0067	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0069					0.020			0.0069	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0043					0.020			0.0043	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.019	0.019	UG L	U	U	U	N	PR	TRG										0.0090					0.040			0.0090	0.019	0.040	C095296		6692764	6692764	6692764	6692764	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0035					0.040			0.0035	0.010	0.040	C095296		6692764	6692764	6692764	6692764	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0051					0.020			0.0051	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0041					0.020			0.0041	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0052					0.020			0.0052	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0067					0.020			0.0067	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.019	0.019	UG L	U	U	U	N	PR	TRG										0.0090					0.040			0.0090	0.019	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0035					0.040			0.0035	0.010	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0043					0.020			0.0043	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.019	0.019	UG L	U	U	U	N	PR	TRG										0.0090					0.040			0.0090	0.019	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0035					0.040			0.0035	0.010	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0051					0.020			0.0051	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0041					0.020			0.0041	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0068					0.020			0.0068	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0071					0.020			0.0071	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.0067	0.0067	UG L	J	J	J	Y	PR	TRG										0.0064					0.020			0.0064	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.065	0.065	UG L				Y	PR	TRG										0.0052					0.020			0.0052	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0049					0.020			0.0049	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.026	0.026	UG L				Y	PR	TRG										0.0074					0.020			0.0074	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.15	0.15	UG L				Y	PR	TRG										0.0052					0.020			0.0052	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	UJ	UJ	N	PR	TRG										0.0067					0.020			0.0067	0.015	0.020	C095296		6692764	6692764	6692764	6692764	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	UJ	UJ	N	PR	TRG										0.0069					0.020			0.0069	0.015	0.020	C095296		6692764	6692764	6692764	6692764	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0043					0.020			0.0043	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.019	0.019	UG L	U	U	U	N	PR	TRG										0.0090					0.040			0.0090	0.019	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0035					0.040			0.0035	0.010	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.020	0.020	UG L				Y	PR	TRG										0.0051					0.020			0.0051	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0041					0.020			0.0041	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0068					0.020			0.0068	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.039	0.039	UG L				Y	PR	TRG										0.0052					0.020			0.0052	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0067					0.020			0.0067	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0069					0.020			0.0069	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0043					0.020			0.0043	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.095	0.095	UG L	U	U	U	N	PR	TRG										0.045					0.20			0.045	0.095	0.20	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.050	0.050	UG L	U	U	U	N	PR	TRG										0.018					0.20			0.018	0.050	0.20	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.15	0.15	UG L				Y	PR	TRG										0.026					0.10			0.026	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.050	0.050	UG L	U	U	U	N	PR	TRG										0.021					0.10			0.021	0.050	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.075	0.075	UG L	U	U	U	N	PR	TRG										0.034					0.10			0.034	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
1.7	1.7	UG L				Y	PR	TRG										0.036					0.10			0.036	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
2.8	2.8	UG L				Y	PR	TRG										0.032					0.10			0.032	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
9.2	9.2	UG L				Y	PR	TRG										0.26					1.0			0.26	0.75	1.0	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.11	0.11	UG L				Y	PR	TRG										0.025					0.10			0.025	0.050	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
2.0	2.0	UG L				Y	PR	TRG										0.037					0.10			0.037	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
30	30	UG L				Y	PR	TRG										0.26					1.0			0.26	0.75	1.0	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.075	0.075	UG L	U	U	U	N	PR	TRG										0.034					0.10			0.034	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.075	0.075	UG L	U	U	U	N	PR	TRG										0.035					0.10			0.035	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.050	0.050	UG L	U	U	U	N	PR	TRG										0.022					0.10			0.022	0.050	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.095	0.095	UG L	U	U	U	N	PR	TRG										0.045					0.20			0.045	0.095	0.20	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.050	0.050	UG L	U	U	U	N	PR	TRG										0.018					0.20			0.018	0.050	0.20	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.17	0.17	UG L				Y	PR	TRG										0.026					0.10			0.026	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.050	0.050	UG L	U	U	U	N	PR	TRG										0.021					0.10			0.021	0.050	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.075	0.075	UG L	U	U	U	N	PR	TRG										0.034					0.10			0.034	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
1.8	1.8	UG L				Y	PR	TRG										0.036					0.10			0.036	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
3.0	3.0	UG L				Y	PR	TRG										0.032					0.10			0.032	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
8.1	8.1	UG L				Y	PR	TRG										0.26					1.0			0.26	0.75	1.0	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.12	0.12	UG L				Y	PR	TRG										0.025					0.10			0.025	0.050	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
2.1	2.1	UG L				Y	PR	TRG										0.037					0.10			0.037	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
27	27	UG L				Y	PR	TRG										0.26					1.0			0.26	0.75	1.0	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.075	0.075	UG L	U	U	U	N	PR	TRG										0.034					0.10			0.034	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.075	0.075	UG L	U	U	U	N	PR	TRG										0.035					0.10			0.035	0.075	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.050	0.050	UG L	U	U	U	N	PR	TRG										0.022					0.10			0.022	0.050	0.10	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.038	0.038	UG L	U	U	U	N	PR	TRG										0.018					0.080			0.018	0.038	0.080	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0035					0.040			0.0035	0.010	0.040	C095296		6692764	6692764	6692764	6692764	LABORATORY DATA CONSULTANTS
0.12	0.12	UG L				Y	PR	TRG										0.010					0.040			0.010	0.030	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.020	0.020	UG L	U	U	U	N	PR	TRG										0.0082					0.040			0.0082	0.020	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.030	0.030	UG L	U	U	U	N	PR	TRG										0.014					0.040			0.014	0.030	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.87	0.87	UG L				Y	PR	TRG										0.014					0.040			0.014	0.030	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
1.8	1.8	UG L				Y	PR	TRG										0.013					0.040			0.013	0.030	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
2.9	2.9	UG L				Y	PR	TRG										0.10					0.40			0.10	0.30	0.40	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.059	0.059	UG L				Y	PR	TRG										0.0098					0.040			0.0098	0.020	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
2.0	2.0	UG L				Y	PR	TRG										0.015					0.040			0.015	0.030	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
11	11	UG L				Y	PR	TRG										0.10					0.40			0.10	0.30	0.40	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.030	0.030	UG L	U	U	U	N	PR	TRG										0.013					0.040			0.013	0.030	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.030	0.030	UG L	U	U	U	N	PR	TRG										0.014					0.040			0.014	0.030	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.020	0.020	UG L	U	U	U	N	PR	TRG										0.0086					0.040			0.0086	0.020	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.019	0.019	UG L	U	U	U	N	PR	TRG										0.0090					0.040			0.0090	0.019	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0035					0.040			0.0035	0.010	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.014	0.014	UG L	J	J	J	Y	PR	TRG										0.0051					0.020			0.0051	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0041					0.020			0.0041	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0068					0.020			0.0068	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.054	0.054	UG L				Y	PR	TRG										0.0071					0.020			0.0071	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.15	0.15	UG L				Y	PR	TRG										0.0064					0.020			0.0064	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.46	0.46	UG L				Y	PR	TRG										0.0052					0.020			0.0052	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0049					0.020			0.0049	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.10	0.10	UG L				Y	PR	TRG										0.0074					0.020			0.0074	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
1.8	1.8	UG L				Y	PR	TRG										0.052					0.20			0.052	0.15	0.20	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0067					0.020			0.0067	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0069					0.020			0.0069	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0043					0.020			0.0043	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.019	0.019	UG L	U	U	U	N	PR	TRG										0.0090					0.040			0.0090	0.019	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0035					0.040			0.0035	0.010	0.040	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.026	0.026	UG L				Y	PR	TRG										0.0051					0.020			0.0051	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.010	0.010	UG L	U	U	U	N	PR	TRG										0.0041					0.020			0.0041	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0068					0.020			0.0068	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.16	0.16	UG L				Y	PR	TRG										0.0071					0.020			0.0071	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.29	0.29	UG L				Y	PR	TRG										0.0064					0.020			0.0064	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
1.2	1.2	UG L				Y	PR	TRG										0.052					0.20			0.052	0.15	0.20	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.026	0.026	UG L				Y	PR	TRG										0.0049					0.020			0.0049	0.010	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.21	0.21	UG L				Y	PR	TRG										0.0074					0.020			0.0074	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
4.1	4.1	UG L				Y	PR	TRG										0.052					0.20			0.052	0.15	0.20	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0067					0.020			0.0067	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS
0.015	0.015	UG L	U	U	U	N	PR	TRG										0.0069					0.020			0.0069	0.015	0.020	C095296		6690634	6690634	6690634	6690634	LABORATORY DATA CONSULTANTS

VALIDATION QC	VAL DATE	REPORTABLE RESULT	REASON CODES	SAMPLING DATE
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LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

NOREAS, Inc.
16501 Scientific Way
Irvine, CA 92618
ATTN: Ms. Sevda Aleckson
Sevda.Aleckson@noreasinc.com

May 28, 2020

SUBJECT: Treasure Island, IR Site 6 Data Validation

Dear Ms. Aleckson,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on May 8, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #48034:

SDG #	Fraction:
20D083/C095296 20D145	Dissolved Arsenic, Perfluoroalkyl & Polyfluoroalkyl Substances

The data validation was performed under Level III & IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- Final Sampling and Analysis Plan, Field Sampling Plan and Quality Assurance Project Plan, Basewide Groundwater and Soil Gas Monitoring at Installation Restoration Sites 6, 12, 21, and 24, Former Naval Station Treasure Island, San Francisco, California; April 2017
- U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 5.3; 2019
- USEPA National Functional Guidelines for Superfund Organic Methods Data Review; August 2014
- USEPA National Functional Guidelines for Inorganic Superfund Data Review; August 2014
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

912 pages-DL

Attachment 1

NEDD/NIRIS **Client Select** **LDC #48034 (Noreas, Inc.-Irvine, CA/ Treasure Island, IR Site 6)**

LDC	SDG#	DATE REC'D	(3) DATE DUE	Diss. As (6020A)		PFAs (537M)																															
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	20D083 /C095296	05/08/20	06/01/20	-	-	11	0																														
B	20D145	05/08/20	06/01/20	1	0	-	-																														
Total	J/PG			1	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS/MSD, and DUPs

L:\Noreas\Treasure Island\48034ST-Site 6.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Treasure Island, IR Site 6

LDC Report Date: May 27, 2020

Parameters: Perfluoroalkyl & Polyfluoroalkyl Substances

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc./Bureau Veritas Canada, Inc.

Sample Delivery Group (SDG): 20D083/C095296

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
06-MW25-0420	20D083-01/MLP496	Water	04/08/20
06-MW26-0420	20D083-02/MLP497	Water	04/08/20
06-MW30-0420	20D083-03/MLP498	Water	04/08/20
06-MW31-0420	20D083-04/MLP499	Water	04/08/20
06-MW32-0420	20D083-05/MLP500	Water	04/08/20
06-MW32-0420 DUP	20D083-06/MLP501	Water	04/08/20
06-MW33-0420	20D083-07/MLP502	Water	04/08/20
06-MW34-0420	20D083-08/MLP503	Water	04/08/20
06-MW35-0420	20D083-09/MLP504	Water	04/08/20
06-MW36-0420	20D083-10/MLP505	Water	04/08/20
QCFB-0420	20D083-11/MLP506	Water	04/08/20
06-MW30-0420MS1	20D083-03/MLP498MS1	Water	04/08/20
06-MW30-0420MSD1	20D083-03/MLP498MSD1	Water	04/08/20
06-MW30-0420MS2	20D083-03/MLP498MS2	Water	04/08/20
06-MW30-0420MSD2	20D083-03/MLP498MSD2	Water	04/08/20

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan), Basewide Groundwater and Soil Gas Monitoring at Installation Restoration Sites 6, 12, 21, and 24, Former Naval Station Treasure Island, San Francisco, California (April 2017), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.3 (2019), and a modified outline of the USEPA National Functional Guidelines (NFG) for Superfund Organic Methods Data Review (August 2014). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) by Environmental Protection Agency (EPA) Method 537 Modified and LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

All sample results were subjected to Level IV data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Codes

1	Holding Times Exceeded
2	Sample Preservation / Cooler Temperature Exceeded Acceptance Criteria
3	Sample Custody Potentially Compromised Sample Integrity
4	Missing/Incomplete Deliverables
5	Calibration Did Not Meet Method Criteria
6	Equipment/Field Blank Contamination
7	Laboratory Method or Calibration Blank Contamination
8	Matrix Spike % Recovery Exceeded Acceptance Criteria
9	Matrix Spike Duplicate (RPD or Duplicate Sample Analysis) Exceeded Acceptance Criteria
10A	Laboratory Control Sample % Recovery Exceeded Acceptance Criteria
10B	Laboratory Control Sample Duplicate (RPD) Exceeded Acceptance Criteria
11	ICP Interference Check Analysis Exceeded Method Criteria
12	RPD Between Two Columns (Pesticides/PCBs only)
13	Surrogate Recoveries Exceeded Acceptance Criteria
14	Field Duplicates RPD Exceeded Project Criteria
15	Peak Resolution did not meet method criteria
16	Serial Dilution Analysis Exceeded Method Criteria
17	Chemical Recoveries Exceeded Acceptance Criteria
18	Trip Blank Contamination
19	Internal Standards Did Not Meet Method Criteria
20	Calibration Range exceeded Method Criteria
21	Potential False Positives
22	Do not use, other result more technically sound (overall assessment)
23	Estimated Maximum Possible Concentration
24	Trace Detection Below the LOQ (RL) and Above the DL (MDL)
25	Other

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. LC/MS Instrument Performance Check

Instrument performance was checked and the requirements were met.

III. Initial Calibration and Initial Calibration Verification

Initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

For each calibration standard, all compounds were within 70-130% of their true value.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

Retention time windows were established as required by the method.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all compounds.

The percent differences (%D) of the instrument sensitivity check (ISC) were less than or equal to 30.0% for all compounds.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

Retention times of all compounds in the calibration standards were within the established retention time windows.

All compound concentrations were at the limit of quantitation (LOQ) for the ISC standard.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample QCFB-0420 was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the methods. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

Samples 06-MW31-0420 and QCFB-0420 were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)	Flag	A or P
	06-MW31-0420	QCFB-0420			
Perfluorohexanoic acid (PFHxA)	2.8	3.0	7 (≤30)	-	-
Perfluoroheptanoic acid (PFHpA)	1.7	1.8	6 (≤30)	-	-
Perfluorooctanoic acid (PFOA)	2.0	2.1	5 (≤30)	-	-
Perfluorononanoic acid (PFNA)	0.11	0.12	9 (≤30)	-	-
Perfluorobutane sulfonate (PFBS)	0.15	0.17	13 (≤30)	-	-
Perfluorohexane sulfonate (PFHxS)	9.2	8.1	13 (≤30)	-	-
Perfluorooctane sulfonate (PFOS)	30	27	11 (≤30)	-	-

XI. Labeled Compounds

All percent recoveries (%R) for labeled compounds used to quantitate target compounds were within QC limits with the following exceptions:

Sample	Labeled Compound	%R (Limits)	Affected Compound	Flag	A or P
06-MW30-0420	13C2-PFTeDA	46 (50-150)	Perfluorotridecanoic acid (PFTriDA) Perfluorotetradecanoic acid (PFTeDA)	UJ (all non-detects) UJ (all non-detects)	P

XII. Compound Quantitation

All compound quantitations met validation criteria.

XIII. Target Compound Identifications

All target compound identifications met validation criteria.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method, DoD QSM version 5.3 and project SAP. This review also included verification of analytes, methods, reporting limits, instrument performance and method QC acceptance limits, which were found to be compliant with the project documents. No results were rejected.

Due to labeled compound %R, data were qualified as estimated in one sample.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

Treasure Island, IR Site 6
Perfluoroalkyl & Polyfluoroalkyl Substances - Data Qualification Summary - SDG 20D083/C095296

Sample	Compound	Flag	A or P	Reason (Code)
06-MW30-0420	Perfluorotridecanoic acid (PFTriDA) Perfluorotetradecanoic acid (PFTeDA)	UJ (all non-detects) UJ (all non-detects)	P	Labeled compounds (%R) (19)

Treasure Island, IR Site 6
Perfluoroalkyl & Polyfluoroalkyl Substances - Laboratory Blank Data Qualification Summary - SDG 20D083/C095296

No Sample Data Qualified in this SDG

Treasure Island, IR Site 6
Perfluoroalkyl & Polyfluoroalkyl Substances - Field Blank Data Qualification Summary - SDG 20D083/C095296

No Sample Data Qualified in this SDG

LDC #: 48034A96 **VALIDATION COMPLETENESS WORKSHEET** Date: 5/24/20

SDG #: 20D083/C095296 ~~Level III/IV~~ Stage 4 Page: 1 of 2

Laboratory: EMAX Laboratories, Inc./Bureau Veritas Canada, Inc. Reviewer: M

2nd Reviewer: [illegible]

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537M) / DoD QSM 5.2 Table B-15

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	N2 IV/ICV ≤ 30
IV.	Continuing calibration/ISC	A/A	D ≤ 30
V.	Laboratory Blanks	A	
V.I	Field blanks	ND	FB = 11
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS
IX.	Field duplicates	SW	D = 5+6
X.	Labeled Compounds	SW	
XI.	Compound quantitation RL/LOQ/LODs	A	
XII.	Target compound identification	A	Not reviewed for Level III validation.
XIII.	System performance	A	Not reviewed for Level III validation.
XIV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

** Indicates sample was underwent Level IV review

	Client ID	Sub	Lab ID	Matrix	Date
1 2	06-MW25-0420	MLP496	20D083-01	Water	04/08/20
2	06-MW26-0420	497	20D083-02	Water	04/08/20
3	06-MW30-0420	498	20D083-03	Water	04/08/20
4	06-MW31-0420	499	20D083-04	Water	04/08/20
5	06-MW32-0420	500	20D083-05	Water	04/08/20
6	06-MW32-0420 DUP	501	20D083-06	Water	04/08/20
7	06-MW33-0420	502	20D083-07	Water	04/08/20
8	06-MW34-0420	503	20D083-08	Water	04/08/20
9	06-MW35-0420	504	20D083-09	Water	04/08/20
10	06-MW36-0420	505	20D083-10	Water	04/08/20
11 1,2	QCFB-0420	506	20D083-11	Water	04/08/20
12	06-MW30-0420MS1	498MS	20D083-03MS1	Water	04/08/20
13	06-MW30-0420MSD1	D1	20D083-03MSD1	Water	04/08/20
14	06-MW30-0420MS2	2	20D083-03MS2	Water	04/08/20
15	06-MW30-0420MSD2	D2	20D083-03MSD2	Water	04/08/20

LDC #: 48034A96 **VALIDATION COMPLETENESS WORKSHEET** Date: 5/24/20
SDG #: 20D083/C095296 Level III/IV Page: 2 of 2
Laboratory: EMAX Laboratories, Inc./Bureau Veritas Canada, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537M)

16				
17				
18				

Notes:

1	6690634						
2	6692764						

LDC #: 48034A96

VALIDATION FINDINGS CHECKLIST

Reviewer: N
2nd Reviewer: [illegible]

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Were cooler temperature criteria met?	✓			
II. LC/MS Instrument performance check				
Were the instrument performance reviewed and found to be within the validation criteria?	✓			
III. Initial calibration and Initial calibration verification				
Did the laboratory perform a 5-point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?		✓		
Was a curve fit used for evaluation? If yes, did the initial calibration meet the coefficient of determination (r^2) criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were the retention time windows properly established?	✓			
Was an initial calibration verification (ICV) standard analyzed after each initial calibration for each instrument?	✓			
Were all ICV percent differences (%D) of the initial calibration verification ≤ 30%?	✓			
IV. Continuing calibration and Instrument sensitivity check				
Was a continuing calibration analyzed prior to sample analysis, after every 10 samples and at the end of the analytical sequence?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 30%?	✓			
Were all the retention times within the acceptance windows?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were all percent differences (%D) of the Instrument Sensitivity Check ≤ 30%?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		

Validation Area	Yes	No	NA	Findings/Comments
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed per extraction batch for this SDG?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?	✓			
X. Labeled compounds				
Were labeled compound percent recoveries (%R) within the QC limits?		✓		
Were retention times within 0.4 minutes of the associated calibration standard?	✓			
XI. Compound quantitation				
Did the laboratory reporting limits (i.e. DL, LOD, LOQ) meet the QAPP?	✓			
Did reported results include both branched and linear isomers?	✓			
Were the correct ion transition, labeled compound and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound retention times within 0.1 minutes of the associated labeled compound for compounds with a labeled analog?	✓			
Were compound quantitation and reporting limits adjusted to reflect all sample dilutions and dry weight factors applicable to Stage 4 validation?	✓			
XII. Target compound identification				
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were two transitions and the ion transition ratio per analyte monitored and documented with the exception of PFBA and PFPeA?	✓			
Were ion ratios between 50-150%?	✓			
XIII. System performance				
System performance was found to be acceptable.	✓			
XIV. Overall assessment of Data				
Overall assessment of data was found to be acceptable.	✓			

TARGET COMPOUND WORKSHEET

METHOD: PFAS

A. Perfluorohexanoic acid (PFHxA)			
B. Perfluoroheptanoic acid (PFHpA)			
C. Perfluorooctanoic acid (PFOA)			
D. Perfluorononanoic acid (PFNA)			
E. Perfluorodecanoic acid (PFDA)			
F. Perfluoroundecanoic acid (PFUnA)			
G. Perfluorododecanoic acid (PFDoA)			
H. Perfluorotridecanoic acid (PFTriDA)			
I. Perfluorotetradecanoic acid (PFTeDA)			
J. Perfluorobutanesulfonic acid (PFBS)			
K. Perfluorohexanesulfonic acid (PFHxS)			
L. Perfluoroheptanesulfonic acid (PFHpS)			
M. Perfluorooctanesulfonic acid (PFOS)			
N.Perfluorodecanesulfonic acid (PFDS)			
O. Perfluorooctane Sulfonamide (FOSA)			
P. Perfluorobutanoic acid (PFBA)			
Q. Perfluoropentanoic acis (PFPeA)			
R. 6:2 Fluorotelomer sulfonic acid (6:2 FTS)			
S. 8:2 Fluorotelomer sulfonic acid (8:2 FTS)			
T. N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)			
U. N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)			
V. 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)			

LDC #: 48034A96

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: SC
2nd Reviewer:

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Compound	Concentration (ug/L)		RPD (≤30) >10XLOQ	Qualification
	4	11		
A	2.8	3.0	7	
B	1.7	1.8	6	
C	2.0	2.1	5	
D	0.11	0.12	9	
J	0.15	0.17	13	
K	9.2	8.1	13	
M	30	27	11	

LDC #: 48034A96

VALIDATION FINDINGS WORKSHEET
Labeled Compounds

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: LC/MS PFAS (EPA Method 537M)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y (N) N/A Were all labeled compound recoveries within the QC criteria?

#	Date	Lab ID/Reference	Labeled Compound	% Recovery (Limit)	Qualifications
		3 (Nb)	13C2 - I	46 (50-150)	J/UJ/P (H,I)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
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				( )	

LDC #: 48034A96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: SC
2nd Reviewer: [signature]

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Calibration Date	Instrument	Analyte	Standard	(Y) Response ratio	(X) Concentration ratio
4/21/2020	LCMS04	PFOA	1	0.15726	0.830
			2	0.59597	3.000
			3	1.31424	8.000
			4	2.68708	16.000
			5	4.98796	30.000
			6	7.00886	41.700

Linear

	Calculated	Reported
Constant	0.028859	0.031570
X Coefficient(s)	0.16657	0.16640
Correlation Coefficient	0.999870	
Coefficient of Determination (r^2)	0.999740	1.000000

Calibration Date	Instrument	Analyte	Standard	(Y) Response ratio	(X) Concentration ratio
4/21/2020	LCMS04	PFOS	1	0.15660	0.830
			2	0.56833	3.000
			3	1.26609	8.000
			4	2.46937	16.000
			5	4.64868	30.000
			6	6.40932	41.700

Linear

	Calculated	Reported
Constant	0.058527	0.044727
X Coefficient(s)	0.15239	0.15320
Correlation Coefficient	0.999921	
Coefficient of Determination (r^2)	0.999843	1.000000

LDC #: 48034A96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: SC
2nd Reviewer:

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Calibration Date	Instrument	Analyte	Standard	(Y) Response ratio	(X) Concentration ratio
4/23/2020	LCMS04	PFOA	1	0.16929	0.830
			2	0.61985	3.000
			3	1.43741	8.000
			4	2.57516	16.000
			5	5.41129	30.000
			6	7.36508	41.700

Linear

	Calculated	Reported
Constant	0.001495	0.034148
X Coefficient(s)	0.176521	0.174552
Correlation Coefficient	0.998969	
Coefficient of Determination (r^2)	0.997939	1.000000

Calibration Date	Instrument	Analyte	Standard	(Y) Response ratio	(X) Concentration ratio
4/23/2020	LCMS04	PFOS	1	0.16182	0.830
			2	0.57718	3.000
			3	1.35068	8.000
			4	2.40170	16.000
			5	4.85687	30.000
			6	6.89729	41.700

Linear

	Calculated	Reported
Constant	0.001478	0.038069
X Coefficient(s)	0.163133	0.160914
Correlation Coefficient	0.999085	
Coefficient of Determination (r^2)	0.998171	1.000000

LDC #: 48034A96

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: SC
2nd Reviewer:

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	True Conc	Reported Conc	Recalculated Conc	Reported %R	Recalculated %R
1	6690634_10	4/21/2020	PFOA (13C4-PFOA)	0.8300	0.7982	0.7982	96.2	96.2
			PFOS (13C4-PFOS)	0.8300	0.7373	0.7373	88.8	88.8
2	6690634_29	4/22/2020	PFOA (13C4-PFOA)	16.000	15.8688	15.8688	99.2	99.2
			PFOS (13C4-PFOS)	16.000	15.8549	15.8572	99.1	99.1
3	6692764_10	4/23/2020	PFOA (13C4-PFOA)	0.8300	0.7676	0.7676	92.5	92.5
			PFOS (13C4-PFOS)	0.8300	0.7281	0.7281	87.7	87.7

LDC #: 48034A96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: SC
2nd Reviewer:

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

SSC = (Area spike) (Conc IS) / (Area IS) (average RRF spike)

%Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked concentration, SA = Spike added, SC = Sample concentration

RPD = | MS - MSD | * 2/(MS + MSD)

MS = Matrix spike recovery, MSD = Matrix spike duplicate recovery

MS/MSD ID: 14/15

Compound	SA (ug/L)		SC (ug/L)	SSC (ug/L)		MS Percent Recovery		MSD Percent Recovery		MS/MSD RPD	
	MS	MSD		MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
PFOA	0.4800	0.4800	0.026	0.5748	0.5850	113	114	115	116	1.9	1.8
PFOS	0.4800	0.4800	0.15	0.6975	0.6972	112	114	113	114	0.76	0.04

LDC #: 48034A96

VALIDATION FINDINGS WORKSHEET
LCS Results Verification

Reviewer: SC
2nd Reviewer:

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control duplicate were recalculated for the compounds identified below using the following calculation:

SSC = (Area spike) (Conc IS) / (Area IS) (average RRF spike)
%Recovery = 100 * SSC/SA

Where:
SSC = Spiked concentration
SA = Spike added
LCS = Laboratory control spike recovery
LCSD = Laboratory control spike duplicate recovery

RPD = | LCS - LCSD | * 2/(LCS + LCSD)

LCS/LCSD ID: 6690634LCS

Compound	SA (ug/L)		SSC (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
PFOA	0.4800		0.5206		108	108				
PFOS	0.4800		0.5796		121	121				

LDC #: 48034A96

VALIDATION FINDINGS WORKSHEET
Sample Results Verification

Reviewer: SC
2nd Reviewer:

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Compound results for all Level IV samples reported with a positive detect were recalculated and verified using the following equation:

$$\text{Concentration} = \frac{(Ax)\,(Vo)\,(Df)}{(RRF)\,(Wt)\,(\%S)}$$

Where:

Ax = Area or height of the peak for the compound to be measured
Ais = Area or height of the peak for the internal standard
Cis = Concentration of the internal standard
DF = Dilution factor
Vt = Volume of extract in milliters (mL)
RRF = Average relative response factor
Vo = Volume of sample in milliliters (mL)
Wt = Weight of sample in grams (g)

Sample #	Compound	Ax	Ais	Cis	DF	RRF	Vt (mL)	Vo (mL)	%S	Calculated Concentration (ug/L)	Reported Concentration (ug/L)	% Diff
1	PFOA	9357	11522	100	10		3	125		1.1	1.1	0
			y = mx + b									
			m	0.174552								
			b	0.034148								

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Treasure Island, IR Site 6

LDC Report Date: May 20, 2020

Parameters: Dissolved Arsenic

Validation Level: Level III

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 20D145

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
06-MW33-0420	20D145-01	Water	04/23/20

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan), Basewide Groundwater and Soil Gas Monitoring at Installation Restoration Sites 6, 12, 21, and 24, Former Naval Station Treasure Island, San Francisco, California (April 2017), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.3 (2019), and a modified outline of the USEPA National Functional Guidelines (NFG) for Inorganic Superfund Data Review (August 2014). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Dissolved Arsenic by Environmental Protection Agency (EPA) SW 846 Method 6020A

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level IV data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Codes

1	Holding Times Exceeded
2	Sample Preservation / Cooler Temperature Exceeded Acceptance Criteria
3	Sample Custody Potentially Compromised Sample Integrity
4	Missing/Incomplete Deliverables
5	Calibration Did Not Meet Method Criteria
6	Equipment/Field Blank Contamination
7	Laboratory Method or Calibration Blank Contamination
8	Matrix Spike % Recovery Exceeded Acceptance Criteria
9	Matrix Spike Duplicate (RPD or Duplicate Sample Analysis) Exceeded Acceptance Criteria
10A	Laboratory Control Sample % Recovery Exceeded Acceptance Criteria
10B	Laboratory Control Sample Duplicate (RPD) Exceeded Acceptance Criteria
11	ICP Interference Check Analysis Exceeded Method Criteria
12	RPD Between Two Columns (Pesticides/PCBs only)
13	Surrogate Recoveries Exceeded Acceptance Criteria
14	Field Duplicates RPD Exceeded Project Criteria
15	Peak Resolution did not meet method criteria
16	Serial Dilution Analysis Exceeded Method Criteria
17	Chemical Recoveries Exceeded Acceptance Criteria
18	Trip Blank Contamination
19	Internal Standards Did Not Meet Method Criteria
20	Calibration Range exceeded Method Criteria
21	Potential False Positives
22	Do not use, other result more technically sound (overall assessment)
23	Estimated Maximum Possible Concentration
24	Trace Detection Below the LOQ (RL) and Above the DL (MDL)
25	Other

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5%.

III. Instrument Calibration

Initial and continuing calibrations were performed as required by the method.

The initial calibration verification (ICV) and continuing calibration verification (CCV) standards were within QC limits.

IV. ICP Interference Check Sample Analysis

The frequency of interference check sample (ICS) analysis was met. All criteria were within QC limits.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

IX. Serial Dilution

Serial dilution was not performed for this SDG.

X. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

XI. Field Duplicates

No field duplicates were identified in this SDG.

XII. Internal Standards (ICP-MS)

All internal standard percent recoveries (%R) were within QC limits.

XIII. Sample Result Verification

Raw data were not reviewed for Level III validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method, DoD QSM version 5.3 and project SAP. This review also included verification of analytes, methods, reporting limits, instrument performance and method QC acceptance limits, which were found to be compliant with the project documents. No results were rejected.

The quality control criteria reviewed were met and are considered acceptable.

Treasure Island, IR Site 6
Dissolved Arsenic - Data Qualification Summary - SDG 20D145

No Sample Data Qualified in this SDG

Treasure Island, IR Site 6
Dissolved Arsenic - Laboratory Blank Data Qualification Summary - SDG 20D145

No Sample Data Qualified in this SDG

Treasure Island, IR Site 6
Dissolved Arsenic - Field Blank Data Qualification Summary - SDG 20D145

No Sample Data Qualified in this SDG

LDC #: 48034B4a **VALIDATION COMPLETENESS WORKSHEET** Date: 5/14/2020
SDG #: 20D145 Level III Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: DM
2nd Reviewer:

METHOD: Dissolved Arsenic (EPA SW 846 Method 6020A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	ICP/MS Tune	A	
III.	Instrument Calibration	A	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Laboratory Blanks	A	
VI.	Field Blanks	N	
VII.	Matrix Spike/Matrix Spike Duplicates	N	
VIII.	Duplicate sample analysis	N	
IX.	Serial Dilution	N	
X.	Laboratory control samples	A	LCS/D
XI.	Field Duplicates	N	
XII.	Internal Standard (ICP-MS)	N	
XIII.	Sample Result Verification	N	
XIV	Overall Assessment of Data	A	

Note: A = Acceptable ND = No compounds detected D = Duplicate SB=Source blank
N = Not provided/applicable R = Rinsate TB = Trip blank OTHER:
SW = See worksheet FB = Field blank EB = Equipment blank

	Client ID	Lab ID	Matrix	Date
1	06-MW33-0420	20D145-01	Water	04/23/20
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

Notes:

INSTALLATION_ID	SITE_NAME	LOCATION_NAME	LOCATION_TYPE_DESC	COORD_X	COORD_Y	SAMPLE_NAME	SAMPLE_MATRIX_DESC	COLLECT_DATE	ANALYTICAL_METHOD_GRP_DESC	SDG
TREASURE_ISLAND_NS	SITE 00006	06-MW35	Monitoring well	6021434.084	2130622.196	06-MW35-0420	Ground water	8-Apr-20	Perfluoroalkyl Compounds	C095296
TREASURE_ISLAND_NS	SITE 00006	06-MW26	Monitoring well	6021172.738	2130574.156	06-MW26-0420	Ground water	8-Apr-20	Perfluoroalkyl Compounds	C095296
TREASURE_ISLAND_NS	SITE 00006	06-MW30	Monitoring well	6021128.148	2130373.461	06-MW30-0420	Ground water	8-Apr-20	Perfluoroalkyl Compounds	C095296
TREASURE_ISLAND_NS	SITE 00006	06-MW31	Monitoring well	6021354.143	2130342.49	06-MW31-0420	Ground water	8-Apr-20	Perfluoroalkyl Compounds	C095296
TREASURE_ISLAND_NS	SITE 00006	06-MW25	Monitoring well	6021163.016	2130486.964	06-MW25-0420	Ground water	8-Apr-20	Perfluoroalkyl Compounds	C095296
TREASURE_ISLAND_NS	SITE 00006	06-MW33	Monitoring well	6021270.898	2130694.212	06-MW33-0420	Ground water	8-Apr-20	Perfluoroalkyl Compounds	C095296
TREASURE_ISLAND_NS	SITE 00006	06-MW36	Monitoring well	6021419.54	2130435.329	06-MW36-0420	Ground water	8-Apr-20	Perfluoroalkyl Compounds	C095296
TREASURE_ISLAND_NS	SITE 00006	06-MW32	Monitoring well	6021196.627	2130516.559	06-MW32-0420 DUP	Ground water	8-Apr-20	Perfluoroalkyl Compounds	C095296
TREASURE_ISLAND_NS						QCFB-0420	Water for QC samples	8-Apr-20	Perfluoroalkyl Compounds	C095296
TREASURE_ISLAND_NS	SITE 00006	06-MW34	Monitoring well	6021397.778	2130405.903	06-MW34-0420	Ground water	8-Apr-20	Perfluoroalkyl Compounds	C095296
TREASURE_ISLAND_NS	SITE 00006	06-MW32	Monitoring well	6021196.627	2130516.559	06-MW32-0420	Ground water	8-Apr-20	Perfluoroalkyl Compounds	C095296