GROUNDWATER ANALYTICAL RESULTS - PFAS
West Plant Site
Oshkosh, Wisconsin

Location		NR 140 Proposed ES	NR 140 Proposed PAL	WP-MW-1	
Sample Name					
Laboratory Sample ID				WH24026-001	WJ23011-001
Sample Date				8/19/2021	10/16/2021
Parameter (ng/L)	CAS Number				
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	NS	NS	<9.4	<8.6
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NS	NS	<13	<12
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	NS	NS	<31	<29
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	NS	NS	200	140
1H, 1H, 2H, 2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	NS	NS	<17	<16
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	300	30	<41	<37
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	3,000	600	<9.4	<8.6
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	NS	NS	<26	<24
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	20	2	<15	<13
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	20	2	<19	<17
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	NS	NS	<25	<22
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	NS	NS	<18	<17
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	NS	NS	<25	<23
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	450,000	90,000	10 J	23 J
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	NS	NS	<15	<14
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	NS	NS	<9.7	<8.9
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	NS	NS	<14	<13
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	20	2	<12	<11
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	NS	NS	<12	<11
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	NS	NS	<20	<19
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	40	4	**23 J**	**13 J**
Perfluoro-n-butanoic acid (PFBA)	375-22-4	10,000	2,000	**3,800**	1,900
Perfluoro-n-decanoic acid (PFDA)	335-76-2	300	60	<10	<9.3
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	500	100	<9.2	<8.4
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	NS	NS	1,300	560
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	150,000	30,000	7,900	4,000
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	30	3	<9.0	<8.2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	20	2	**120**	**70 J**
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	NS	NS	19,000	9,900
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	10,000	2,000	<12	<11
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	NS	NS	<10	<9.4
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	3,000	600	<12	<11
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	20	2	<39	<36
PFOS + PFOA (Calculated)	PFOS+PFOA	20	2	**120**	**70 J**

Notes:
1. Samples were collected by GZA GeoEnvironmental, Inc. on the date indicated.
2. **Bold** concentrations indicate an exceedance of the Wisconsin Administrative Code (Wis. Adm. Code) proposed Preventive Action Limit (PAL) and **bold/underlined** concentrations indicate an exceedance of the Wis. Adm. Code proposed Enforcement Standard (ES).
3. Results are presented in nanograms per liter (ng/L).
4. "NS" indicates there is no standard for that parameter.
5. "J"-flagged concentrations indicate that the estimated result is less than the Limit of Quantitation (LOQ) and greater than or equal to the Method Detection Limit (DL).

Report of Analysis

GZA GeoEnvironmental, Inc.
17975 West Sarah Lane, Suite 100
Brookfield, WI 53045
Attention: Kevin Hedinger

Project Name: OshKosh Corporation

Project Number: 20.0157080.00

Lot Number:**WJ23011**

Date Completed:11/12/2021

11/12/2021 9:49 AM
Approved and released by:
Project Manager II: **Kathy E. Smith**

The electronic signature above is the equivalent of a handwritten signature.

Pace Analytical Services, LLC (*formerly Shealy Environmental Services, Inc.*)
106 Vantage Point Drive West Columbia, SC 29172
Tel: 803-791-9700 Fax: 803-791-9111 www.pacelabs.com

Case Narrative
GZA GeoEnvironmental, Inc.
Lot Number: WJ23011

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the Pace Quality Assurance Management Plan (QAMP), applicable Shealy standard operating procedures (SOPs), the 2003 NELAC standard, and Shealy policies. Additionally, the DoD QSM version 5.3 has been followed for these samples, and specifically Table B-15 was followed for all PFAS samples. Any exceptions to the QAMP, SOPs, NELAC standards, the DoD QSM, or policies are qualified on the results page or discussed below.

All QC associated with these samples was in compliance with DOD QSM 5.3 table B-15 and our PFAS SOP.

Correction factors (CF) are used to calculate the original sample concentration. The CF is the inverse of the concentration factor (sample volume / extract final volume) times the dilution factor (DF). For undiluted analysis. For undiluted analysis, the extract is prepared for injection by adding 182 uL of sample extract + 8 uL of reagent water + 10 uL of internal standard solution to a polypropylene autosampler vial. An extra correction factor of 0.91 (182 uL / 200 uL = 0.91) applies. The CF is calculated as follows:

CF = DF * FV / Vo

FV is volume of extract (mL)
Vo is initial sample volume (mL)
DF is dilution factor. For undiluted analysis, DF = 1/0.91.

Sample concentration for aqueous samples:
Concentration (ng/L) = Cs*CF,

$$C_s = \frac{\left(\frac{(A_s x C_{is})}{A_{is}}\right) - B}{M1}$$

Where

C_s is on column concentration of target analyte in the sample (ng/L)
C_{is} is concentration of internal standard in the sample (ng/L)
A_s is peak response of target analyte in the sample
A_{is} is peak response of internal standard in the sample
M1 is the average RF from ICAL or the slope from linear regression ICAL
B is the y-intercept from the ICAL

Pace is a TNI accredited laboratory; however, the following analyses are currently not listed on our TNI scope of accreditation:

Biological Tissue: All, Non-Potable Water: SGT-HEM EPA 1664B, Silica EPA 200.7, Boron, Calcium, Silicon, Strontium EPA 200.8, Bicarbonate, Carbonate, and Hydroxide Alkalinity SM 2320 B-2011, Fecal Coliform SM 9221 C E-2006 & SM 9222D-2006, Strontium SW-846 6010D, VOC SM 6200 B-2011, Drinking Water: VOC (excluding BTEX, MTBE, Naphthalene, & 1,2-dichloroethane) EPA 524.2, Solid Chemical Material: TOC Walkley-Black.

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

Sample Summary

GZA GeoEnvironmental, Inc.

Lot Number: WJ23011

Project Name: OshKosh Corporation

Project Number: 20.0157080.00

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WP-MW-1	Aqueous	10/16/2021 0855	10/20/2021

(1 sample)

Detection Summary

GZA GeoEnvironmental, Inc.

Lot Number: WJ23011

Project Name: OshKosh Corporation

Project Number: 20.0157080.00

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WP-MW-1	Aqueous	6:2 FTS	PFAS by ID	140		ng/L	5
001	WP-MW-1	Aqueous	PFBS	PFAS by ID	23	J	ng/L	5
001	WP-MW-1	Aqueous	PFHxS	PFAS by ID	13	J	ng/L	5
001	WP-MW-1	Aqueous	PFBA	PFAS by ID	1900		ng/L	5
001	WP-MW-1	Aqueous	PFHpA	PFAS by ID	560		ng/L	5
001	WP-MW-1	Aqueous	PFHxA	PFAS by ID	4000		ng/L	5
001	WP-MW-1	Aqueous	PFOA	PFAS by ID	70	J	ng/L	6
001	WP-MW-1	Aqueous	PFPeA	PFAS by ID	9900		ng/L	6

(8 detections)

PFAS by LC/MS/MS

Client: **GZA GeoEnvironmental, Inc.** Laboratory ID: **WJ23011-001**

Description: **WP-MW-1** Matrix: **Aqueous**

Date Sampled: **10/16/2021 0855** Project Name: **OshKosh Corporation**

Date Received: **10/20/2021** Project Number: **20.0157080.00**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	20	11/11/2021 1901	MMM	11/09/2021 1201	21762

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		140	8.6	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		140	12	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		140	29	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	**27619-97-2**	**PFAS by ID SOP**	**140**		**140**	**36**	**ng/L**	**1**
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		140	16	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		140	37	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		140	8.6	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		140	24	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		140	13	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		140	17	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		280	22	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		140	17	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		140	23	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**23**	**J**	**71**	**7.4**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		71	14	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		71	8.9	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		71	13	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		71	11	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		71	11	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		140	19	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**13**	**J**	**71**	**9.8**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**1900**		**71**	**11**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		71	9.3	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		71	8.4	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**560**		**71**	**8.0**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**4000**		**71**	**12**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		71	8.2	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**70**	**J**	**71**	**15**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**9900**		**71**	**9.7**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		71	11	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		71	9.4	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		71	11	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		71	36	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		99	25-150
13C2_6:2FTS		104	25-150
13C2_8:2FTS		97	25-150
13C2_PFDoA		108	25-150
13C2_PFTeDA		104	25-150
13C3_PFBS		100	25-150
13C3_PFHxS		104	25-150
13C3-HFPO-DA		116	25-150
13C4_PFBA		103	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: **GZA GeoEnvironmental, Inc.** Laboratory ID: **WJ23011-001**

Description: **WP-MW-1** Matrix: **Aqueous**

Date Sampled: **10/16/2021 0855** Project Name: **OshKosh Corporation**

Date Received: **10/20/2021** Project Number: **20.0157080.00**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		96	25-150
13C5_PFHxA		100	25-150
13C5_PFPeA		94	25-150
13C6_PFDA		111	25-150
13C7_PFUdA		107	25-150
13C8_PFOA		98	25-150
13C8_PFOS		94	25-150
13C8_PFOSA		99	10-150
13C9_PFNA		105	25-150
d-EtFOSA		115	10-150
d5-EtFOSAA		121	25-150
d9-EtFOSE		98	10-150
d-MeFOSA		109	10-150
d3-MeFOSAA		127	25-150
d7-MeFOSE		106	10-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
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QC Summary

PFAS by LC/MS/MS - MB

Sample ID: WQ21762-001
Batch: 21762
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 11/09/2021 1201

Parameter	Result	Q	Dil	LOQ	MDL	Units	Analysis Date
9Cl-PF3ONS	ND		1	8.0	0.48	ng/L	11/10/2021 1806
11Cl-PF3OUdS	ND		1	8.0	0.66	ng/L	11/10/2021 1806
8:2 FTS	ND		1	8.0	1.6	ng/L	11/10/2021 1806
6:2 FTS	ND		1	8.0	2.0	ng/L	11/10/2021 1806
4:2 FTS	ND		1	8.0	0.87	ng/L	11/10/2021 1806
GenX	ND		1	8.0	2.1	ng/L	11/10/2021 1806
ADONA	ND		1	8.0	0.48	ng/L	11/10/2021 1806
EtFOSA	ND		1	8.0	1.4	ng/L	11/10/2021 1806
EtFOSAA	ND		1	8.0	0.75	ng/L	11/10/2021 1806
EtFOSE	ND		1	8.0	0.95	ng/L	11/10/2021 1806
MeFOSA	ND		1	16	1.3	ng/L	11/10/2021 1806
MeFOSAA	ND		1	8.0	0.93	ng/L	11/10/2021 1806
MeFOSE	ND		1	8.0	1.3	ng/L	11/10/2021 1806
PFBS	ND		1	4.0	0.41	ng/L	11/10/2021 1806
PFDS	ND		1	4.0	0.78	ng/L	11/10/2021 1806
PFHpS	ND		1	4.0	0.50	ng/L	11/10/2021 1806
PFNS	ND		1	4.0	0.71	ng/L	11/10/2021 1806
PFOSA	ND		1	4.0	0.61	ng/L	11/10/2021 1806
PFPeS	ND		1	4.0	0.59	ng/L	11/10/2021 1806
PFDOS	ND		1	8.0	1.0	ng/L	11/10/2021 1806
PFHxS	ND		1	4.0	0.55	ng/L	11/10/2021 1806
PFBA	ND		1	4.0	0.60	ng/L	11/10/2021 1806
PFDA	ND		1	4.0	0.52	ng/L	11/10/2021 1806
PFDoA	ND		1	4.0	0.47	ng/L	11/10/2021 1806
PFHpA	ND		1	4.0	0.45	ng/L	11/10/2021 1806
PFHxA	ND		1	4.0	0.69	ng/L	11/10/2021 1806
PFNA	ND		1	4.0	0.46	ng/L	11/10/2021 1806
PFOA	ND		1	4.0	0.83	ng/L	11/10/2021 1806
PFPeA	ND		1	4.0	0.54	ng/L	11/10/2021 1806
PFTeDA	ND		1	4.0	0.60	ng/L	11/10/2021 1806
PFTrDA	ND		1	4.0	0.53	ng/L	11/10/2021 1806
PFUdA	ND		1	4.0	0.63	ng/L	11/10/2021 1806
PFOS	ND		1	4.0	2.0	ng/L	11/10/2021 1806

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		95	25-150
13C2_6:2FTS		93	25-150
13C2_8:2FTS		95	25-150
13C2_PFDoA		87	25-150
13C2_PFTeDA		89	25-150
13C3_PFBS		102	25-150
13C3_PFHxS		93	25-150
13C3-HFPO-DA		115	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - MB

Sample ID: WQ21762-001
Batch: 21762
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 11/09/2021 1201

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		99	25-150
13C4_PFHpA		101	25-150
13C5_PFHxA		98	25-150
13C5_PFPeA		100	25-150
13C6_PFDA		93	25-150
13C7_PFUdA		88	25-150
13C8_PFOA		97	25-150
13C8_PFOS		94	25-150
13C8_PFOSA		96	10-150
13C9_PFNA		92	25-150
d-EtFOSA		75	10-150
d5-EtFOSAA		111	25-150
d9-EtFOSE		86	10-150
d-MeFOSA		67	10-150
d3-MeFOSAA		106	25-150
d7-MeFOSE		93	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: WQ21762-002
Batch: 21762
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 11/09/2021 1201

Parameter	Spike Amount (ng/L)	Result (ng/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
9Cl-PF3ONS	15	15		1	99	50-150	11/10/2021 1817
11Cl-PF3OUdS	15	14		1	96	50-150	11/10/2021 1817
8:2 FTS	15	15		1	100	50-150	11/10/2021 1817
6:2 FTS	15	14		1	90	50-150	11/10/2021 1817
4:2 FTS	15	16		1	104	50-150	11/10/2021 1817
GenX	32	33		1	104	50-150	11/10/2021 1817
ADONA	15	15		1	100	50-150	11/10/2021 1817
EtFOSA	16	15		1	95	50-150	11/10/2021 1817
EtFOSAA	16	15		1	95	50-150	11/10/2021 1817
EtFOSE	16	16		1	99	50-150	11/10/2021 1817
MeFOSA	16	18		1	111	50-150	11/10/2021 1817
MeFOSAA	16	13		1	79	50-150	11/10/2021 1817
MeFOSE	16	13		1	83	50-150	11/10/2021 1817
PFBS	14	13		1	92	50-150	11/10/2021 1817
PFDS	15	14		1	93	50-150	11/10/2021 1817
PFHpS	15	15		1	97	50-150	11/10/2021 1817
PFNS	15	15		1	100	50-150	11/10/2021 1817
PFOSA	16	15		1	97	50-150	11/10/2021 1817
PFPeS	15	15		1	98	50-150	11/10/2021 1817
PFDOS	15	13		1	87	50-150	11/10/2021 1817
PFHxS	15	14		1	94	50-150	11/10/2021 1817
PFBA	16	15		1	96	50-150	11/10/2021 1817
PFDA	16	17		1	103	50-150	11/10/2021 1817
PFDoA	16	16		1	102	50-150	11/10/2021 1817
PFHpA	16	15		1	92	50-150	11/10/2021 1817
PFHxA	16	15		1	96	50-150	11/10/2021 1817
PFNA	16	16		1	100	50-150	11/10/2021 1817
PFOA	16	16		1	101	50-150	11/10/2021 1817
PFPeA	16	16		1	98	50-150	11/10/2021 1817
PFTeDA	16	17		1	107	50-150	11/10/2021 1817
PFTrDA	16	14		1	90	50-150	11/10/2021 1817
PFUdA	16	16		1	98	50-150	11/10/2021 1817
PFOS	15	16		1	108	50-150	11/10/2021 1817

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		105	25-150
13C2_6:2FTS		99	25-150
13C2_8:2FTS		105	25-150
13C2_PFDoA		95	25-150
13C2_PFTeDA		98	25-150
13C3_PFBS		110	25-150
13C3_PFHxS		105	25-150
13C3-HFPO-DA		127	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: WQ21762-002
Batch: 21762
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 11/09/2021 1201

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		107	25-150
13C4_PFHpA		109	25-150
13C5_PFHxA		109	25-150
13C5_PFPeA		106	25-150
13C6_PFDA		103	25-150
13C7_PFUdA		99	25-150
13C8_PFOA		104	25-150
13C8_PFOS		101	25-150
13C8_PFOSA		104	10-150
13C9_PFNA		106	25-150
d-EtFOSA		75	10-150
d5-EtFOSAA		127	25-150
d9-EtFOSE		93	10-150
d-MeFOSA		51	10-150
d3-MeFOSAA		146	25-150
d7-MeFOSE		110	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

Pace Analytical®

PACE ANALYTICAL SERVICES, LLC
106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.pacelabs.com

Number 127142

Client: GZA GeoEnvironmental Inc	Report to Contact: Kevin Hedinger	Telephone No. / E-mail: Kevin.Hedinger@gza.com	Quote No.
Address: 17975 W. Sarah Lane STE 100	Sampler's Signature: X	Analysis (Attach list if more space is needed)	Page 1 of 1
City: Brookfield / State: WI / Zip Code: 53045	Printed Name: Alex Amundson		
Project Name: Oshkosh Corporation			
Project No.: 20.0157080.00	P.O. No		

Sample ID / Description (Containers for each sample may be combined on one line)	Collection Date(s)	Collection Time (Military)	Grab/Composite	Matrix: Aqueous	Matrix: Solid / Wipe / Aqueous	No. of Containers by Preservative Type: Unpres	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Field Filtered	DFATS WS Lyr 33	Remarks / Cooler I.D.
WP-MW-1	10/16/21	0855	G	X		X							X	

Turn Around Time Required (Prior lab approval required for expedited TAT.) ✓ Standard ☐ Rush (Specify)

Sample Disposal ☐ Return to Client ☐ Disposal by Lab

Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

QC Requirements (Specify)

	Date	Time
1. Relinquished by	10-19-21	2000
2. Relinquished by		
3. Relinquished by		
4. Relinquished by FedEx	10/20/21	0915

	Date	Time
1. Received by FedEx	10-19-21	2000
2. Received by		
3. Received by		
4. Laboratory received by	10/20/21	0915

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Circle) (Yes) No Ice Pack Receipt Temp 3.6 °C
Temp Blank ✓ Y ☐ N

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: ME003N2-01

WJ23011

PACE ANALYTICAL SERVICES, LLC

Pace Analytical

Samples Receipt Checklist (SRC) (ME0018C-15)
Issuing Authority: Pace ENV - WCOL

Revised:9/29/2020
Page 1 of 1

Sample Receipt Checklist (SRC)

Client: GZA Cooler Inspected by/date: KSC / 10/23/2021 Lot #: WJ23011

Means of receipt: ☐ Pace ☐ Client ☐ UPS ☑ FedEx ☐ Other:

☐ Yes	☑ No		1. Were custody seals present on the cooler?
☐ Yes	☐ No	☑ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

3.6 / 3.6 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13. Was adequate sample volume available?
☐ Yes	☑ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☐ No	☑ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☑ Yes	☐ No		21. Was the quote number listed on the container label? If yes, Quote # 25431

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

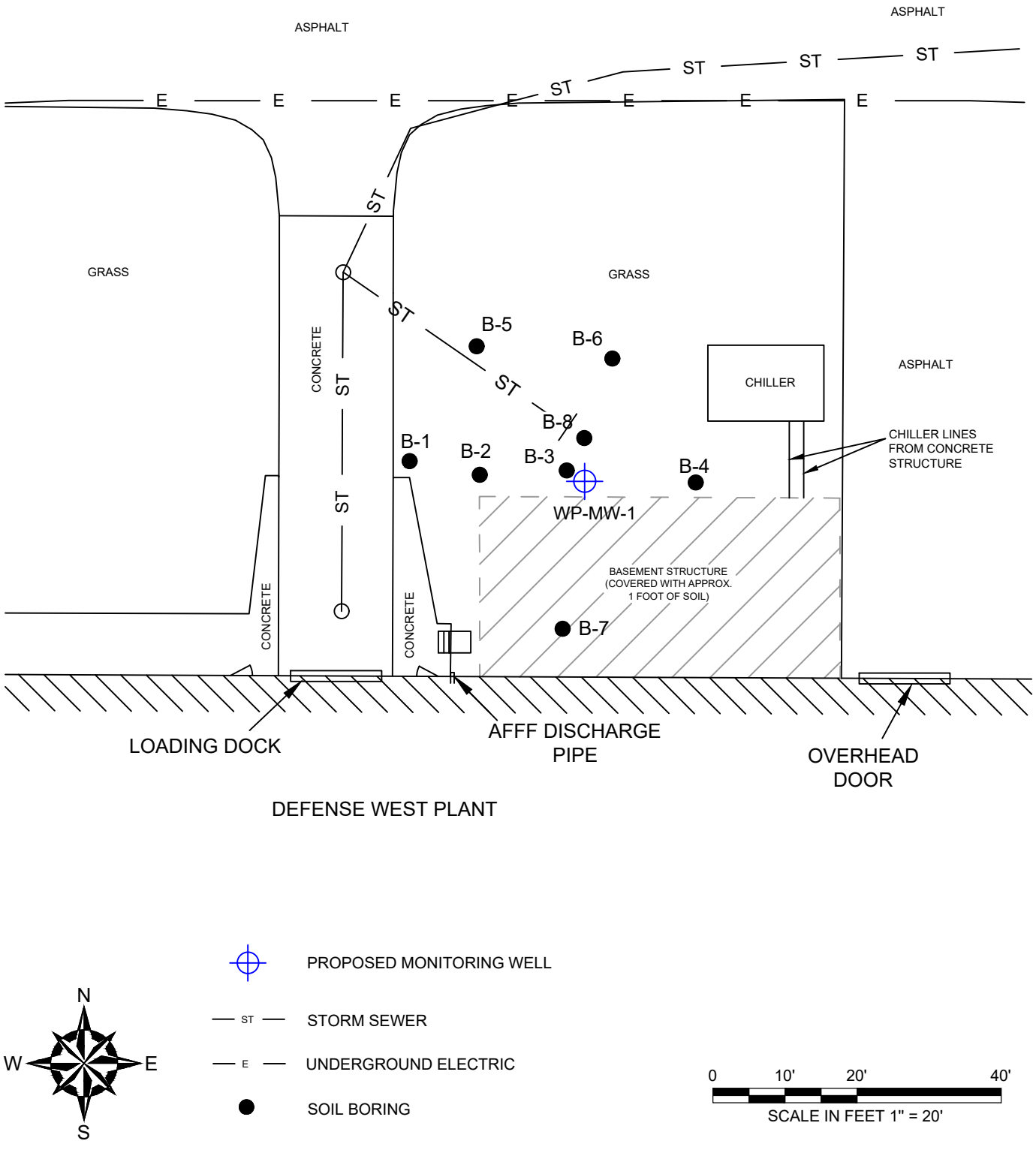
Sample(s) NA _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA.
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA _____ were received with bubbles >6 mm in diameter.

Samples(s) NA _____ were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: JRG2 Date: 10/22/2021

Comments:



NO.	ISSUE/DESCRIPTION	BY	DATE

DEFENSE WEST PLANT
OSHKOSH, WISCONSIN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
OSHKOSH CORPORATION
OSHKOSH, WISCONSIN

SOIL BORING PLAN &
PROPOSED MONITORING WELL LOCATION

PROJ MGR: KMH	REVIEWED BY: JO	CHECKED BY: JO	FIGURE
DESIGNED BY: KMH	DRAWN BY: KMH	SCALE: 1"=20'	
DATE: JANUARY 2021	PROJECT NO. 20.0157080.00	REVISION NO.	SHEET NO.