Client: Cardno, Inc.
Project: Deer Park Fire

Service Request: K1902516

Cover Page - Organic Analysis Data Package
Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
WT-20190322-SF-005	K1902516-001	03/22/2019	03/23/2019
WT-20190322-SF-006	K1902516-002	03/22/2019	03/23/2019
WT-20190322-SF-007	K1902516-003	03/22/2019	03/23/2019
WT-20190322-SF-008	K1902516-004	03/22/2019	03/23/2019

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Analytical Results

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Collected:**	03/22/2019
Sample Matrix:	Water	**Date Received:**	03/23/2019

Volatile Organic Compounds

Sample Name:	WT-20190322-SF-005	**Units:**	ug/L
Lab Code:	K1902516-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.13	1	03/28/19	03/28/19	KWG1901412	
Chloromethane	ND	U	0.50	0.068	1	03/28/19	03/28/19	KWG1901412	
Vinyl Chloride	ND	U	0.50	0.075	1	03/28/19	03/28/19	KWG1901412	
Bromomethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	*
Chloroethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Trichlorofluoromethane	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloroethene	ND	U	0.50	0.080	1	03/28/19	03/28/19	KWG1901412	
Acetone	ND	U	20	3.3	1	03/28/19	03/28/19	KWG1901412	
Carbon Disulfide	ND	U	0.50	0.069	1	03/28/19	03/28/19	KWG1901412	
Methylene Chloride	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloroethane	ND	U	0.50	0.077	1	03/28/19	03/28/19	KWG1901412	
2,2-Dichloropropane	ND	U	0.50	0.065	1	03/28/19	03/28/19	KWG1901412	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	03/28/19	03/28/19	KWG1901412	
2-Butanone (MEK)	ND	U	20	1.9	1	03/28/19	03/28/19	KWG1901412	
Bromochloromethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Chloroform	**0.61**		0.50	0.072	1	03/28/19	03/28/19	KWG1901412	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	03/28/19	03/28/19	KWG1901412	
Carbon Tetrachloride	ND	U	0.50	0.096	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloropropene	ND	U	0.50	0.089	1	03/28/19	03/28/19	KWG1901412	
Benzene	ND	U	0.50	0.062	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	03/28/19	03/28/19	KWG1901412	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichloropropane	ND	U	0.50	0.095	1	03/28/19	03/28/19	KWG1901412	
Dibromomethane	ND	U	0.50	0.15	1	03/28/19	03/28/19	KWG1901412	
Bromodichloromethane	**0.19**	J	0.50	0.091	1	03/28/19	03/28/19	KWG1901412	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	03/28/19	03/28/19	KWG1901412	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	03/28/19	03/28/19	KWG1901412	
Toluene	ND	U	0.50	0.054	1	03/28/19	03/28/19	KWG1901412	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	03/28/19	03/28/19	KWG1901412	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	03/28/19	03/28/19	KWG1901412	
2-Hexanone	ND	U	20	2.7	1	03/28/19	03/28/19	KWG1901412	
1,3-Dichloropropane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	
Dibromochloromethane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	

Comments:

Analytical Results

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Collected:**	03/22/2019
Sample Matrix:	Water	**Date Received:**	03/23/2019

Volatile Organic Compounds

Sample Name:	WT-20190322-SF-005	**Units:**	ug/L
Lab Code:	K1902516-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
Chlorobenzene	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
Ethylbenzene	ND	U	0.50	0.050	1	03/28/19	03/28/19	KWG1901412	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
m,p-Xylenes	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
o-Xylene	ND	U	0.50	0.074	1	03/28/19	03/28/19	KWG1901412	
Styrene	ND	U	0.50	0.089	1	03/28/19	03/28/19	KWG1901412	
Bromoform	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Isopropylbenzene	ND	U	2.0	0.051	1	03/28/19	03/28/19	KWG1901412	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Bromobenzene	ND	U	2.0	0.12	1	03/28/19	03/28/19	KWG1901412	
n-Propylbenzene	ND	U	2.0	0.054	1	03/28/19	03/28/19	KWG1901412	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	03/28/19	03/28/19	KWG1901412	
2-Chlorotoluene	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	03/28/19	03/28/19	KWG1901412	
4-Chlorotoluene	ND	U	2.0	0.13	1	03/28/19	03/28/19	KWG1901412	
tert-Butylbenzene	ND	U	2.0	0.059	1	03/28/19	03/28/19	KWG1901412	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	03/28/19	03/28/19	KWG1901412	
sec-Butylbenzene	ND	U	2.0	0.062	1	03/28/19	03/28/19	KWG1901412	
4-Isopropyltoluene	ND	U	2.0	0.060	1	03/28/19	03/28/19	KWG1901412	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	03/28/19	03/28/19	KWG1901412	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
n-Butylbenzene	ND	U	2.0	0.054	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.22	1	03/28/19	03/28/19	KWG1901412	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	03/28/19	03/28/19	KWG1901412	
Hexachlorobutadiene	ND	U	2.0	0.11	1	03/28/19	03/28/19	KWG1901412	
Naphthalene	ND	U	2.0	0.088	1	03/28/19	03/28/19	KWG1901412	
1,2,3-Trichlorobenzene	ND	U	2.0	0.11	1	03/28/19	03/28/19	KWG1901412	

* See Case Narrative

Comments:

Analytical Results

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Collected:**	03/22/2019
Sample Matrix:	Water	**Date Received:**	03/23/2019

Volatile Organic Compounds

Sample Name:	WT-20190322-SF-005	**Units:**	ug/L
Lab Code:	K1902516-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	73-122	03/28/19	Acceptable
Toluene-d8	102	65-144	03/28/19	Acceptable
4-Bromofluorobenzene	87	68-117	03/28/19	Acceptable

Comments:

Analytical Results

Client: Cardno, Inc.
Project: Deer Park Fire
Sample Matrix: Water

Service Request: K1902516
Date Collected: 03/22/2019
Date Received: 03/23/2019

Volatile Organic Compounds

Sample Name: WT-20190322-SF-006
Lab Code: K1902516-002

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.13	1	03/28/19	03/28/19	KWG1901412	
Chloromethane	**0.27**	J	0.50	0.068	1	03/28/19	03/28/19	KWG1901412	
Vinyl Chloride	ND	U	0.50	0.075	1	03/28/19	03/28/19	KWG1901412	
Bromomethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	*
Chloroethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Trichlorofluoromethane	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloroethene	ND	U	0.50	0.080	1	03/28/19	03/28/19	KWG1901412	
Acetone	**4.0**	J	20	3.3	1	03/28/19	03/28/19	KWG1901412	
Carbon Disulfide	ND	U	0.50	0.069	1	03/28/19	03/28/19	KWG1901412	
Methylene Chloride	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloroethane	ND	U	0.50	0.077	1	03/28/19	03/28/19	KWG1901412	
2,2-Dichloropropane	ND	U	0.50	0.065	1	03/28/19	03/28/19	KWG1901412	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	03/28/19	03/28/19	KWG1901412	
2-Butanone (MEK)	ND	U	20	1.9	1	03/28/19	03/28/19	KWG1901412	
Bromochloromethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Chloroform	**0.99**		0.50	0.072	1	03/28/19	03/28/19	KWG1901412	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	03/28/19	03/28/19	KWG1901412	
Carbon Tetrachloride	ND	U	0.50	0.096	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloropropene	ND	U	0.50	0.089	1	03/28/19	03/28/19	KWG1901412	
Benzene	**4.2**		0.50	0.062	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	03/28/19	03/28/19	KWG1901412	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichloropropane	ND	U	0.50	0.095	1	03/28/19	03/28/19	KWG1901412	
Dibromomethane	ND	U	0.50	0.15	1	03/28/19	03/28/19	KWG1901412	
Bromodichloromethane	**0.23**	J	0.50	0.091	1	03/28/19	03/28/19	KWG1901412	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	03/28/19	03/28/19	KWG1901412	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	03/28/19	03/28/19	KWG1901412	
Toluene	**0.44**	J	0.50	0.054	1	03/28/19	03/28/19	KWG1901412	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	03/28/19	03/28/19	KWG1901412	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	03/28/19	03/28/19	KWG1901412	
2-Hexanone	ND	U	20	2.7	1	03/28/19	03/28/19	KWG1901412	
1,3-Dichloropropane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	
Dibromochloromethane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	

Comments:

Analytical Results

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Collected:**	03/22/2019
Sample Matrix:	Water	**Date Received:**	03/23/2019

Volatile Organic Compounds

Sample Name:	WT-20190322-SF-006	**Units:**	ug/L
Lab Code:	K1902516-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
Chlorobenzene	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
Ethylbenzene	ND	U	0.50	0.050	1	03/28/19	03/28/19	KWG1901412	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
m,p-Xylenes	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
o-Xylene	**1.3**		0.50	0.074	1	03/28/19	03/28/19	KWG1901412	
Styrene	**0.22**	J	0.50	0.089	1	03/28/19	03/28/19	KWG1901412	
Bromoform	**0.32**	J	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Isopropylbenzene	ND	U	2.0	0.051	1	03/28/19	03/28/19	KWG1901412	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Bromobenzene	ND	U	2.0	0.12	1	03/28/19	03/28/19	KWG1901412	
n-Propylbenzene	ND	U	2.0	0.054	1	03/28/19	03/28/19	KWG1901412	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	03/28/19	03/28/19	KWG1901412	
2-Chlorotoluene	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	03/28/19	03/28/19	KWG1901412	
4-Chlorotoluene	ND	U	2.0	0.13	1	03/28/19	03/28/19	KWG1901412	
tert-Butylbenzene	ND	U	2.0	0.059	1	03/28/19	03/28/19	KWG1901412	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	03/28/19	03/28/19	KWG1901412	
sec-Butylbenzene	ND	U	2.0	0.062	1	03/28/19	03/28/19	KWG1901412	
4-Isopropyltoluene	ND	U	2.0	0.060	1	03/28/19	03/28/19	KWG1901412	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	03/28/19	03/28/19	KWG1901412	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
n-Butylbenzene	ND	U	2.0	0.054	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.22	1	03/28/19	03/28/19	KWG1901412	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	03/28/19	03/28/19	KWG1901412	
Hexachlorobutadiene	ND	U	2.0	0.11	1	03/28/19	03/28/19	KWG1901412	
Naphthalene	ND	U	2.0	0.088	1	03/28/19	03/28/19	KWG1901412	
1,2,3-Trichlorobenzene	ND	U	2.0	0.11	1	03/28/19	03/28/19	KWG1901412	

* See Case Narrative

Comments:

Analytical Results

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Collected:**	03/22/2019
Sample Matrix:	Water	**Date Received:**	03/23/2019

Volatile Organic Compounds

Sample Name:	WT-20190322-SF-006	**Units:**	ug/L
Lab Code:	K1902516-002	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	105	73-122	03/28/19	Acceptable
Toluene-d8	105	65-144	03/28/19	Acceptable
4-Bromofluorobenzene	90	68-117	03/28/19	Acceptable

Comments:

Analytical Results

Client: Cardno, Inc.
Project: Deer Park Fire
Sample Matrix: Water

Service Request: K1902516
Date Collected: 03/22/2019
Date Received: 03/23/2019

Volatile Organic Compounds

Sample Name: WT-20190322-SF-007
Lab Code: K1902516-003

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.13	1	03/28/19	03/28/19	KWG1901412	
Chloromethane	ND	U	0.50	0.068	1	03/28/19	03/28/19	KWG1901412	
Vinyl Chloride	ND	U	0.50	0.075	1	03/28/19	03/28/19	KWG1901412	
Bromomethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	*
Chloroethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Trichlorofluoromethane	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloroethene	ND	U	0.50	0.080	1	03/28/19	03/28/19	KWG1901412	
Acetone	**3.3**	J	20	3.3	1	03/28/19	03/28/19	KWG1901412	
Carbon Disulfide	ND	U	0.50	0.069	1	03/28/19	03/28/19	KWG1901412	
Methylene Chloride	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloroethane	ND	U	0.50	0.077	1	03/28/19	03/28/19	KWG1901412	
2,2-Dichloropropane	ND	U	0.50	0.065	1	03/28/19	03/28/19	KWG1901412	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	03/28/19	03/28/19	KWG1901412	
2-Butanone (MEK)	ND	U	20	1.9	1	03/28/19	03/28/19	KWG1901412	
Bromochloromethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Chloroform	**1.0**		0.50	0.072	1	03/28/19	03/28/19	KWG1901412	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	03/28/19	03/28/19	KWG1901412	
Carbon Tetrachloride	ND	U	0.50	0.096	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloropropene	ND	U	0.50	0.089	1	03/28/19	03/28/19	KWG1901412	
Benzene	ND	U	0.50	0.062	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	03/28/19	03/28/19	KWG1901412	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichloropropane	ND	U	0.50	0.095	1	03/28/19	03/28/19	KWG1901412	
Dibromomethane	ND	U	0.50	0.15	1	03/28/19	03/28/19	KWG1901412	
Bromodichloromethane	**0.24**	J	0.50	0.091	1	03/28/19	03/28/19	KWG1901412	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	03/28/19	03/28/19	KWG1901412	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	03/28/19	03/28/19	KWG1901412	
Toluene	ND	U	0.50	0.054	1	03/28/19	03/28/19	KWG1901412	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	03/28/19	03/28/19	KWG1901412	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	03/28/19	03/28/19	KWG1901412	
2-Hexanone	ND	U	20	2.7	1	03/28/19	03/28/19	KWG1901412	
1,3-Dichloropropane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	
Dibromochloromethane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	

Comments:

Analytical Results

Client: Cardno, Inc.
Project: Deer Park Fire
Sample Matrix: Water

Service Request: K1902516
Date Collected: 03/22/2019
Date Received: 03/23/2019

Volatile Organic Compounds

Sample Name: WT-20190322-SF-007
Lab Code: K1902516-003

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
Chlorobenzene	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
Ethylbenzene	ND	U	0.50	0.050	1	03/28/19	03/28/19	KWG1901412	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
m,p-Xylenes	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
o-Xylene	ND	U	0.50	0.074	1	03/28/19	03/28/19	KWG1901412	
Styrene	ND	U	0.50	0.089	1	03/28/19	03/28/19	KWG1901412	
Bromoform	**0.40**	J	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Isopropylbenzene	ND	U	2.0	0.051	1	03/28/19	03/28/19	KWG1901412	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Bromobenzene	ND	U	2.0	0.12	1	03/28/19	03/28/19	KWG1901412	
n-Propylbenzene	ND	U	2.0	0.054	1	03/28/19	03/28/19	KWG1901412	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	03/28/19	03/28/19	KWG1901412	
2-Chlorotoluene	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	03/28/19	03/28/19	KWG1901412	
4-Chlorotoluene	ND	U	2.0	0.13	1	03/28/19	03/28/19	KWG1901412	
tert-Butylbenzene	ND	U	2.0	0.059	1	03/28/19	03/28/19	KWG1901412	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	03/28/19	03/28/19	KWG1901412	
sec-Butylbenzene	ND	U	2.0	0.062	1	03/28/19	03/28/19	KWG1901412	
4-Isopropyltoluene	ND	U	2.0	0.060	1	03/28/19	03/28/19	KWG1901412	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	03/28/19	03/28/19	KWG1901412	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
n-Butylbenzene	ND	U	2.0	0.054	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.22	1	03/28/19	03/28/19	KWG1901412	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	03/28/19	03/28/19	KWG1901412	
Hexachlorobutadiene	ND	U	2.0	0.11	1	03/28/19	03/28/19	KWG1901412	
Naphthalene	ND	U	2.0	0.088	1	03/28/19	03/28/19	KWG1901412	
1,2,3-Trichlorobenzene	ND	U	2.0	0.11	1	03/28/19	03/28/19	KWG1901412	

* See Case Narrative

Comments:

Analytical Results

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Collected:**	03/22/2019
Sample Matrix:	Water	**Date Received:**	03/23/2019

Volatile Organic Compounds

Sample Name:	WT-20190322-SF-007	**Units:**	ug/L
Lab Code:	K1902516-003	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	105	73-122	03/28/19	Acceptable
Toluene-d8	98	65-144	03/28/19	Acceptable
4-Bromofluorobenzene	90	68-117	03/28/19	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Collected:**	03/22/2019
Sample Matrix:	Water	**Date Received:**	03/23/2019

Volatile Organic Compounds

Sample Name:	WT-20190322-SF-008	**Units:**	ug/L
Lab Code:	K1902516-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.13	1	03/28/19	03/28/19	KWG1901412	
Chloromethane	ND	U	0.50	0.068	1	03/28/19	03/28/19	KWG1901412	
Vinyl Chloride	ND	U	0.50	0.075	1	03/28/19	03/28/19	KWG1901412	
Bromomethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	*
Chloroethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Trichlorofluoromethane	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloroethene	ND	U	0.50	0.080	1	03/28/19	03/28/19	KWG1901412	
Acetone	ND	U	20	3.3	1	03/28/19	03/28/19	KWG1901412	
Carbon Disulfide	ND	U	0.50	0.069	1	03/28/19	03/28/19	KWG1901412	
Methylene Chloride	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloroethane	ND	U	0.50	0.077	1	03/28/19	03/28/19	KWG1901412	
2,2-Dichloropropane	ND	U	0.50	0.065	1	03/28/19	03/28/19	KWG1901412	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	03/28/19	03/28/19	KWG1901412	
2-Butanone (MEK)	ND	U	20	1.9	1	03/28/19	03/28/19	KWG1901412	
Bromochloromethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Chloroform	**0.96**		0.50	0.072	1	03/28/19	03/28/19	KWG1901412	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	03/28/19	03/28/19	KWG1901412	
Carbon Tetrachloride	ND	U	0.50	0.096	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloropropene	ND	U	0.50	0.089	1	03/28/19	03/28/19	KWG1901412	
Benzene	ND	U	0.50	0.062	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	03/28/19	03/28/19	KWG1901412	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichloropropane	ND	U	0.50	0.095	1	03/28/19	03/28/19	KWG1901412	
Dibromomethane	ND	U	0.50	0.15	1	03/28/19	03/28/19	KWG1901412	
Bromodichloromethane	**0.28**	J	0.50	0.091	1	03/28/19	03/28/19	KWG1901412	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	03/28/19	03/28/19	KWG1901412	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	03/28/19	03/28/19	KWG1901412	
Toluene	ND	U	0.50	0.054	1	03/28/19	03/28/19	KWG1901412	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	03/28/19	03/28/19	KWG1901412	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	03/28/19	03/28/19	KWG1901412	
2-Hexanone	ND	U	20	2.7	1	03/28/19	03/28/19	KWG1901412	
1,3-Dichloropropane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	
Dibromochloromethane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	

Comments:

Analytical Results

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Collected:**	03/22/2019
Sample Matrix:	Water	**Date Received:**	03/23/2019

Volatile Organic Compounds

Sample Name:	WT-20190322-SF-008	**Units:**	ug/L
Lab Code:	K1902516-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
Chlorobenzene	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
Ethylbenzene	ND	U	0.50	0.050	1	03/28/19	03/28/19	KWG1901412	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
m,p-Xylenes	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
o-Xylene	ND	U	0.50	0.074	1	03/28/19	03/28/19	KWG1901412	
Styrene	ND	U	0.50	0.089	1	03/28/19	03/28/19	KWG1901412	
Bromoform	**0.37**	J	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Isopropylbenzene	ND	U	2.0	0.051	1	03/28/19	03/28/19	KWG1901412	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Bromobenzene	ND	U	2.0	0.12	1	03/28/19	03/28/19	KWG1901412	
n-Propylbenzene	ND	U	2.0	0.054	1	03/28/19	03/28/19	KWG1901412	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	03/28/19	03/28/19	KWG1901412	
2-Chlorotoluene	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	03/28/19	03/28/19	KWG1901412	
4-Chlorotoluene	ND	U	2.0	0.13	1	03/28/19	03/28/19	KWG1901412	
tert-Butylbenzene	ND	U	2.0	0.059	1	03/28/19	03/28/19	KWG1901412	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	03/28/19	03/28/19	KWG1901412	
sec-Butylbenzene	ND	U	2.0	0.062	1	03/28/19	03/28/19	KWG1901412	
4-Isopropyltoluene	ND	U	2.0	0.060	1	03/28/19	03/28/19	KWG1901412	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	03/28/19	03/28/19	KWG1901412	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
n-Butylbenzene	ND	U	2.0	0.054	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.22	1	03/28/19	03/28/19	KWG1901412	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	03/28/19	03/28/19	KWG1901412	
Hexachlorobutadiene	ND	U	2.0	0.11	1	03/28/19	03/28/19	KWG1901412	
Naphthalene	ND	U	2.0	0.088	1	03/28/19	03/28/19	KWG1901412	
1,2,3-Trichlorobenzene	ND	U	2.0	0.11	1	03/28/19	03/28/19	KWG1901412	

* See Case Narrative

Comments:

Analytical Results

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Collected:**	03/22/2019
Sample Matrix:	Water	**Date Received:**	03/23/2019

Volatile Organic Compounds

Sample Name:	WT-20190322-SF-008	**Units:**	ug/L
Lab Code:	K1902516-004	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	73-122	03/28/19	Acceptable
Toluene-d8	98	65-144	03/28/19	Acceptable
4-Bromofluorobenzene	88	68-117	03/28/19	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1901412-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.13	1	03/28/19	03/28/19	KWG1901412	
Chloromethane	ND	U	0.50	0.068	1	03/28/19	03/28/19	KWG1901412	
Vinyl Chloride	ND	U	0.50	0.075	1	03/28/19	03/28/19	KWG1901412	
Bromomethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	*
Chloroethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Trichlorofluoromethane	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloroethene	ND	U	0.50	0.080	1	03/28/19	03/28/19	KWG1901412	
Acetone	ND	U	20	3.3	1	03/28/19	03/28/19	KWG1901412	
Carbon Disulfide	ND	U	0.50	0.069	1	03/28/19	03/28/19	KWG1901412	
Methylene Chloride	**0.16**	J	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloroethane	ND	U	0.50	0.077	1	03/28/19	03/28/19	KWG1901412	
2,2-Dichloropropane	ND	U	0.50	0.065	1	03/28/19	03/28/19	KWG1901412	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	03/28/19	03/28/19	KWG1901412	
2-Butanone (MEK)	ND	U	20	1.9	1	03/28/19	03/28/19	KWG1901412	
Bromochloromethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Chloroform	ND	U	0.50	0.072	1	03/28/19	03/28/19	KWG1901412	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	03/28/19	03/28/19	KWG1901412	
Carbon Tetrachloride	ND	U	0.50	0.096	1	03/28/19	03/28/19	KWG1901412	
1,1-Dichloropropene	ND	U	0.50	0.089	1	03/28/19	03/28/19	KWG1901412	
Benzene	ND	U	0.50	0.062	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	03/28/19	03/28/19	KWG1901412	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichloropropane	ND	U	0.50	0.095	1	03/28/19	03/28/19	KWG1901412	
Dibromomethane	ND	U	0.50	0.15	1	03/28/19	03/28/19	KWG1901412	
Bromodichloromethane	ND	U	0.50	0.091	1	03/28/19	03/28/19	KWG1901412	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	03/28/19	03/28/19	KWG1901412	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	03/28/19	03/28/19	KWG1901412	
Toluene	ND	U	0.50	0.054	1	03/28/19	03/28/19	KWG1901412	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	03/28/19	03/28/19	KWG1901412	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	03/28/19	03/28/19	KWG1901412	
2-Hexanone	ND	U	20	2.7	1	03/28/19	03/28/19	KWG1901412	
1,3-Dichloropropane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	
Dibromochloromethane	ND	U	0.50	0.14	1	03/28/19	03/28/19	KWG1901412	

Comments:

Analytical Results

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1901412-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
Chlorobenzene	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
Ethylbenzene	ND	U	0.50	0.050	1	03/28/19	03/28/19	KWG1901412	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
m,p-Xylenes	ND	U	0.50	0.11	1	03/28/19	03/28/19	KWG1901412	
o-Xylene	ND	U	0.50	0.074	1	03/28/19	03/28/19	KWG1901412	
Styrene	ND	U	0.50	0.089	1	03/28/19	03/28/19	KWG1901412	
Bromoform	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Isopropylbenzene	ND	U	2.0	0.051	1	03/28/19	03/28/19	KWG1901412	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	03/28/19	03/28/19	KWG1901412	
Bromobenzene	ND	U	2.0	0.12	1	03/28/19	03/28/19	KWG1901412	
n-Propylbenzene	ND	U	2.0	0.054	1	03/28/19	03/28/19	KWG1901412	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	03/28/19	03/28/19	KWG1901412	
2-Chlorotoluene	ND	U	2.0	0.10	1	03/28/19	03/28/19	KWG1901412	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	03/28/19	03/28/19	KWG1901412	
4-Chlorotoluene	ND	U	2.0	0.13	1	03/28/19	03/28/19	KWG1901412	
tert-Butylbenzene	ND	U	2.0	0.059	1	03/28/19	03/28/19	KWG1901412	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	03/28/19	03/28/19	KWG1901412	
sec-Butylbenzene	ND	U	2.0	0.062	1	03/28/19	03/28/19	KWG1901412	
4-Isopropyltoluene	ND	U	2.0	0.060	1	03/28/19	03/28/19	KWG1901412	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	03/28/19	03/28/19	KWG1901412	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
n-Butylbenzene	ND	U	2.0	0.054	1	03/28/19	03/28/19	KWG1901412	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	03/28/19	03/28/19	KWG1901412	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.22	1	03/28/19	03/28/19	KWG1901412	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	03/28/19	03/28/19	KWG1901412	
Hexachlorobutadiene	ND	U	2.0	0.11	1	03/28/19	03/28/19	KWG1901412	
Naphthalene	ND	U	2.0	0.088	1	03/28/19	03/28/19	KWG1901412	
1,2,3-Trichlorobenzene	ND	U	2.0	0.11	1	03/28/19	03/28/19	KWG1901412	

* See Case Narrative

Comments:

Analytical Results

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1901412-4	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	103	73-122	03/28/19	Acceptable
Toluene-d8	99	65-144	03/28/19	Acceptable
4-Bromofluorobenzene	89	68-117	03/28/19	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Cardno, Inc.
Project: Deer Park Fire
Sample Matrix: Water

Service Request: K1902516

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
WT-20190322-SF-005	K1902516-001	102	102	87
WT-20190322-SF-006	K1902516-002	105	105	90
WT-20190322-SF-007	K1902516-003	105	98	90
WT-20190322-SF-008	K1902516-004	100	98	88
Method Blank	KWG1901412-4	103	99	89
Lab Control Sample	KWG1901412-3	108	107	97

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	73-122
Sur2	=	Toluene-d8	65-144
Sur3	=	4-Bromofluorobenzene	68-117

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Analyzed:**	03/28/2019
		Time Analyzed:	01:02

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID:	J:\MS46\DATA\032719\0327F037.D	**Lab Code:**	KWG1901411-2
Instrument ID:	MS46	**Analysis Lot:**	KWG1901411
Analysis Method:	8260C		

		Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	129,595	6.51	57,178	9.98	50,247	12.57
	Upper Limit ==>	259,190	7.01	114,356	10.48	100,494	13.07
	Lower Limit ==>	64,798	6.01	28,589	9.48	25,124	12.07
	ICAL Result ==>	211,486	6.51	83,836	9.99	79,357	12.57
Associated Analyses							
Lab Control Sample	KWG1901412-3	131,928	6.50	57,394	9.98	52,357	12.57
Method Blank	KWG1901412-4	130,792	6.51	55,976	9.98	47,035	12.56
WT-20190322-SF-005	K1902516-001	120,262	6.51	51,797	9.98	42,991	12.57
WT-20190322-SF-006	K1902516-002	118,479	6.51	50,535	9.98	42,020	12.56
WT-20190322-SF-007	K1902516-003	117,977	6.51	49,064	9.98	42,398	12.57
WT-20190322-SF-008	K1902516-004	120,972	6.51	50,361	9.98	41,526	12.57

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Extracted:**	03/28/2019
Sample Matrix:	Water	**Date Analyzed:**	03/28/2019

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1901412

	Lab Control Sample KWG1901412-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Dichlorodifluoromethane	9.79	10.0	98	32-124
Chloromethane	10.2	10.0	102	34-130
Vinyl Chloride	9.66	10.0	97	55-123
Bromomethane	5.02	10.0	50	35-113
Chloroethane	8.99	10.0	90	58-134
Trichlorofluoromethane	9.20	10.0	92	52-141
1,1-Dichloroethene	8.88	10.0	89	66-129
Acetone	60.5	50.0	121	68-135
Carbon Disulfide	16.9	20.0	85	46-144
Methylene Chloride	9.02	10.0	90	71-122
trans-1,2-Dichloroethene	9.13	10.0	91	67-125
1,1-Dichloroethane	10.0	10.0	100	68-132
2,2-Dichloropropane	8.17	10.0	82	37-145
cis-1,2-Dichloroethene	8.57	10.0	86	71-118
2-Butanone (MEK)	52.6	50.0	105	71-149
Bromochloromethane	8.69	10.0	87	75-131
Chloroform	9.88	10.0	99	70-129
1,1,1-Trichloroethane (TCA)	9.49	10.0	95	59-136
Carbon Tetrachloride	10.3	10.0	103	55-140
1,1-Dichloropropene	9.40	10.0	94	59-134
Benzene	9.33	10.0	93	69-124
1,2-Dichloroethane (EDC)	10.7	10.0	107	56-142
Trichloroethene (TCE)	9.03	10.0	90	67-128
1,2-Dichloropropane	9.21	10.0	92	67-126
Dibromomethane	9.06	10.0	91	69-128
Bromodichloromethane	9.23	10.0	92	63-129
cis-1,3-Dichloropropene	8.72	10.0	87	62-132
4-Methyl-2-pentanone (MIBK)	52.6	50.0	105	64-134
Toluene	9.04	10.0	90	69-124
trans-1,3-Dichloropropene	8.17	10.0	82	59-125
1,1,2-Trichloroethane	8.76	10.0	88	74-118
Tetrachloroethene (PCE)	7.83	10.0	78	62-126
2-Hexanone	52.9	50.0	106	59-131
1,3-Dichloropropane	9.06	10.0	91	75-116
Dibromochloromethane	8.28	10.0	83	67-126

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Extracted:**	03/28/2019
Sample Matrix:	Water	**Date Analyzed:**	03/28/2019

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1901412

	Lab Control Sample KWG1901412-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
1,2-Dibromoethane (EDB)	8.20	10.0	82	74-118
Chlorobenzene	8.48	10.0	85	72-116
Ethylbenzene	8.70	10.0	87	67-121
1,1,1,2-Tetrachloroethane	8.65	10.0	87	66-124
m,p-Xylenes	17.5	20.0	87	69-121
o-Xylene	8.65	10.0	87	71-119
Styrene	9.09	10.0	91	74-121
Bromoform	7.76	10.0	78	52-144
Isopropylbenzene	8.75	10.0	88	67-129
1,1,2,2-Tetrachloroethane	8.84	10.0	88	70-127
Bromobenzene	7.98	10.0	80	72-116
n-Propylbenzene	9.08	10.0	91	61-124
1,2,3-Trichloropropane	8.77	10.0	88	69-123
2-Chlorotoluene	9.10	10.0	91	55-131
1,3,5-Trimethylbenzene	9.05	10.0	91	62-126
4-Chlorotoluene	8.99	10.0	90	66-121
tert-Butylbenzene	8.84	10.0	88	61-127
1,2,4-Trimethylbenzene	8.98	10.0	90	63-122
sec-Butylbenzene	8.94	10.0	89	59-128
4-Isopropyltoluene	8.91	10.0	89	61-128
1,3-Dichlorobenzene	8.31	10.0	83	70-116
1,4-Dichlorobenzene	8.17	10.0	82	73-115
n-Butylbenzene	9.04	10.0	90	55-130
1,2-Dichlorobenzene	8.48	10.0	85	72-115
1,2-Dibromo-3-chloropropane	7.61	10.0	76	55-132
1,2,4-Trichlorobenzene	7.57	10.0	76	58-126
Hexachlorobutadiene	7.36	10.0	74	57-119
Naphthalene	8.17	10.0	82	64-126
1,2,3-Trichlorobenzene	8.09	10.0	81	68-120

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Extracted:**	03/28/2019
Sample Matrix:	Water	**Date Analyzed:**	03/28/2019
		Time Analyzed:	03:15

Method Blank Summary
Volatile Organic Compounds

Sample Name:	Method Blank	**Instrument ID:**	MS46
Lab Code:	KWG1901412-4	**File ID:**	J:\MS46\DATA\032719\0327F042.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1901412

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1901412-3	J:\MS46\DATA\032719\0327F038.D	03/28/19	01:29
WT-20190322-SF-005	K1902516-001	J:\MS46\DATA\032719\0327F059.D	03/28/19	10:49
WT-20190322-SF-006	K1902516-002	J:\MS46\DATA\032719\0327F060.D	03/28/19	11:15
WT-20190322-SF-007	K1902516-003	J:\MS46\DATA\032719\0327F061.D	03/28/19	11:42
WT-20190322-SF-008	K1902516-004	J:\MS46\DATA\032719\0327F062.D	03/28/19	12:09

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Cardno, Inc.	**Service Request:**	K1902516
Project:	Deer Park Fire	**Date Extracted:**	03/28/2019
Sample Matrix:	Water	**Date Analyzed:**	03/28/2019
		Time Analyzed:	01:29

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name:	Lab Control Sample	**Instrument ID:**	MS46
Lab Code:	KWG1901412-3	**File ID:**	J:\MS46\DATA\032719\0327F038.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1901412

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1901412-4	J:\MS46\DATA\032719\0327F042.D	03/28/19	03:15
WT-20190322-SF-005	K1902516-001	J:\MS46\DATA\032719\0327F059.D	03/28/19	10:49
WT-20190322-SF-006	K1902516-002	J:\MS46\DATA\032719\0327F060.D	03/28/19	11:15
WT-20190322-SF-007	K1902516-003	J:\MS46\DATA\032719\0327F061.D	03/28/19	11:42
WT-20190322-SF-008	K1902516-004	J:\MS46\DATA\032719\0327F062.D	03/28/19	12:09

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Cardno, Inc.
Project: Deer Park Fire

Service Request: K1902516
Date Analyzed: 03/28/2019
Time Analyzed: 00:36

Tune Summary
Volatile Organic Compounds

File ID: J:\MS46\DATA\032719\0327F036.D
Instrument ID: GCMS46
Column:

Analysis Method: 8260C
Analysis Lot: KWG1901411

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	23.9	1099	PASS
75	95	30	60	54.6	2513	PASS
95	95	100	100	100.0	4603	PASS
96	95	5	9	8.0	369	PASS
173	174	0	2	0.2	10	PASS
174	95	50	120	89.6	4124	PASS
175	174	5	9	8.9	369	PASS
176	174	95	101	99.3	4095	PASS
177	176	5	9	6.2	253	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1901411-2	J:\MS46\DATA\032719\0327F037.D	03/28/2019	01:02	
Lab Control Sample	KWG1901412-3	J:\MS46\DATA\032719\0327F038.D	03/28/2019	01:29	
Method Blank	KWG1901412-4	J:\MS46\DATA\032719\0327F042.D	03/28/2019	03:15	
WT-20190322-SF-005	K1902516-001	J:\MS46\DATA\032719\0327F059.D	03/28/2019	10:49	
WT-20190322-SF-006	K1902516-002	J:\MS46\DATA\032719\0327F060.D	03/28/2019	11:15	
WT-20190322-SF-007	K1902516-003	J:\MS46\DATA\032719\0327F061.D	03/28/2019	11:42	
WT-20190322-SF-008	K1902516-004	J:\MS46\DATA\032719\0327F062.D	03/28/2019	12:09	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Cardno, Inc. **Service Request:** K1902516
Project: Deer Park Fire **Calibration Date:** 03/15/2019

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15985 **Column:** MS
Instrument ID: MS46

Level ID	File ID	Level ID	File ID
A	J:\MS46\DATA\031519\0315F009.D	G	J:\MS46\DATA\031519\0315F015.D
B	J:\MS46\DATA\031519\0315F010.D	H	J:\MS46\DATA\031519\0315F016.D
C	J:\MS46\DATA\031519\0315F011.D	I	J:\MS46\DATA\031519\0315F017.D
D	J:\MS46\DATA\031519\0315F012.D	J	J:\MS46\DATA\031519\0315F018.D
E	J:\MS46\DATA\031519\0315F013.D	K	J:\MS46\DATA\031519\0315F019.D
F	J:\MS46\DATA\031519\0315F014.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dichlorodifluoromethane	A	80	0.362	B	60	0.345	C	40	0.307	D	20	0.304	E	10	0.376
	F	5.0	0.365	G	2.0	0.379	H	1.0	0.397	I	0.50	0.420	J	0.20	0.382
	K	0.10	0.490												
Chloromethane	A	80	0.281	B	60	0.289	C	40	0.279	D	20	0.267	E	10	0.303
	F	5.0	0.299	G	2.0	0.312	H	1.0	0.331	I	0.50	0.365			
Vinyl Chloride	A	80	0.319	B	60	0.310	C	40	0.293	D	20	0.286	E	10	0.343
	F	5.0	0.340	G	2.0	0.349	H	1.0	0.339	I	0.50	0.365	J	0.20	0.400
	K	0.10	0.422												
Bromomethane										D	20	0.187	E	10	0.212
	F	5.0	0.216	G	2.0	0.249	H	1.0	0.242	I	0.50	0.285			
Chloroethane										D	20	0.172	E	10	0.203
	F	5.0	0.220	G	2.0	0.225	H	1.0	0.240	I	0.50	0.263			
Trichlorofluoromethane	A	80	0.426	B	60	0.418	C	40	0.396	D	20	0.392	E	10	0.463
	F	5.0	0.473	G	2.0	0.491	H	1.0	0.471	I	0.50	0.500	J	0.20	0.486
	K	0.10	0.529												
1,1-Dichloroethene	A	80	0.224	B	60	0.221	C	40	0.214	D	20	0.211	E	10	0.242
	F	5.0	0.250	G	2.0	0.278	H	1.0	0.274	I	0.50	0.267	J	0.20	0.269
Acetone	A	2000	0.0473	B	1600	0.0466	C	800	0.0469	D	400	0.0439	E	200	0.0452
	F	100	0.0472	G	80	0.0471	H	40	0.0440	I	20	0.0468	J	8.0	0.0473
	K	4.0	0.0599												
Carbon Disulfide	A	80	0.685	B	60	0.698	C	40	0.644	D	20	0.642	E	10	0.754
	F	5.0	0.776	G	2.0	0.821	H	1.0	0.842	I	0.50	0.888	J	0.20	0.950
Methylene Chloride	A	80	0.252	B	60	0.260	C	40	0.253	D	20	0.246	E	10	0.267
	F	5.0	0.279	G	2.0	0.291	H	1.0	0.313	I	0.50	0.337			

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Cardno, Inc. **Service Request:** K1902516
Project: Deer Park Fire **Calibration Date:** 03/15/2019

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15985 **Column:** MS
Instrument ID: MS46

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
trans-1,2-Dichloroethene	A	80	0.261	B	60	0.255	C	40	0.240	D	20	0.235	E	10	0.276
	F	5.0	0.270	G	2.0	0.292	H	1.0	0.289	I	0.50	0.301	J	0.20	0.304
1,1-Dichloroethane	A	80	0.431	B	60	0.436	C	40	0.429	D	20	0.425	E	10	0.477
	F	5.0	0.470	G	2.0	0.495	H	1.0	0.489	I	0.50	0.497	J	0.20	0.613
	K	0.10	0.578												
2,2-Dichloropropane	A	80	0.408	B	60	0.399	C	40	0.362	D	20	0.358	E	10	0.401
	F	5.0	0.387	G	2.0	0.403	H	1.0	0.365	I	0.50	0.399	J	0.20	0.372
	K	0.10	0.495												
cis-1,2-Dichloroethene	A	80	0.287	B	60	0.283	C	40	0.273	D	20	0.277	E	10	0.291
	F	5.0	0.287	G	2.0	0.316	H	1.0	0.320	I	0.50	0.331	J	0.20	0.361
	K	0.10	0.417												
2-Butanone (MEK)	A	2000	0.0220	B	1600	0.0214	C	800	0.0214	D	400	0.0208	E	200	0.0206
	F	100	0.0202	G	80	0.0207	H	40	0.0201	I	20	0.0201	J	8.0	0.0212
	K	4.0	0.0229												
Bromochloromethane	A	80	0.122	B	60	0.115	C	40	0.111	D	20	0.114	E	10	0.120
	F	5.0	0.124	G	2.0	0.130	H	1.0	0.143	I	0.50	0.140	J	0.20	0.142
	K	0.10	0.157												
Chloroform	A	80	0.468	B	60	0.466	C	40	0.442	D	20	0.456	E	10	0.488
	F	5.0	0.482	G	2.0	0.508	H	1.0	0.492	I	0.50	0.526	J	0.20	0.530
	K	0.10	0.583												
1,1,1-Trichloroethane (TCA)	A	80	0.426	B	60	0.421	C	40	0.384	D	20	0.389	E	10	0.446
	F	5.0	0.447	G	2.0	0.468	H	1.0	0.444	I	0.50	0.480	J	0.20	0.518
	K	0.10	0.581												
Carbon Tetrachloride	A	80	0.386	B	60	0.379	C	40	0.342	D	20	0.345	E	10	0.410
	F	5.0	0.392	G	2.0	0.406	H	1.0	0.395	I	0.50	0.393	J	0.20	0.421
	K	0.10	0.365												
1,1-Dichloropropene	A	80	0.376	B	60	0.370	C	40	0.342	D	20	0.351	E	10	0.413
	F	5.0	0.395	G	2.0	0.424	H	1.0	0.408	I	0.50	0.399	J	0.20	0.423
	K	0.10	0.452												
Benzene	A	80	1.07	B	60	1.06	C	40	1.02	D	20	1.01	E	10	1.12
	F	5.0	1.11	G	2.0	1.17	H	1.0	1.16	I	0.50	1.21	J	0.20	1.32
	K	0.10	1.31												
1,2-Dichloroethane (EDC)	A	80	0.360	B	60	0.353	C	40	0.352	D	20	0.341	E	10	0.348
	F	5.0	0.349	G	2.0	0.380	H	1.0	0.382	I	0.50	0.365	J	0.20	0.371
	K	0.10	0.413												

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† **SPCC Compound** ‡ **CCC Compound**

Client: Cardno, Inc. **Service Request:** K1902516
Project: Deer Park Fire **Calibration Date:** 03/15/2019

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15985 **Column:** MS
Instrument ID: MS46

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Trichloroethene (TCE)	A	80	0.284	B	60	0.281	C	40	0.272	D	20	0.265	E	10	0.306
	F	5.0	0.303	G	2.0	0.316	H	1.0	0.319	I	0.50	0.353	J	0.20	0.370
	K	0.10	0.340												
1,2-Dichloropropane	A	80	0.285	B	60	0.279	C	40	0.277	D	20	0.273	E	10	0.285
	F	5.0	0.284	G	2.0	0.286	H	1.0	0.292	I	0.50	0.311	J	0.20	0.320
	K	0.10	0.319												
Dibromomethane	A	80	0.166	B	60	0.160	C	40	0.162	D	20	0.155	E	10	0.160
	F	5.0	0.160	G	2.0	0.166	H	1.0	0.169	I	0.50	0.177	J	0.20	0.162
	K	0.10	0.236												
Bromodichloromethane	A	80	0.392	B	60	0.384	C	40	0.382	D	20	0.373	E	10	0.369
	F	5.0	0.366	G	2.0	0.372	H	1.0	0.371	I	0.50	0.393	J	0.20	0.367
	K	0.10	0.462												
cis-1,3-Dichloropropene	A	80	0.469	B	60	0.460	C	40	0.457	D	20	0.448	E	10	0.445
	F	5.0	0.428	G	2.0	0.441	H	1.0	0.412	I	0.50	0.439	J	0.20	0.437
	K	0.10	0.482												
4-Methyl-2-pentanone (MIBK)	A	2000	0.0875	B	1600	0.0847	C	800	0.0838	D	400	0.0795	E	200	0.0800
	F	100	0.0775	G	80	0.0804	H	40	0.0783	I	20	0.0768	J	8.0	0.0734
	K	4.0	0.0767												
Toluene	A	80	0.691	B	60	0.681	C	40	0.668	D	20	0.665	E	10	0.716
	F	5.0	0.718	G	2.0	0.787	H	1.0	0.753	I	0.50	0.785	J	0.20	0.822
	K	0.10	0.797												
trans-1,3-Dichloropropene	A	80	1.03	B	60	0.975	C	40	1.02	D	20	0.969	E	10	0.967
	F	5.0	0.886	G	2.0	0.952	H	1.0	0.894	I	0.50	0.945	J	0.20	0.906
	K	0.10	1.06												
1,1,2-Trichloroethane	A	80	0.489	B	60	0.467	C	40	0.494	D	20	0.489	E	10	0.498
	F	5.0	0.483	G	2.0	0.524	H	1.0	0.497	I	0.50	0.508	J	0.20	0.508
	K	0.10	0.574												
Tetrachloroethene (PCE)	A	80	0.636	B	60	0.600	C	40	0.616	D	20	0.614	E	10	0.719
	F	5.0	0.696	G	2.0	0.782	H	1.0	0.732	I	0.50	0.818	J	0.20	0.708
	K	0.10	0.880												
2-Hexanone	A	2400	0.0562	B	1600	0.0629	C	800	0.0663	D	400	0.0619	E	200	0.0635
	F	100	0.0610	G	80	0.0606	H	40	0.0602	I	20	0.0562	J	8.0	0.0572
	K	4.0	0.0627												
1,3-Dichloropropane	A	80	1.02	B	60	0.968	C	40	1.04	D	20	1.01	E	10	1.04
	F	5.0	1.02	G	2.0	1.08	H	1.0	1.03	I	0.50	1.06	J	0.20	1.23
	K	0.10	1.08												

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Client: Cardno, Inc. **Service Request:** K1902516
Project: Deer Park Fire **Calibration Date:** 03/15/2019

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15985 **Column:** MS
Instrument ID: MS46

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dibromochloromethane	A	80	0.730	B	60	0.694	C	40	0.742	D	20	0.716	E	10	0.702
	F	5.0	0.702	G	2.0	0.708	H	1.0	0.704	I	0.50	0.707	J	0.20	0.728
	K	0.10	0.701												
1,2-Dibromoethane (EDB)	A	80	0.586	B	60	0.556	C	40	0.596	D	20	0.583	E	10	0.591
	F	5.0	0.580	G	2.0	0.616	H	1.0	0.604	I	0.50	0.658	J	0.20	0.625
	K	0.10	0.657												
Chlorobenzene	A	80	1.87	B	60	1.86	C	40	1.88	D	20	1.84	E	10	1.96
	F	5.0	1.94	G	2.0	2.08	H	1.0	2.06	I	0.50	2.19	J	0.20	2.24
	K	0.10	2.22												
Ethylbenzene	A	80	1.02	B	60	0.994	C	40	0.996	D	20	0.974	E	10	1.09
	F	5.0	1.05	G	2.0	1.10	H	1.0	1.10	I	0.50	1.13	J	0.20	1.10
	K	0.10	1.05												
1,1,1,2-Tetrachloroethane	A	80	0.708	B	60	0.698	C	40	0.709	D	20	0.684	E	10	0.710
	F	5.0	0.696	G	2.0	0.726	H	1.0	0.694	I	0.50	0.728	J	0.20	0.701
	K	0.10	0.613												
m,p-Xylenes	A	160	1.22	B	120	1.20	C	80	1.20	D	40	1.17	E	20	1.36
	F	10	1.30	G	4.0	1.34	H	2.0	1.28	I	1.0	1.31	J	0.40	1.36
	K	0.20	1.38												
o-Xylene	A	80	1.17	B	60	1.16	C	40	1.17	D	20	1.13	E	10	1.26
	F	5.0	1.18	G	2.0	1.25	H	1.0	1.18	I	0.50	1.19	J	0.20	1.26
	K	0.10	1.38												
Styrene	A	80	1.10	B	60	1.08	C	40	1.09	D	20	1.07	E	10	1.15
	F	5.0	1.07	G	2.0	1.09	H	1.0	1.07	I	0.50	1.05	J	0.20	1.06
	K	0.10	0.997												
Bromoform	A	80	0.484	B	60	0.485	C	40	0.494	D	20	0.470	E	10	0.487
	F	5.0	0.447	G	2.0	0.469	H	1.0	0.435	I	0.50	0.392			
Isopropylbenzene	A	80	3.12	B	60	3.09	C	40	3.06	D	20	2.99	E	10	3.49
	F	5.0	3.27	G	2.0	3.38	H	1.0	3.25	I	0.50	3.34	J	0.20	3.08
	K	0.10	3.49												
1,1,2,2-Tetrachloroethane	A	80	0.686	B	60	0.701	C	40	0.734	D	20	0.740	E	10	0.755
	F	5.0	0.747	G	2.0	0.826	H	1.0	0.758	I	0.50	0.764	J	0.20	0.871
	K	0.10	0.754												
Bromobenzene	A	80	0.846	B	60	0.878	C	40	0.898	D	20	0.888	E	10	0.906
	F	5.0	0.932	G	2.0	1.02	H	1.0	0.978	I	0.50	0.928	J	0.20	1.05
	K	0.10	1.11												

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Client: Cardno, Inc. **Service Request:** K1902516
Project: Deer Park Fire **Calibration Date:** 03/15/2019

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15985 **Column:** MS
Instrument ID: MS46

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
n-Propylbenzene	A	80	3.85	B	60	3.93	C	40	3.98	D	20	3.96	E	10	4.31
	F	5.0	4.33	G	2.0	4.41	H	1.0	4.24	I	0.50	4.32	J	0.20	4.42
	K	0.10	4.17												
1,2,3-Trichloropropane	A	80	0.222	B	60	0.234	C	40	0.242	D	20	0.243	E	10	0.242
	F	5.0	0.257	G	2.0	0.275	H	1.0	0.255	I	0.50	0.271	J	0.20	0.269
	K	0.10	0.308												
2-Chlorotoluene	A	80	2.18	B	60	2.22	C	40	2.24	D	20	2.26	E	10	2.41
	F	5.0	2.41	G	2.0	2.61	H	1.0	2.46	I	0.50	2.56	J	0.20	2.42
	K	0.10	2.47												
1,3,5-Trimethylbenzene	A	80	2.69	B	60	2.66	C	40	2.68	D	20	2.65	E	10	2.84
	F	5.0	2.81	G	2.0	2.97	H	1.0	2.74	I	0.50	2.71	J	0.20	2.65
	K	0.10	2.93												
4-Chlorotoluene	A	80	2.36	B	60	2.32	C	40	2.36	D	20	2.38	E	10	2.51
	F	5.0	2.55	G	2.0	2.68	H	1.0	2.57	I	0.50	2.92	J	0.20	2.48
	K	0.10	2.81												
tert-Butylbenzene	A	80	2.36	B	60	2.34	C	40	2.32	D	20	2.32	E	10	2.54
	F	5.0	2.53	G	2.0	2.69	H	1.0	2.47	I	0.50	2.57	J	0.20	2.37
	K	0.10	2.82												
1,2,4-Trimethylbenzene	A	80	2.69	B	60	2.66	C	40	2.69	D	20	2.67	E	10	2.83
	F	5.0	2.85	G	2.0	2.91	H	1.0	2.71	I	0.50	2.80	J	0.20	2.68
	K	0.10	2.85												
sec-Butylbenzene	A	80	3.42	B	60	3.38	C	40	3.35	D	20	3.38	E	10	3.70
	F	5.0	3.62	G	2.0	3.84	H	1.0	3.58	I	0.50	3.63	J	0.20	3.67
	K	0.10	3.80												
4-Isopropyltoluene	A	80	2.88	B	60	2.85	C	40	2.84	D	20	2.82	E	10	3.06
	F	5.0	3.00	G	2.0	3.06	H	1.0	2.88	I	0.50	2.99	J	0.20	2.91
	K	0.10	2.85												
1,3-Dichlorobenzene	A	80	1.59	B	60	1.58	C	40	1.60	D	20	1.58	E	10	1.66
	F	5.0	1.68	G	2.0	1.82	H	1.0	1.76	I	0.50	1.73	J	0.20	1.99
	K	0.10	1.91												
1,4-Dichlorobenzene	A	80	1.61	B	60	1.59	C	40	1.61	D	20	1.61	E	10	1.65
	F	5.0	1.68	G	2.0	1.84	H	1.0	1.74	I	0.50	1.89	J	0.20	1.90
	K	0.10	2.30												
n-Butylbenzene	A	80	2.58	B	60	2.56	C	40	2.54	D	20	2.52	E	10	2.67
	F	5.0	2.59	G	2.0	2.71	H	1.0	2.45	I	0.50	2.45	J	0.20	2.44
	K	0.10	2.54												

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Client: Cardno, Inc. **Service Request:** K1902516
Project: Deer Park Fire **Calibration Date:** 03/15/2019

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15985 **Column:** MS
Instrument ID: MS46

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
1,2-Dichlorobenzene	A	80	1.48	B	60	1.46	C	40	1.49	D	20	1.47	E	10	1.49
	F	5.0	1.50	G	2.0	1.68	H	1.0	1.56	I	0.50	1.61	J	0.20	1.76
	K	0.10	1.78												
1,2-Dibromo-3-chloropropane	A	80	0.121	B	60	0.120	C	40	0.120	D	20	0.122	E	10	0.114
	F	5.0	0.110	G	2.0	0.119	H	1.0	0.0976	I	0.50	0.0862			
1,2,4-Trichlorobenzene	A	80	1.02	B	60	1.01	C	40	1.01	D	20	1.02	E	10	0.976
	F	5.0	0.956	G	2.0	1.06	H	1.0	0.954	I	0.50	0.974	J	0.20	1.20
	K	0.10	1.30												
Hexachlorobutadiene	A	80	0.464	B	60	0.474	C	40	0.461	D	20	0.486	E	10	0.494
	F	5.0	0.478	G	2.0	0.514	H	1.0	0.523	I	0.50	0.513	J	0.20	0.554
	K	0.10	0.529												
Naphthalene	A	80	2.16	B	60	2.15	C	40	2.15	D	20	2.17	E	10	1.99
	F	5.0	1.96	G	2.0	2.07	H	1.0	1.87	I	0.50	1.97	J	0.20	2.10
	K	0.10	2.17												
1,2,3-Trichlorobenzene	A	80	0.882	B	60	0.883	C	40	0.895	D	20	0.901	E	10	0.860
	F	5.0	0.858	G	2.0	0.889	H	1.0	0.804	I	0.50	0.896	J	0.20	0.837
	K	0.10	0.952												
Dibromofluoromethane							C	14	0.248	D	12	0.257	E	10	0.245
	F	8.0	0.258	G	6.0	0.252									
Toluene-d8							C	14	0.962	D	12	0.959	E	10	0.868
	F	8.0	0.944	G	6.0	0.931									
4-Bromofluorobenzene							C	14	0.890	D	12	0.860	E	10	0.878
	F	8.0	0.866	G	6.0	0.839									

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Client: Cardno, Inc. **Service Request:** K1902516
Project: Deer Park Fire **Calibration Date:** 03/15/2019

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15985 **Column:** MS
Instrument ID: MS46

		Calibration Evaluation					RRF Evaluation		
Analyte Name	Compound Type	Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Dichlorodifluoromethane	TRG	AverageRF	% RSD	13.8		≤ 20	0.375		0.100
Chloromethane	TRG	AverageRF	% RSD	10.0		≤ 20	0.303		0.100
Vinyl Chloride	MS	AverageRF	% RSD	12.2		≤ 20	0.342		0.100
Bromomethane	TRG	AverageRF	% RSD	14.8		≤ 20	0.232		0.100
Chloroethane	TRG	AverageRF	% RSD	14.2		≤ 20	0.221		0.100
Trichlorofluoromethane	TRG	AverageRF	% RSD	9.7		≤ 20	0.459		0.100
1,1-Dichloroethene	MS	AverageRF	% RSD	10.7		≤ 20	0.245		0.100
Acetone	TRG	AverageRF	% RSD	9.1		≤ 20	0.0475		0.010
Carbon Disulfide	TRG	AverageRF	% RSD	13.6		≤ 20	0.770		0.100
Methylene Chloride	TRG	AverageRF	% RSD	11.1		≤ 20	0.278		0.100
trans-1,2-Dichloroethene	TRG	AverageRF	% RSD	9.0		≤ 20	0.272		0.100
1,1-Dichloroethane	TRG	AverageRF	% RSD	12.6		≤ 20	0.485		0.200
2,2-Dichloropropane	TRG	AverageRF	% RSD	9.5		≤ 20	0.395		0.01
cis-1,2-Dichloroethene	TRG	AverageRF	% RSD	14.0		≤ 20	0.313		0.100
2-Butanone (MEK)	TRG	AverageRF	% RSD	4.1		≤ 20	0.0210		0.010
Bromochloromethane	TRG	AverageRF	% RSD	11.4		≤ 20	0.129		0.01
Chloroform	MS	AverageRF	% RSD	8.2		≤ 20	0.495		0.200
1,1,1-Trichloroethane (TCA)	TRG	AverageRF	% RSD	12.5		≤ 20	0.455		0.100
Carbon Tetrachloride	MS	AverageRF	% RSD	6.6		≤ 20	0.385		0.100
1,1-Dichloropropene	TRG	AverageRF	% RSD	8.4		≤ 20	0.396		0.01
Benzene	MS	AverageRF	% RSD	9.2		≤ 20	1.14		0.500
1,2-Dichloroethane (EDC)	TRG	AverageRF	% RSD	5.7		≤ 20	0.365		0.100
Trichloroethene (TCE)	MS	AverageRF	% RSD	11.0		≤ 20	0.310		0.200
1,2-Dichloropropane	TRG	AverageRF	% RSD	5.8		≤ 20	0.292		0.100
Dibromomethane	TRG	AverageRF	% RSD	13.2		≤ 20	0.170		0.01
Bromodichloromethane	MS	AverageRF	% RSD	7.1		≤ 20	0.385		0.200
cis-1,3-Dichloropropene	TRG	AverageRF	% RSD	4.3		≤ 20	0.447		0.200
4-Methyl-2-pentanone (MIBK)	TRG	AverageRF	% RSD	5.1		≤ 20	0.0799		0.010
Toluene	MS	AverageRF	% RSD	7.7		≤ 20	0.735		0.400
trans-1,3-Dichloropropene	TRG	AverageRF	% RSD	5.8		≤ 20	0.964		0.100
1,1,2-Trichloroethane	MS	AverageRF	% RSD	5.6		≤ 20	0.503		0.100
Tetrachloroethene (PCE)	TRG	AverageRF	% RSD	12.8		≤ 20	0.709		0.200
2-Hexanone	MS	AverageRF	% RSD	5.3		≤ 20	0.0608		0.015
1,3-Dichloropropane	TRG	AverageRF	% RSD	6.3		≤ 20	1.05		0.01
Dibromochloromethane	TRG	AverageRF	% RSD	2.1		≤ 20	0.712		0.100
1,2-Dibromoethane (EDB)	TRG	AverageRF	% RSD	5.3		≤ 20	0.605		0.100
Chlorobenzene	MS	AverageRF	% RSD	7.6		≤ 20	2.01		0.500
Ethylbenzene	MS	AverageRF	% RSD	5.0		≤ 20	1.06		0.100
1,1,1,2-Tetrachloroethane	TRG	AverageRF	% RSD	4.4		≤ 20	0.697		0.01
m,p-Xylenes	TRG	AverageRF	% RSD	5.7		≤ 20	1.28		0.100
o-Xylene	TRG	AverageRF	% RSD	5.8		≤ 20	1.21		0.300
Styrene	TRG	AverageRF	% RSD	3.5		≤ 20	1.08		0.300

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Client: Cardno, Inc. **Service Request:** K1902516
Project: Deer Park Fire **Calibration Date:** 03/15/2019

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15985 **Column:** MS
Instrument ID: MS46

		Calibration Evaluation					RRF Evaluation		
Analyte Name	Compound Type	Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Bromoform	TRG	AverageRF	% RSD	7.1		≤ 20	0.462		0.100
Isopropylbenzene	TRG	AverageRF	% RSD	5.5		≤ 20	3.23		0.100
1,1,2,2-Tetrachloroethane	TRG	AverageRF	% RSD	6.8		≤ 20	0.758		0.300
Bromobenzene	TRG	AverageRF	% RSD	8.7		≤ 20	0.949		0.01
n-Propylbenzene	TRG	AverageRF	% RSD	5.0		≤ 20	4.18		0.01
1,2,3-Trichloropropane	MS	AverageRF	% RSD	9.3		≤ 20	0.256		0.01
2-Chlorotoluene	MS	AverageRF	% RSD	5.9		≤ 20	2.39		0.01
1,3,5-Trimethylbenzene	TRG	AverageRF	% RSD	4.1		≤ 20	2.76		0.01
4-Chlorotoluene	TRG	AverageRF	% RSD	7.7		≤ 20	2.54		0.01
tert-Butylbenzene	TRG	AverageRF	% RSD	6.6		≤ 20	2.48		0.01
1,2,4-Trimethylbenzene	TRG	AverageRF	% RSD	3.3		≤ 20	2.76		0.01
sec-Butylbenzene	TRG	AverageRF	% RSD	4.8		≤ 20	3.58		0.01
4-Isopropyltoluene	TRG	AverageRF	% RSD	3.0		≤ 20	2.92		0.01
1,3-Dichlorobenzene	TRG	AverageRF	% RSD	8.3		≤ 20	1.72		0.600
1,4-Dichlorobenzene	TRG	AverageRF	% RSD	12.0		≤ 20	1.77		0.500
n-Butylbenzene	TRG	AverageRF	% RSD	3.5		≤ 20	2.55		0.01
1,2-Dichlorobenzene	MS	AverageRF	% RSD	7.5		≤ 20	1.57		0.400
1,2-Dibromo-3-chloropropane	TRG	AverageRF	% RSD	11.2		≤ 20	0.112		0.025
1,2,4-Trichlorobenzene	TRG	AverageRF	% RSD	10.4		≤ 20	1.04		0.200
Hexachlorobutadiene	TRG	AverageRF	% RSD	6.0		≤ 20	0.499		0.01
Naphthalene	MS	AverageRF	% RSD	5.1		≤ 20	2.07		0.01
1,2,3-Trichlorobenzene	TRG	AverageRF	% RSD	4.4		≤ 20	0.878		0.01
Dibromofluoromethane	SURR	AverageRF	% RSD	2.2		≤ 20	0.252		0.01
Toluene-d8	SURR	AverageRF	% RSD	4.1		≤ 20	0.933		0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	2.2		≤ 20	0.867		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

QA/QC Results

Client: Cardno, Inc.
Project: Deer Park Fire

Service Request: K1902516
Calibration Date: 03/15/2019
Date Analyzed: 03/17/2019

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL15985
Units: PPB

File ID: J:\MS46\DATA\031719\0317F005.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	10	0.375	0.377	0	NA	± 30 %	AverageRF
Chloromethane	10	10	0.303	0.315	4	NA	± 30 %	AverageRF
Vinyl Chloride	10	9.9	0.342	0.340	-1	NA	± 30 %	AverageRF
Bromomethane	10	8.1	0.232	0.187	-19	NA	± 30 %	AverageRF
Chloroethane	10	8.5	0.221	0.188	-15	NA	± 30 %	AverageRF
Trichlorofluoromethane	10	8.9	0.459	0.407	-11	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	9.4	0.245	0.230	-6	NA	± 30 %	AverageRF
Acetone	50	43	0.0475	0.0407	-14	NA	± 30 %	AverageRF
Carbon Disulfide	20	18	0.770	0.704	-9	NA	± 30 %	AverageRF
Methylene Chloride	10	9.1	0.278	0.252	-9	NA	± 30 %	AverageRF
trans-1,2-Dichloroethene	10	9.2	0.272	0.251	-8	NA	± 30 %	AverageRF
1,1-Dichloroethane	10	9.6	0.485	0.466	-4	NA	± 30 %	AverageRF
2,2-Dichloropropane	10	9.9	0.395	0.391	-1	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	8.8	0.313	0.274	-12	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	43	0.0210	0.0179	-15	NA	± 30 %	AverageRF
Bromochloromethane	10	9.7	0.129	0.126	-3	NA	± 30 %	AverageRF
Chloroform	10	9.4	0.495	0.465	-6	NA	± 30 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	9.4	0.455	0.428	-6	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	10	0.385	0.393	2	NA	± 30 %	AverageRF
1,1-Dichloropropene	10	9.7	0.396	0.382	-3	NA	± 30 %	AverageRF
Benzene	10	9.6	1.14	1.10	-4	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	9.3	0.365	0.340	-7	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	9.1	0.310	0.283	-9	NA	± 30 %	AverageRF
1,2-Dichloropropane	10	9.2	0.292	0.269	-8	NA	± 30 %	AverageRF
Dibromomethane	10	8.8	0.170	0.149	-12	NA	± 30 %	AverageRF
Bromodichloromethane	10	9.2	0.385	0.355	-8	NA	± 30 %	AverageRF
cis-1,3-Dichloropropene	10	9.5	0.447	0.425	-5	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	50	45	0.0799	0.0713	-11	NA	± 30 %	AverageRF
Toluene	10	9.3	0.735	0.686	-7	NA	± 30 %	AverageRF
trans-1,3-Dichloropropene	10	9.2	0.964	0.885	-8	NA	± 30 %	AverageRF
1,1,2-Trichloroethane	10	9.1	0.503	0.455	-9	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	9.3	0.709	0.661	-7	NA	± 30 %	AverageRF
2-Hexanone	50	45	0.0608	0.0548	-10	NA	± 30 %	AverageRF
1,3-Dichloropropane	10	9.0	1.05	0.949	-10	NA	± 30 %	AverageRF
Dibromochloromethane	10	9.0	0.712	0.640	-10	NA	± 30 %	AverageRF
1,2-Dibromoethane (EDB)	10	8.9	0.605	0.536	-11	NA	± 30 %	AverageRF
Chlorobenzene	10	9.2	2.01	1.85	-8	NA	± 30 %	AverageRF
Ethylbenzene	10	9.8	1.06	1.04	-2	NA	± 30 %	AverageRF
1,1,1,2-Tetrachloroethane	10	9.7	0.697	0.679	-3	NA	± 30 %	AverageRF
m,p-Xylenes	20	20	1.28	1.25	-2	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Cardno, Inc.
Project: Deer Park Fire

Service Request: K1902516
Calibration Date: 03/15/2019
Date Analyzed: 03/17/2019

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL15985
Units: PPB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
o-Xylene	10	9.8	1.21	1.18	-2	NA	± 30 %	AverageRF
Styrene	10	10	1.08	1.08	0	NA	± 30 %	AverageRF
Bromoform	10	8.8	0.462	0.406	-12	NA	± 30 %	AverageRF
Isopropylbenzene	10	9.9	3.23	3.20	-1	NA	± 30 %	AverageRF
1,1,2,2-Tetrachloroethane	10	8.7	0.758	0.657	-13	NA	± 30 %	AverageRF
Bromobenzene	10	9.2	0.949	0.874	-8	NA	± 30 %	AverageRF
n-Propylbenzene	10	9.9	4.18	4.11	-1	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	10	8.3	0.256	0.213	-17	NA	± 30 %	AverageRF
2-Chlorotoluene	10	9.6	2.39	2.30	-4	NA	± 30 %	AverageRF
1,3,5-Trimethylbenzene	10	9.8	2.76	2.69	-2	NA	± 30 %	AverageRF
4-Chlorotoluene	10	9.4	2.54	2.39	-6	NA	± 30 %	AverageRF
tert-Butylbenzene	10	9.7	2.48	2.41	-3	NA	± 30 %	AverageRF
1,2,4-Trimethylbenzene	10	9.9	2.76	2.72	-1	NA	± 30 %	AverageRF
sec-Butylbenzene	10	9.8	3.58	3.49	-2	NA	± 30 %	AverageRF
4-Isopropyltoluene	10	10	2.92	2.92	0	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	10	9.1	1.72	1.57	-9	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	9.0	1.77	1.60	-10	NA	± 30 %	AverageRF
n-Butylbenzene	10	9.9	2.55	2.53	-1	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	10	9.1	1.57	1.43	-9	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane	10	8.2	0.112	0.0917	-18	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	8.6	1.04	0.902	-14	NA	± 30 %	AverageRF
Hexachlorobutadiene	10	9.2	0.499	0.458	-8	NA	± 30 %	AverageRF
Naphthalene	10	8.4	2.07	1.73	-16	NA	± 30 %	AverageRF
1,2,3-Trichlorobenzene	10	8.7	0.878	0.767	-13	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Cardno, Inc. **Service Request:** K1902516
Project: Deer Park Fire **Date Analyzed:** 03/28/2019

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard **Calibration Date:** 03/15/2019
Analysis Method: 8260C **Calibration ID:** CAL15985
Analysis Lot: KWG1901411
Units: PPB

File ID: J:\MS46\DATA\032719\0327F037.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D		%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	11	0.100	0.375	0.413	10		NA	± 20	AverageRF
Chloromethane	10	11	0.100	0.303	0.338	12		NA	± 20	AverageRF
Vinyl Chloride	10	11	0.100	0.342	0.361	5		NA	± 20	AverageRF
Bromomethane	10	5.2	0.100	0.232	0.120	-48	*	NA	± 20	AverageRF
Chloroethane	10	9.7	0.100	0.221	0.215	-3		NA	± 20	AverageRF
Trichlorofluoromethane	10	12	0.100	0.459	0.538	17		NA	± 20	AverageRF
1,1-Dichloroethene	10	10	0.100	0.245	0.250	2		NA	± 20	AverageRF
Acetone	200	240	0.010	0.0475	0.0563	18		NA	± 20	AverageRF
Carbon Disulfide	10	9.0	0.100	0.770	0.692	-10		NA	± 20	AverageRF
Methylene Chloride	10	9.7	0.100	0.278	0.270	-3		NA	± 20	AverageRF
trans-1,2-Dichloroethene	10	9.9	0.100	0.272	0.270	-1		NA	± 20	AverageRF
1,1-Dichloroethane	10	10	0.200	0.485	0.509	5		NA	± 20	AverageRF
2,2-Dichloropropane	10	9.4	0.01	0.395	0.373	-6		NA	± 20	AverageRF
cis-1,2-Dichloroethene	10	9.2	0.100	0.313	0.287	-8		NA	± 20	AverageRF
2-Butanone (MEK)	200	200	0.010	0.0210	0.0212	1		NA	± 20	AverageRF
Bromochloromethane	10	9.6	0.01	0.129	0.123	-4		NA	± 20	AverageRF
Chloroform	10	11	0.200	0.495	0.533	8		NA	± 20	AverageRF
1,1,1-Trichloroethane (TCA)	10	11	0.100	0.455	0.494	9		NA	± 20	AverageRF
Carbon Tetrachloride	10	12	0.100	0.385	0.443	15		NA	± 20	AverageRF
1,1-Dichloropropene	10	11	0.01	0.396	0.421	6		NA	± 20	AverageRF
Benzene	10	10	0.500	1.14	1.14	0		NA	± 20	AverageRF
1,2-Dichloroethane (EDC)	10	12	0.100	0.365	0.427	17		NA	± 20	AverageRF
Trichloroethene (TCE)	10	11	0.200	0.310	0.338	9		NA	± 20	AverageRF
1,2-Dichloropropane	10	10	0.100	0.292	0.299	2		NA	± 20	AverageRF
Dibromomethane	10	10	0.01	0.170	0.171	0		NA	± 20	AverageRF
Bromodichloromethane	10	11	0.200	0.385	0.416	8		NA	± 20	AverageRF
cis-1,3-Dichloropropene	10	9.8	0.200	0.447	0.438	-2		NA	± 20	AverageRF
4-Methyl-2-pentanone (MIBK)	200	210	0.010	0.0799	0.0856	7		NA	± 20	AverageRF
Toluene	10	10	0.400	0.735	0.760	3		NA	± 20	AverageRF
trans-1,3-Dichloropropene	10	9.3	0.100	0.964	0.893	-7		NA	± 20	AverageRF
1,1,2-Trichloroethane	10	9.7	0.100	0.503	0.487	-3		NA	± 20	AverageRF
Tetrachloroethene (PCE)	10	9.0	0.200	0.709	0.635	-10		NA	± 20	AverageRF
2-Hexanone	200	200	0.015	0.0608	0.0619	2		NA	± 20	AverageRF
1,3-Dichloropropane	10	9.8	0.01	1.05	1.02	-3		NA	± 20	AverageRF
Dibromochloromethane	10	9.2	0.100	0.712	0.655	-8		NA	± 20	AverageRF
1,2-Dibromoethane (EDB)	10	9.1	0.100	0.605	0.553	-9		NA	± 20	AverageRF
Chlorobenzene	10	9.1	0.500	2.01	1.83	-9		NA	± 20	AverageRF
Ethylbenzene	10	9.5	0.100	1.06	1.01	-5		NA	± 20	AverageRF
1,1,1,2-Tetrachloroethane	10	9.4	0.01	0.697	0.654	-6		NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Cardno, Inc.
Project: Deer Park Fire

Service Request: K1902516
Date Analyzed: 03/28/2019

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 03/15/2019
Calibration ID: CAL15985
Analysis Lot: KWG1901411
Units: PPB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
m,p-Xylenes	20	19	0.100	1.28	1.23	-4	NA	± 20	AverageRF
o-Xylene	10	9.5	0.300	1.21	1.15	-5	NA	± 20	AverageRF
Styrene	10	10	0.300	1.08	1.08	0	NA	± 20	AverageRF
Bromoform	10	8.5	0.100	0.462	0.393	-15	NA	± 20	AverageRF
Isopropylbenzene	10	9.9	0.100	3.23	3.21	-1	NA	± 20	AverageRF
1,1,2,2-Tetrachloroethane	10	9.3	0.300	0.758	0.703	-7	NA	± 20	AverageRF
Bromobenzene	10	9.1	0.01	0.949	0.865	-9	NA	± 20	AverageRF
n-Propylbenzene	10	11	0.01	4.18	4.42	6	NA	± 20	AverageRF
1,2,3-Trichloropropane	10	10	0.01	0.256	0.259	1	NA	± 20	AverageRF
2-Chlorotoluene	10	10	0.01	2.39	2.48	4	NA	± 20	AverageRF
1,3,5-Trimethylbenzene	10	11	0.01	2.76	2.90	5	NA	± 20	AverageRF
4-Chlorotoluene	10	10	0.01	2.54	2.63	4	NA	± 20	AverageRF
tert-Butylbenzene	10	10	0.01	2.48	2.50	1	NA	± 20	AverageRF
1,2,4-Trimethylbenzene	10	10	0.01	2.76	2.89	5	NA	± 20	AverageRF
sec-Butylbenzene	10	10	0.01	3.58	3.66	2	NA	± 20	AverageRF
4-Isopropyltoluene	10	10	0.01	2.92	2.99	2	NA	± 20	AverageRF
1,3-Dichlorobenzene	10	9.6	0.600	1.72	1.65	-4	NA	± 20	AverageRF
1,4-Dichlorobenzene	10	9.2	0.500	1.77	1.62	-8	NA	± 20	AverageRF
n-Butylbenzene	10	10	0.01	2.55	2.67	5	NA	± 20	AverageRF
1,2-Dichlorobenzene	10	9.4	0.400	1.57	1.48	-6	NA	± 20	AverageRF
1,2-Dibromo-3-chloropropane	10	9.2	0.025	0.112	0.103	-8	NA	± 20	AverageRF
1,2,4-Trichlorobenzene	10	8.3	0.200	1.04	0.869	-17	NA	± 20	AverageRF
Hexachlorobutadiene	10	8.6	0.01	0.499	0.427	-15	NA	± 20	AverageRF
Naphthalene	10	8.8	0.01	2.07	1.82	-12	NA	± 20	AverageRF
1,2,3-Trichlorobenzene	10	9.1	0.01	0.878	0.796	-9	NA	± 20	AverageRF
Dibromofluoromethane	10	10	0.01	0.252	0.263	4	NA	± 20	AverageRF
Toluene-d8	10	11	0.01	0.933	1.03	10	NA	± 20	AverageRF
4-Bromofluorobenzene	10	9.6	0.01	0.867	0.830	-4	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Cardno, Inc. **Service Request:** K1902516
Project: Deer Park Fire

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C **Analysis Lot:** KWG1901411
Instrument ID: MS46

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0327F036.D	GC/MS Tuning - Bromofluorobenzene	KWG1901411-1	3/28/2019	00:36		3/28/2019	00:52
0327F037.D	Continuing Calibration Verification	KWG1901411-2	3/28/2019	01:02		3/28/2019	01:18
0327F038.D	Lab Control Sample	KWG1901412-3	3/28/2019	01:29		3/28/2019	01:45
0327F039.D	ZZZZZZ	ZZZZZZ	3/28/2019	01:56		3/28/2019	02:12
0327F040.D	ZZZZZZ	ZZZZZZ	3/28/2019	02:22		3/28/2019	02:38
0327F042.D	Method Blank	KWG1901412-4	3/28/2019	03:15		3/28/2019	03:31
0327F043.D	ZZZZZZ	ZZZZZZ	3/28/2019	03:42		3/28/2019	03:58
0327F044.D	ZZZZZZ	ZZZZZZ	3/28/2019	04:09		3/28/2019	04:25
0327F045.D	ZZZZZZ	ZZZZZZ	3/28/2019	04:35		3/28/2019	04:51
0327F046.D	ZZZZZZ	ZZZZZZ	3/28/2019	05:02		3/28/2019	05:18
0327F047.D	ZZZZZZ	ZZZZZZ	3/28/2019	05:29		3/28/2019	05:45
0327F048.D	ZZZZZZ	ZZZZZZ	3/28/2019	05:55		3/28/2019	06:11
0327F049.D	ZZZZZZ	ZZZZZZ	3/28/2019	06:22		3/28/2019	06:38
0327F050.D	ZZZZZZ	ZZZZZZ	3/28/2019	06:49		3/28/2019	07:05
0327F051.D	ZZZZZZ	ZZZZZZ	3/28/2019	07:15		3/28/2019	07:31
0327F052.D	ZZZZZZ	ZZZZZZ	3/28/2019	07:42		3/28/2019	07:58
0327F053.D	ZZZZZZ	ZZZZZZ	3/28/2019	08:09		3/28/2019	08:25
0327F054.D	ZZZZZZ	ZZZZZZ	3/28/2019	08:35		3/28/2019	08:51
0327F055.D	ZZZZZZ	ZZZZZZ	3/28/2019	09:02		3/28/2019	09:18
0327F056.D	ZZZZZZ	ZZZZZZ	3/28/2019	09:29		3/28/2019	09:45
0327F057.D	ZZZZZZ	ZZZZZZ	3/28/2019	09:55		3/28/2019	10:11
0327F058.D	ZZZZZZ	ZZZZZZ	3/28/2019	10:22		3/28/2019	10:38
0327F059.D	WT-20190322-SF-005	K1902516-001	3/28/2019	10:49		3/28/2019	11:05
0327F060.D	WT-20190322-SF-006	K1902516-002	3/28/2019	11:15		3/28/2019	11:31
0327F061.D	WT-20190322-SF-007	K1902516-003	3/28/2019	11:42		3/28/2019	11:58
0327F062.D	WT-20190322-SF-008	K1902516-004	3/28/2019	12:09		3/28/2019	12:25

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Cardno, Inc.
Project: Deer Park Fire
Sample Matrix: Water

Service Request: K1902516
Date Extracted: 03/28/2019

Extraction Prep Log
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Extraction Lot: KWG1901412
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
WT-20190322-SF-005	K1902516-001	03/22/19	03/23/19	10ml	10ml	NA	
WT-20190322-SF-006	K1902516-002	03/22/19	03/23/19	10ml	10ml	NA	
WT-20190322-SF-007	K1902516-003	03/22/19	03/23/19	10ml	10ml	NA	
WT-20190322-SF-008	K1902516-004	03/22/19	03/23/19	10ml	10ml	NA	
Method Blank	KWG1901412-4	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1901412-3	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis