

Pelton, Jason M (DEC)

From: Smeal, Monica <monica.smeal@aptim.com>
Sent: Thursday, September 26, 2019 10:52 AM
To: Murray, Brian S CIV USN NAVFAC MIDLANT NOR (USA)
Cc: Pelton, Jason M (DEC); Hesler, Donald (DEC); Collins, Timothy (CFS); Montgomery, Seth
Subject: N62470.16.D.9004.N4008518F6147 NWIRP Bethpage Site 1 Submittal SD-04-002 - Concrete Waste Characterization Analytical Results
Attachments: N62470.16.D.9004.F6147 SD-04-004 Enclosures.pdf; N62470.16.D.9004.F6147 Submittal SD-04-004.pdf

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Brian,

Please find attached Submittal SD-04-004. On August 23, 2019, APTIM collected a discrete grab chip sample from concrete removed from the limits of excavation. This sample was to ensure that the concrete was not contaminated by it's contact with the Site 1 soils and could be transported to a recycling facility.

Please note that no analytes were detected exceeding the regulatory limits. This submittal is for information purposes only and does not require government approval.

Thank you,

MONICA L. SMEAL

Project Manager

APTIM | Diversified Services

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LabLink Analytical Data Report

Site 1 - Former Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

APTIM Project Number: 501164, F6147

Sample	Parameter	Cas No.	Method	Result	Qual	Units	LOQ	LOD	DF	TCLP Limits ¹	Client ID	Collected	Time
JC93827-1	1,1,1-Trichloroethane	71-55-6	SW846 8260C	0.98	U	ug/kg	2.0	0.98	1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	1,1,2-Trichloroethane	79-00-5	SW846 8260C	0.98	U	ug/kg	2.0	0.98	1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	Trichloroethene	79-01-6	SW846 8260C	0.78	U	ug/kg	0.98	0.78	1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	Trichlorofluoromethane	75-69-4	SW846 8260C	0.98	U	ug/kg	4.9	0.98	1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	Vinyl chloride	75-01-4	SW846 8260C	0.98	U	ug/kg	2.0	0.98	1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	m,p-Xylene		SW846 8260C	0.93	U	ug/kg	0.98	0.93	1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	o-Xylene	95-47-6	SW846 8260C	0.73	U	ug/kg	0.98	0.73	1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	Xylene (total)	1330-20-7	SW846 8260C	0.73	U	ug/kg	0.98	0.73	1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	Dibromofluoromethane	1868-53-7	SW846 8260C	52.0		%			1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	Dibromofluoromethane	1868-53-7	SW846 8260C	48.0		%			1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	1,2-Dichloroethane-D4	17060-07-0	SW846 8260C	125		%			1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	1,2-Dichloroethane-D4	17060-07-0	SW846 8260C	125		%			1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	Toluene-D8	2037-26-5	SW846 8260C	96.0		%			1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	Toluene-D8	2037-26-5	SW846 8260C	96.0		%			1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	4-Bromofluorobenzene	460-00-4	SW846 8260C	102		%			1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	4-Bromofluorobenzene	460-00-4	SW846 8260C	102		%			1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Ignitability (Flashpoint)		SW846 1010A/ASTM D93	>200	>	Deg. F			1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Corrosivity as pH		SW846 9045D	11.49		su			1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Sulfide Reactivity		SW846 CHAP7/9034	85	U	mg/kg	110	85	1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Cyanide Reactivity		SW846 CHAP7/9012 B	8.0	U	mg/kg	11	8.0	1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Arsenic	7440-38-2	SW846 6010D	0.015	U	mg/l	0.50	0.015	5	5.0	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Barium	7440-39-3	SW846 6010D	0.50	U	mg/l	1.0	0.50	5	100	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Cadmium	7440-43-9	SW846 6010D	0.010	U	mg/l	0.020	0.010	5	1.0	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Chromium	7440-47-3	SW846 6010D	0.12		mg/l	0.050	0.025	5	5.0	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Lead	7439-92-1	SW846 6010D	0.015	U	mg/l	0.50	0.015	5	5.0	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Mercury	7439-97-6	SW846 7470A	0.00015	U	mg/l	0.00020	0.00015	1	0.20	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Selenium	7782-49-2	SW846 6010D	0.040	U	mg/l	0.50	0.040	5	1.0	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Silver	7440-22-4	SW846 6010D	0.020	U	mg/l	0.050	0.020	5	5.0	NWIRP-S1-WC-C-001	8/23/2019	9:00

¹Toxicity Characteristic Leaching Procedure Maximum Contaminant Concentrations (40 CFR 261 July 2011).

Found 0 results exceeding regulatory limits.

** Indicates result outside regulatory limits.

Laboratory Qualifiers:

U = Not detected; the analyte was analyzed for, but not detected above the associated detection limit.

% = percent

> = greater than

Deg. F = degrees Fahrenheit

LOD = limit of detection

LOQ = limit of quantitation

su = standard units

mg/l = milligram/liter = ppm

µg/kg = microgram/kilogram = ppb

mg/kg = milligram/kilogram = ppm

(s) = surrogates

LabLink Analytical Data Report - Hits/J-Values Only

Site 1 - Former Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

APTIM Project Number: 501164, F6147

Sample	Parameter	Cas No.	Method	Result	Qual	Units	LOQ	LOD	DF	TCLP Limits ¹	Client ID	Collected	Time
JC93827-1	Acetone	67-64-1	SW846 8260C	37.6		ug/kg	9.8	7.3	1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1	Methylene chloride	75-09-2	SW846 8260C	7.4		ug/kg	4.9	2.9	1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Corrosivity as pH		SW846 9045D	11.49		su			1	----	NWIRP-S1-WC-C-001	8/23/2019	9:00
JC93827-1A	Chromium	7440-47-3	SW846 6010D	0.12		mg/l	0.050	0.025	5	5.0	NWIRP-S1-WC-C-001	8/23/2019	9:00

¹Toxicity Characteristic Leaching Procedure Maximum Contaminant Concentrations (40 CFR 261 July 2011).

Found 0 results exceeding regulatory limits.

** Indicates result outside regulatory limits.

LOD = limit of detection

LOQ = limit of quantitation

su = standard units

mg/l = milligram/liter = ppm

µg/kg = microgram/kilogram = ppb

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

NOREAS, Inc.

Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

501164

SGS Job Number: JC93827

Sampling Date: 08/23/19

Report to:

APTIM

Natasha.Kelleysullivan@cbifederaleservices.com

ATTN: Natasha Sullivan

Total number of pages in report: 328



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink, appearing to read "Mike Earp".

Mike Earp
General Manager

Client Service contact: Kristin Degraw 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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Test results relate only to samples analyzed.

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Sample Summary

NOREAS, Inc.

Job No: JC93827

Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Project No: 501164

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JC93827-1	08/23/19	09:00	08/23/19	SO	Solid	NWIRP-S1-WC-C-001
JC93827-1A	08/23/19	09:00	08/23/19	SO	Soil	NWIRP-S1-WC-C-001

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: NOREAS, Inc.

Job No JC93827

Site: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reser

Report Date 9/5/2019 3:22:55 PM

On 08/23/2019, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC93827 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: SO

Batch ID: VI9196

- The data for SW846 8260C meets quality control requirements.
- Sample(s) JC93827-1 have surrogates outside control limits. Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory. Confirmation run for surrogate recoveries.
- JC93827-1: Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory. Confirmation run for surrogate recoveries.

Matrix: SO

Batch ID: VI9197

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC93502-2MS, JC93502-3DUP were used as the QC samples indicated.
- RPD(s) for Duplicate for Acetone are outside control limits for sample JC93502-3DUP. Outside control limits due to sample non-homogeneity.
- Sample(s) JC93827-1 have surrogates outside control limits. Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory. Confirmation run for surrogate recoveries.
- JC93827-1: Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.
- JC93827-1 for Dibromofluoromethane: Outside control limits due to matrix interference.
- JC93827-1 for Bromomethane: This compound in the associated ICV is outside the method criteria of 20%, biased high.

Thursday, September 05, 2019

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MS Semi-volatiles By Method SW846 8270D

Matrix: SO

Batch ID: OP22364

- All samples were extracted within the recommended method holding time.
- Sample(s) JC93827-1MS, JC93827-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for 1,2,4,5-Tetrachlorobenzene, 2,2'-Oxybis(1-chloropropane), 2,3,4,6-Tetrachlorophenol, 2,4,5-Trichlorophenol, 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 2,4-Dinitrophenol, 2-Chloronaphthalene, 2-Nitrophenol, 4,6-Dinitro-o-cresol, 4-Bromophenyl phenyl ether, 4-Chlorophenyl phenyl ether, 4-Nitrophenol, Acenaphthene, Acenaphthylene, Anthracene, bis(2-Chloroethoxy)methane, bis(2-Chloroethyl)ether, Di-n-butyl phthalate, Di-n-octyl phthalate, Diethyl phthalate, Dimethyl phthalate, Fluorene, Hexachlorobutadiene, Hexachloroethane, Indeno(1,2,3-cd)pyrene, Isophorone, N-Nitroso-di-n-propylamine, Naphthalene, Nitrobenzene, Pentachlorophenol, Phenanthrene are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for 2,4-Dinitrophenol, 4,6-Dinitro-o-cresol, 4-Nitrophenol, Pentachlorophenol, 2,3,4,6-Tetrachlorophenol, 2,4,5-Trichlorophenol, 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 2-Chlorophenol, 2-Nitrophenol are outside control limits. Outside control limits due to matrix interference.
- RPD(s) for MSD for 1,2,4,5-Tetrachlorobenzene, 2,2'-Oxybis(1-chloropropane), 2,3,4,6-Tetrachlorophenol, 2,4,5-Trichlorophenol, 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 2-Chloronaphthalene, 2-Chlorophenol, 2-Nitrophenol, 3,3'-Dichlorobenzidine, 4-Bromophenyl phenyl ether, 4-Chloro-3-methyl phenol, 4-Chlorophenyl phenyl ether, Acenaphthene, Acenaphthylene, Anthracene, Benzaldehyde, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, bis(2-Chloroethoxy)methane, bis(2-Chloroethyl)ether, bis(2-Ethylhexyl)phthalate, Butyl benzyl phthalate, Chrysene, Di-n-butyl phthalate, Di-n-octyl phthalate, Dibenzo(a,h)anthracene, Diethyl phthalate, Dimethyl phthalate, Fluoranthene, Fluorene, Hexachlorobenzene, Hexachlorobutadiene, Hexachlorocyclopentadiene, Hexachloroethane, Indeno(1,2,3-cd)pyrene, Isophorone, N-Nitroso-di-n-propylamine, N-Nitrosodiphenylamine, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene are outside control limits for sample OP22364-MSD. Outside control limits due to matrix interference.
- OP22364-MSD for 4-Chloro-3-methyl phenol: Outside of control limits.
- OP22364-MSD for Dimethyl phthalate: Outside of control limits.
- OP22364-MSD for Fluoranthene: Outside of control limits.
- OP22364-MSD for Chrysene: Outside of control limits.
- OP22364-MSD for 2,3,4,6-Tetrachlorophenol: Outside of control limits.
- OP22364-MSD for Benzo(a)anthracene: Outside of control limits.
- OP22364-MSD for Benzaldehyde: Outside of control limits.
- OP22364-MSD for Anthracene: Outside of control limits.
- OP22364-MSD for Diethyl phthalate: Outside of control limits.
- OP22364-MSD for Acenaphthene: Outside of control limits.
- OP22364-MSD for Hexachloroethane: Outside of control limits.
- OP22364-MSD for 2-Nitrophenol: Outside of control limits.
- OP22364-MSD for Acenaphthylene: Outside of control limits.
- OP22364-MSD for bis(2-Chloroethyl)ether: Outside of control limits.
- OP22364-MSD for Di-n-octyl phthalate: Outside of control limits.
- JC93827-1 for 2-Fluorophenol: Outside control limits due to matrix interference, confirmed by MS/MSD.
- OP22364-MSD for Indeno(1,2,3-cd)pyrene: Outside of control limits.
- OP22364-MSD for Isophorone: Outside of control limits.
- OP22364-MSD for N-Nitroso-di-n-propylamine: Outside of control limits.
- OP22364-MSD for N-Nitrosodiphenylamine: Outside of control limits.
- OP22364-MSD for 1,2,4,5-Tetrachlorobenzene: Outside of control limits.
- OP22364-MSD for bis(2-Chloroethoxy)methane: Outside of control limits.
- OP22364-MSD for Dibenzo(a,h)anthracene: Outside of control limits.
- OP22364-MSD for bis(2-Ethylhexyl)phthalate: Outside of control limits.

Thursday, September 05, 2019

Page 2 of 5

MS Semi-volatiles By Method SW846 8270D

Matrix: SO

Batch ID: OP22364

- OP22364-MSD for Butyl benzyl phthalate: Outside of control limits.
- OP22364-MSD for 2,4-Dinitrotoluene: Outside of control limits.
- OP22364-MSD for Di-n-butyl phthalate: Outside of control limits.
- OP22364-MSD for Phenanthrene: Outside of control limits.
- OP22364-MSD for Nitrobenzene: Outside of control limits.
- OP22364-MSD for Naphthalene: Outside of control limits.
- OP22364-MSD for Benzo(k)fluoranthene: Outside of control limits.
- JC93827-1 for 2,4,6-Tribromophenol: Outside control limits due to matrix interference, confirmed by MS/MSD.
- OP22364-MSD for 2,6-Dinitrotoluene: Outside of control limits.
- OP22364-MSD for 2,4,6-Trichlorophenol: Outside of control limits.
- OP22364-MSD for Pyrene: Outside of control limits.
- OP22364-MSD for Fluorene: Outside of control limits.
- OP22364-MSD for 2-Chloronaphthalene: Outside of control limits.
- JC93827-1 for 4-Nitrophenol: Associated CCV outside of control limits high, sample was ND.
- OP22364-MSD for Benzo(g,h,i)perylene: Outside of control limits.
- OP22364-MSD for Benzo(b)fluoranthene: Outside of control limits.
- OP22364-MSD for 2,4-Dichlorophenol: Outside of control limits.
- OP22364-MSD for Hexachlorobenzene: Outside of control limits.
- JC93827-1 for Phenol-d5: Outside control limits due to matrix interference, confirmed by MS/MSD.
- OP22364-MSD for 2,2'-Oxybis(1-chloropropane): Outside of control limits.
- OP22364-MSD for Benzo(a)pyrene: Outside of control limits.
- OP22364-MSD for 2,4,5-Trichlorophenol: Outside of control limits.
- OP22364-MSD for Hexachlorocyclopentadiene: Outside of control limits.
- OP22364-MSD for Hexachlorobutadiene: Outside of control limits.

GC/LC Semi-volatiles By Method SW846 8081B

Matrix: SO

Batch ID: OP22361

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC93548-1MS, JC93548-1MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-BHC, delta-BHC, Dieldrin, Endosulfan sulfate, Endosulfan-II, Endrin, Endrin aldehyde, gamma-BHC (Lindane), Heptachlor, Heptachlor epoxide, Methoxychlor are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for 4,4'-DDT, alpha-BHC, Endosulfan-II, Heptachlor, alpha-Chlordane, beta-BHC, gamma-Chlordane are outside control limits. Outside control limits due to matrix interference.
- RPD(s) for MSD for Aldrin, alpha-Chlordane, beta-BHC, Endrin aldehyde, gamma-BHC (Lindane), gamma-Chlordane are outside control limits for sample OP22361-MSD. Probable cause due to sample homogeneity.
- Sample(s) OP22361-MS, OP22361-MSD have surrogates outside control limits. Probable cause due to matrix interference.
- JC93827-1: Confirmation run.
- OP22361-MSD for Tetrachloro-m-xylene: Outside control limits due to matrix interference.
- OP22361-MSD for Decachlorobiphenyl: Outside control limits due to matrix interference.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: SO **Batch ID:** OP22362

- All samples were extracted within the recommended method holding time.
- Sample(s) JC93812-1MS, JC93812-1MSD, OP22362-MSMSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

GC/LC Semi-volatiles By Method SW846 8151A

Matrix: SO **Batch ID:** OP22369

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC93827-1MS, JC93827-1MSD were used as the QC samples indicated.

Metals Analysis By Method SW846 6010D

Matrix: LEACHATE **Batch ID:** MP17060

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC93827-1AMS, JC93827-1AMSD, JC93827-1ASDL were used as the QC samples for metals.

Metals Analysis By Method SW846 7470A

Matrix: LEACHATE **Batch ID:** MP17075

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC93827-1AMS, JC93827-1AMSD were used as the QC samples for metals.

General Chemistry By Method SM2540 G 18TH ED MOD

Matrix: SO **Batch ID:** GN99220

- Sample(s) JC93505-6DUP were used as the QC samples for Solids, Percent.

General Chemistry By Method SW846 1010A/ASTM D93

Matrix: SO **Batch ID:** GN99301

- Sample(s) JC93441-11DUP were used as the QC samples for Ignitability (Flashpoint).

General Chemistry By Method SW846 9045D

Matrix: SO **Batch ID:** GN99343

- Sample(s) JC93827-1ADUP were used as the QC samples for Corrosivity as pH.

General Chemistry By Method SW846 CHAP7/9012 B

Matrix: SO **Batch ID:** GP23352

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC93897-1ADUP were used as the QC samples for Cyanide Reactivity.

General Chemistry By Method SW846 CHAP7/9034

Matrix: SO

Batch ID: GP23354

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC93897-1ADUP, JC93897-1AMS were used as the QC samples for Sulfide Reactivity.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Thursday, September 05, 2019

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Summary of Hits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
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JC93827-1 NWIRP-S1-WC-C-001

Acetone ^a	37.6	9.8	7.3	ug/kg	SW846 8260C
Methylene chloride ^a	7.4	4.9	2.9	ug/kg	SW846 8260C

JC93827-1A NWIRP-S1-WC-C-001

Corrosivity as pH	11.49 NC			b	su	SW846 9045D
Ignitability (Flashpoint)	> 200			b	Deg. F	SW846 1010A/ASTM D93
Chromium	0.12	0.050	0.025		mg/l	SW846 6010D

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

(b) Value reported is laboratory DL (MDL).

Sample Results

Report of Analysis

Report of Analysis

Page 1 of 2

Client Sample ID:	NWIRP-S1-WC-C-001		
Lab Sample ID:	JC93827-1	Date Sampled:	08/23/19
Matrix:	SO - Solid	Date Received:	08/23/19
Method:	SW846 8260C SW846 5035	Percent Solids:	94.7
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	I228141.D	1	08/30/19 09:25	TDN	08/26/19 15:00	n/a	VI9197
Run #2 ^b	I228133.D	1	08/29/19 15:12	TDN	08/26/19 15:00	n/a	VI9196

	Initial Weight
Run #1	5.4 g
Run #2	5.3 g

VOA TCL List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	37.6	9.8	7.3	3.9	ug/kg	
71-43-2	Benzene	0.45 U	0.49	0.45	0.44	ug/kg	
74-97-5	Bromochloromethane	2.0 U	4.9	2.0	0.55	ug/kg	
75-27-4	Bromodichloromethane	1.5 U	2.0	1.5	0.43	ug/kg	
75-25-2	Bromoform	2.0 U	4.9	2.0	0.56	ug/kg	
74-83-9	Bromomethane ^c	3.4 U	4.9	3.4	0.97	ug/kg	
78-93-3	2-Butanone (MEK)	7.3 U	9.8	7.3	3.7	ug/kg	
75-15-0	Carbon disulfide	0.98 U	2.0	0.98	0.91	ug/kg	
56-23-5	Carbon tetrachloride	0.98 U	2.0	0.98	0.60	ug/kg	
108-90-7	Chlorobenzene	1.5 U	2.0	1.5	0.45	ug/kg	
75-00-3	Chloroethane	2.0 U	4.9	2.0	0.58	ug/kg	
67-66-3	Chloroform	0.98 U	2.0	0.98	0.48	ug/kg	
74-87-3	Chloromethane	3.9 U	4.9	3.9	1.9	ug/kg	
110-82-7	Cyclohexane	0.98 U	2.0	0.98	0.64	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	0.98 U	2.0	0.98	0.82	ug/kg	
124-48-1	Dibromochloromethane	0.98 U	2.0	0.98	0.55	ug/kg	
106-93-4	1,2-Dibromoethane	0.73 U	0.98	0.73	0.41	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.73 U	0.98	0.73	0.53	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.73 U	0.98	0.73	0.48	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.73 U	0.98	0.73	0.48	ug/kg	
75-71-8	Dichlorodifluoromethane	2.4 U	4.9	2.4	0.71	ug/kg	
75-34-3	1,1-Dichloroethane	0.73 U	0.98	0.73	0.48	ug/kg	
107-06-2	1,2-Dichloroethane	0.73 U	0.98	0.73	0.46	ug/kg	
75-35-4	1,1-Dichloroethene	0.73 U	0.98	0.73	0.64	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.88 U	0.98	0.88	0.82	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.73 U	0.98	0.73	0.60	ug/kg	
78-87-5	1,2-Dichloropropane	0.98 U	2.0	0.98	0.46	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	0.98 U	2.0	0.98	0.46	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	0.98 U	2.0	0.98	0.45	ug/kg	
100-41-4	Ethylbenzene	0.73 U	0.98	0.73	0.54	ug/kg	
76-13-1	Freon 113	2.4 U	4.9	2.4	0.99	ug/kg	
591-78-6	2-Hexanone	2.9 U	4.9	2.9	2.1	ug/kg	

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NWIRP-S1-WC-C-001		
Lab Sample ID:	JC93827-1	Date Sampled:	08/23/19
Matrix:	SO - Solid	Date Received:	08/23/19
Method:	SW846 8260C SW846 5035	Percent Solids:	94.7
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA TCL List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
98-82-8	Isopropylbenzene	0.98 U	2.0	0.98	0.68	ug/kg	
79-20-9	Methyl Acetate	2.9 U	4.9	2.9	1.4	ug/kg	
108-87-2	Methylcyclohexane	0.98 U	2.0	0.98	0.86	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.49 U	0.98	0.49	0.46	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.9 U	4.9	3.9	2.2	ug/kg	
75-09-2	Methylene chloride	7.4	4.9	2.9	0.97	ug/kg	
100-42-5	Styrene	0.98 U	2.0	0.98	0.56	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	0.98 U	2.0	0.98	0.59	ug/kg	
127-18-4	Tetrachloroethene	0.98 U	2.0	0.98	0.57	ug/kg	
108-88-3	Toluene	0.73 U	0.98	0.73	0.51	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	2.4 U	4.9	2.4	1.9	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	2.4 U	4.9	2.4	1.5	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.98 U	2.0	0.98	0.47	ug/kg	
79-00-5	1,1,2-Trichloroethane	0.98 U	2.0	0.98	0.54	ug/kg	
79-01-6	Trichloroethene	0.78 U	0.98	0.78	0.75	ug/kg	
75-69-4	Trichlorofluoromethane	0.98 U	4.9	0.98	0.67	ug/kg	
75-01-4	Vinyl chloride	0.98 U	2.0	0.98	0.47	ug/kg	
	m,p-Xylene	0.93 U	0.98	0.93	0.88	ug/kg	
95-47-6	o-Xylene	0.73 U	0.98	0.73	0.57	ug/kg	
1330-20-7	Xylene (total)	0.73 U	0.98	0.73	0.57	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	52% ^d	48% ^d	75-127%
17060-07-0	1,2-Dichloroethane-D4	125%	125%	75-130%
2037-26-5	Toluene-D8	96%	96%	80-120%
460-00-4	4-Bromofluorobenzene	102%	102%	79-127%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

(b) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

Confirmation run for surrogate recoveries.

(c) This compound in the associated ICV is outside the method criteria of 20%, biased high.

(d) Outside control limits due to matrix interference.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NWIRP-S1-WC-C-001		
Lab Sample ID:	JC93827-1	Date Sampled:	08/23/19
Matrix:	SO - Solid	Date Received:	08/23/19
Method:	SW846 8270D SW846 3546	Percent Solids:	94.7
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z139916.D	1	08/29/19 07:10	CS	08/28/19 16:30	OP22364	EZ6895
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
95-57-8	2-Chlorophenol	35 U	70	35	17	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	88 U	180	88	22	ug/kg	
120-83-2	2,4-Dichlorophenol	88 U	180	88	30	ug/kg	
105-67-9	2,4-Dimethylphenol	88 U	180	88	62	ug/kg	
51-28-5	2,4-Dinitrophenol	140 U	180	140	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	88 U	180	88	38	ug/kg	
95-48-7	2-Methylphenol	35 U	70	35	22	ug/kg	
	3&4-Methylphenol	35 U	70	35	29	ug/kg	
88-75-5	2-Nitrophenol	88 U	180	88	23	ug/kg	
100-02-7	4-Nitrophenol ^a	180 U	350	180	94	ug/kg	
87-86-5	Pentachlorophenol	88 U	140	88	33	ug/kg	
108-95-2	Phenol	35 U	70	35	18	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	88 U	180	88	23	ug/kg	
95-95-4	2,4,5-Trichlorophenol	88 U	180	88	26	ug/kg	
88-06-2	2,4,6-Trichlorophenol	88 U	180	88	21	ug/kg	
83-32-9	Acenaphthene	18 U	35	18	12	ug/kg	
208-96-8	Acenaphthylene	26 U	35	26	18	ug/kg	
98-86-2	Acetophenone	26 U	180	26	7.5	ug/kg	
120-12-7	Anthracene	26 U	35	26	22	ug/kg	
1912-24-9	Atrazine	35 U	70	35	15	ug/kg	
56-55-3	Benzo(a)anthracene	18 U	35	18	9.9	ug/kg	
50-32-8	Benzo(a)pyrene	18 U	35	18	16	ug/kg	
205-99-2	Benzo(b)fluoranthene	18 U	35	18	16	ug/kg	
191-24-2	Benzo(g,h,i)perylene	26 U	35	26	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	18 U	35	18	16	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	18 U	70	18	14	ug/kg	
85-68-7	Butyl benzyl phthalate	35 U	70	35	8.6	ug/kg	
92-52-4	1,1'-Biphenyl	18 U	70	18	4.8	ug/kg	
100-52-7	Benzaldehyde	18 U	180	18	8.7	ug/kg	
91-58-7	2-Chloronaphthalene	35 U	70	35	8.3	ug/kg	
106-47-8	4-Chloroaniline	35 U	180	35	13	ug/kg	
86-74-8	Carbazole	18 U	70	18	5.1	ug/kg	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	NWIRP-S1-WC-C-001		
Lab Sample ID:	JC93827-1	Date Sampled:	08/23/19
Matrix:	SO - Solid	Date Received:	08/23/19
Method:	SW846 8270D SW846 3546	Percent Solids:	94.7
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
105-60-2	Caprolactam	35 U	70	35	14	ug/kg	
218-01-9	Chrysene	18 U	35	18	11	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	18 U	70	18	7.5	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	18 U	70	18	15	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	18 U	70	18	13	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	18 U	70	18	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	18 U	35	18	11	ug/kg	
606-20-2	2,6-Dinitrotoluene	26 U	35	26	18	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	35 U	70	35	29	ug/kg	
123-91-1	1,4-Dioxane	26 U	35	26	23	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	18 U	35	18	16	ug/kg	
132-64-9	Dibenzofuran	18 U	70	18	14	ug/kg	
84-74-2	Di-n-butyl phthalate	18 U	70	18	5.7	ug/kg	
117-84-0	Di-n-octyl phthalate	18 U	70	18	8.7	ug/kg	
84-66-2	Diethyl phthalate	18 U	70	18	7.5	ug/kg	
131-11-3	Dimethyl phthalate	18 U	70	18	6.2	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	35 U	70	35	8.2	ug/kg	
206-44-0	Fluoranthene	18 U	35	18	16	ug/kg	
86-73-7	Fluorene	26 U	35	26	16	ug/kg	
118-74-1	Hexachlorobenzene	18 U	70	18	8.9	ug/kg	
87-68-3	Hexachlorobutadiene	18 U	35	18	14	ug/kg	
77-47-4	Hexachlorocyclopentadiene	35 U	350	35	14	ug/kg	
67-72-1	Hexachloroethane	35 U	180	35	17	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	18 U	35	18	16	ug/kg	
78-59-1	Isophorone	18 U	70	18	7.5	ug/kg	
91-57-6	2-Methylnaphthalene	18 U	35	18	7.9	ug/kg	
88-74-4	2-Nitroaniline	18 U	180	18	8.3	ug/kg	
99-09-2	3-Nitroaniline	18 U	180	18	8.8	ug/kg	
100-01-6	4-Nitroaniline	35 U	180	35	9.1	ug/kg	
91-20-3	Naphthalene	18 U	35	18	9.9	ug/kg	
98-95-3	Nitrobenzene	18 U	70	18	14	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	18 U	70	18	10	ug/kg	
86-30-6	N-Nitrosodiphenylamine	35 U	180	35	13	ug/kg	
85-01-8	Phenanthrene	18 U	35	18	12	ug/kg	
129-00-0	Pyrene	18 U	35	18	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	18 U	180	18	8.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	3% ^b		23-115%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NWIRP-S1-WC-C-001		
Lab Sample ID:	JC93827-1	Date Sampled:	08/23/19
Matrix:	SO - Solid	Date Received:	08/23/19
Method:	SW846 8270D SW846 3546	Percent Solids:	94.7
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	31% ^b		27-114%
118-79-6	2,4,6-Tribromophenol	2% ^b		19-152%
4165-60-0	Nitrobenzene-d5	67%		26-134%
321-60-8	2-Fluorobiphenyl	58%		39-124%
1718-51-0	Terphenyl-d14	71%		36-134%

- (a) Associated CCV outside of control limits high, sample was ND.
- (b) Outside control limits due to matrix interference, confirmed by MS/MSD.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: NWIRP-S1-WC-C-001	
Lab Sample ID: JC93827-1	Date Sampled: 08/23/19
Matrix: SO - Solid	Date Received: 08/23/19
Method: SW846 8151A SW846 3546	Percent Solids: 94.7
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA142089.D	1	08/30/19 13:50	VDT	08/28/19 08:45	OP22369	GOA4910
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
94-75-7	2,4-D	14 U	17	14	4.4	ug/kg	
93-72-1	2,4,5-TP (Silvex)	3.3 U	3.5	3.3	3.2	ug/kg	
93-76-5	2,4,5-T	3.1 U	3.5	3.1	2.8	ug/kg	
75-99-0	Dalapon	3.3 U	3.5	3.3	3.2	ug/kg	
1918-00-9	Dicamba	3.1 U	3.5	3.1	2.8	ug/kg	
120-36-5	Dichloroprop	16 U	17	16	13	ug/kg	
88-85-7	Dinoseb	10 U	17	10	8.4	ug/kg	
94-74-6	MCPA	1200 U	1700	1200	310	ug/kg	
93-65-2	MCPP	1200 U	1700	1200	520	ug/kg	
87-86-5	Pentachlorophenol	1.4 U	1.7	1.4	0.98	ug/kg	
94-82-6	2,4-DB	14 U	17	14	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	68%		10-159%
19719-28-9	2,4-DCAA	67%		10-159%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: NWIRP-S1-WC-C-001	
Lab Sample ID: JC93827-1	Date Sampled: 08/23/19
Matrix: SO - Solid	Date Received: 08/23/19
Method: SW846 8081B SW846 3546	Percent Solids: 94.7
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G67547.D	1	08/30/19 12:21	AB	08/29/19 09:30	OP22361	G6G2122
Run #2 ^a	6G67533.D	1	08/30/19 02:44	CP	08/29/19 09:30	OP22361	G6G2121

	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2	15.7 g	10.0 ml

Pesticide TCL List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
309-00-2	Aldrin	0.64 U	0.67	0.64	0.55	ug/kg	
319-84-6	alpha-BHC	0.64 U	0.67	0.64	0.55	ug/kg	
319-85-7	beta-BHC	0.64 U	0.67	0.64	0.61	ug/kg	
319-86-8	delta-BHC	0.66 U	0.67	0.66	0.65	ug/kg	
58-89-9	gamma-BHC (Lindane)	0.61 U	0.67	0.61	0.50	ug/kg	
5103-71-9	alpha-Chlordane	0.64 U	0.67	0.64	0.54	ug/kg	
5103-74-2	gamma-Chlordane	0.34 U	0.67	0.34	0.30	ug/kg	
60-57-1	Dieldrin	0.50 U	0.67	0.50	0.46	ug/kg	
72-54-8	4,4'-DDD	0.64 U	0.67	0.64	0.62	ug/kg	
72-55-9	4,4'-DDE	0.64 U	0.67	0.64	0.59	ug/kg	
50-29-3	4,4'-DDT	0.64 U	0.67	0.64	0.60	ug/kg	
72-20-8	Endrin	0.61 U	0.67	0.61	0.52	ug/kg	
1031-07-8	Endosulfan sulfate	0.61 U	0.67	0.61	0.53	ug/kg	
7421-93-4	Endrin aldehyde	0.50 U	0.67	0.50	0.38	ug/kg	
959-98-8	Endosulfan-I	0.50 U	0.67	0.50	0.39	ug/kg	
33213-65-9	Endosulfan-II	0.50 U	0.67	0.50	0.42	ug/kg	
76-44-8	Heptachlor	0.61 U	0.67	0.61	0.58	ug/kg	
1024-57-3	Heptachlor epoxide	0.50 U	0.67	0.50	0.47	ug/kg	
72-43-5	Methoxychlor	0.61 U	1.3	0.61	0.53	ug/kg	
53494-70-5	Endrin ketone	0.54 U	0.67	0.54	0.49	ug/kg	
8001-35-2	Toxaphene	16 U	17	16	16	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	85%	86%	25-135%
877-09-8	Tetrachloro-m-xylene	81%	85%	25-135%
2051-24-3	Decachlorobiphenyl	72%	75%	10-156%
2051-24-3	Decachlorobiphenyl	56%	68%	10-156%

(a) Confirmation run.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID: NWIRP-S1-WC-C-001	
Lab Sample ID: JC93827-1	Date Sampled: 08/23/19
Matrix: SO - Solid	Date Received: 08/23/19
Method: SW846 8082A SW846 3546	Percent Solids: 94.7
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX2439269.D	1	08/30/19 02:26	TR	08/29/19 09:30	OP22362	GXX6789
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
12674-11-2	Aroclor 1016	27 U	34	27	16	ug/kg	
11104-28-2	Aroclor 1221	27 U	34	27	21	ug/kg	
11141-16-5	Aroclor 1232	27 U	34	27	21	ug/kg	
53469-21-9	Aroclor 1242	27 U	34	27	14	ug/kg	
12672-29-6	Aroclor 1248	32 U	34	32	30	ug/kg	
11097-69-1	Aroclor 1254	27 U	34	27	18	ug/kg	
11096-82-5	Aroclor 1260	27 U	34	27	14	ug/kg	
11100-14-4	Aroclor 1268	27 U	34	27	14	ug/kg	
37324-23-5	Aroclor 1262	27 U	34	27	22	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		31-146%
877-09-8	Tetrachloro-m-xylene	105%		31-146%
2051-24-3	Decachlorobiphenyl	92%		17-164%
2051-24-3	Decachlorobiphenyl	102%		17-164%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID: NWIRP-S1-WC-C-001	Date Sampled: 08/23/19
Lab Sample ID: JC93827-1A	Date Received: 08/23/19
Matrix: SO - Soil	Percent Solids: 94.7
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage	

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	LOQ	LOD	DL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.015 U	D004	5.0	0.50	0.015	0.014	mg/l	5	08/28/19	08/29/19	GT SW846 6010D ²
Barium	0.50 U	D005	100	1.0	0.50	0.067	mg/l	5	08/28/19	08/29/19	GT SW846 6010D ²
Cadmium	0.010 U	D006	1.0	0.020	0.010	0.0050	mg/l	5	08/28/19	08/29/19	GT SW846 6010D ²
Chromium	0.12	D007	5.0	0.050	0.025	0.010	mg/l	5	08/28/19	08/29/19	GT SW846 6010D ²
Lead	0.015 U	D008	5.0	0.50	0.015	0.0090	mg/l	5	08/28/19	08/29/19	GT SW846 6010D ²
Mercury	0.00015 U	D009	0.20	0.00020	0.00015	0.000095	mg/l	1	08/29/19	08/29/19	LL SW846 7470A ¹
Selenium	0.040 U	D010	1.0	0.50	0.040	0.025	mg/l	5	08/28/19	08/29/19	GT SW846 6010D ²
Silver	0.020 U	D011	5.0	0.050	0.020	0.0095	mg/l	5	08/28/19	08/29/19	GT SW846 6010D ²

- (1) Instrument QC Batch: MA47364
- (2) Instrument QC Batch: MA47366
- (3) Prep QC Batch: MP17060
- (4) Prep QC Batch: MP17075

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
 LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

4.2
4

Report of Analysis

Client Sample ID:	NWIRP-S1-WC-C-001		
Lab Sample ID:	JC93827-1A	Date Sampled:	08/23/19
Matrix:	SO - Soil	Date Received:	08/23/19
		Percent Solids:	94.7
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By Method
Corrosivity as pH	11.49 NC				su	1	08/29/19 14:55	MS SW846 9045D
Cyanide Reactivity	8.0 U	11	8.0	7.9	mg/kg	1	08/30/19 09:35	KI SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200				Deg. F	1	08/28/19 19:13	JOOSW846 1010A/ASTM D93
Sulfide Reactivity	85 U	110	85	63	mg/kg	1	08/30/19 15:53	MP SW846 CHAP7/9034

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
 LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

4.2
4

GC/LC Semi-volatiles

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- DDT/Endrin Breakdown Checks
- GC Identification Summaries (Hits)
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Parameter Certification Exceptions

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

The following parameters included in this report are exceptions to NELAC certification. The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Cyanide Reactivity		SW846 CHAP7/9012 B	SO	SGS is not certified for this parameter. ^a
Sulfide Reactivity		SW846 CHAP7/9034	SO	SGS is not certified for this parameter. ^a

(a) Reactivity analyzed following SW846 Chapter 7 is no longer recognized by regulatory agencies. Use of results should be verified through the program to which the data is being submitted.

Certification exceptions shown are based on the New Jersey DEP certifications. Applicability in other states may vary. Please contact your laboratory representative if additional information is required for a specific regulatory program.

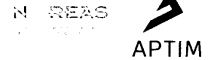
5.1
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SOLL

JC93827 CR/L

CHAIN-OF-CUSTODY RECORD

COC Number: 501164-20190823
Subcontract Services Agreement #: TBD



APTIM - 150 Boush Street, Suite 701, Norfolk, VA 23510 (757) 640-6200

SGS Accutest - New Jersey		2235 US-130, Dayton, NJ 08810 Phone: (732) 329-0200	
Site 1 - Former Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage, New York		Disposal Samples Concrete Samples	
F8147	501164	Natasha Kelley Sullivan	(410)529-7598
NAVY		Monica L. Smeal E.I.T.	
1	NWIRP-S1-WC-C-001	08/23/19	0900
		X	
	Concrete Chip Samples; 1 sample/500 CY		(5) x 8 oz glass jar, none
2		X	X
3		X	X
4		X	X
5		X	X
6		X	X
7		X	X
8		X	X
9		X	X
10		X	X

OSU1
D48
14M2
4057

5.2
5

7 Day TAT Sampled By: McCutcheon, Sean, APTIM Laboratory Report No:

Sample No.	Signature	Date	Signature	Date	Time	Report Format:	Deliverables:	Fax results to:
1	<i>[Signature]</i>	8/23/2019	<i>[Signature]</i>	8/23/19	1200	Full Report	EDD Excel+NIRIS	Fax results to Natasha Sullivan (410) 529-7598
2	<i>[Signature]</i>	8/23/19	<i>[Signature]</i>	8/23/19	1832			

INITIAL ASSESSMENT 3A
LABEL VERIFICATION 2.3 ^{OCF}

SGS Sample Receipt Summary

Job Number: JC93827

Client: APTIM

Project: SITE 1 - FORMER DRUM MARSHALLING AREA

Date / Time Received: 8/23/2019 6:32:00 PM

Delivery Method: Accutest Courier

Airbill #s:

Cooler Temps (Raw Measured) °C: Cooler 1: (2.3);

Cooler Temps (Corrected) °C: Cooler 1: (2.2);

<u>Cooler Security</u>	<u>Y or N</u>		<u>Y or N</u>	
1. Custody Seals Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/> <input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y or N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Cooler temp verification:	<u>IR Gun</u>
3. Cooler media:	<u>Ice (Bag)</u>
4. No. Coolers:	<u>1</u>

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:	<u>Intact</u>		

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Test Strip Lot #s:	pH 1-12: <u>229517</u>	pH 12+: <u>208717</u>	Other: (Specify) _____
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Comments -1 Sample matrix not amenable to Encore or Terracore kit collection, VOA lab to LL prep as soon as possible from intact volume.

SM089-03
Rev. Date 12/7/17

JC93827: Chain of Custody

Page 2 of 3

5.2
5

Responded to by: CSR: N/A

Response Date: Response Date: 8/23/2019

Response:

Response: Proceed with analysis

JC93827: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

NOREAS, Inc.

Job No: JC93827

Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
 Project No: 501164

5.3
5

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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JC93827-1 Collected: 23-AUG-19 09:00 By: Received: 23-AUG-19 By: AS
 NWIRP-S1-WC-C-001

JC93827-1	SM2540 G 18TH ED MOD	28-AUG-19 17:47	BG			SOL104
JC93827-1	SW846 8270D	29-AUG-19 07:10	CS	28-AUG-19	WC	AB8270TCL20
JC93827-1	SW846 8260C	29-AUG-19 15:12	TDN			V8260TCL20
JC93827-1	SW846 8082A	30-AUG-19 02:26	TR	29-AUG-19	CC	P8082PCB11AO
JC93827-1	SW846 8081B	30-AUG-19 02:44	CP	29-AUG-19	CC	P8081PESTTCL
JC93827-1	SW846 8260C	30-AUG-19 09:25	TDN			V8260TCL20
JC93827-1	SW846 8081B	30-AUG-19 12:21	AB	29-AUG-19	CC	P8081PESTTCL
JC93827-1	SW846 8151A	30-AUG-19 13:50	VDT	28-AUG-19	CC	H8151FL

JC93827-1A Collected: 23-AUG-19 09:00 By: Received: 23-AUG-19 By: AS
 NWIRP-S1-WC-C-001

JC93827-1A	SW846 1010A/ASTM D28	28-AUG-19 19:13	JOO			IGN
JC93827-1A	SW846 7470A	29-AUG-19 12:17	LL	29-AUG-19	LL	EHG
JC93827-1A	SW846 6010D	29-AUG-19 14:39	GT	28-AUG-19	BP	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC93827-1A	SW846 9045D	29-AUG-19 14:55	MS			CORR
JC93827-1A	SW846 CHAP7/9012 B	30-AUG-19 09:35	KI	29-AUG-19	BM	CREAC
JC93827-1A	SW846 CHAP7/9034	30-AUG-19 15:53	MP	29-AUG-19	BM	SREAC

SGS Internal Chain of Custody

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 08/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC93827-1.1	Secured Storage	Todd Shoemaker	08/28/19 08:36	Retrieve from Storage
JC93827-1.1	Todd Shoemaker	Secured Staging Area	08/28/19 08:37	Return to Storage
JC93827-1.1	Secured Staging Area	Jared O. Onindo	08/28/19 19:11	Retrieve from Storage
JC93827-1.1	Jared O. Onindo	Secured Storage	08/28/19 19:56	Return to Storage
JC93827-1.1	Secured Storage	Todd Shoemaker	08/29/19 13:49	Retrieve from Storage
JC93827-1.1	Todd Shoemaker	Secured Staging Area	08/29/19 13:50	Return to Storage
JC93827-1.1	Secured Staging Area	Dave Hunkele	09/04/19 05:23	Retrieve from Storage
JC93827-1.1	Dave Hunkele	Secured Storage	09/04/19 10:16	Return to Storage
JC93827-1.2	Secured Storage	Todd Shoemaker	08/28/19 13:52	Retrieve from Storage
JC93827-1.2	Todd Shoemaker	Secured Staging Area	08/28/19 13:52	Return to Storage
JC93827-1.2	Secured Staging Area	William Crusier	08/28/19 14:04	Retrieve from Storage
JC93827-1.2	William Crusier	Secured Storage	08/28/19 21:31	Return to Storage
JC93827-1.2.1	William Crusier	Organics Prep	08/28/19 14:13	Extract from JC93827-1.2
JC93827-1.2.1	Organics Prep	William Crusier	08/28/19 22:30	Extract from JC93827-1.2
JC93827-1.2.1	William Crusier	Extract Storage	08/28/19 22:30	Return to Storage
JC93827-1.2.1	Extract Storage	Christopher Sowa	08/29/19 04:59	Retrieve from Storage
JC93827-1.2.1	Christopher Sowa	GCMSZ	08/29/19 04:59	Load on Instrument
JC93827-1.2.1	GCMSZ	Angela Rastelli	08/29/19 13:54	Unload from Instrument
JC93827-1.2.1	Angela Rastelli	Extract Freezer	08/29/19 13:54	Return to Storage
JC93827-1.2.2	William Crusier	Organics Prep	08/28/19 14:15	Extract from JC93827-1.2
JC93827-1.2.2	Organics Prep	Chadiyah Canaday	08/29/19 15:18	Extract from JC93827-1.2
JC93827-1.2.2	Chadiyah Canaday	Extract Storage	08/29/19 15:18	Return to Storage
JC93827-1.2.2	Extract Storage	Christine Phillips	08/30/19 02:52	Retrieve from Storage
JC93827-1.2.2	Christine Phillips	GC6G	08/30/19 02:52	Load on Instrument
JC93827-1.2.3	William Crusier	Organics Prep	08/28/19 14:16	Extract from JC93827-1.2
JC93827-1.2.3	Organics Prep	Chadiyah Canaday	08/29/19 15:19	Extract from JC93827-1.2
JC93827-1.2.3	Chadiyah Canaday	Extract Storage	08/29/19 15:19	Return to Storage
JC93827-1.2.3	Extract Storage	Tianwei Ruan	08/29/19 16:22	Retrieve from Storage
JC93827-1.2.3	Tianwei Ruan	GCXX	08/29/19 16:22	Load on Instrument
JC93827-1.3	Secured Storage	Matthew Robbins	08/27/19 21:04	Retrieve from Storage
JC93827-1.3	Matthew Robbins	Secured Staging Area	08/27/19 21:04	Return to Storage
JC93827-1.3	Secured Staging Area	Natasha Torres	08/28/19 07:08	Retrieve from Storage
JC93827-1.3	Natasha Torres	Secured Storage	08/28/19 10:15	Return to Storage
JC93827-1.3	Secured Storage	Sahara Feliciano	08/29/19 20:49	Retrieve from Storage
JC93827-1.3	Sahara Feliciano	Secured Staging Area	08/29/19 20:49	Return to Storage
JC93827-1.3	Secured Staging Area	Michelle Schmitz	08/30/19 08:25	Retrieve from Storage
JC93827-1.3	Michelle Schmitz	Secured Storage	09/04/19 17:14	Return to Storage
JC93827-1.3.1	Natasha Torres	Organics Prep	08/28/19 07:16	Extract from JC93827-1.3

5.4
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SGS Internal Chain of Custody

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 08/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC93827-1.3.1	Organics Prep	Chatayah Canaday	08/28/19 14:51	Extract from JC93827-1.3
JC93827-1.3.1	Chatayah Canaday	Extract Storage	08/28/19 14:51	Return to Storage
JC93827-1.3.1	Extract Storage	Vincent Drago	08/30/19 10:21	Retrieve from Storage
JC93827-1.3.1	Vincent Drago	GCOA	08/30/19 10:21	Load on Instrument
JC93827-1.3.1	GCOA	Vincent Drago	09/03/19 10:46	Unload from Instrument
JC93827-1.3.1	Vincent Drago	Extract Freezer	09/03/19 10:46	Return to Storage
JC93827-1.4	Secured Storage	Devin Gomez	08/26/19 15:35	Retrieve from Storage
JC93827-1.4	Devin Gomez	Secured Storage	08/26/19 15:42	Return to Storage
JC93827-1.4	Secured Storage	Benjamin Gaines	08/27/19 11:05	Retrieve from Storage
JC93827-1.4	Benjamin Gaines	Secured Staging Area	08/27/19 11:05	Return to Storage
JC93827-1.4	Secured Staging Area	Benjamin Gaines	08/27/19 11:06	Retrieve from Storage
JC93827-1.4	Benjamin Gaines	Secured Storage	08/27/19 16:16	Return to Storage
JC93827-1.4	Secured Storage	Matthew Robbins	08/28/19 21:35	Retrieve from Storage
JC93827-1.4	Matthew Robbins	Secured Staging Area	08/28/19 21:35	Return to Storage
JC93827-1.4	Secured Staging Area	Beatrice Marcelino	08/29/19 09:53	Retrieve from Storage
JC93827-1.4	Beatrice Marcelino	Secured Storage	08/29/19 15:33	Return to Storage
JC93827-1.5	Secured Storage	Dwayne Johnson	08/27/19 11:06	Retrieve from Storage
JC93827-1.5	Dwayne Johnson	Secured Staging Area	08/27/19 11:06	Return to Storage
JC93827-1.5	Secured Staging Area	Christopher Motola	08/27/19 20:03	Retrieve from Storage
JC93827-1.5	Christopher Motola	Secured Storage	08/27/19 21:08	Return to Storage
JC93827-1.5.1	Christopher Motola	TCLP	08/27/19 20:03	Leachate from JC93827-1.5
JC93827-1.5.1	TCLP	Tharun Murali	08/28/19 09:32	Leachate from JC93827-1.5
JC93827-1.5.1	Tharun Murali	Secured Storage	08/28/19 09:32	Return to Storage
JC93827-1.6	Secured Storage	Dwayne Johnson	08/26/19 10:27	Retrieve from Storage
JC93827-1.6	Dwayne Johnson	Secured Staging Area	08/26/19 10:27	Return to Storage
JC93827-1.6	Secured Staging Area	Dwayne Johnson	08/26/19 10:28	Retrieve from Storage
JC93827-1.6	Dwayne Johnson		08/26/19 12:23	Depleted
JC93827-1.8	Secured Storage	Thien Nguyen	08/30/19 07:46	Retrieve from Storage
JC93827-1.8	Thien Nguyen	GCMSI	08/30/19 07:47	Load on Instrument
JC93827-1.8	GCMSI	Thien Nguyen	09/03/19 08:21	Unload from Instrument
JC93827-1.8	Thien Nguyen		09/03/19 08:22	Depleted
JC93827-1.9	Secured Storage	Thien Nguyen	08/29/19 13:58	Retrieve from Storage
JC93827-1.9	Thien Nguyen	GCMSI	08/29/19 13:58	Load on Instrument
JC93827-1.9	GCMSI	Thien Nguyen	08/30/19 07:46	Unload from Instrument
JC93827-1.9	Thien Nguyen		08/30/19 07:46	Depleted

5.4
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QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI9197	SW846 8260C						
VI9197-BS	67-64-1	Acetone	BSP	REC	112	%	36-164
VI9197-BS	71-43-2	Benzene	BSP	REC	100	%	77-121
VI9197-BS	74-97-5	Bromochloromethane	BSP	REC	97	%	78-125
VI9197-BS	75-27-4	Bromodichloromethane	BSP	REC	107	%	75-127
VI9197-BS	75-25-2	Bromoform	BSP	REC	100	%	67-132
VI9197-BS	74-83-9	Bromomethane	BSP	REC	103	%	53-143
VI9197-BS	78-93-3	2-Butanone (MEK)	BSP	REC	101	%	51-148
VI9197-BS	75-15-0	Carbon disulfide	BSP	REC	92	%	63-132
VI9197-BS	56-23-5	Carbon tetrachloride	BSP	REC	110	%	70-135
VI9197-BS	108-90-7	Chlorobenzene	BSP	REC	92	%	79-120
VI9197-BS	75-00-3	Chloroethane	BSP	REC	106	%	59-139
VI9197-BS	67-66-3	Chloroform	BSP	REC	103	%	78-123
VI9197-BS	74-87-3	Chloromethane	BSP	REC	95	%	50-136
VI9197-BS	110-82-7	Cyclohexane	BSP	REC	87	%	67-131
VI9197-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	92	%	61-132
VI9197-BS	124-48-1	Dibromochloromethane	BSP	REC	104	%	74-126
VI9197-BS	106-93-4	1,2-Dibromoethane	BSP	REC	96	%	78-122
VI9197-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	98	%	78-121
VI9197-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	95	%	77-121
VI9197-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	94	%	75-120
VI9197-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	102	%	29-149
VI9197-BS	75-34-3	1,1-Dichloroethane	BSP	REC	107	%	76-125
VI9197-BS	107-06-2	1,2-Dichloroethane	BSP	REC	107	%	73-128
VI9197-BS	75-35-4	1,1-Dichloroethene	BSP	REC	108	%	70-131
VI9197-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	99	%	77-123
VI9197-BS	156-60-5	trans-1,2-Dichloroethene	BSP	REC	108	%	74-125
VI9197-BS	78-87-5	1,2-Dichloropropane	BSP	REC	102	%	76-123
VI9197-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	102	%	74-126
VI9197-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	103	%	71-130
VI9197-BS	100-41-4	Ethylbenzene	BSP	REC	93	%	76-122
VI9197-BS	76-13-1	Freon 113	BSP	REC	93	%	66-136
VI9197-BS	591-78-6	2-Hexanone	BSP	REC	97	%	53-145
VI9197-BS	98-82-8	Isopropylbenzene	BSP	REC	93	%	68-134
VI9197-BS	79-20-9	Methyl Acetate	BSP	REC	96	%	53-144
VI9197-BS	108-87-2	Methylcyclohexane	BSP	REC	90	%	66-133
VI9197-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	104	%	73-125
VI9197-BS	108-10-1	4-Methyl-2-pentanone(MIBK)	BSP	REC	97	%	65-135
VI9197-BS	75-09-2	Methylene chloride	BSP	REC	90	%	70-128
VI9197-BS	100-42-5	Styrene	BSP	REC	94	%	76-124
VI9197-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	97	%	70-124
VI9197-BS	127-18-4	Tetrachloroethene	BSP	REC	90	%	73-128
VI9197-BS	108-88-3	Toluene	BSP	REC	92	%	77-121

* Sample used for QC is not from job JC93827

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QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI9197-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	103	%	66-130
VI9197-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	103	%	67-129
VI9197-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	109	%	73-130
VI9197-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	103	%	78-121
VI9197-BS	79-01-6	Trichloroethene	BSP	REC	100	%	77-123
VI9197-BS	75-69-4	Trichlorofluoromethane	BSP	REC	103	%	62-140
VI9197-BS	75-01-4	Vinyl chloride	BSP	REC	102	%	56-135
VI9197-BS		m,p-Xylene	BSP	REC	90	%	77-124
VI9197-BS	95-47-6	o-Xylene	BSP	REC	92	%	77-123
VI9197-BS	1330-20-7	Xylene (total)	BSP	REC	91	%	78-124
VI9197-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	101	%	78-119
VI9197-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	114	%	71-136
VI9197-BS	2037-26-5	Toluene-D8	BSP	SURR	97	%	85-116
VI9197-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	102	%	79-119
JC93502-2MS*	67-64-1	Acetone	MS	REC	84	%	36-164
JC93502-2MS*	71-43-2	Benzene	MS	REC	98	%	77-121
JC93502-2MS*	74-97-5	Bromochloromethane	MS	REC	97	%	78-125
JC93502-2MS*	75-27-4	Bromodichloromethane	MS	REC	105	%	75-127
JC93502-2MS*	75-25-2	Bromoform	MS	REC	92	%	67-132
JC93502-2MS*	74-83-9	Bromomethane	MS	REC	108	%	53-143
JC93502-2MS*	78-93-3	2-Butanone (MEK)	MS	REC	86	%	51-148
JC93502-2MS*	75-15-0	Carbon disulfide	MS	REC	93	%	63-132
JC93502-2MS*	56-23-5	Carbon tetrachloride	MS	REC	117	%	70-135
JC93502-2MS*	108-90-7	Chlorobenzene	MS	REC	93	%	79-120
JC93502-2MS*	75-00-3	Chloroethane	MS	REC	106	%	59-139
JC93502-2MS*	67-66-3	Chloroform	MS	REC	105	%	78-123
JC93502-2MS*	74-87-3	Chloromethane	MS	REC	90	%	50-136
JC93502-2MS*	110-82-7	Cyclohexane	MS	REC	88	%	67-131
JC93502-2MS*	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	80	%	61-132
JC93502-2MS*	124-48-1	Dibromochloromethane	MS	REC	102	%	74-126
JC93502-2MS*	106-93-4	1,2-Dibromoethane	MS	REC	89	%	78-122
JC93502-2MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	95	%	78-121
JC93502-2MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	95	%	77-121
JC93502-2MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	93	%	75-120
JC93502-2MS*	75-71-8	Dichlorodifluoromethane	MS	REC	101	%	29-149
JC93502-2MS*	75-34-3	1,1-Dichloroethane	MS	REC	106	%	76-125
JC93502-2MS*	107-06-2	1,2-Dichloroethane	MS	REC	105	%	73-128
JC93502-2MS*	75-35-4	1,1-Dichloroethene	MS	REC	113	%	70-131
JC93502-2MS*	156-59-2	cis-1,2-Dichloroethene	MS	REC	98	%	77-123
JC93502-2MS*	156-60-5	trans-1,2-Dichloroethene	MS	REC	111	%	74-125
JC93502-2MS*	78-87-5	1,2-Dichloropropane	MS	REC	101	%	76-123
JC93502-2MS*	10061-01-5	cis-1,3-Dichloropropene	MS	REC	97	%	74-126
JC93502-2MS*	10061-02-6	trans-1,3-Dichloropropene	MS	REC	98	%	71-130
JC93502-2MS*	100-41-4	Ethylbenzene	MS	REC	94	%	76-122
JC93502-2MS*	76-13-1	Freon 113	MS	REC	95	%	66-136

* Sample used for QC is not from job JC93827

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QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC93502-2MS*	591-78-6	2-Hexanone	MS	REC	81	%	53-145
JC93502-2MS*	98-82-8	Isopropylbenzene	MS	REC	95	%	68-134
JC93502-2MS*	79-20-9	Methyl Acetate	MS	REC	82	%	53-144
JC93502-2MS*	108-87-2	Methylcyclohexane	MS	REC	89	%	66-133
JC93502-2MS*	1634-04-4	Methyl Tert Butyl Ether	MS	REC	98	%	73-125
JC93502-2MS*	108-10-1	4-Methyl-2-pentanone(MIBK)	MS	REC	83	%	65-135
JC93502-2MS*	75-09-2	Methylene chloride	MS	REC	89	%	70-128
JC93502-2MS*	100-42-5	Styrene	MS	REC	92	%	76-124
JC93502-2MS*	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	86	%	70-124
JC93502-2MS*	127-18-4	Tetrachloroethene	MS	REC	95	%	73-128
JC93502-2MS*	108-88-3	Toluene	MS	REC	94	%	77-121
JC93502-2MS*	87-61-6	1,2,3-Trichlorobenzene	MS	REC	94	%	66-130
JC93502-2MS*	120-82-1	1,2,4-Trichlorobenzene	MS	REC	97	%	67-129
JC93502-2MS*	71-55-6	1,1,1-Trichloroethane	MS	REC	114	%	73-130
JC93502-2MS*	79-00-5	1,1,2-Trichloroethane	MS	REC	96	%	78-121
JC93502-2MS*	79-01-6	Trichloroethene	MS	REC	105	%	77-123
JC93502-2MS*	75-69-4	Trichlorofluoromethane	MS	REC	110	%	62-140
JC93502-2MS*	75-01-4	Vinyl chloride	MS	REC	103	%	56-135
JC93502-2MS*		m,p-Xylene	MS	REC	92	%	77-124
JC93502-2MS*	95-47-6	o-Xylene	MS	REC	92	%	77-123
JC93502-2MS*	1330-20-7	Xylene (total)	MS	REC	92	%	78-124
JC93502-2MS*	1868-53-7	Dibromofluoromethane	MS	SURR	104	%	78-119
JC93502-2MS*	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	116	%	71-136
JC93502-2MS*	2037-26-5	Toluene-D8	MS	SURR	98	%	85-116
JC93502-2MS*	460-00-4	4-Bromofluorobenzene	MS	SURR	102	%	79-119
JC93502-3DUP*	67-64-1	Acetone	DUP	RPD	64 ^a	%	20
JC93502-3DUP*	71-43-2	Benzene	DUP	RPD	0	%	20
JC93502-3DUP*	74-97-5	Bromochloromethane	DUP	RPD	0	%	20
JC93502-3DUP*	75-27-4	Bromodichloromethane	DUP	RPD	0	%	20
JC93502-3DUP*	75-25-2	Bromoform	DUP	RPD	0	%	20
JC93502-3DUP*	74-83-9	Bromomethane	DUP	RPD	0	%	20
JC93502-3DUP*	78-93-3	2-Butanone (MEK)	DUP	RPD	0	%	20
JC93502-3DUP*	75-15-0	Carbon disulfide	DUP	RPD	0	%	20
JC93502-3DUP*	56-23-5	Carbon tetrachloride	DUP	RPD	0	%	20
JC93502-3DUP*	108-90-7	Chlorobenzene	DUP	RPD	0	%	20
JC93502-3DUP*	75-00-3	Chloroethane	DUP	RPD	0	%	20
JC93502-3DUP*	67-66-3	Chloroform	DUP	RPD	0	%	20
JC93502-3DUP*	74-87-3	Chloromethane	DUP	RPD	0	%	20
JC93502-3DUP*	110-82-7	Cyclohexane	DUP	RPD	0	%	20
JC93502-3DUP*	96-12-8	1,2-Dibromo-3-chloropropane	DUP	RPD	0	%	20
JC93502-3DUP*	124-48-1	Dibromochloromethane	DUP	RPD	0	%	20
JC93502-3DUP*	106-93-4	1,2-Dibromoethane	DUP	RPD	0	%	20
JC93502-3DUP*	95-50-1	1,2-Dichlorobenzene	DUP	RPD	0	%	20
JC93502-3DUP*	541-73-1	1,3-Dichlorobenzene	DUP	RPD	0	%	20
JC93502-3DUP*	106-46-7	1,4-Dichlorobenzene	DUP	RPD	0	%	20

* Sample used for QC is not from job JC93827

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QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC93502-3DUP*	75-71-8	Dichlorodifluoromethane	DUP	RPD	0	%	20
JC93502-3DUP*	75-34-3	1,1-Dichloroethane	DUP	RPD	0	%	20
JC93502-3DUP*	107-06-2	1,2-Dichloroethane	DUP	RPD	0	%	20
JC93502-3DUP*	75-35-4	1,1-Dichloroethene	DUP	RPD	0	%	20
JC93502-3DUP*	156-59-2	cis-1,2-Dichloroethene	DUP	RPD	0	%	20
JC93502-3DUP*	156-60-5	trans-1,2-Dichloroethene	DUP	RPD	0	%	20
JC93502-3DUP*	78-87-5	1,2-Dichloropropane	DUP	RPD	0	%	20
JC93502-3DUP*	10061-01-5	cis-1,3-Dichloropropene	DUP	RPD	0	%	20
JC93502-3DUP*	10061-02-6	trans-1,3-Dichloropropene	DUP	RPD	0	%	20
JC93502-3DUP*	100-41-4	Ethylbenzene	DUP	RPD	0	%	20
JC93502-3DUP*	76-13-1	Freon 113	DUP	RPD	0	%	20
JC93502-3DUP*	591-78-6	2-Hexanone	DUP	RPD	0	%	20
JC93502-3DUP*	98-82-8	Isopropylbenzene	DUP	RPD	0	%	20
JC93502-3DUP*	79-20-9	Methyl Acetate	DUP	RPD	0	%	20
JC93502-3DUP*	108-87-2	Methylcyclohexane	DUP	RPD	0	%	20
JC93502-3DUP*	1634-04-4	Methyl Tert Butyl Ether	DUP	RPD	0	%	20
JC93502-3DUP*	108-10-1	4-Methyl-2-pentanone(MIBK)	DUP	RPD	0	%	20
JC93502-3DUP*	75-09-2	Methylene chloride	DUP	RPD	30	%	20
JC93502-3DUP*	100-42-5	Styrene	DUP	RPD	0	%	20
JC93502-3DUP*	79-34-5	1,1,2,2-Tetrachloroethane	DUP	RPD	0	%	20
JC93502-3DUP*	127-18-4	Tetrachloroethene	DUP	RPD	0	%	20
JC93502-3DUP*	108-88-3	Toluene	DUP	RPD	0	%	20
JC93502-3DUP*	87-61-6	1,2,3-Trichlorobenzene	DUP	RPD	0	%	20
JC93502-3DUP*	120-82-1	1,2,4-Trichlorobenzene	DUP	RPD	0	%	20
JC93502-3DUP*	71-55-6	1,1,1-Trichloroethane	DUP	RPD	0	%	20
JC93502-3DUP*	79-00-5	1,1,2-Trichloroethane	DUP	RPD	0	%	20
JC93502-3DUP*	79-01-6	Trichloroethene	DUP	RPD	0	%	20
JC93502-3DUP*	75-69-4	Trichlorofluoromethane	DUP	RPD	0	%	20
JC93502-3DUP*	75-01-4	Vinyl chloride	DUP	RPD	0	%	20
JC93502-3DUP*		m,p-Xylene	DUP	RPD	0	%	20
JC93502-3DUP*	95-47-6	o-Xylene	DUP	RPD	0	%	20
JC93502-3DUP*	1330-20-7	Xylene (total)	DUP	RPD	0	%	20
JC93502-3DUP*	1868-53-7	Dibromofluoromethane	DUP	SURR	108	%	78-119
JC93502-3DUP*	17060-07-0	1,2-Dichloroethane-D4	DUP	SURR	124	%	71-136
JC93502-3DUP*	2037-26-5	Toluene-D8	DUP	SURR	96	%	85-116
JC93502-3DUP*	460-00-4	4-Bromofluorobenzene	DUP	SURR	103	%	79-119
VI9197-MB	1868-53-7	Dibromofluoromethane	MB	SURR	103	%	78-119
VI9197-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	117	%	71-136
VI9197-MB	2037-26-5	Toluene-D8	MB	SURR	99	%	85-116
VI9197-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	102	%	79-119
JC93827-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	52 ^b	%	78-119
JC93827-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	125	%	71-136
JC93827-1	2037-26-5	Toluene-D8	SAMP	SURR	96	%	85-116
JC93827-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	102	%	79-119

* Sample used for QC is not from job JC93827

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QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP22364	SW846 8270D						
OP22364-BS1	95-57-8	2-Chlorophenol	BSP	REC	72	%	34-121
OP22364-BS1	59-50-7	4-Chloro-3-methyl phenol	BSP	REC	76	%	45-122
OP22364-BS1	120-83-2	2,4-Dichlorophenol	BSP	REC	75	%	40-122
OP22364-BS1	105-67-9	2,4-Dimethylphenol	BSP	REC	83	%	30-127
OP22364-BS1	534-52-1	4,6-Dinitro-o-cresol	BSP	REC	73	%	29-132
OP22364-BS1	95-48-7	2-Methylphenol	BSP	REC	74	%	32-122
OP22364-BS1		3&4-Methylphenol	BSP	REC	76	%	34-119
OP22364-BS1	88-75-5	2-Nitrophenol	BSP	REC	72	%	36-123
OP22364-BS1	100-02-7	4-Nitrophenol	BSP	REC	89	%	30-132
OP22364-BS1	87-86-5	Pentachlorophenol	BSP	REC	90	%	25-133
OP22364-BS1	108-95-2	Phenol	BSP	REC	70	%	34-121
OP22364-BS1	58-90-2	2,3,4,6-Tetrachlorophenol	BSP	REC	77	%	44-125
OP22364-BS1	95-95-4	2,4,5-Trichlorophenol	BSP	REC	76	%	41-124
OP22364-BS1	88-06-2	2,4,6-Trichlorophenol	BSP	REC	81	%	39-126
OP22364-BS1	83-32-9	Acenaphthene	BSP	REC	73	%	40-123
OP22364-BS1	208-96-8	Acenaphthylene	BSP	REC	74	%	32-132
OP22364-BS1	98-86-2	Acetophenone	BSP	REC	73	%	33-115
OP22364-BS1	120-12-7	Anthracene	BSP	REC	77	%	47-123
OP22364-BS1	1912-24-9	Atrazine	BSP	REC	79	%	47-127
OP22364-BS1	56-55-3	Benzo(a)anthracene	BSP	REC	73	%	49-126
OP22364-BS1	50-32-8	Benzo(a)pyrene	BSP	REC	77	%	45-129
OP22364-BS1	205-99-2	Benzo(b)fluoranthene	BSP	REC	79	%	45-132
OP22364-BS1	191-24-2	Benzo(g,h,i)perylene	BSP	REC	78	%	43-134
OP22364-BS1	207-08-9	Benzo(k)fluoranthene	BSP	REC	77	%	47-132
OP22364-BS1	101-55-3	4-Bromophenyl phenyl ether	BSP	REC	78	%	46-124
OP22364-BS1	85-68-7	Butyl benzyl phthalate	BSP	REC	77	%	48-132
OP22364-BS1	92-52-4	1,1'-Biphenyl	BSP	REC	71	%	40-117
OP22364-BS1	91-58-7	2-Chloronaphthalene	BSP	REC	75	%	41-114
OP22364-BS1	106-47-8	4-Chloroaniline	BSP	REC	54	%	17-106
OP22364-BS1	86-74-8	Carbazole	BSP	REC	73	%	50-123
OP22364-BS1	105-60-2	Caprolactam	BSP	REC	66	%	46-117
OP22364-BS1	218-01-9	Chrysene	BSP	REC	70	%	50-124
OP22364-BS1	111-91-1	bis(2-Chloroethoxy)methane	BSP	REC	77	%	36-121
OP22364-BS1	111-44-4	bis(2-Chloroethyl)ether	BSP	REC	74	%	31-120
OP22364-BS1	108-60-1	2,2'-Oxybis(1-chloropropane)	BSP	REC	87	%	33-131
OP22364-BS1	7005-72-3	4-Chlorophenyl phenyl ether	BSP	REC	81	%	45-121
OP22364-BS1	121-14-2	2,4-Dinitrotoluene	BSP	REC	76	%	48-126
OP22364-BS1	606-20-2	2,6-Dinitrotoluene	BSP	REC	76	%	46-124
OP22364-BS1	91-94-1	3,3'-Dichlorobenzidine	BSP	REC	65	%	22-121
OP22364-BS1	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	74	%	45-134
OP22364-BS1	132-64-9	Dibenzofuran	BSP	REC	73	%	44-120
OP22364-BS1	84-74-2	Di-n-butyl phthalate	BSP	REC	79	%	51-128

* Sample used for QC is not from job JC93827

QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP22364-BS1	117-84-0	Di-n-octyl phthalate	BSP	REC	86	%	45-140
OP22364-BS1	84-66-2	Diethyl phthalate	BSP	REC	76	%	50-124
OP22364-BS1	131-11-3	Dimethyl phthalate	BSP	REC	76	%	48-124
OP22364-BS1	117-81-7	bis(2-Ethylhexyl)phthalate	BSP	REC	76	%	51-133
OP22364-BS1	206-44-0	Fluoranthene	BSP	REC	75	%	50-127
OP22364-BS1	86-73-7	Fluorene	BSP	REC	80	%	43-125
OP22364-BS1	118-74-1	Hexachlorobenzene	BSP	REC	74	%	45-122
OP22364-BS1	87-68-3	Hexachlorobutadiene	BSP	REC	83	%	32-123
OP22364-BS1	67-72-1	Hexachloroethane	BSP	REC	71	%	28-117
OP22364-BS1	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	77	%	45-133
OP22364-BS1	78-59-1	Isophorone	BSP	REC	82	%	30-122
OP22364-BS1	91-57-6	2-Methylnaphthalene	BSP	REC	79	%	38-122
OP22364-BS1	88-74-4	2-Nitroaniline	BSP	REC	56	%	44-127
OP22364-BS1	99-09-2	3-Nitroaniline	BSP	REC	57	%	33-119
OP22364-BS1	91-20-3	Naphthalene	BSP	REC	77	%	35-123
OP22364-BS1	98-95-3	Nitrobenzene	BSP	REC	79	%	34-122
OP22364-BS1	621-64-7	N-Nitroso-di-n-propylamine	BSP	REC	77	%	36-120
OP22364-BS1	86-30-6	N-Nitrosodiphenylamine	BSP	REC	77	%	38-127
OP22364-BS1	85-01-8	Phenanthrene	BSP	REC	76	%	50-121
OP22364-BS1	129-00-0	Pyrene	BSP	REC	76	%	47-127
OP22364-BS1	95-94-3	1,2,4,5-Tetrachlorobenzene	BSP	REC	82	%	37-119
OP22364-BS1	367-12-4	2-Fluorophenol	BSP	SURR	71	%	35-115
OP22364-BS1	4165-62-2	Phenol-d5	BSP	SURR	72	%	33-122
OP22364-BS1	118-79-6	2,4,6-Tribromophenol	BSP	SURR	74	%	39-132
OP22364-BS1	4165-60-0	Nitrobenzene-d5	BSP	SURR	78	%	37-122
OP22364-BS1	321-60-8	2-Fluorobiphenyl	BSP	SURR	72	%	44-115
OP22364-BS1	1718-51-0	Terphenyl-d14	BSP	SURR	73	%	54-127
OP22364-MS	95-57-8	2-Chlorophenol	MS	REC	12	%	34-121
OP22364-MS	59-50-7	4-Chloro-3-methyl phenol	MS	REC	41	%	45-122
OP22364-MS	120-83-2	2,4-Dichlorophenol	MS	REC	8 ^b	%	40-122
OP22364-MS	105-67-9	2,4-Dimethylphenol	MS	REC	50	%	30-127
OP22364-MS	534-52-1	4,6-Dinitro-o-cresol	MS	REC	7 ^b	%	29-132
OP22364-MS	95-48-7	2-Methylphenol	MS	REC	51	%	32-122
OP22364-MS		3&4-Methylphenol	MS	REC	49	%	34-119
OP22364-MS	88-75-5	2-Nitrophenol	MS	REC	3 ^b	%	36-123
OP22364-MS	100-02-7	4-Nitrophenol	MS	REC	0 ^b	%	30-132
OP22364-MS	87-86-5	Pentachlorophenol	MS	REC	9 ^b	%	25-133
OP22364-MS	108-95-2	Phenol	MS	REC	35	%	34-121
OP22364-MS	58-90-2	2,3,4,6-Tetrachlorophenol	MS	REC	4 ^b	%	44-125
OP22364-MS	95-95-4	2,4,5-Trichlorophenol	MS	REC	4 ^b	%	41-124
OP22364-MS	88-06-2	2,4,6-Trichlorophenol	MS	REC	2 ^b	%	39-126
OP22364-MS	83-32-9	Acenaphthene	MS	REC	147 ^b	%	40-123
OP22364-MS	208-96-8	Acenaphthylene	MS	REC	149 ^b	%	32-132
OP22364-MS	98-86-2	Acetophenone	MS	REC	68	%	33-115
OP22364-MS	120-12-7	Anthracene	MS	REC	151 ^b	%	47-123

* Sample used for QC is not from job JC93827

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QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP22364-MS	1912-24-9	Atrazine	MS	REC	75	%	47-127
OP22364-MS	56-55-3	Benzo(a)anthracene	MS	REC	128	%	49-126
OP22364-MS	50-32-8	Benzo(a)pyrene	MS	REC	144	%	45-129
OP22364-MS	205-99-2	Benzo(b)fluoranthene	MS	REC	140	%	45-132
OP22364-MS	191-24-2	Benzo(g,h,i)perylene	MS	REC	149	%	43-134
OP22364-MS	207-08-9	Benzo(k)fluoranthene	MS	REC	141	%	47-132
OP22364-MS	101-55-3	4-Bromophenyl phenyl ether	MS	REC	151 ^b	%	46-124
OP22364-MS	85-68-7	Butyl benzyl phthalate	MS	REC	133	%	48-132
OP22364-MS	92-52-4	1,1'-Biphenyl	MS	REC	68	%	40-117
OP22364-MS	91-58-7	2-Chloronaphthalene	MS	REC	150 ^b	%	41-114
OP22364-MS	106-47-8	4-Chloroaniline	MS	REC	44	%	17-106
OP22364-MS	86-74-8	Carbazole	MS	REC	68	%	50-123
OP22364-MS	105-60-2	Caprolactam	MS	REC	61	%	46-117
OP22364-MS	218-01-9	Chrysene	MS	REC	125	%	50-124
OP22364-MS	111-91-1	bis(2-Chloroethoxy)methane	MS	REC	149 ^b	%	36-121
OP22364-MS	111-44-4	bis(2-Chloroethyl)ether	MS	REC	147 ^b	%	31-120
OP22364-MS	108-60-1	2,2'-Oxybis(1-chloropropane)	MS	REC	162 ^b	%	33-131
OP22364-MS	7005-72-3	4-Chlorophenyl phenyl ether	MS	REC	167 ^b	%	45-121
OP22364-MS	121-14-2	2,4-Dinitrotoluene	MS	REC	139	%	48-126
OP22364-MS	606-20-2	2,6-Dinitrotoluene	MS	REC	146	%	46-124
OP22364-MS	91-94-1	3,3'-Dichlorobenzidine	MS	REC	95	%	22-121
OP22364-MS	53-70-3	Dibenzo(a,h)anthracene	MS	REC	140	%	45-134
OP22364-MS	132-64-9	Dibenzofuran	MS	REC	71	%	44-120
OP22364-MS	84-74-2	Di-n-butyl phthalate	MS	REC	150 ^b	%	51-128
OP22364-MS	117-84-0	Di-n-octyl phthalate	MS	REC	156 ^b	%	45-140
OP22364-MS	84-66-2	Diethyl phthalate	MS	REC	144 ^b	%	50-124
OP22364-MS	131-11-3	Dimethyl phthalate	MS	REC	136 ^b	%	48-124
OP22364-MS	117-81-7	bis(2-Ethylhexyl)phthalate	MS	REC	134	%	51-133
OP22364-MS	206-44-0	Fluoranthene	MS	REC	146	%	50-127
OP22364-MS	86-73-7	Fluorene	MS	REC	164 ^b	%	43-125
OP22364-MS	118-74-1	Hexachlorobenzene	MS	REC	141	%	45-122
OP22364-MS	87-68-3	Hexachlorobutadiene	MS	REC	158 ^b	%	32-123
OP22364-MS	67-72-1	Hexachloroethane	MS	REC	143 ^b	%	28-117
OP22364-MS	193-39-5	Indeno(1,2,3-cd)pyrene	MS	REC	151 ^b	%	45-133
OP22364-MS	78-59-1	Isophorone	MS	REC	160 ^b	%	30-122
OP22364-MS	91-57-6	2-Methylnaphthalene	MS	REC	75	%	38-122
OP22364-MS	88-74-4	2-Nitroaniline	MS	REC	55	%	44-127
OP22364-MS	99-09-2	3-Nitroaniline	MS	REC	61	%	33-119
OP22364-MS	91-20-3	Naphthalene	MS	REC	158 ^b	%	35-123
OP22364-MS	98-95-3	Nitrobenzene	MS	REC	149 ^b	%	34-122
OP22364-MS	621-64-7	N-Nitroso-di-n-propylamine	MS	REC	147 ^b	%	36-120
OP22364-MS	86-30-6	N-Nitrosodiphenylamine	MS	REC	151	%	38-127
OP22364-MS	85-01-8	Phenanthrene	MS	REC	146 ^b	%	50-121
OP22364-MS	129-00-0	Pyrene	MS	REC	135	%	47-127
OP22364-MS	95-94-3	1,2,4,5-Tetrachlorobenzene	MS	REC	158 ^b	%	37-119

* Sample used for QC is not from job JC93827

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QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP22364-MS	367-12-4	2-Fluorophenol	MS	SURR	8 ^b	%	35-115
OP22364-MS	4165-62-2	Phenol-d5	MS	SURR	40	%	33-122
OP22364-MS	118-79-6	2,4,6-Tribromophenol	MS	SURR	4 ^b	%	39-132
OP22364-MS	4165-60-0	Nitrobenzene-d5	MS	SURR	73	%	37-122
OP22364-MS	321-60-8	2-Fluorobiphenyl	MS	SURR	68	%	44-115
OP22364-MS	1718-51-0	Terphenyl-d14	MS	SURR	63	%	54-127
OP22364-MSD	95-57-8	2-Chlorophenol	MSD	REC	3 ^b	%	34-121
OP22364-MSD	95-57-8	2-Chlorophenol	MSD	RPD	116 ^c	%	20
OP22364-MSD	59-50-7	4-Chloro-3-methyl phenol	MSD	REC	27	%	45-122
OP22364-MSD	59-50-7	4-Chloro-3-methyl phenol	MSD	RPD	42 ^c	%	20
OP22364-MSD	120-83-2	2,4-Dichlorophenol	MSD	REC	0 ^b	%	40-122
OP22364-MSD	120-83-2	2,4-Dichlorophenol	MSD	RPD	200 ^c	%	20
OP22364-MSD	105-67-9	2,4-Dimethylphenol	MSD	REC	61	%	30-127
OP22364-MSD	105-67-9	2,4-Dimethylphenol	MSD	RPD	20	%	20
OP22364-MSD	534-52-1	4,6-Dinitro-o-cresol	MSD	REC	9 ^b	%	29-132
OP22364-MSD	534-52-1	4,6-Dinitro-o-cresol	MSD	RPD	33	%	20
OP22364-MSD	95-48-7	2-Methylphenol	MSD	REC	51	%	32-122
OP22364-MSD	95-48-7	2-Methylphenol	MSD	RPD	1	%	20
OP22364-MSD		3&4-Methylphenol	MSD	REC	45	%	34-119
OP22364-MSD		3&4-Methylphenol	MSD	RPD	7	%	20
OP22364-MSD	88-75-5	2-Nitrophenol	MSD	REC	0 ^b	%	36-123
OP22364-MSD	88-75-5	2-Nitrophenol	MSD	RPD	200 ^c	%	20
OP22364-MSD	100-02-7	4-Nitrophenol	MSD	REC	0 ^b	%	30-132
OP22364-MSD	100-02-7	4-Nitrophenol	MSD	RPD	0	%	20
OP22364-MSD	87-86-5	Pentachlorophenol	MSD	REC	8 ^b	%	25-133
OP22364-MSD	87-86-5	Pentachlorophenol	MSD	RPD	13	%	20
OP22364-MSD	108-95-2	Phenol	MSD	REC	28	%	34-121
OP22364-MSD	108-95-2	Phenol	MSD	RPD	24	%	20
OP22364-MSD	58-90-2	2,3,4,6-Tetrachlorophenol	MSD	REC	2 ^b	%	44-125
OP22364-MSD	58-90-2	2,3,4,6-Tetrachlorophenol	MSD	RPD	42 ^c	%	20
OP22364-MSD	95-95-4	2,4,5-Trichlorophenol	MSD	REC	0 ^b	%	41-124
OP22364-MSD	95-95-4	2,4,5-Trichlorophenol	MSD	RPD	200 ^c	%	20
OP22364-MSD	88-06-2	2,4,6-Trichlorophenol	MSD	REC	1 ^b	%	39-126
OP22364-MSD	88-06-2	2,4,6-Trichlorophenol	MSD	RPD	49 ^c	%	20
OP22364-MSD	83-32-9	Acenaphthene	MSD	REC	63	%	40-123
OP22364-MSD	83-32-9	Acenaphthene	MSD	RPD	81 ^c	%	20
OP22364-MSD	208-96-8	Acenaphthylene	MSD	REC	65	%	32-132
OP22364-MSD	208-96-8	Acenaphthylene	MSD	RPD	79 ^c	%	20
OP22364-MSD	98-86-2	Acetophenone	MSD	REC	62	%	33-115
OP22364-MSD	98-86-2	Acetophenone	MSD	RPD	10	%	20
OP22364-MSD	120-12-7	Anthracene	MSD	REC	68	%	47-123
OP22364-MSD	120-12-7	Anthracene	MSD	RPD	75 ^c	%	20
OP22364-MSD	1912-24-9	Atrazine	MSD	REC	74	%	47-127
OP22364-MSD	1912-24-9	Atrazine	MSD	RPD	2	%	20
OP22364-MSD	56-55-3	Benzo(a)anthracene	MSD	REC	66	%	49-126

* Sample used for QC is not from job JC93827

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QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP22364-MSD	56-55-3	Benzo(a)anthracene	MSD	RPD	65 ^c	%	20
OP22364-MSD	50-32-8	Benzo(a)pyrene	MSD	REC	68	%	45-129
OP22364-MSD	50-32-8	Benzo(a)pyrene	MSD	RPD	72 ^c	%	20
OP22364-MSD	205-99-2	Benzo(b)fluoranthene	MSD	REC	66	%	45-132
OP22364-MSD	205-99-2	Benzo(b)fluoranthene	MSD	RPD	72 ^c	%	20
OP22364-MSD	191-24-2	Benzo(g,h,i)perylene	MSD	REC	69	%	43-134
OP22364-MSD	191-24-2	Benzo(g,h,i)perylene	MSD	RPD	74 ^c	%	20
OP22364-MSD	207-08-9	Benzo(k)fluoranthene	MSD	REC	70	%	47-132
OP22364-MSD	207-08-9	Benzo(k)fluoranthene	MSD	RPD	68 ^c	%	20
OP22364-MSD	101-55-3	4-Bromophenyl phenyl ether	MSD	REC	68	%	46-124
OP22364-MSD	101-55-3	4-Bromophenyl phenyl ether	MSD	RPD	76 ^c	%	20
OP22364-MSD	85-68-7	Butyl benzyl phthalate	MSD	REC	71	%	48-132
OP22364-MSD	85-68-7	Butyl benzyl phthalate	MSD	RPD	61 ^c	%	20
OP22364-MSD	92-52-4	1,1'-Biphenyl	MSD	REC	58	%	40-117
OP22364-MSD	92-52-4	1,1'-Biphenyl	MSD	RPD	15	%	20
OP22364-MSD	91-58-7	2-Chloronaphthalene	MSD	REC	63	%	41-114
OP22364-MSD	91-58-7	2-Chloronaphthalene	MSD	RPD	82 ^c	%	20
OP22364-MSD	106-47-8	4-Chloroaniline	MSD	REC	42	%	17-106
OP22364-MSD	106-47-8	4-Chloroaniline	MSD	RPD	6	%	20
OP22364-MSD	86-74-8	Carbazole	MSD	REC	66	%	50-123
OP22364-MSD	86-74-8	Carbazole	MSD	RPD	3	%	20
OP22364-MSD	105-60-2	Caprolactam	MSD	REC	59	%	46-117
OP22364-MSD	105-60-2	Caprolactam	MSD	RPD	3	%	20
OP22364-MSD	218-01-9	Chrysene	MSD	REC	64	%	50-124
OP22364-MSD	218-01-9	Chrysene	MSD	RPD	65 ^c	%	20
OP22364-MSD	111-91-1	bis(2-Chloroethoxy)methane	MSD	REC	61	%	36-121
OP22364-MSD	111-91-1	bis(2-Chloroethoxy)methane	MSD	RPD	84 ^c	%	20
OP22364-MSD	111-44-4	bis(2-Chloroethyl)ether	MSD	REC	59	%	31-120
OP22364-MSD	111-44-4	bis(2-Chloroethyl)ether	MSD	RPD	86 ^c	%	20
OP22364-MSD	108-60-1	2,2'-Oxybis(1-chloropropane)	MSD	REC	71	%	33-131
OP22364-MSD	108-60-1	2,2'-Oxybis(1-chloropropane)	MSD	RPD	78 ^c	%	20
OP22364-MSD	7005-72-3	4-Chlorophenyl phenyl ether	MSD	REC	71	%	45-121
OP22364-MSD	7005-72-3	4-Chlorophenyl phenyl ether	MSD	RPD	80 ^c	%	20
OP22364-MSD	121-14-2	2,4-Dinitrotoluene	MSD	REC	67	%	48-126
OP22364-MSD	121-14-2	2,4-Dinitrotoluene	MSD	RPD	70 ^c	%	20
OP22364-MSD	606-20-2	2,6-Dinitrotoluene	MSD	REC	69	%	46-124
OP22364-MSD	606-20-2	2,6-Dinitrotoluene	MSD	RPD	72 ^c	%	20
OP22364-MSD	91-94-1	3,3'-Dichlorobenzidine	MSD	REC	56	%	22-121
OP22364-MSD	91-94-1	3,3'-Dichlorobenzidine	MSD	RPD	52 ^c	%	20
OP22364-MSD	53-70-3	Dibenzo(a,h)anthracene	MSD	REC	63	%	45-134
OP22364-MSD	53-70-3	Dibenzo(a,h)anthracene	MSD	RPD	76 ^c	%	20
OP22364-MSD	132-64-9	Dibenzofuran	MSD	REC	66	%	44-120
OP22364-MSD	132-64-9	Dibenzofuran	MSD	RPD	8	%	20
OP22364-MSD	84-74-2	Di-n-butyl phthalate	MSD	REC	70	%	51-128
OP22364-MSD	84-74-2	Di-n-butyl phthalate	MSD	RPD	73 ^c	%	20

* Sample used for QC is not from job JC93827

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QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP22364-MSD	117-84-0	Di-n-octyl phthalate	MSD	REC	75	%	45-140
OP22364-MSD	117-84-0	Di-n-octyl phthalate	MSD	RPD	70 ^c	%	20
OP22364-MSD	84-66-2	Diethyl phthalate	MSD	REC	71	%	50-124
OP22364-MSD	84-66-2	Diethyl phthalate	MSD	RPD	68 ^c	%	20
OP22364-MSD	131-11-3	Dimethyl phthalate	MSD	REC	67	%	48-124
OP22364-MSD	131-11-3	Dimethyl phthalate	MSD	RPD	68 ^c	%	20
OP22364-MSD	117-81-7	bis(2-Ethylhexyl)phthalate	MSD	REC	71	%	51-133
OP22364-MSD	117-81-7	bis(2-Ethylhexyl)phthalate	MSD	RPD	62 ^c	%	20
OP22364-MSD	206-44-0	Fluoranthene	MSD	REC	68	%	50-127
OP22364-MSD	206-44-0	Fluoranthene	MSD	RPD	73 ^c	%	20
OP22364-MSD	86-73-7	Fluorene	MSD	REC	71	%	43-125
OP22364-MSD	86-73-7	Fluorene	MSD	RPD	80 ^c	%	20
OP22364-MSD	118-74-1	Hexachlorobenzene	MSD	REC	65	%	45-122
OP22364-MSD	118-74-1	Hexachlorobenzene	MSD	RPD	74 ^c	%	20
OP22364-MSD	87-68-3	Hexachlorobutadiene	MSD	REC	66	%	32-123
OP22364-MSD	87-68-3	Hexachlorobutadiene	MSD	RPD	82 ^c	%	20
OP22364-MSD	67-72-1	Hexachloroethane	MSD	REC	61	%	28-117
OP22364-MSD	67-72-1	Hexachloroethane	MSD	RPD	81 ^c	%	20
OP22364-MSD	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	REC	67	%	45-133
OP22364-MSD	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	RPD	77 ^c	%	20
OP22364-MSD	78-59-1	Isophorone	MSD	REC	68	%	30-122
OP22364-MSD	78-59-1	Isophorone	MSD	RPD	81 ^c	%	20
OP22364-MSD	91-57-6	2-Methylnaphthalene	MSD	REC	67	%	38-122
OP22364-MSD	91-57-6	2-Methylnaphthalene	MSD	RPD	12	%	20
OP22364-MSD	88-74-4	2-Nitroaniline	MSD	REC	53	%	44-127
OP22364-MSD	88-74-4	2-Nitroaniline	MSD	RPD	3	%	20
OP22364-MSD	99-09-2	3-Nitroaniline	MSD	REC	63	%	33-119
OP22364-MSD	99-09-2	3-Nitroaniline	MSD	RPD	3	%	20
OP22364-MSD	91-20-3	Naphthalene	MSD	REC	61	%	35-123
OP22364-MSD	91-20-3	Naphthalene	MSD	RPD	88 ^c	%	20
OP22364-MSD	98-95-3	Nitrobenzene	MSD	REC	64	%	34-122
OP22364-MSD	98-95-3	Nitrobenzene	MSD	RPD	80 ^c	%	20
OP22364-MSD	621-64-7	N-Nitroso-di-n-propylamine	MSD	REC	68	%	36-120
OP22364-MSD	621-64-7	N-Nitroso-di-n-propylamine	MSD	RPD	73 ^c	%	20
OP22364-MSD	86-30-6	N-Nitrosodiphenylamine	MSD	REC	69	%	38-127
OP22364-MSD	86-30-6	N-Nitrosodiphenylamine	MSD	RPD	74 ^c	%	20
OP22364-MSD	85-01-8	Phenanthrene	MSD	REC	67	%	50-121
OP22364-MSD	85-01-8	Phenanthrene	MSD	RPD	75 ^c	%	20
OP22364-MSD	129-00-0	Pyrene	MSD	REC	68	%	47-127
OP22364-MSD	129-00-0	Pyrene	MSD	RPD	67 ^c	%	20
OP22364-MSD	95-94-3	1,2,4,5-Tetrachlorobenzene	MSD	REC	68	%	37-119
OP22364-MSD	95-94-3	1,2,4,5-Tetrachlorobenzene	MSD	RPD	80 ^c	%	20
OP22364-MSD	367-12-4	2-Fluorophenol	MSD	SURR	4 ^b	%	35-115
OP22364-MSD	4165-62-2	Phenol-d5	MSD	SURR	34	%	33-122
OP22364-MSD	118-79-6	2,4,6-Tribromophenol	MSD	SURR	4 ^b	%	39-132

* Sample used for QC is not from job JC93827

QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP22364-MSD	4165-60-0	Nitrobenzene-d5	MSD	SURR	67	%	37-122
OP22364-MSD	321-60-8	2-Fluorobiphenyl	MSD	SURR	62	%	44-115
OP22364-MSD	1718-51-0	Terphenyl-d14	MSD	SURR	69	%	54-127
OP22364-MB1	367-12-4	2-Fluorophenol	MB	SURR	63	%	35-115
OP22364-MB1	4165-62-2	Phenol-d5	MB	SURR	61	%	33-122
OP22364-MB1	118-79-6	2,4,6-Tribromophenol	MB	SURR	60	%	39-132
OP22364-MB1	4165-60-0	Nitrobenzene-d5	MB	SURR	68	%	37-122
OP22364-MB1	321-60-8	2-Fluorobiphenyl	MB	SURR	60	%	44-115
OP22364-MB1	1718-51-0	Terphenyl-d14	MB	SURR	72	%	54-127
JC93827-1	367-12-4	2-Fluorophenol	SAMP	SURR	3 ^d	%	35-115
JC93827-1	4165-62-2	Phenol-d5	SAMP	SURR	31 ^d	%	33-122
JC93827-1	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	2 ^d	%	39-132
JC93827-1	4165-60-0	Nitrobenzene-d5	SAMP	SURR	67	%	37-122
JC93827-1	321-60-8	2-Fluorobiphenyl	SAMP	SURR	58	%	44-115
JC93827-1	1718-51-0	Terphenyl-d14	SAMP	SURR	71	%	54-127

OP22361 SW846 8081B

OP22361-BS1	309-00-2	Aldrin	BSP	REC	92	%	45-136
OP22361-BS1	319-84-6	alpha-BHC	BSP	REC	97	%	45-137
OP22361-BS1	319-85-7	beta-BHC	BSP	REC	85	%	50-136
OP22361-BS1	319-86-8	delta-BHC	BSP	REC	91	%	47-139
OP22361-BS1	58-89-9	gamma-BHC (Lindane)	BSP	REC	95	%	49-135
OP22361-BS1	5103-71-9	alpha-Chlordane	BSP	REC	94	%	54-133
OP22361-BS1	5103-74-2	gamma-Chlordane	BSP	REC	94	%	53-135
OP22361-BS1	60-57-1	Dieldrin	BSP	REC	95	%	56-136
OP22361-BS1	72-54-8	4,4'-DDD	BSP	REC	99	%	56-139
OP22361-BS1	72-55-9	4,4'-DDE	BSP	REC	90	%	56-134
OP22361-BS1	50-29-3	4,4'-DDT	BSP	REC	89	%	50-141
OP22361-BS1	72-20-8	Endrin	BSP	REC	91	%	57-140
OP22361-BS1	1031-07-8	Endosulfan sulfate	BSP	REC	95	%	55-136
OP22361-BS1	7421-93-4	Endrin aldehyde	BSP	REC	96	%	35-137
OP22361-BS1	959-98-8	Endosulfan-I	BSP	REC	93	%	53-132
OP22361-BS1	33213-65-9	Endosulfan-II	BSP	REC	98	%	53-134
OP22361-BS1	76-44-8	Heptachlor	BSP	REC	92	%	47-136
OP22361-BS1	1024-57-3	Heptachlor epoxide	BSP	REC	95	%	52-136
OP22361-BS1	72-43-5	Methoxychlor	BSP	REC	82	%	52-143
OP22361-BS1	53494-70-5	Endrin ketone	BSP	REC	101	%	55-136
OP22361-BS1	877-09-8	Tetrachloro-m-xylene (sig#1)	BSP	SURR	84	%	42-129
OP22361-BS1	877-09-8	Tetrachloro-m-xylene (sig#2)	BSP	SURR	75	%	42-129
OP22361-MS*	309-00-2	Aldrin	MS	REC	44	%	45-136
OP22361-MS*	319-84-6	alpha-BHC	MS	REC	176 ^b	%	45-137
OP22361-MS*	319-85-7	beta-BHC	MS	REC	64	%	50-136
OP22361-MS*	319-86-8	delta-BHC	MS	REC	469 ^b	%	47-139
OP22361-MS*	58-89-9	gamma-BHC (Lindane)	MS	REC	-86 ^b	%	49-135

* Sample used for QC is not from job JC93827

QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP22361-MS*	5103-71-9	alpha-Chlordane	MS	REC	124	%	54-133
OP22361-MS*	5103-74-2	gamma-Chlordane	MS	REC	141	%	53-135
OP22361-MS*	60-57-1	Dieldrin	MS	REC	893 ^b	%	56-136
OP22361-MS*	72-54-8	4,4'-DDD	MS	REC	963 ^b	%	56-139
OP22361-MS*	72-55-9	4,4'-DDE	MS	REC	3522 ^b	%	56-134
OP22361-MS*	50-29-3	4,4'-DDT	MS	REC	264 ^b	%	50-141
OP22361-MS*	72-20-8	Endrin	MS	REC	656 ^b	%	57-140
OP22361-MS*	1031-07-8	Endosulfan sulfate	MS	REC	455 ^b	%	55-136
OP22361-MS*	7421-93-4	Endrin aldehyde	MS	REC	905 ^b	%	35-137
OP22361-MS*	959-98-8	Endosulfan-I	MS	REC	115	%	53-132
OP22361-MS*	33213-65-9	Endosulfan-II	MS	REC	139 ^b	%	53-134
OP22361-MS*	76-44-8	Heptachlor	MS	REC	251 ^b	%	47-136
OP22361-MS*	1024-57-3	Heptachlor epoxide	MS	REC	3562 ^b	%	52-136
OP22361-MS*	72-43-5	Methoxychlor	MS	REC	847 ^b	%	52-143
OP22361-MS*	53494-70-5	Endrin ketone	MS	REC	124	%	55-136
OP22361-MS*	877-09-8	Tetrachloro-m-xylene (sig#1)	MS	SURR	493 ^b	%	42-129
OP22361-MS*	877-09-8	Tetrachloro-m-xylene (sig#2)	MS	SURR	4 ^b	%	42-129
OP22361-MSD*	309-00-2	Aldrin	MSD	REC	131	%	45-136
OP22361-MSD*	309-00-2	Aldrin	MSD	RPD	100 ^b	%	30
OP22361-MSD*	319-84-6	alpha-BHC	MSD	REC	158 ^b	%	45-137
OP22361-MSD*	319-84-6	alpha-BHC	MSD	RPD	10	%	30
OP22361-MSD*	319-85-7	beta-BHC	MSD	REC	244 ^b	%	50-136
OP22361-MSD*	319-85-7	beta-BHC	MSD	RPD	117 ^b	%	30
OP22361-MSD*	319-86-8	delta-BHC	MSD	REC	738 ^b	%	47-139
OP22361-MSD*	319-86-8	delta-BHC	MSD	RPD	45	%	30
OP22361-MSD*	58-89-9	gamma-BHC (Lindane)	MSD	REC	98	%	49-135
OP22361-MSD*	58-89-9	gamma-BHC (Lindane)	MSD	RPD	128 ^b	%	30
OP22361-MSD*	5103-71-9	alpha-Chlordane	MSD	REC	289 ^b	%	54-133
OP22361-MSD*	5103-71-9	alpha-Chlordane	MSD	RPD	80 ^b	%	30
OP22361-MSD*	5103-74-2	gamma-Chlordane	MSD	REC	2092 ^b	%	53-135
OP22361-MSD*	5103-74-2	gamma-Chlordane	MSD	RPD	175 ^b	%	30
OP22361-MSD*	60-57-1	Dieldrin	MSD	REC	1095 ^b	%	56-136
OP22361-MSD*	60-57-1	Dieldrin	MSD	RPD	21	%	30
OP22361-MSD*	72-54-8	4,4'-DDD	MSD	REC	1159 ^b	%	56-139
OP22361-MSD*	72-54-8	4,4'-DDD	MSD	RPD	19	%	30
OP22361-MSD*	72-55-9	4,4'-DDE	MSD	REC	4248 ^b	%	56-134
OP22361-MSD*	72-55-9	4,4'-DDE	MSD	RPD	19	%	30
OP22361-MSD*	50-29-3	4,4'-DDT	MSD	REC	206 ^b	%	50-141
OP22361-MSD*	50-29-3	4,4'-DDT	MSD	RPD	24	%	30
OP22361-MSD*	72-20-8	Endrin	MSD	REC	628 ^b	%	57-140
OP22361-MSD*	72-20-8	Endrin	MSD	RPD	4	%	30
OP22361-MSD*	1031-07-8	Endosulfan sulfate	MSD	REC	465 ^b	%	55-136
OP22361-MSD*	1031-07-8	Endosulfan sulfate	MSD	RPD	3	%	30
OP22361-MSD*	7421-93-4	Endrin aldehyde	MSD	REC	2277 ^b	%	35-137
OP22361-MSD*	7421-93-4	Endrin aldehyde	MSD	RPD	87 ^b	%	30

* Sample used for QC is not from job JC93827

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QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP22361-MSD*	959-98-8	Endosulfan-I	MSD	REC	102	%	53-132
OP22361-MSD*	959-98-8	Endosulfan-I	MSD	RPD	12	%	30
OP22361-MSD*	33213-65-9	Endosulfan-II	MSD	REC	201 ^b	%	53-134
OP22361-MSD*	33213-65-9	Endosulfan-II	MSD	RPD	37	%	30
OP22361-MSD*	76-44-8	Heptachlor	MSD	REC	267 ^b	%	47-136
OP22361-MSD*	76-44-8	Heptachlor	MSD	RPD	7	%	30
OP22361-MSD*	1024-57-3	Heptachlor epoxide	MSD	REC	4876 ^b	%	52-136
OP22361-MSD*	1024-57-3	Heptachlor epoxide	MSD	RPD	32	%	30
OP22361-MSD*	72-43-5	Methoxychlor	MSD	REC	1049 ^b	%	52-143
OP22361-MSD*	72-43-5	Methoxychlor	MSD	RPD	22	%	30
OP22361-MSD*	53494-70-5	Endrin ketone	MSD	REC	133	%	55-136
OP22361-MSD*	53494-70-5	Endrin ketone	MSD	RPD	7	%	30
OP22361-MSD*	8001-35-2	Toxaphene	MSD	RPD	0	%	30
OP22361-MSD*	877-09-8	Tetrachloro-m-xylene (sig#1)	MSD	SURR	188 ^b	%	42-129
OP22361-MSD*	877-09-8	Tetrachloro-m-xylene (sig#2)	MSD	SURR	3 ^b	%	42-129
OP22361-MB1	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	86	%	42-129
OP22361-MB1	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	78	%	42-129
OP22361-MB1	877-09-8	Tetrachloro-m-xylene (sig#2)	MB	SURR	82	%	42-129
OP22361-MB1	877-09-8	Tetrachloro-m-xylene (sig#2)	MB	SURR	80	%	42-129
JC93827-1	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	86	%	42-129
JC93827-1	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	85	%	42-129
JC93827-1	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	81	%	42-129
JC93827-1	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	85	%	42-129
OP22362 SW846 8082A							
OP22362-BS1	12674-11-2	Aroclor 1016	BSP	REC	71	%	47-134
OP22362-BS1	11096-82-5	Aroclor 1260	BSP	REC	71	%	53-140
OP22362-BS1	877-09-8	Tetrachloro-m-xylene (sig#1)	BSP	SURR	96	%	44-130
OP22362-BS1	877-09-8	Tetrachloro-m-xylene (sig#2)	BSP	SURR	105	%	44-130
OP22362-MS*	12674-11-2	Aroclor 1016	MS	REC	49	%	47-134
OP22362-MS*	11096-82-5	Aroclor 1260	MS	REC	82	%	53-140
OP22362-MS*	877-09-8	Tetrachloro-m-xylene (sig#1)	MS	SURR	68	%	44-130
OP22362-MS*	877-09-8	Tetrachloro-m-xylene (sig#2)	MS	SURR	77	%	44-130
OP22362-MSD*	12674-11-2	Aroclor 1016	MSD	REC	68	%	47-134
OP22362-MSD*	12674-11-2	Aroclor 1016	MSD	RPD	31	%	30
OP22362-MSD*	11097-69-1	Aroclor 1254	MSD	RPD	0	%	30
OP22362-MSD*	11096-82-5	Aroclor 1260	MSD	REC	144	%	53-140
OP22362-MSD*	11096-82-5	Aroclor 1260	MSD	RPD	45	%	30
OP22362-MSD*	877-09-8	Tetrachloro-m-xylene (sig#1)	MSD	SURR	71	%	44-130
OP22362-MSD*	877-09-8	Tetrachloro-m-xylene (sig#2)	MSD	SURR	82	%	44-130
OP22362-MB1	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	91	%	44-130
OP22362-MB1	877-09-8	Tetrachloro-m-xylene (sig#2)	MB	SURR	100	%	44-130
JC93827-1	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	92	%	44-130
JC93827-1	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	105	%	44-130

* Sample used for QC is not from job JC93827

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QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP22369	SW846 8151A						
OP22369-BS1	94-75-7	2,4-D	BSP	REC	54	%	28-144
OP22369-BS1	93-72-1	2,4,5-TP (Silvex)	BSP	REC	67	%	43-129
OP22369-BS1	93-76-5	2,4,5-T	BSP	REC	62	%	31-138
OP22369-BS1	1918-00-9	Dicamba	BSP	REC	66	%	38-132
OP22369-BS1	120-36-5	Dichloroprop	BSP	REC	64	%	28-155
OP22369-BS1	94-74-6	MCPA	BSP	REC	63	%	28-135
OP22369-BS1	93-65-2	MCPPP	BSP	REC	72	%	35-143
OP22369-BS1	94-82-6	2,4-DB	BSP	REC	50	%	34-142
OP22369-BS1	19719-28-9	2,4-DCAA (sig#1)	BSP	SURR	61	%	27-122
OP22369-BS1	19719-28-9	2,4-DCAA (sig#2)	BSP	SURR	63	%	27-122
OP22369-MS	94-75-7	2,4-D	MS	REC	59	%	28-144
OP22369-MS	93-72-1	2,4,5-TP (Silvex)	MS	REC	79	%	43-129
OP22369-MS	93-76-5	2,4,5-T	MS	REC	70	%	31-138
OP22369-MS	1918-00-9	Dicamba	MS	REC	80	%	38-132
OP22369-MS	120-36-5	Dichloroprop	MS	REC	73	%	28-155
OP22369-MS	94-74-6	MCPA	MS	REC	73	%	28-135
OP22369-MS	93-65-2	MCPPP	MS	REC	98	%	35-143
OP22369-MS	94-82-6	2,4-DB	MS	REC	52	%	34-142
OP22369-MS	19719-28-9	2,4-DCAA (sig#1)	MS	SURR	63	%	27-122
OP22369-MS	19719-28-9	2,4-DCAA (sig#2)	MS	SURR	64	%	27-122
OP22369-MSD	94-75-7	2,4-D	MSD	REC	62	%	28-144
OP22369-MSD	94-75-7	2,4-D	MSD	RPD	9	%	30
OP22369-MSD	93-72-1	2,4,5-TP (Silvex)	MSD	REC	83	%	43-129
OP22369-MSD	93-72-1	2,4,5-TP (Silvex)	MSD	RPD	9	%	30
OP22369-MSD	93-76-5	2,4,5-T	MSD	REC	75	%	31-138
OP22369-MSD	93-76-5	2,4,5-T	MSD	RPD	11	%	30
OP22369-MSD	1918-00-9	Dicamba	MSD	REC	84	%	38-132
OP22369-MSD	1918-00-9	Dicamba	MSD	RPD	9	%	30
OP22369-MSD	120-36-5	Dichloroprop	MSD	REC	77	%	28-155
OP22369-MSD	120-36-5	Dichloroprop	MSD	RPD	8	%	30
OP22369-MSD	94-74-6	MCPA	MSD	REC	80	%	28-135
OP22369-MSD	94-74-6	MCPA	MSD	RPD	14	%	30
OP22369-MSD	93-65-2	MCPPP	MSD	REC	103	%	35-143
OP22369-MSD	93-65-2	MCPPP	MSD	RPD	9	%	30
OP22369-MSD	94-82-6	2,4-DB	MSD	REC	49	%	34-142
OP22369-MSD	94-82-6	2,4-DB	MSD	RPD	1	%	30
OP22369-MSD	19719-28-9	2,4-DCAA (sig#1)	MSD	SURR	63	%	27-122
OP22369-MSD	19719-28-9	2,4-DCAA (sig#2)	MSD	SURR	63	%	27-122
OP22369-MB1	19719-28-9	2,4-DCAA (sig#1)	MB	SURR	94	%	27-122
OP22369-MB1	19719-28-9	2,4-DCAA (sig#2)	MB	SURR	95	%	27-122
JC93827-1	19719-28-9	2,4-DCAA (sig#1)	SAMP	SURR	67	%	27-122
JC93827-1	19719-28-9	2,4-DCAA (sig#2)	SAMP	SURR	68	%	27-122

* Sample used for QC is not from job JC93827

QC Evaluation: DOD QSM5.x Limits

Job Number: JC93827
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 08/23/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
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QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP17060	SW846 6010D						
MP17060-B1	7440-38-2	Arsenic	BSP	REC	105	%	87-113
MP17060-B1	7440-39-3	Barium	BSP	REC	100	%	88-113
MP17060-B1	7440-43-9	Cadmium	BSP	REC	100	%	88-113
MP17060-B1	7440-47-3	Chromium	BSP	REC	100	%	90-113
MP17060-B1	7439-92-1	Lead	BSP	REC	105	%	86-113
MP17060-B1	7782-49-2	Selenium	BSP	REC	105	%	83-114
MP17060-B1	7440-22-4	Silver	BSP	REC	100	%	84-115
MP17060-S1	7440-38-2	Arsenic	MS	REC	105	%	87-113
MP17060-S1	7440-39-3	Barium	MS	REC	97.3	%	88-113
MP17060-S1	7440-43-9	Cadmium	MS	REC	100	%	88-113
MP17060-S1	7440-47-3	Chromium	MS	REC	99	%	90-113
MP17060-S1	7439-92-1	Lead	MS	REC	100	%	86-113
MP17060-S1	7782-49-2	Selenium	MS	REC	105	%	83-114
MP17060-S1	7440-22-4	Silver	MS	REC	100	%	84-115
MP17060-S2	7440-38-2	Arsenic	MSD	REC	105	%	87-113
MP17060-S2	7440-38-2	Arsenic	MSD	RPD	0	%	20
MP17060-S2	7440-39-3	Barium	MSD	REC	97.3	%	88-113
MP17060-S2	7440-39-3	Barium	MSD	RPD	0	%	20
MP17060-S2	7440-43-9	Cadmium	MSD	REC	100	%	88-113
MP17060-S2	7440-43-9	Cadmium	MSD	RPD	0	%	20
MP17060-S2	7440-47-3	Chromium	MSD	REC	99	%	90-113
MP17060-S2	7440-47-3	Chromium	MSD	RPD	0	%	20
MP17060-S2	7439-92-1	Lead	MSD	REC	100	%	86-113
MP17060-S2	7439-92-1	Lead	MSD	RPD	0	%	20
MP17060-S2	7782-49-2	Selenium	MSD	REC	105	%	83-114
MP17060-S2	7782-49-2	Selenium	MSD	RPD	0	%	20
MP17060-S2	7440-22-4	Silver	MSD	REC	100	%	84-115
MP17060-S2	7440-22-4	Silver	MSD	RPD	0	%	20

- (a) Outside control limits due to sample non-homogeneity.
- (b) Outside control limits due to matrix interference.
- (c) Outside of control limits.
- (d) Outside control limits due to matrix interference, confirmed by MS/MSD.

* Sample used for QC is not from job JC93827

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MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9197-MB	I228140.D	1	08/30/19	TDN	n/a	n/a	VI9197

The QC reported here applies to the following samples:

Method: SW846 8260C

JC93827-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	4.0	ug/kg	
71-43-2	Benzene	ND	0.50	0.46	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.56	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.44	ug/kg	
75-25-2	Bromoform	ND	5.0	0.58	ug/kg	
74-83-9	Bromomethane	ND	5.0	1.0	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	3.7	ug/kg	
75-15-0	Carbon disulfide	ND	2.0	0.93	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.62	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.46	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.59	ug/kg	
67-66-3	Chloroform	ND	2.0	0.49	ug/kg	
74-87-3	Chloromethane	ND	5.0	2.0	ug/kg	
110-82-7	Cyclohexane	ND	2.0	0.66	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.84	ug/kg	
124-48-1	Dibromochloromethane	ND	2.0	0.56	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.0	0.42	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.55	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.49	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.73	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.47	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.0	0.66	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.61	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.47	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.48	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.46	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.55	ug/kg	
76-13-1	Freon 113	ND	5.0	1.0	ug/kg	
591-78-6	2-Hexanone	ND	5.0	2.1	ug/kg	
98-82-8	Isopropylbenzene	ND	2.0	0.70	ug/kg	
79-20-9	Methyl Acetate	ND	5.0	1.4	ug/kg	
108-87-2	Methylcyclohexane	ND	2.0	0.88	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.47	ug/kg	

Method Blank Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V19197-MB	I228140.D	1	08/30/19	TDN	n/a	n/a	VI9197

The QC reported here applies to the following samples:

Method: SW846 8260C

JC93827-1

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	2.3	ug/kg	
75-09-2	Methylene chloride	ND	5.0	0.99	ug/kg	
100-42-5	Styrene	ND	2.0	0.58	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.60	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.58	ug/kg	
108-88-3	Toluene	ND	1.0	0.53	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.9	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.48	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.55	ug/kg	
79-01-6	Trichloroethene	ND	1.0	0.76	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.68	ug/kg	
75-01-4	Vinyl chloride	ND	2.0	0.48	ug/kg	
	m,p-Xylene	ND	1.0	0.90	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.58	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.58	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	103% 75-127%
17060-07-0	1,2-Dichloroethane-D4	117% 75-130%
2037-26-5	Toluene-D8	99% 80-120%
460-00-4	4-Bromofluorobenzene	102% 79-127%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Blank Spike Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9197-BS	I228138.D	1	08/30/19	TDN	n/a	n/a	VI9197

The QC reported here applies to the following samples:

Method: SW846 8260C

JC93827-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	200	224	112	48-149
71-43-2	Benzene	50	49.8	100	74-117
74-97-5	Bromochloromethane	50	48.6	97	82-121
75-27-4	Bromodichloromethane	50	53.5	107	78-119
75-25-2	Bromoform	50	49.8	100	76-130
74-83-9	Bromomethane	50	51.4	103	58-137
78-93-3	2-Butanone (MEK)	200	201	101	65-143
75-15-0	Carbon disulfide	50	46.1	92	66-140
56-23-5	Carbon tetrachloride	50	55.0	110	69-136
108-90-7	Chlorobenzene	50	46.0	92	79-117
75-00-3	Chloroethane	50	53.1	106	62-139
67-66-3	Chloroform	50	51.4	103	76-119
74-87-3	Chloromethane	50	47.6	95	52-144
110-82-7	Cyclohexane	50	43.6	87	64-136
96-12-8	1,2-Dibromo-3-chloropropane	50	45.9	92	72-124
124-48-1	Dibromochloromethane	50	51.9	104	78-122
106-93-4	1,2-Dibromoethane	50	47.8	96	80-116
95-50-1	1,2-Dichlorobenzene	50	48.8	98	77-117
541-73-1	1,3-Dichlorobenzene	50	47.5	95	75-117
106-46-7	1,4-Dichlorobenzene	50	47.0	94	76-115
75-71-8	Dichlorodifluoromethane	50	51.1	102	43-156
75-34-3	1,1-Dichloroethane	50	53.3	107	75-124
107-06-2	1,2-Dichloroethane	50	53.5	107	74-124
75-35-4	1,1-Dichloroethene	50	54.1	108	64-129
156-59-2	cis-1,2-Dichloroethene	50	49.5	99	74-118
156-60-5	trans-1,2-Dichloroethene	50	54.2	108	71-125
78-87-5	1,2-Dichloropropane	50	50.9	102	80-119
10061-01-5	cis-1,3-Dichloropropene	50	50.9	102	80-119
10061-02-6	trans-1,3-Dichloropropene	50	51.6	103	78-119
100-41-4	Ethylbenzene	50	46.4	93	75-118
76-13-1	Freon 113	50	46.7	93	60-181
591-78-6	2-Hexanone	200	193	97	63-138
98-82-8	Isopropylbenzene	50	46.7	93	74-122
79-20-9	Methyl Acetate	50	47.9	96	61-140
108-87-2	Methylcyclohexane	50	44.9	90	67-136
1634-04-4	Methyl Tert Butyl Ether	50	52.1	104	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V19197-BS	I228138.D	1	08/30/19	TDN	n/a	n/a	VI9197

The QC reported here applies to the following samples:

Method: SW846 8260C

JC93827-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	194	97	73-136
75-09-2	Methylene chloride	50	45.2	90	73-120
100-42-5	Styrene	50	46.9	94	78-120
79-34-5	1,1,2,2-Tetrachloroethane	50	48.4	97	72-120
127-18-4	Tetrachloroethene	50	45.0	90	69-128
108-88-3	Toluene	50	46.0	92	74-117
87-61-6	1,2,3-Trichlorobenzene	50	51.3	103	72-133
120-82-1	1,2,4-Trichlorobenzene	50	51.5	103	73-132
71-55-6	1,1,1-Trichloroethane	50	54.4	109	73-131
79-00-5	1,1,2-Trichloroethane	50	51.5	103	79-117
79-01-6	Trichloroethene	50	50.2	100	80-120
75-69-4	Trichlorofluoromethane	50	51.3	103	63-141
75-01-4	Vinyl chloride	50	51.0	102	55-145
	m,p-Xylene	100	90.3	90	75-120
95-47-6	o-Xylene	50	46.0	92	75-119
1330-20-7	Xylene (total)	150	136	91	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	75-127%
17060-07-0	1,2-Dichloroethane-D4	114%	75-130%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	102%	79-127%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC93502-2MS	I228145.D	1	08/30/19	TDN	n/a	n/a	VI9197
JC93502-2	I228142.D	1	08/30/19	TDN	n/a	n/a	VI9197

The QC reported here applies to the following samples:

Method: SW846 8260C

JC93827-1

CAS No.	Compound	JC93502-2 ug/kg	Spike Q	MS ug/kg	MS %	Limits	
67-64-1	Acetone	10.1	J	248	219	84	10-157
71-43-2	Benzene	ND		62	60.9	98	58-125
74-97-5	Bromochloromethane	ND		62	60.0	97	60-127
75-27-4	Bromodichloromethane	ND		62	65.2	105	57-128
75-25-2	Bromoform	ND		62	57.2	92	48-133
74-83-9	Bromomethane	ND		62	66.7	108	31-141
78-93-3	2-Butanone (MEK)	ND		248	212	86	29-146
75-15-0	Carbon disulfide	ND		62	57.5	93	47-145
56-23-5	Carbon tetrachloride	ND		62	72.6	117	51-143
108-90-7	Chlorobenzene	ND		62	57.4	93	54-130
75-00-3	Chloroethane	ND		62	65.8	106	22-153
67-66-3	Chloroform	ND		62	65.3	105	61-125
74-87-3	Chloromethane	ND		62	55.9	90	43-142
110-82-7	Cyclohexane	ND		62	54.8	88	37-148
96-12-8	1,2-Dibromo-3-chloropropane	ND		62	49.3	80	41-127
124-48-1	Dibromochloromethane	ND		62	63.3	102	56-127
106-93-4	1,2-Dibromoethane	ND		62	55.3	89	54-121
95-50-1	1,2-Dichlorobenzene	ND		62	59.1	95	41-134
541-73-1	1,3-Dichlorobenzene	ND		62	59.1	95	41-135
106-46-7	1,4-Dichlorobenzene	ND		62	57.4	93	41-133
75-71-8	Dichlorodifluoromethane	ND		62	62.4	101	30-153
75-34-3	1,1-Dichloroethane	ND		62	65.5	106	61-131
107-06-2	1,2-Dichloroethane	ND		62	65.3	105	56-126
75-35-4	1,1-Dichloroethene	ND		62	69.9	113	53-132
156-59-2	cis-1,2-Dichloroethene	ND		62	60.7	98	57-125
156-60-5	trans-1,2-Dichloroethene	ND		62	68.6	111	56-130
78-87-5	1,2-Dichloropropane	ND		62	62.3	101	63-126
10061-01-5	cis-1,3-Dichloropropene	ND		62	60.3	97	55-126
10061-02-6	trans-1,3-Dichloropropene	ND		62	60.9	98	51-126
100-41-4	Ethylbenzene	ND		62	58.1	94	49-132
76-13-1	Freon 113	ND		62	59.1	95	42-179
591-78-6	2-Hexanone	ND		248	201	81	25-150
98-82-8	Isopropylbenzene	ND		62	58.7	95	43-141
79-20-9	Methyl Acetate	ND		62	50.6	82	32-158
108-87-2	Methylcyclohexane	ND		62	55.4	89	22-158
1634-04-4	Methyl Tert Butyl Ether	ND		62	60.6	98	58-123

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC93502-2MS	I228145.D	1	08/30/19	TDN	n/a	n/a	VI9197
JC93502-2	I228142.D	1	08/30/19	TDN	n/a	n/a	VI9197

The QC reported here applies to the following samples:

Method: SW846 8260C

JC93827-1

CAS No.	Compound	JC93502-2 ug/kg	Spike Q	MS ug/kg	MS %	Limits	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		248	205	83	40-140
75-09-2	Methylene chloride	1.7	J	62	56.9	89	57-123
100-42-5	Styrene	ND		62	57.0	92	46-139
79-34-5	1,1,2,2-Tetrachloroethane	ND		62	53.0	86	44-127
127-18-4	Tetrachloroethene	ND		62	58.9	95	39-154
108-88-3	Toluene	ND		62	58.0	94	54-127
87-61-6	1,2,3-Trichlorobenzene	ND		62	58.4	94	17-151
120-82-1	1,2,4-Trichlorobenzene	ND		62	60.2	97	19-153
71-55-6	1,1,1-Trichloroethane	ND		62	70.8	114	57-138
79-00-5	1,1,2-Trichloroethane	ND		62	59.5	96	53-127
79-01-6	Trichloroethene	ND		62	64.9	105	52-140
75-69-4	Trichlorofluoromethane	ND		62	68.4	110	46-142
75-01-4	Vinyl chloride	ND		62	63.9	103	43-146
	m,p-Xylene	ND		124	114	92	45-137
95-47-6	o-Xylene	ND		62	56.9	92	48-135
1330-20-7	Xylene (total)	ND		186	171	92	46-137

CAS No.	Surrogate Recoveries	MS	JC93502-2	Limits
1868-53-7	Dibromofluoromethane	104%	105%	75-127%
17060-07-0	1,2-Dichloroethane-D4	116%	123%	75-130%
2037-26-5	Toluene-D8	98%	97%	80-120%
460-00-4	4-Bromofluorobenzene	102%	103%	79-127%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC93502-3DUP	I228147.D	1	08/30/19	TDN	n/a	n/a	VI9197
JC93502-3	I228143.D	1	08/30/19	TDN	n/a	n/a	VI9197

The QC reported here applies to the following samples:

Method: SW846 8260C

JC93827-1

CAS No.	Compound	JC93502-3 ug/kg	DUP Q	ug/kg	Q	RPD	Limits
67-64-1	Acetone	47.9		24.8		64* a	40
71-43-2	Benzene	ND		ND		nc	30
74-97-5	Bromochloromethane	ND		ND		nc	30
75-27-4	Bromodichloromethane	ND		ND		nc	30
75-25-2	Bromoform	ND		ND		nc	30
74-83-9	Bromomethane	ND		ND		nc	30
78-93-3	2-Butanone (MEK)	ND		ND		nc	30
75-15-0	Carbon disulfide	ND		ND		nc	30
56-23-5	Carbon tetrachloride	ND		ND		nc	30
108-90-7	Chlorobenzene	ND		ND		nc	30
75-00-3	Chloroethane	ND		ND		nc	30
67-66-3	Chloroform	ND		ND		nc	30
74-87-3	Chloromethane	ND		ND		nc	30
110-82-7	Cyclohexane	ND		ND		nc	30
96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		nc	30
124-48-1	Dibromochloromethane	ND		ND		nc	30
106-93-4	1,2-Dibromoethane	ND		ND		nc	30
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	30
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	30
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	30
75-71-8	Dichlorodifluoromethane	ND		ND		nc	30
75-34-3	1,1-Dichloroethane	ND		ND		nc	30
107-06-2	1,2-Dichloroethane	ND		ND		nc	30
75-35-4	1,1-Dichloroethene	ND		ND		nc	30
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	30
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	30
78-87-5	1,2-Dichloropropane	ND		ND		nc	30
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	30
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	30
100-41-4	Ethylbenzene	ND		ND		nc	30
76-13-1	Freon 113	ND		ND		nc	30
591-78-6	2-Hexanone	ND		ND		nc	30
98-82-8	Isopropylbenzene	ND		ND		nc	30
79-20-9	Methyl Acetate	ND		ND		nc	30
108-87-2	Methylcyclohexane	ND		ND		nc	30
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC93502-3DUP	I228147.D	1	08/30/19	TDN	n/a	n/a	VI9197
JC93502-3	I228143.D	1	08/30/19	TDN	n/a	n/a	VI9197

The QC reported here applies to the following samples:

Method: SW846 8260C

JC93827-1

CAS No.	Compound	JC93502-3 ug/kg	DUP Q	ug/kg	Q	RPD	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	30
75-09-2	Methylene chloride	4.8	J	6.5	J	30	36
100-42-5	Styrene	ND		ND		nc	30
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	30
127-18-4	Tetrachloroethene	ND		ND		nc	30
108-88-3	Toluene	ND		ND		nc	24
87-61-6	1,2,3-Trichlorobenzene	ND		ND		nc	30
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	30
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	30
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	30
79-01-6	Trichloroethene	ND		ND		nc	30
75-69-4	Trichlorofluoromethane	ND		ND		nc	30
75-01-4	Vinyl chloride	ND		ND		nc	30
	m,p-Xylene	ND		ND		nc	32
95-47-6	o-Xylene	ND		ND		nc	30
1330-20-7	Xylene (total)	ND		ND		nc	33

CAS No.	Surrogate Recoveries	DUP	JC93502-3	Limits
1868-53-7	Dibromofluoromethane	108%	107%	75-127%
17060-07-0	1,2-Dichloroethane-D4	124%	125%	75-130%
2037-26-5	Toluene-D8	96%	97%	80-120%
460-00-4	4-Bromofluorobenzene	103%	100%	79-127%

(a) Outside control limits due to sample non-homogeneity.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: VI9163-BFB

Injection Date: 07/23/19

Lab File ID: I227377.D

Injection Time: 16:19

Instrument ID: GCMSI

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	12918	18.2	Pass
75	30.0 - 60.0% of mass 95	34154	48.1	Pass
95	Base peak, 100% relative abundance	70946	100.0	Pass
96	5.0 - 9.0% of mass 95	4748	6.69	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	76461	107.8	Pass
175	5.0 - 9.0% of mass 174	5672	7.99 (7.42) ^a	Pass
176	95.0 - 101.0% of mass 174	74082	104.4 (96.9) ^a	Pass
177	5.0 - 9.0% of mass 176	4881	6.88 (6.59) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI9163-IC9163	I227378.D	07/23/19	17:08	00:49	Initial cal 0.5
VI9163-IC9163	I227379.D	07/23/19	17:39	01:20	Initial cal 1
VI9163-IC9163	I227380.D	07/23/19	18:10	01:51	Initial cal 2
VI9163-IC9163	I227381.D	07/23/19	18:40	02:21	Initial cal 4
VI9163-IC9163	I227382.D	07/23/19	19:11	02:52	Initial cal 8
VI9163-IC9163	I227383.D	07/23/19	19:42	03:23	Initial cal 20
VI9163-ICC9163	I227384.D	07/23/19	20:13	03:54	Initial cal 50
VI9163-IC9163	I227385.D	07/23/19	20:44	04:25	Initial cal 100
VI9163-IC9163	I227386.D	07/23/19	21:15	04:56	Initial cal 200
VI9163-ICV9163	I227389.D	07/23/19	22:47	06:28	Initial cal verification 50
VI9163-ICV9163	I227390.D	07/23/19	23:18	06:59	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: VI9196-BFB

Injection Date: 08/29/19

Lab File ID: I228121.D

Injection Time: 07:59

Instrument ID: GCMSI

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	11025	19.8	Pass
75	30.0 - 60.0% of mass 95	28837	51.7	Pass
95	Base peak, 100% relative abundance	55773	100.0	Pass
96	5.0 - 9.0% of mass 95	3673	6.59	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	59171	106.1	Pass
175	5.0 - 9.0% of mass 174	4520	8.10 (7.64) ^a	Pass
176	95.0 - 101.0% of mass 174	57392	102.9 (97.0) ^a	Pass
177	5.0 - 9.0% of mass 176	3961	7.10 (6.90) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI9196-CC9163	I228121.D	08/29/19	07:59	00:00	Continuing cal 50
VI9196-BS	I228122.D	08/29/19	08:36	00:37	Blank Spike
VI9196-MB	I228124.D	08/29/19	09:34	01:35	Method Blank
JC93733-5	I228125.D	08/29/19	10:13	02:14	(used for QC only; not part of job JC93827)
JC93733-6	I228126.D	08/29/19	10:42	02:43	(used for QC only; not part of job JC93827)
ZZZZZZ	I228128.D	08/29/19	12:39	04:40	(unrelated sample)
JC93733-5MS	I228129.D	08/29/19	13:15	05:16	Matrix Spike
JC93733-6DUP	I228131.D	08/29/19	14:14	06:15	Duplicate
ZZZZZZ	I228132.D	08/29/19	14:43	06:44	(unrelated sample)
JC93827-1	I228133.D	08/29/19	15:12	07:13	NWIRP-S1-WC-C-001
VI9196-ECC9163	I228134.D	08/29/19	15:41	07:42	Ending cal 50

6.5.2
6

Instrument Performance Check (BFB)

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: VI9197-BFB	Injection Date: 08/30/19
Lab File ID: I228137.D	Injection Time: 07:23
Instrument ID: GCMSI	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	11173	19.2	Pass
75	30.0 - 60.0% of mass 95	30592	52.5	Pass
95	Base peak, 100% relative abundance	58267	100.0	Pass
96	5.0 - 9.0% of mass 95	3942	6.77	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	60717	104.2	Pass
175	5.0 - 9.0% of mass 174	4710	8.08 (7.76) ^a	Pass
176	95.0 - 101.0% of mass 174	59048	101.3 (97.3) ^a	Pass
177	5.0 - 9.0% of mass 176	4284	7.35 (7.26) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI9197-CC9163	I228137.D	08/30/19	07:23	00:00	Continuing cal 50
VI9197-BS	I228138.D	08/30/19	07:58	00:35	Blank Spike
VI9197-MB	I228140.D	08/30/19	08:56	01:33	Method Blank
JC93827-1	I228141.D	08/30/19	09:25	02:02	NWIRP-S1-WC-C-001
JC93502-2	I228142.D	08/30/19	09:54	02:31	(used for QC only; not part of job JC93827)
JC93502-3	I228143.D	08/30/19	10:24	03:01	(used for QC only; not part of job JC93827)
ZZZZZZ	I228144.D	08/30/19	10:53	03:30	(unrelated sample)
JC93502-2MS	I228145.D	08/30/19	11:24	04:01	Matrix Spike
JC93502-3DUP	I228147.D	08/30/19	12:22	04:59	Duplicate
ZZZZZZ	I228148.D	08/30/19	12:52	05:29	(unrelated sample)
VI9197-ECC9163	I228149.D	08/30/19	13:21	05:58	Ending cal 50

Internal Standard Area Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: VI9196-CC9163	Injection Date: 08/29/19
Lab File ID: I228121.D	Injection Time: 07:59
Instrument ID: GCMSI	Method: SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	63147	7.33	155032	9.68	220263	10.61	182067	13.74	108506	16.09
Upper Limit ^a	126294	7.83	310064	10.18	440526	11.11	364134	14.24	217012	16.59
Lower Limit ^b	31574	6.83	77516	9.18	110132	10.11	91034	13.24	54253	15.59

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VI9196-BS	70712	7.33	159067	9.68	228352	10.61	184794	13.74	110268	16.09
VI9196-MB	59082	7.33	165050	9.68	231288	10.61	191230	13.74	111652	16.09
JC93733-5	58352	7.33	141360	9.68	204481	10.61	165124	13.74	92966	16.09
JC93733-6	57919	7.33	136207	9.68	193238	10.61	159633	13.74	93815	16.09
ZZZZZZ	55952	7.33	145677	9.68	201001	10.61	171681	13.74	102519	16.09
JC93733-5MS	47481	7.33	144624	9.68	206101	10.61	170686	13.74	100809	16.09
JC93733-6DUP	63329	7.33	135378	9.68	191123	10.61	158405	13.74	93545	16.09
ZZZZZZ	55688	7.33	132738	9.68	187406	10.61	152434	13.74	84765	16.09
JC93827-1 ^c	59242	7.33	136139	9.67	192872	10.61	162105	13.74	96312	16.09
VI9196-ECC9163	60999	7.33	142864	9.67	204966	10.61	165599	13.74	100677	16.09

- IS 1** = Tert Butyl Alcohol-D9
- IS 2** = Pentafluorobenzene
- IS 3** = 1,4-Difluorobenzene
- IS 4** = Chlorobenzene-D5
- IS 5** = 1,4-Dichlorobenzene-d4

- (a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
- (c) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory. Confirmation run for surrogate recoveries.

Internal Standard Area Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	VI9197-CC9163	Injection Date:	08/30/19
Lab File ID:	I228137.D	Injection Time:	07:23
Instrument ID:	GCMSI	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	62715	7.33	159930	9.68	234379	10.61	189832	13.74	115793	16.09
Upper Limit ^a	125430	7.83	319860	10.18	468758	11.11	379664	14.24	231586	16.59
Lower Limit ^b	31358	6.83	79965	9.18	117190	10.11	94916	13.24	57897	15.59

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VI9197-BS	68369	7.33	165576	9.68	240593	10.61	196920	13.74	117748	16.09
VI9197-MB	62570	7.33	164944	9.68	236369	10.61	194161	13.74	114255	16.09
JC93827-1 ^c	68765	7.33	150974	9.68	217365	10.61	183090	13.74	106820	16.09
JC93502-2	62789	7.33	148899	9.67	216059	10.61	179827	13.74	104786	16.09
JC93502-3	65729	7.33	146652	9.67	210321	10.61	177309	13.74	105688	16.09
ZZZZZZ	58131	7.33	126842	9.68	184913	10.61	155974	13.74	91399	16.09
JC93502-2MS	53555	7.33	149009	9.68	217565	10.61	179321	13.74	107444	16.09
JC93502-3DUP	62216	7.33	146193	9.68	213545	10.61	177024	13.74	103558	16.09
ZZZZZZ	59364	7.33	140858	9.68	199380	10.61	169245	13.74	99273	16.09
VI9197-ECC9163	65183	7.34	153600	9.68	223872	10.61	183612	13.74	110449	16.09

- IS 1 = Tert Butyl Alcohol-D9
- IS 2 = Pentafluorobenzene
- IS 3 = 1,4-Difluorobenzene
- IS 4 = Chlorobenzene-D5
- IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
 (c) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

6.6.2
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Surrogate Recovery Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Method: SW846 8260C	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC93827-1	I228133.D	48* a	125	96	102
JC93827-1	I228141.D	52* a	125	96	102
JC93502-2MS	I228145.D	104	116	98	102
JC93502-3DUP	I228147.D	108	124	96	103
VI9197-BS	I228138.D	101	114	97	102
VI9197-MB	I228140.D	103	117	99	102

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	75-127%
S2 = 1,2-Dichloroethane-D4	75-130%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	79-127%

(a) Outside control limits due to matrix interference.

Initial Calibration Summary

Job Number: JC93827 **Sample:** VI9163-ICC9163
Account: NOREASCA NOREAS, Inc. **Lab FileID:** I227384.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report GCMSI

Method : C:\MSDCHEM\1\METHODS\MI9163.M (RTE Integrator)
 Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
 Last Update : Fri Jul 26 07:46:37 2019
 Response via : Initial Calibration

Calibration Files

0.5 =I227378.D 1 =I227379.D 2 =I227380.D 8 =I227382.D
 4 =I227381.D 20 =I227383.D 50 =I227384.D 100 =I227385.D
 200 =I227386.D = = = =

Compound	0.5	1	2	8	4	20	50	100	200	Avg	%RSD
1) I tert butyl alcohol-d9 -----ISTD-----											
2) ethanol										0.000	-1.00
3) tertiary butyl alcohol											
	0.953	1.073	1.044	1.064	1.054	1.079	1.080			1.050	4.24
4) 1,4-dioxane											
			0.110	0.101	0.109	0.106	0.108	0.102		0.106	3.37
5) I pentafluorobenzene -----ISTD-----											
6) dichlorodifluoromethane											
	0.602	0.632	0.628	0.613	0.596	0.557	0.609	0.596		0.604	3.84
7) chlorodifluoromethane											
	0.483	0.540	0.543	0.530	0.501	0.461	0.457	0.488	0.488	0.499	6.48
8) chloromethane											
			0.574	0.558	0.480	0.464	0.519	0.542		0.523	8.33
9) vinyl chloride											
	0.336	0.399	0.435	0.458	0.446	0.407	0.395	0.444	0.449	0.419	9.24
10) 1,3-butadiene											
	0.222	0.248	0.258	0.273	0.252	0.254	0.243	0.260	0.268	0.253	5.90
11) bromomethane											
			0.233	0.247	0.225	0.226	0.263	0.260		0.242	7.04
12) chloroethane											
	0.234	0.195	0.243	0.214	0.225	0.209	0.233	0.228		0.223	7.07
13) vinyl bromide											
	0.350	0.366	0.424	0.388	0.373	0.358	0.392	0.390		0.380	6.13
14) trichlorofluoromethane											
	0.586	0.588	0.627	0.618	0.653	0.599	0.663	0.657		0.624	5.00
15) ethyl ether											
	0.126	0.147	0.155	0.150	0.154	0.165	0.162			0.151	8.51
16) 2-chloropropane											
			0.124	0.128	0.121	0.115	0.115	0.109		0.119	6.10
17) acrolein											
			0.039		0.048	0.055	0.056	0.057		0.051	14.96
18) freon 113											
	0.280	0.291	0.264	0.281	0.263	0.284	0.280			0.278	3.75
19) 1,1-dichloroethene											
	0.473	0.498	0.498	0.479	0.499	0.468	0.511	0.506		0.491	3.27
20) acetone											
	0.188	0.151	0.144	0.138	0.114	0.116	0.106			0.137	20.80
	----- Linear regression ----- Coefficient = 0.9959										
	Response Ratio = 0.01595 + 0.10937 *A										
21) iodomethane											
	0.254	0.297	0.268	0.302	0.326	0.355	0.335			0.305	11.85

Initial Calibration Summary

Job Number: JC93827 **Sample:** VI9163-ICC9163
Account: NOREASCA NOREAS, Inc. **Lab FileID:** I227384.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

22)	carbon disulfide	1.120	1.034	1.000	0.920	0.872	0.941	0.947	0.976	8.43		
23)	acetonitrile	0.051	0.051	0.047	0.045	0.048	0.045	0.048	0.048	5.54		
24)	methyl acetate	0.306	0.310	0.236	0.238	0.254	0.246	0.265	0.265	12.80		
25)	methylene chloride	0.428	0.462	0.348	0.329	0.354	0.353	0.379	0.379	13.99		
26)	acrylonitrile	0.090	0.077	0.101	0.101	0.112	0.108	0.098	0.098	12.79		
27)	methyl tert butyl ether	0.918	0.925	0.980	0.972	0.981	0.897	0.905	0.964	0.925	0.941	3.53
28)	trans-1,2-dichloroethene	0.397	0.428	0.467	0.493	0.473	0.465	0.449	0.483	0.467	0.458	6.43
29)	hexane	0.599	0.539	0.501	0.520	0.486	0.513	0.516	0.525	0.525	6.94	
30)	1,1-dichloroethane	0.517	0.623	0.613	0.623	0.605	0.586	0.563	0.596	0.583	0.590	5.69
31)	vinyl acetate	0.047		0.062	0.058	0.063	0.061	0.058	0.058	11.40		
32)	di-isopropyl ether	1.301	1.125	1.091	1.072	1.035	1.006	1.060	1.035	1.091	8.49	
33)	chloroprene	0.503	0.528	0.563	0.561	0.541	0.516	0.536	0.526	0.534	3.89	
34)	ethyl tert-butyl ether	0.928	0.931	1.038	1.011	1.004	1.013	0.995	1.062	1.039	1.002	4.60
35)	2-butanone	0.030	0.039	0.032	0.039	0.039	0.042	0.041	0.037	0.037	12.31	
36)	2,2-dichloropropane	0.647	0.565	0.623	0.592	0.569	0.532	0.548	0.530	0.576	7.34	
37)	ethyl acetate	0.069	0.059	0.052	0.045	0.047	0.049	0.054	0.054	16.83		
38)	cis-1,2-dichloroethene	0.314	0.353	0.411	0.401	0.382	0.374	0.358	0.381	0.379	0.373	7.61
39)	propionitrile	0.046	0.044	0.055	0.052	0.053	0.051	0.054	0.053	0.051	7.55	
40)	methyl acrylate	0.294	0.252	0.273	0.277	0.292	0.285	0.279	0.279	5.58		
41)	methacrylonitrile	0.105	0.115	0.127	0.126	0.140	0.137	0.125	0.125	10.50		
42)	bromochloromethane	0.167	0.182	0.166	0.189	0.173	0.181	0.176	0.188	0.185	0.179	4.76
43)	tetrahydrofuran	0.133		0.109	0.099	0.102	0.097	0.108	0.108	13.53		
44)	chloroform	0.688	0.680	0.686	0.678	0.649	0.624	0.661	0.637	0.663	3.64	
45)	carbon tetrachloride	0.438	0.550	0.542	0.588	0.532	0.546	0.531	0.562	0.542	0.537	7.62
46)	1,1-dichloropropene	0.411	0.468	0.484	0.517	0.471	0.477	0.463	0.484	0.479	0.472	5.90
47)	isobutyl alcohol								0.000	-1.00		
48)	dibromofluoromethane (s)	0.466	0.463	0.461	0.463	0.467	0.449	0.448	0.454	0.442	0.457	1.95
49)	1,1,1-trichloroethane	0.508	0.611	0.616	0.642	0.619	0.607	0.582	0.620	0.600	0.601	6.37
50)	cyclohexane	0.522	0.502	0.533	0.520	0.517	0.465	0.500	0.500	0.507	4.15	
51)	tert-amyl alcohol	0.017	0.016	0.017	0.016	0.017	0.017	0.017	0.017	2.99		

6.8.1
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Initial Calibration Summary

Job Number: JC93827 **Sample:** VI9163-ICC9163
Account: NOREASCA NOREAS, Inc. **Lab FileID:** I227384.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

52)	I	1,4-difluorobenzene	-----ISTD-----										
53)		1,2-dichloroethane-d4 (s)	0.312	0.331	0.339	0.347	0.344	0.344	0.333	0.320	0.308	0.331	4.41
54)		isopropyl acetate										0.047	5.01
			0.046	0.044	0.045	0.047	0.049	0.051					
55)		1,2-dichloroethane										0.356	6.16
			0.386	0.378	0.368	0.369	0.341	0.333	0.339	0.331			
56)		benzene										0.922	4.61
			0.865	0.864	0.936	0.986	0.962	0.926	0.889	0.922	0.950		
57)		2,2,4-trimethylpentane										0.780	7.42
			0.662	0.721	0.794	0.840	0.775	0.828	0.768	0.799	0.834		
58)		tert-amyl methyl ether										0.162	7.95
			0.133	0.157	0.163	0.175	0.164	0.165	0.170	0.168			
59)		heptane										0.187	6.52
			0.165	0.202	0.200	0.177	0.190	0.182	0.189	0.194			
60)		n-butyl alcohol										0.007	14.69
				0.007	0.007	0.007	0.007	0.007	0.007	0.009			
61)		trichloroethene										0.251	7.06
			0.237	0.220	0.253	0.284	0.263	0.246	0.244	0.256	0.256		
62)		ethyl acrylate										0.276	4.09
				0.259	0.279	0.268	0.269	0.275	0.288	0.290			
63)		methylcyclohexane										0.400	4.33
				0.368	0.392	0.412	0.405	0.414	0.385	0.404	0.420		
64)		1,2-dichloropropane										0.226	9.02
				0.256	0.196	0.196	0.248	0.231	0.228	0.219	0.229	0.233	
65)		methyl methacrylate										0.061	8.35
				0.064	0.052	0.058	0.062	0.063	0.065				
66)		dibromomethane										0.145	4.38
				0.134	0.151	0.153	0.144	0.140	0.147	0.145			
67)		bromodichloromethane										0.350	3.31
				0.352	0.327	0.355	0.370	0.351	0.346	0.342	0.352	0.357	
68)		2-nitropropane										0.074	5.15
				0.079	0.076	0.075	0.070	0.071	0.070				
69)		2-chloroethyl vinyl ether										0.132	7.27
				0.120	0.113	0.128	0.138	0.135	0.134	0.134	0.140	0.141	
70)		epichlorohydrin										0.026	4.12
				0.025	0.027	0.028	0.026	0.024	0.025	0.025			
71)		cis-1,3-dichloropropene										0.391	2.94
				0.388	0.368	0.396	0.401	0.397	0.390	0.380	0.396	0.406	
72)		4-methyl-2-pentanone										0.080	7.90
				0.071	0.068	0.084	0.084	0.082	0.080	0.079	0.084	0.085	
73)		3-methyl-1-butanol										0.008	6.60
				0.007	0.008	0.007	0.008	0.008	0.008	0.008	0.008		
74)	I	chlorobenzene-d5	-----ISTD-----										
75)		toluene-d8 (s)	1.307	1.310	1.313	1.302	1.293	1.295	1.264	1.277	1.250	1.290	1.70
76)		toluene										0.700	4.23
				0.729	0.719	0.678	0.738	0.724	0.679	0.648	0.690	0.697	
77)		trans-1,3-dichloropropene										0.437	2.93
				0.456	0.439	0.445	0.442	0.447	0.422	0.422	0.438	0.420	
78)		ethyl methacrylate										0.303	6.18
				0.279	0.296	0.273	0.333	0.309	0.308	0.299	0.318	0.312	
79)		1,1,2-trichloroethane										0.196	5.67
				0.175	0.182	0.208	0.195	0.207	0.194	0.194	0.204	0.202	
80)		1,3-dichloropropane										0.370	3.99
				0.393	0.346	0.363	0.388	0.372	0.371	0.355	0.373	0.366	
81)		tetrachloroethene										0.358	5.21
				0.329	0.361	0.391	0.367	0.362	0.337	0.360	0.359		

6.8.1
6

Initial Calibration Summary

Job Number: JC93827 **Sample:** VI9163-ICC9163
Account: NOREASCA NOREAS, Inc. **Lab FileID:** I227384.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

82)	2-hexanone	0.089	0.093	0.084	0.101	0.095	0.098	0.093	0.099	0.098	0.094	5.77
83)	butyl acetate	0.198	0.168	0.197	0.160	0.156	0.164	0.163			0.172	10.29
84)	n-butyl ether	0.947	0.968	0.934	1.014	1.008	0.973	0.938	1.011	1.054	0.983	4.19
85)	dibromochloromethane	0.293	0.305	0.301	0.348	0.328	0.329	0.321	0.345	0.336	0.323	6.10
86)	1,2-dibromoethane	0.267	0.297	0.289	0.312	0.284	0.299	0.294	0.314	0.312	0.296	5.20
87)	chlorobenzene	0.739	0.766	0.761	0.791	0.756	0.749	0.733	0.777	0.781	0.761	2.54
88)	1,1,1,2-tetrachloroethane	0.281	0.295	0.295	0.326	0.317	0.309	0.297	0.317	0.319	0.306	4.90
89)	ethylbenzene	1.187	1.324	1.286	1.371	1.306	1.276	1.219	1.306	1.346	1.291	4.53
90)	m,p-xylene	0.466	0.502	0.502	0.533	0.521	0.500	0.477	0.517	0.532	0.506	4.55
91)	o-xylene	0.483	0.498	0.507	0.510	0.491	0.485	0.478	0.514	0.524	0.499	3.23
92)	styrene	0.747	0.744	0.819	0.865	0.830	0.809	0.807	0.880	0.899	0.822	6.55
93)	butyl acrylate	0.453	0.474	0.487	0.504	0.496	0.488	0.479	0.524	0.532	0.493	5.01
94)	cis-1,4-dichloro-2-butene	0.126	0.118	0.127	0.146	0.137	0.141	0.137	0.145	0.143	0.136	7.30
95)	bromoform	0.229	0.227	0.230	0.249	0.244	0.241	0.238	0.257	0.258	0.241	4.75
96)	isopropylbenzene	1.158	1.238	1.319	1.346	1.277	1.296	1.253	1.375	1.419	1.298	6.01
97)	I 1,4-dichlorobenzene-d	-----ISTD-----										
98)	4-bromofluorobenzene (s)	0.807	0.788	0.805	0.787	0.777	0.775	0.749	0.761	0.744	0.777	2.90
99)	1,1,2,2-tetrachloroethane	0.563	0.462	0.534	0.537	0.502	0.501	0.502	0.536	0.536	0.519	5.79
100)	trans-1,4-dichloro-2-butene	0.153	0.144	0.152	0.142	0.133	0.141	0.139			0.143	4.85
101)	1,2,3-trichloropropane	0.126	0.151	0.165	0.148	0.141	0.150	0.146			0.147	7.99
102)	bromobenzene	0.633	0.643	0.629	0.673	0.662	0.611	0.599	0.636	0.632	0.635	3.58
103)	n-propylbenzene	2.418	2.533	2.469	2.689	2.527	2.453	2.355	2.539	2.616	2.511	4.04
104)	2-chlorotoluene	0.535	0.498	0.525	0.582	0.522	0.541	0.529	0.563	0.561	0.540	4.74
105)	4-chlorotoluene	1.489	1.466	1.597	1.615	1.486	1.503	1.433	1.532	1.546	1.519	3.94
106)	1,3,5-trimethylbenzene	1.605	1.882	1.867	1.943	1.796	1.792	1.741	1.891	1.929	1.827	5.85
107)	tert-butylbenzene	0.416	0.348	0.368	0.344	0.349	0.339	0.377	0.383		0.366	7.13
108)	1,2,4-trimethylbenzene	2.022	1.955	1.973	1.979	1.999	1.805	1.788	1.948	1.949	1.935	4.26
109)	sec-butylbenzene	2.143	2.447	2.403	2.549	2.370	2.370	2.357	2.531	2.585	2.417	5.52
110)	p-isopropyltoluene	2.134	2.166	2.107	2.256	2.158	2.122	2.090	2.274	2.288	2.177	3.48
111)	benzyl chloride	1.132	0.997	1.094	1.083	1.062	1.015	1.008	1.060	1.036	1.054	4.22

6.8.1
6

Initial Calibration Summary

Job Number: JC93827 **Sample:** VI9163-ICC9163
Account: NOREASCA NOREAS, Inc. **Lab FileID:** I227384.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

112)	1,3-dichlorobenzene	1.090	1.121	1.158	1.257	1.191	1.168	1.128	1.227	1.242	1.176	4.94
113)	1,4-dichlorobenzene	1.229	1.225	1.236	1.313	1.205	1.177	1.167	1.257	1.257	1.230	3.61
114)	1,2-dichlorobenzene	1.117	1.086	1.214	1.262	1.156	1.152	1.151	1.223	1.224	1.176	4.90
115)	n-butylbenzene	0.903	1.025	1.103	1.161	1.110	1.080	1.078	1.175	1.163	1.089	7.81
116)	hexachloroethane	0.407	0.497	0.440	0.459	0.460	0.447	0.456	0.497	0.500	0.462	6.74
117)	1,2-dibromo-3-chloropropane	0.175	0.173	0.182	0.192	0.180	0.179	0.190	0.181		0.181	3.67
118)	nitrobenzene			0.072	0.064	0.065	0.067	0.069	0.065		0.067	4.44
119)	1,3,5-trichlorobenzene	1.210	1.227	1.187	1.299	1.175	1.198	1.194	1.254	1.190	1.215	3.24
120)	1,2,4-trichlorobenzene	1.225	1.084	1.095	1.175	1.063	1.094	1.101	1.152	1.080	1.119	4.79
121)	2-ethylhexyl acrylate			1.265	1.123	1.130	1.131	1.203	1.079		1.155	5.78
122)	hexachlorobutadiene	0.722	0.637	0.734	0.814	0.730	0.715	0.738	0.769	0.709	0.730	6.51
123)	naphthalene			2.430	2.342	2.445	2.357	2.276	2.341	2.457	2.367	2.97
124)	1,2,3-trichlorobenzene	1.131	0.999	1.000	1.196	1.045	1.085	1.094	1.132	1.047	1.081	6.06
125)	2-methylnaphthalene			1.699	1.589	1.587	1.589	1.618	1.401		1.581	6.20

 (#) = Out of Range ### Number of calibration levels exceeded format ###

MI9163.M

Fri Jul 26 07:54:39 2019

6.8.1

6

Initial Calibration Verification

Job Number: JC93827 **Sample:** VI9163-ICV9163
Account: NOREASCA NOREAS, Inc. **Lab FileID:** I227389.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VI9163\I227389.D Vial: 19
 Acq On : 23 Jul 2019 10:47 pm Operator: thienn
 Sample : icv9163-50 Inst : GCMSI
 Misc : MS36342,VI9163,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MI9163.M (RTE Integrator)
 Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
 Last Update : Fri Jul 26 07:46:37 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	99	-0.02	7.34
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.050	1.122	-6.9	105	-0.01	7.46
4	1,4-dioxane	0.106	0.113	-6.6	105	0.00	11.27
5 I	pentafluorobenzene	1.000	1.000	0.0	103	0.00	9.68
6	dichlorodifluoromethane	0.604	0.486	19.5	90	0.00	3.89
7	chlorodifluoromethane	0.499	0.506	-1.4	114	0.00	3.92
8	chloromethane	0.523	0.441	15.7	98	0.00	4.28
9	vinyl chloride	0.419	0.407	2.9	106	0.00	4.51
10	1,3-butadiene	0.253	0.316	-24.9	134	0.00	4.60
11	bromomethane	0.242	0.294	-21.5	134	0.01	5.17
12	chloroethane	0.223	0.195	12.6	96	0.00	5.37
13	vinyl bromide	0.380	0.306	19.5	88	0.00	5.72
14	trichlorofluoromethane	0.624	0.617	1.1	106	0.00	5.85
15	ethyl ether	0.151	0.160	-6.0	107	0.00	6.29
16	2-chloropropane	0.119	0.126	-5.9	113	0.00	6.48
17	acrolein	0.051	0.049	3.9	92	0.00	6.48
18	freon 113	0.278	0.318	-14.4	124	0.00	6.70
19	1,1-dichloroethene	0.491	0.469	4.5	103	0.00	6.70
	----- True Calc. % Drift -----						
20	acetone	200.000	192.810	3.6	99	0.00	6.68
	----- AvgRF CCRF % Dev -----						
21	iodomethane	0.305	0.380	-24.6	120	0.00	6.95
22	carbon disulfide	0.976	1.020	-4.5	120	0.00	7.10
23	acetonitrile			-----NA-----			
24	methyl acetate	0.265	0.229	13.6	99	0.00	7.18
25	methylene chloride	0.379	0.339	10.6	106	0.00	7.41
26	acrylonitrile			-----NA-----			
27	methyl tert butyl ether	0.941	0.923	1.9	105	0.00	7.79
28	trans-1,2-dichloroethene	0.458	0.464	-1.3	106	0.00	7.83
29	hexane	0.525	0.570	-8.6	120	0.00	8.21
30	1,1-dichloroethane	0.590	0.589	0.2	108	0.00	8.40
31	vinyl acetate	0.058	0.055	5.2	97	0.00	8.35
32	di-isopropyl ether	1.091	1.008	7.6	103	0.00	8.41
33	chloroprene	0.534	0.564	-5.6	112	0.00	8.51
34	ethyl tert-butyl ether	1.002	1.016	-1.4	105	0.00	8.88
35	2-butanone	0.037	0.038	-2.7	100	0.00	9.04
36	2,2-dichloropropane	0.576	0.540	6.2	104	0.00	9.15
37	ethyl acetate	0.054	0.044	18.5	101	0.00	9.08

Initial Calibration Verification

Job Number: JC93827

Sample: VI9163-ICV9163

Account: NOREASCA NOREAS, Inc.

Lab FileID: I227389.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

38		cis-1,2-dichloroethene	0.373	0.361	3.2	104	0.00	9.12
39		propionitrile	0.051	0.052	-2.0	105	0.00	9.09
40		methyl acrylate	0.279	0.278	0.4	103	0.00	9.16
41		methacrylonitrile	0.125	0.127	-1.6	104	0.00	9.30
42		bromochloromethane	0.179	0.187	-4.5	109	0.00	9.41
43		tetrahydrofuran	0.108	0.104	3.7	108	0.00	9.46
44		chloroform	0.663	0.649	2.1	107	0.00	9.51
45		carbon tetrachloride	0.537	0.558	-3.9	108	0.00	9.99
46		1,1-dichloropropene	0.472	0.474	-0.4	105	0.00	9.96
47		isobutyl alcohol			-----NA-----			
48	S	dibromofluoromethane (s)	0.457	0.446	2.4	102	0.00	9.70
49		1,1,1-trichloroethane	0.601	0.605	-0.7	107	0.00	9.78
50		cyclohexane	0.507	0.472	6.9	104	0.00	9.91
51		tert-amyl alcohol	0.017	0.017	0.0	109	0.00	10.06
52	I	1,4-difluorobenzene	1.000	1.000	0.0	103	0.00	10.62
53	S	1,2-dichloroethane-d4 (s)	0.331	0.335	-1.2	103	0.00	10.12
54		isopropyl acetate	0.047	0.046	2.1	100	0.00	10.11
55		1,2-dichloroethane	0.356	0.337	5.3	104	0.00	10.21
56		benzene	0.922	0.921	0.1	107	0.00	10.20
57		2,2,4-trimethylpentane	0.780	0.864	-10.8	116	0.00	10.32
58		tert-amyl methyl ether	0.162	0.169	-4.3	106	0.00	10.29
59		heptane	0.187	0.217	-16.0	123	0.00	10.49
60		n-butyl alcohol	0.007	0.007	0.0	107	0.00	10.65
61		trichloroethene	0.251	0.256	-2.0	108	0.00	10.94
62		ethyl acrylate	0.276	0.284	-2.9	106	0.00	10.91
63		methylcyclohexane	0.400	0.394	1.5	105	0.00	11.25
64		1,2-dichloropropane	0.226	0.227	-0.4	107	0.00	11.21
65		methyl methacrylate	0.061	0.062	-1.6	103	0.00	11.18
66		dibromomethane	0.145	0.142	2.1	105	0.00	11.32
67		bromodichloromethane	0.350	0.349	0.3	105	0.00	11.47
68		2-nitropropane	0.074	0.077	-4.1	114	0.00	11.64
69		2-chloroethyl vinyl ether	0.132	0.148	-12.1	114	0.00	11.71
70		epichlorohydrin	0.026	0.026	0.0	110	0.00	11.78
71		cis-1,3-dichloropropene	0.391	0.391	0.0	106	0.00	11.93
72		4-methyl-2-pentanone	0.080	0.083	-3.8	107	0.00	12.02
73		3-methyl-1-butanol	0.008	0.008	0.0	112	0.00	12.02
74	I	chlorobenzene-d5	1.000	1.000	0.0	100	0.00	13.75
75	S	toluene-d8 (s)	1.290	1.295	-0.4	103	0.00	12.25
76		toluene	0.700	0.693	1.0	107	0.00	12.32
77		trans-1,3-dichloropropene	0.437	0.449	-2.7	107	0.00	12.49
78		ethyl methacrylate	0.303	0.331	-9.2	111	0.00	12.49
79		1,1,2-trichloroethane	0.196	0.207	-5.6	107	0.00	12.71
80		1,3-dichloropropane	0.370	0.385	-4.1	109	0.00	12.89
81		tetrachloroethene			-----NA-----			
82		2-hexanone	0.094	0.098	-4.3	106	0.00	12.87
83		butyl acetate	0.172	0.167	2.9	107	0.00	12.97
84		n-butyl ether	0.983	1.047	-6.5	112	0.00	13.76
85		dibromochloromethane	0.323	0.365	-13.0	114	0.00	13.14
86		1,2-dibromoethane	0.296	0.304	-2.7	104	0.00	13.29
87		chlorobenzene	0.761	0.786	-3.3	108	0.00	13.78
88		1,1,1,2-tetrachloroethane	0.306	0.326	-6.5	110	0.00	13.84
89		ethylbenzene	1.291	1.305	-1.1	108	0.00	13.85
90		m,p-xylene	0.506	0.516	-2.0	109	0.00	13.97
91		o-xylene	0.499	0.509	-2.0	107	0.00	14.37
92		styrene	0.822	0.869	-5.7	108	0.00	14.38
93		butyl acrylate	0.493	0.512	-3.9	107	0.00	14.19
94		cis-1,4-dichloro-2-butene	0.136	0.141	-3.7	103	0.00	14.73
95		bromoform	0.241	0.283	-17.4	119	0.00	14.60

Initial Calibration Verification

Job Number: JC93827

Sample: VI9163-ICV9163

Account: NOREASCA NOREAS, Inc.

Lab FileID: I227389.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

96	isopropylbenzene	1.298	1.362	-4.9	109	0.00	14.72
97 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	16.09
98 S	4-bromofluorobenzene (s)	0.777	0.770	0.9	103	0.00	14.92
99	1,1,2,2-tetrachloroethane	0.519	0.546	-5.2	109	0.00	14.98
100	trans-1,4-dichloro-2-bute	0.143	0.159	-11.2	120	0.00	15.01
101	1,2,3-trichloropropane	0.147	0.149	-1.4	106	0.00	15.06
102	bromobenzene	0.635	0.643	-1.3	108	0.00	15.10
103	n-propylbenzene	2.511	2.552	-1.6	109	0.00	15.14
104	2-chlorotoluene	0.540	0.560	-3.7	107	0.00	15.27
105	4-chlorotoluene	1.519	1.561	-2.8	110	0.00	15.38
106	1,3,5-trimethylbenzene	1.827	1.850	-1.3	107	0.00	15.30
107	tert-butylbenzene	0.366	0.365	0.3	108	0.00	15.64
108	1,2,4-trimethylbenzene	1.935	1.946	-0.6	109	0.00	15.69
109	sec-butylbenzene	2.417	2.515	-4.1	107	0.00	15.86
110	p-isopropyltoluene	2.177	2.262	-3.9	109	0.00	15.99
111	benzyl chloride	1.054	1.313	-24.6	131	0.00	16.21
112	1,3-dichlorobenzene	1.176	1.237	-5.2	110	0.00	16.02
113	1,4-dichlorobenzene	1.230	1.250	-1.6	108	0.00	16.12
114	1,2-dichlorobenzene	1.176	1.258	-7.0	110	0.00	16.50
115	n-butylbenzene	1.089	1.144	-5.1	107	0.00	16.42
116	hexachloroethane	0.462	0.527	-14.1	116	0.00	16.83
117	1,2-dibromo-3-chloropropa	0.181	0.195	-7.7	109	0.00	17.29
118	nitrobenzene	0.067	0.067	0.0	100	0.00	17.47
119	1,3,5-trichlorobenzene	1.215	1.219	-0.3	103	0.00	17.50
120	1,2,4-trichlorobenzene	1.119	1.117	0.2	102	0.00	18.16
121	2-ethylhexyl acrylate	1.155	1.255	-8.7	112	0.00	18.18
122	hexachlorobutadiene	0.730	0.756	-3.6	103	0.00	18.29
123	naphthalene	2.367	2.492	-5.3	107	0.00	18.45
124	1,2,3-trichlorobenzene	1.081	1.134	-4.9	104	0.00	18.67
125	2-methylnaphthalene	1.581	1.757	-11.1	111	0.00	19.55

(#) = Out of Range
I227384.D MI9163.M

SPCC's out = 0 CCC's out = 0
Fri Jul 26 07:49:36 2019

Initial Calibration Verification

Job Number: JC93827 **Sample:** VI9163-ICV9163
Account: NOREASCA NOREAS, Inc. **Lab FileID:** I227390.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VI9163\I227390.D Vial: 20
 Acq On : 23 Jul 2019 11:18 pm Operator: thienn
 Sample : icv9163-50 Inst : GCMSI
 Misc : MS36342,VI9163,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MI9163.M (RTE Integrator)
 Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
 Last Update : Fri Jul 26 07:46:37 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	98	-0.02	7.34
2	ethanol			NA			
3	tertiary butyl alcohol			NA			
4	1,4-dioxane			NA			
5 I	pentafluorobenzene	1.000	1.000	0.0	102	0.00	9.68
6	dichlorodifluoromethane			NA			
7	chlorodifluoromethane			NA			
8	chloromethane			NA			
9	vinyl chloride			NA			
10	1,3-butadiene			NA			
11	bromomethane			NA			
12	chloroethane			NA			
13	vinyl bromide			NA			
14	trichlorofluoromethane			NA			
15	ethyl ether			NA			
16	2-chloropropane			NA			
17	acrolein			NA			
18	freon 113			NA			
19	1,1-dichloroethene			NA			
----- True			Calc.	% Drift	-----		
20	acetone			NA			
----- AvgRF			CCRF	% Dev	-----		
21	iodomethane			NA			
22	carbon disulfide			NA			
23	acetonitrile	0.048	0.049	-2.1	110	0.00	7.07
24	methyl acetate			NA			
25	methylene chloride			NA			
26	acrylonitrile	0.098	0.115	-17.3	115	0.00	7.68
27	methyl tert butyl ether			NA			
28	trans-1,2-dichloroethene			NA			
29	hexane			NA			
30	1,1-dichloroethane			NA			
31	vinyl acetate			NA			
32	di-isopropyl ether			NA			
33	chloroprene			NA			
34	ethyl tert-butyl ether			NA			
35	2-butanone			NA			
36	2,2-dichloropropane			NA			
37	ethyl acetate			NA			

6.8.3

6

Initial Calibration Verification

Job Number: JC93827 **Sample:** VI9163-ICV9163
Account: NOREASCA NOREAS, Inc. **Lab FileID:** I227390.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

38	cis-1,2-dichloroethene							
39	propionitrile							
40	methyl acrylate							
41	methacrylonitrile							
42	bromochloromethane							
43	tetrahydrofuran							
44	chloroform							
45	carbon tetrachloride							
46	1,1-dichloropropene							
47	isobutyl alcohol							
48 S	dibromofluoromethane (s)	0.457	0.451	1.3	102	0.00	9.70	
49	1,1,1-trichloroethane							
50	cyclohexane							
51	tert-amyl alcohol							
52 I	1,4-difluorobenzene	1.000	1.000	0.0	99	0.00	10.62	
53 S	1,2-dichloroethane-d4 (s)	0.331	0.337	-1.8	101	0.00	10.12	
54	isopropyl acetate							
55	1,2-dichloroethane							
56	benzene							
57	2,2,4-trimethylpentane							
58	tert-amyl methyl ether							
59	heptane							
60	n-butyl alcohol							
61	trichloroethene							
62	ethyl acrylate							
63	methylcyclohexane							
64	1,2-dichloropropane							
65	methyl methacrylate							
66	dibromomethane							
67	bromodichloromethane							
68	2-nitropropane							
69	2-chloroethyl vinyl ether							
70	epichlorohydrin							
71	cis-1,3-dichloropropene							
72	4-methyl-2-pentanone							
73	3-methyl-1-butanol							
74 I	chlorobenzene-d5	1.000	1.000	0.0	97	0.00	13.75	
75 S	toluene-d8 (s)	1.290	1.308	-1.4	100	0.00	12.25	
76	toluene							
77	trans-1,3-dichloropropene							
78	ethyl methacrylate							
79	1,1,2-trichloroethane							
80	1,3-dichloropropane							
81	tetrachloroethene	0.358	0.425	-18.7	122	0.00	12.89	
82	2-hexanone							
83	butyl acetate							
84	n-butyl ether							
85	dibromochloromethane							
86	1,2-dibromoethane							
87	chlorobenzene							
88	1,1,1,2-tetrachloroethane							
89	ethylbenzene							
90	m,p-xylene							
91	o-xylene							
92	styrene							
93	butyl acrylate							
94	cis-1,4-dichloro-2-butene							
95	bromoform							

6.8.3
6

Initial Calibration Verification

Job Number: JC93827

Sample: VI9163-ICV9163

Account: NOREASCA NOREAS, Inc.

Lab FileID: I227390.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

96	isopropylbenzene								-----NA-----
97 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	90	0.00	16.09		
98 S	4-bromofluorobenzene (s)	0.777	0.794	-2.2	96	0.00	14.92		
99	1,1,2,2-tetrachloroethane								-----NA-----
100	trans-1,4-dichloro-2-bute								-----NA-----
101	1,2,3-trichloropropane								-----NA-----
102	bromobenzene								-----NA-----
103	n-propylbenzene								-----NA-----
104	2-chlorotoluene								-----NA-----
105	4-chlorotoluene								-----NA-----
106	1,3,5-trimethylbenzene								-----NA-----
107	tert-butylbenzene								-----NA-----
108	1,2,4-trimethylbenzene								-----NA-----
109	sec-butylbenzene								-----NA-----
110	p-isopropyltoluene								-----NA-----
111	benzyl chloride								-----NA-----
112	1,3-dichlorobenzene								-----NA-----
113	1,4-dichlorobenzene								-----NA-----
114	1,2-dichlorobenzene								-----NA-----
115	n-butylbenzene								-----NA-----
116	hexachloroethane								-----NA-----
117	1,2-dibromo-3-chloropropa								-----NA-----
118	nitrobenzene								-----NA-----
119	1,3,5-trichlorobenzene								-----NA-----
120	1,2,4-trichlorobenzene								-----NA-----
121	2-ethylhexyl acrylate								-----NA-----
122	hexachlorobutadiene								-----NA-----
123	naphthalene								-----NA-----
124	1,2,3-trichlorobenzene								-----NA-----
125	2-methylnaphthalene								-----NA-----

(#) = Out of Range
I227384.D MI9163.M

SPCC's out = 0 CCC's out = 0
Fri Jul 26 07:49:38 2019

Continuing Calibration Summary

Job Number: JC93827 **Sample:** VI9196-CC9163
Account: NOREASCA NOREAS, Inc. **Lab FileID:** I228121.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ni...0-19\vi9196\i228121.d Vial: 3
 Acq On : 29 Aug 2019 7:59 am Operator: THIENN
 Sample : cc9163-50 Inst : GCMSI
 Misc : MS37129,VI9196,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MI9163.M (RTE Integrator)
 Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
 Last Update : Mon Sep 13 11:48:20 2010
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	75	-0.03	7.33
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.050	1.069	-1.8	76	-0.02	7.45
4	1,4-dioxane	0.106	0.098	7.5	70	-0.01	11.25
5 I	pentafluorobenzene	1.000	1.000	0.0	85	0.00	9.68
6	dichlorodifluoromethane	0.604	0.649	-7.5	99	0.00	3.88
7	chlorodifluoromethane	0.499	0.536	-7.4	100	0.00	3.92
8	chloromethane	0.523	0.499	4.6	92	-0.02	4.27
9	vinyl chloride	0.419	0.463	-10.5	100	0.00	4.51
10	1,3-butadiene	0.253	0.265	-4.7	93	0.00	4.60
11	bromomethane	0.242	0.287	-18.6	108	0.01	5.17
12	chloroethane	0.223	0.256	-14.8	104	0.00	5.37
13	vinyl bromide	0.380	0.330	13.2	78	0.00	5.72
14	trichlorofluoromethane	0.624	0.727	-16.5	103	0.00	5.84
15	ethyl ether	0.151	0.162	-7.3	90	-0.01	6.28
16	2-chloropropane	0.119	0.139	-16.8	103	0.00	6.48
17	acrolein	0.051	0.042	17.6	66	0.00	6.47
18	freon 113	0.278	0.246	11.5	80	0.00	6.70
19	1,1-dichloroethene	0.491	0.549	-11.8	100	0.00	6.69
	----- True Calc. % Drift -----						
20	acetone	200.000	178.479	10.8	76	0.00	6.67
	----- AvgRF CCRF % Dev -----						
21	iodomethane	0.305	0.259	15.1	68	0.00	6.93
22	carbon disulfide	0.976	0.932	4.5	91	0.00	7.09
23	acetonitrile	0.048	0.044	8.3	83	-0.01	7.06
24	methyl acetate	0.265	0.244	7.9	87	0.00	7.17
25	methylene chloride	0.379	0.348	8.2	90	0.00	7.40
26	acrylonitrile	0.098	0.098	0.0	82	0.00	7.68
27	methyl tert butyl ether	0.941	0.960	-2.0	90	-0.01	7.79
28	trans-1,2-dichloroethene	0.458	0.520	-13.5	99	0.00	7.82
29	hexane	0.525	0.380	27.6#	67	0.00	8.21
30	1,1-dichloroethane	0.590	0.644	-9.2	97	-0.01	8.39
31	vinyl acetate	0.058	0.051	12.1	75	-0.01	8.34
32	di-isopropyl ether	1.091	1.078	1.2	91	0.00	8.41
33	chloroprene	0.534	0.599	-12.2	99	-0.01	8.50
34	ethyl tert-butyl ether	1.002	1.093	-9.1	93	0.00	8.88
35	2-butanone	0.037	0.036	2.7	78	-0.01	9.03
36	2,2-dichloropropane	0.576	0.547	5.0	88	-0.01	9.14
37	ethyl acetate	0.054	0.048	11.1	90	0.00	9.08

Continuing Calibration Summary

Job Number: JC93827

Sample: VI9196-CC9163

Account: NOREASCA NOREAS, Inc.

Lab FileID: I228121.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

38		cis-1,2-dichloroethene	0.373	0.374	-0.3	89	-0.01	9.11
39		propionitrile	0.051	0.048	5.9	81	-0.02	9.08
40		methyl acrylate	0.279	0.261	6.5	80	0.00	9.16
41		methacrylonitrile	0.125	0.121	3.2	82	-0.01	9.29
42		bromochloromethane	0.179	0.184	-2.8	89	-0.01	9.41
43		tetrahydrofuran	0.108	0.091	15.7	78	0.00	9.45
44		chloroform	0.663	0.714	-7.7	97	0.00	9.50
45		carbon tetrachloride	0.537	0.649	-20.9#	104	0.00	9.98
46		1,1-dichloropropene	0.472	0.511	-8.3	94	0.00	9.95
47		isobutyl alcohol			-----NA-----			
48	S	dibromofluoromethane (s)	0.457	0.458	-0.2	87	0.00	9.69
49		1,1,1-trichloroethane	0.601	0.703	-17.0	103	-0.01	9.77
50		cyclohexane	0.507	0.466	8.1	85	-0.01	9.90
51		tert-amyl alcohol	0.017	0.015	11.8	79	-0.01	10.05
52	I	1,4-difluorobenzene	1.000	1.000	0.0	84	0.00	10.61
53	S	1,2-dichloroethane-d4 (s)	0.331	0.384	-16.0	97	-0.01	10.11
54		isopropyl acetate	0.047	0.045	4.3	80	0.00	10.11
55		1,2-dichloroethane	0.356	0.395	-11.0	100	0.00	10.20
56		benzene	0.922	0.967	-4.9	91	0.00	10.19
57		2,2,4-trimethylpentane	0.780	0.642	17.7	70	-0.01	10.31
58		tert-amyl methyl ether	0.162	0.174	-7.4	88	-0.01	10.29
59		heptane	0.187	0.141	24.6#	65	-0.01	10.48
60		n-butyl alcohol	0.007	0.006	14.3	77	-0.02	10.64
61		trichloroethene	0.251	0.271	-8.0	93	0.00	10.93
62		ethyl acrylate	0.276	0.271	1.8	83	0.00	10.91
63		methylcyclohexane	0.400	0.355	11.3	77	0.00	11.24
64		1,2-dichloropropane	0.226	0.235	-4.0	90	-0.01	11.20
65		methyl methacrylate	0.061	0.054	11.5	73	0.00	11.18
66		dibromomethane	0.145	0.152	-4.8	91	-0.01	11.31
67		bromodichloromethane	0.350	0.387	-10.6	95	0.00	11.46
68		2-nitropropane	0.074	0.072	2.7	86	0.00	11.64
69		2-chloroethyl vinyl ether	0.132	0.133	-0.8	83	-0.01	11.70
70		epichlorohydrin	0.026	0.023	11.5	80	-0.01	11.77
71		cis-1,3-dichloropropene	0.391	0.397	-1.5	88	0.00	11.92
72		4-methyl-2-pentanone	0.080	0.074	7.5	79	-0.01	12.01
73		3-methyl-1-butanol	0.008	0.006	25.0#	69	-0.01	12.01
74	I	chlorobenzene-d5	1.000	1.000	0.0	82	0.00	13.74
75	S	toluene-d8 (s)	1.290	1.241	3.8	81	0.00	12.24
76		toluene	0.700	0.674	3.7	86	0.00	12.32
77		trans-1,3-dichloropropene	0.437	0.447	-2.3	87	0.00	12.48
78		ethyl methacrylate	0.303	0.284	6.3	78	0.00	12.49
79		1,1,2-trichloroethane	0.196	0.198	-1.0	84	0.00	12.70
80		1,3-dichloropropane	0.370	0.372	-0.5	86	0.00	12.88
81		tetrachloroethene	0.358	0.352	1.7	86	0.00	12.88
82		2-hexanone	0.094	0.086	8.5	76	0.00	12.87
83		butyl acetate	0.172	0.150	12.8	79	0.00	12.96
84		n-butyl ether	0.983	0.908	7.6	80	0.00	13.75
85		dibromochloromethane	0.323	0.349	-8.0	90	-0.01	13.13
86		1,2-dibromoethane	0.296	0.291	1.7	81	0.00	13.29
87		chlorobenzene	0.761	0.736	3.3	83	0.00	13.78
88		1,1,1,2-tetrachloroethane	0.306	0.316	-3.3	87	0.00	13.84
89		ethylbenzene	1.291	1.270	1.6	86	0.00	13.84
90		m,p-xylene	0.506	0.492	2.8	85	-0.01	13.96
91		o-xylene	0.499	0.484	3.0	83	-0.01	14.36
92		styrene	0.822	0.798	2.9	81	0.00	14.37
93		butyl acrylate	0.493	0.467	5.3	80	-0.01	14.19
94		cis-1,4-dichloro-2-butene	0.136	0.146	-7.4	88	0.00	14.73
95		bromoform	0.241	0.252	-4.6	87	0.00	14.59

Continuing Calibration Summary

Job Number: JC93827

Sample: VI9196-CC9163

Account: NOREASCA NOREAS, Inc.

Lab FileID: I228121.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

96	isopropylbenzene	1.298	1.293	0.4	85	0.00	14.72
97 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	79	-0.01	16.09
98 S	4-bromofluorobenzene (s)	0.777	0.777	0.0	82	0.00	14.91
99	1,1,2,2-tetrachloroethane	0.519	0.497	4.2	78	-0.01	14.97
100	trans-1,4-dichloro-2-bute	0.143	0.142	0.7	85	0.00	15.00
101	1,2,3-trichloropropane	0.147	0.149	-1.4	84	0.00	15.06
102	bromobenzene	0.635	0.630	0.8	83	-0.01	15.09
103	n-propylbenzene	2.511	2.519	-0.3	84	0.00	15.13
104	2-chlorotoluene	0.540	0.542	-0.4	81	-0.01	15.26
105	4-chlorotoluene	1.519	1.561	-2.8	86	0.00	15.37
106	1,3,5-trimethylbenzene	1.827	1.840	-0.7	83	0.00	15.29
107	tert-butylbenzene	0.366	0.365	0.3	85	-0.01	15.63
108	1,2,4-trimethylbenzene	1.935	1.871	3.3	83	-0.01	15.68
109	sec-butylbenzene	2.417	2.429	-0.5	81	-0.01	15.85
110	p-isopropyltoluene	2.177	2.162	0.7	82	-0.01	15.99
111	benzyl chloride	1.054	0.924	12.3	72	-0.01	16.20
112	1,3-dichlorobenzene	1.176	1.182	-0.5	83	0.00	16.02
113	1,4-dichlorobenzene	1.230	1.193	3.0	81	-0.01	16.11
114	1,2-dichlorobenzene	1.176	1.201	-2.1	82	-0.01	16.49
115	n-butylbenzene	1.089	1.111	-2.0	81	0.00	16.41
116	hexachloroethane	0.462	0.500	-8.2	87	0.00	16.82
117	1,2-dibromo-3-chloropropa	0.181	0.166	8.3	73	0.00	17.28
118	nitrobenzene	0.067	0.062	7.5	73	0.00	17.47
119	1,3,5-trichlorobenzene	1.215	1.251	-3.0	83	-0.01	17.50
120	1,2,4-trichlorobenzene	1.119	1.174	-4.9	84	-0.01	18.15
121	2-ethylhexyl acrylate	1.155	1.070	7.4	75	0.00	18.18
122	hexachlorobutadiene	0.730	0.778	-6.6	83	-0.01	18.28
123	naphthalene	2.367	2.278	3.8	77	-0.01	18.44
124	1,2,3-trichlorobenzene	1.081	1.132	-4.7	82	-0.01	18.66
125	2-methylnaphthalene	1.581	1.442	8.8	72	0.00	19.54

(#) = Out of Range
I227384.D MI9163.M

SPCC's out = 0 CCC's out = 0
Fri Aug 30 05:30:41 2019

Continuing Calibration Summary

Job Number: JC93827 **Sample:** VI9196-ECC9163
Account: NOREASCA NOREAS, Inc. **Lab FileID:** I228134.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ni...0-19\vi9196\i228134.d Vial: 16
 Acq On : 29 Aug 2019 3:41 pm Operator: THIENN
 Sample : ecc9163-50 Inst : GCMSI
 Misc : MS37129,VI9196,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MI9163.M (RTE Integrator)
 Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
 Last Update : Mon Sep 13 11:48:20 2010
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	73	-0.03	7.33
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.050	1.090	-3.8	75	-0.02	7.46
4	1,4-dioxane	0.106	0.098	7.5	67	-0.01	11.25
5 I	pentafluorobenzene	1.000	1.000	0.0	78	-0.01	9.67
6	dichlorodifluoromethane	0.604	0.669	-10.8	94	0.00	3.88
7	chlorodifluoromethane	0.499	0.566	-13.4	97	0.00	3.92
8	chloromethane	0.523	0.516	1.3	87	-0.02	4.27
9	vinyl chloride	0.419	0.467	-11.5	93	0.00	4.51
10	1,3-butadiene	0.253	0.258	-2.0	83	0.00	4.60
11	bromomethane	0.242	0.283	-16.9	99	0.01	5.17
12	chloroethane	0.223	0.259	-16.1	97	0.00	5.37
13	vinyl bromide	0.380	0.338	11.1	74	0.00	5.72
14	trichlorofluoromethane	0.624	0.741	-18.8	97	0.00	5.84
15	ethyl ether	0.151	0.159	-5.3	81	-0.01	6.28
16	2-chloropropane	0.119	0.142	-19.3	97	0.00	6.48
17	acrolein	0.051	0.042	17.6	60	0.00	6.48
18	freon 113	0.278	0.254	8.6	76	0.00	6.70
19	1,1-dichloroethene	0.491	0.555	-13.0	93	0.00	6.69
	----- True Calc. % Drift -----						
20	acetone	200.000	195.978	2.0	77	0.00	6.67
	----- AvgRF CCRF % Dev -----						
21	iodomethane	0.305	0.291	4.6	70	0.00	6.93
22	carbon disulfide	0.976	0.930	4.7	84	0.00	7.10
23	acetonitrile	0.048	0.047	2.1	82	0.00	7.07
24	methyl acetate	0.265	0.257	3.0	85	0.00	7.17
25	methylene chloride	0.379	0.359	5.3	86	0.00	7.40
26	acrylonitrile	0.098	0.102	-4.1	79	0.00	7.67
27	methyl tert butyl ether	0.941	0.960	-2.0	83	-0.01	7.79
28	trans-1,2-dichloroethene	0.458	0.524	-14.4	92	0.00	7.82
29	hexane	0.525	0.383	27.0	62	0.00	8.21
30	1,1-dichloroethane	0.590	0.648	-9.8	90	-0.01	8.39
31	vinyl acetate	0.058	0.051	12.1	69	0.00	8.34
32	di-isopropyl ether	1.091	1.104	-1.2	86	-0.01	8.40
33	chloroprene	0.534	0.600	-12.4	91	-0.01	8.50
34	ethyl tert-butyl ether	1.002	1.103	-10.1	87	-0.01	8.87
35	2-butanone	0.037	0.037	0.0	74	-0.01	9.03
36	2,2-dichloropropane	0.576	0.535	7.1	79	-0.01	9.14
37	ethyl acetate	0.054	0.045	16.7	78	0.00	9.08

Continuing Calibration Summary

Job Number: JC93827

Sample: VI9196-ECC9163

Account: NOREASCA NOREAS, Inc.

Lab FileID: I228134.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

38		cis-1,2-dichloroethene	0.373	0.379	-1.6	83	-0.01	9.11
39		propionitrile	0.051	0.052	-2.0	80	-0.02	9.08
40		methyl acrylate	0.279	0.283	-1.4	80	0.00	9.16
41		methacrylonitrile	0.125	0.131	-4.8	81	0.00	9.30
42		bromochloromethane	0.179	0.182	-1.7	81	-0.01	9.41
43		tetrahydrofuran	0.108	0.093	13.9	74	0.00	9.45
44		chloroform	0.663	0.724	-9.2	91	-0.01	9.50
45		carbon tetrachloride	0.537	0.653	-21.6	96	0.00	9.98
46		1,1-dichloropropene	0.472	0.503	-6.6	85	0.00	9.95
47		isobutyl alcohol			-----NA-----			
48	S	dibromofluoromethane (s)	0.457	0.458	-0.2	80	0.00	9.69
49		1,1,1-trichloroethane	0.601	0.703	-17.0	95	-0.01	9.77
50		cyclohexane	0.507	0.456	10.1	77	0.00	9.91
51		tert-amyl alcohol	0.017	0.016	5.9	79	-0.01	10.05
52	I	1,4-difluorobenzene	1.000	1.000	0.0	78	0.00	10.61
53	S	1,2-dichloroethane-d4 (s)	0.331	0.382	-15.4	90	-0.01	10.11
54		isopropyl acetate	0.047	0.049	-4.3	80	-0.01	10.10
55		1,2-dichloroethane	0.356	0.405	-13.8	95	0.00	10.20
56		benzene	0.922	0.954	-3.5	84	0.00	10.19
57		2,2,4-trimethylpentane	0.780	0.648	16.9	66	0.00	10.32
58		tert-amyl methyl ether	0.162	0.176	-8.6	83	-0.01	10.29
59		heptane	0.187	0.141	24.6	61	0.00	10.49
60		n-butyl alcohol	0.007	0.007	0.0	77	-0.02	10.64
61		trichloroethene	0.251	0.266	-6.0	85	0.00	10.93
62		ethyl acrylate	0.276	0.272	1.4	77	0.00	10.91
63		methylcyclohexane	0.400	0.345	13.8	70	0.00	11.24
64		1,2-dichloropropane	0.226	0.235	-4.0	84	-0.01	11.20
65		methyl methacrylate	0.061	0.053	13.1	67	0.00	11.18
66		dibromomethane	0.145	0.152	-4.8	85	0.00	11.31
67		bromodichloromethane	0.350	0.395	-12.9	90	0.00	11.46
68		2-nitropropane	0.074	0.073	1.4	81	-0.01	11.63
69		2-chloroethyl vinyl ether	0.132	0.136	-3.0	79	-0.01	11.70
70		epichlorohydrin	0.026	0.024	7.7	78	-0.01	11.77
71		cis-1,3-dichloropropene	0.391	0.388	0.8	80	0.00	11.92
72		4-methyl-2-pentanone	0.080	0.078	2.5	77	-0.01	12.01
73		3-methyl-1-butanol	0.008	0.007	12.5	70	-0.01	12.01
74	I	chlorobenzene-d5	1.000	1.000	0.0	75	0.00	13.74
75	S	toluene-d8 (s)	1.290	1.279	0.9	76	-0.01	12.24
76		toluene	0.700	0.691	1.3	80	0.00	12.32
77		trans-1,3-dichloropropene	0.437	0.453	-3.7	80	0.00	12.48
78		ethyl methacrylate	0.303	0.298	1.7	75	0.00	12.49
79		1,1,2-trichloroethane	0.196	0.206	-5.1	80	0.00	12.70
80		1,3-dichloropropane	0.370	0.386	-4.3	81	0.00	12.88
81		tetrachloroethene	0.358	0.354	1.1	79	0.00	12.88
82		2-hexanone	0.094	0.092	2.1	74	0.00	12.87
83		butyl acetate	0.172	0.153	11.0	74	0.00	12.96
84		n-butyl ether	0.983	0.951	3.3	76	0.00	13.75
85		dibromochloromethane	0.323	0.361	-11.8	84	-0.01	13.13
86		1,2-dibromoethane	0.296	0.294	0.7	75	0.00	13.29
87		chlorobenzene	0.761	0.745	2.1	76	0.00	13.78
88		1,1,1,2-tetrachloroethane	0.306	0.319	-4.2	80	0.00	13.84
89		ethylbenzene	1.291	1.280	0.9	79	0.00	13.84
90		m,p-xylene	0.506	0.495	2.2	78	-0.01	13.96
91		o-xylene	0.499	0.486	2.6	76	-0.01	14.36
92		styrene	0.822	0.813	1.1	75	0.00	14.37
93		butyl acrylate	0.493	0.468	5.1	73	-0.01	14.19
94		cis-1,4-dichloro-2-butene	0.136	0.148	-8.8	80	0.00	14.73
95		bromoform	0.241	0.259	-7.5	81	0.00	14.59

6.8.5

6

Continuing Calibration Summary

Job Number: JC93827

Sample: VI9196-ECC9163

Account: NOREASCA NOREAS, Inc.

Lab FileID: I228134.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

96	isopropylbenzene	1.298	1.317	-1.5	79	0.00	14.72
97 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	73	-0.01	16.09
98 S	4-bromofluorobenzene (s)	0.777	0.790	-1.7	77	0.00	14.91
99	1,1,2,2-tetrachloroethane	0.519	0.510	1.7	74	-0.01	14.97
100	trans-1,4-dichloro-2-bute	0.143	0.139	2.8	76	0.00	15.00
101	1,2,3-trichloropropane	0.147	0.152	-3.4	79	0.00	15.06
102	bromobenzene	0.635	0.635	0.0	78	-0.01	15.09
103	n-propylbenzene	2.511	2.472	1.6	77	0.00	15.13
104	2-chlorotoluene	0.540	0.534	1.1	74	-0.01	15.26
105	4-chlorotoluene	1.519	1.520	-0.1	78	0.00	15.37
106	1,3,5-trimethylbenzene	1.827	1.820	0.4	76	0.00	15.29
107	tert-butylbenzene	0.366	0.365	0.3	79	-0.01	15.63
108	1,2,4-trimethylbenzene	1.935	1.837	5.1	75	-0.01	15.68
109	sec-butylbenzene	2.417	2.425	-0.3	75	-0.01	15.85
110	p-isopropyltoluene	2.177	2.130	2.2	75	-0.01	15.99
111	benzyl chloride	1.054	0.807	23.4	59	-0.01	16.20
112	1,3-dichlorobenzene	1.176	1.150	2.2	75	0.00	16.02
113	1,4-dichlorobenzene	1.230	1.149	6.6	72	-0.01	16.11
114	1,2-dichlorobenzene	1.176	1.185	-0.8	75	0.00	16.50
115	n-butylbenzene	1.089	1.074	1.4	73	0.00	16.41
116	hexachloroethane	0.462	0.499	-8.0	80	0.00	16.82
117	1,2-dibromo-3-chloropropa	0.181	0.174	3.9	71	0.00	17.28
118	nitrobenzene	0.067	0.065	3.0	71	0.00	17.47
119	1,3,5-trichlorobenzene	1.215	1.122	7.7	69	-0.01	17.50
120	1,2,4-trichlorobenzene	1.119	1.066	4.7	71	0.00	18.16
121	2-ethylhexyl acrylate	1.155	1.068	7.5	69	0.00	18.18
122	hexachlorobutadiene	0.730	0.762	-4.4	76	0.00	18.29
123	naphthalene	2.367	2.311	2.4	72	-0.01	18.44
124	1,2,3-trichlorobenzene	1.081	1.052	2.7	70	-0.01	18.66
125	2-methylnaphthalene	1.581	1.403	11.3	65	0.00	19.54

(#) = Out of Range
I227384.D MI9163.M

SPCC's out = 0 CCC's out = 0
Fri Aug 30 05:44:18 2019

Continuing Calibration Summary

Job Number: JC93827

Sample: VI9197-CC9163

Account: NOREASCA NOREAS, Inc.

Lab FileID: I228137.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\da...1-19\vi9197\i228137.d Vial: 3
 Acq On : 30 Aug 2019 7:23 am Operator: THIENN
 Sample : cc9163-50 Inst : GCMSI
 Misc : MS37129,VI9197,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MI9163.M (RTE Integrator)
 Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
 Last Update : Mon Sep 13 11:48:20 2010
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	75	-0.03	7.33
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.050	1.047	0.3	74	-0.02	7.45
4	1,4-dioxane	0.106	0.098	7.5	69	-0.01	11.25
5 I	pentafluorobenzene	1.000	1.000	0.0	88	0.00	9.68
6	dichlorodifluoromethane	0.604	0.597	1.2	94	0.00	3.88
7	chlorodifluoromethane	0.499	0.520	-4.2	100	-0.01	3.91
8	chloromethane	0.523	0.454	13.2	86	-0.02	4.27
9	vinyl chloride	0.419	0.423	-1.0	94	0.00	4.51
10	1,3-butadiene	0.253	0.265	-4.7	96	0.00	4.60
11	bromomethane	0.242	0.257	-6.2	100	0.01	5.17
12	chloroethane	0.223	0.232	-4.0	98	0.00	5.37
13	vinyl bromide	0.380	0.290	23.7#	71	0.00	5.72
14	trichlorofluoromethane	0.624	0.662	-6.1	97	0.00	5.84
15	ethyl ether	0.151	0.154	-2.0	88	0.00	6.29
16	2-chloropropane	0.119	0.134	-12.6	102	0.00	6.48
17	acrolein	0.051	0.043	15.7	69	0.00	6.47
18	freon 113	0.278	0.265	4.7	88	0.00	6.70
19	1,1-dichloroethene	0.491	0.534	-8.8	100	0.00	6.69
	----- True Calc. % Drift -----						
20	acetone	200.000	195.663	2.2	86	-0.02	6.67
	----- AvgRF CCRF % Dev -----						
21	iodomethane	0.305	0.285	6.6	77	0.00	6.93
22	carbon disulfide	0.976	0.896	8.2	90	0.00	7.09
23	acetonitrile	0.048	0.045	6.3	87	0.00	7.07
24	methyl acetate	0.265	0.228	14.0	84	-0.01	7.16
25	methylene chloride	0.379	0.346	8.7	93	0.00	7.40
26	acrylonitrile	0.098	0.098	0.0	86	0.00	7.67
27	methyl tert butyl ether	0.941	0.939	0.2	91	-0.01	7.79
28	trans-1,2-dichloroethene	0.458	0.499	-9.0	98	0.00	7.82
29	hexane	0.525	0.430	18.1	78	0.00	8.21
30	1,1-dichloroethane	0.590	0.623	-5.6	97	-0.01	8.39
31	vinyl acetate	0.058	0.045	22.4#	68	0.00	8.34
32	di-isopropyl ether	1.091	1.104	-1.2	96	0.00	8.41
33	chloroprene	0.534	0.579	-8.4	99	-0.01	8.50
34	ethyl tert-butyl ether	1.002	1.093	-9.1	96	-0.01	8.87
35	2-butanone	0.037	0.035	5.4	79	-0.01	9.03
36	2,2-dichloropropane	0.576	0.551	4.3	91	-0.01	9.14
37	ethyl acetate	0.054	0.043	20.4#	83	-0.01	9.07

Continuing Calibration Summary

Job Number: JC93827

Sample: VI9197-CC9163

Account: NOREASCA NOREAS, Inc.

Lab FileID: I228137.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

38		cis-1,2-dichloroethene	0.373	0.358	4.0	88	-0.01	9.11
39		propionitrile	0.051	0.047	7.8	81	-0.02	9.08
40		methyl acrylate	0.279	0.261	6.5	83	0.00	9.16
41		methacrylonitrile	0.125	0.121	3.2	84	0.00	9.30
42		bromochloromethane	0.179	0.173	3.4	86	-0.01	9.41
43		tetrahydrofuran	0.108	0.091	15.7	81	0.00	9.44
44		chloroform	0.663	0.676	-2.0	95	-0.01	9.50
45		carbon tetrachloride	0.537	0.601	-11.9	99	0.00	9.98
46		1,1-dichloropropene	0.472	0.486	-3.0	92	0.00	9.95
47		isobutyl alcohol			-----NA-----			
48	S	dibromofluoromethane (s)	0.457	0.466	-2.0	91	0.00	9.69
49		1,1,1-trichloroethane	0.601	0.666	-10.8	101	-0.01	9.77
50		cyclohexane	0.507	0.438	13.6	83	0.00	9.91
51		tert-amyl alcohol	0.017	0.014	17.6	75	-0.01	10.05
52	I	1,4-difluorobenzene	1.000	1.000	0.0	89	0.00	10.61
53	S	1,2-dichloroethane-d4 (s)	0.331	0.379	-14.5	102	-0.01	10.11
54		isopropyl acetate	0.047	0.042	10.6	80	-0.01	10.10
55		1,2-dichloroethane	0.356	0.373	-4.8	100	0.00	10.20
56		benzene	0.922	0.913	1.0	92	0.00	10.19
57		2,2,4-trimethylpentane	0.780	0.736	5.6	86	-0.01	10.31
58		tert-amyl methyl ether	0.162	0.165	-1.9	90	-0.01	10.29
59		heptane	0.187	0.155	17.1	76	0.00	10.49
60		n-butyl alcohol	0.007	0.006#	14.3	74	-0.02	10.64
61		trichloroethene	0.251	0.251	0.0	92	0.00	10.93
62		ethyl acrylate	0.276	0.253	8.3	82	0.00	10.91
63		methylcyclohexane	0.400	0.359	10.3	83	0.00	11.24
64		1,2-dichloropropane	0.226	0.229	-1.3	93	-0.01	11.20
65		methyl methacrylate	0.061	0.050	18.0	72	0.00	11.18
66		dibromomethane	0.145	0.142	2.1	91	-0.01	11.31
67		bromodichloromethane	0.350	0.365	-4.3	95	0.00	11.46
68		2-nitropropane	0.074	0.064	13.5	82	0.00	11.64
69		2-chloroethyl vinyl ether	0.132	0.128	3.0	85	-0.01	11.70
70		epichlorohydrin	0.026	0.022	15.4	80	-0.01	11.77
71		cis-1,3-dichloropropene	0.391	0.383	2.0	90	0.00	11.92
72		4-methyl-2-pentanone	0.080	0.069	13.7	78	-0.01	12.01
73		3-methyl-1-butanol	0.008	0.006#	25.0#	67	-0.01	12.01
74	I	chlorobenzene-d5	1.000	1.000	0.0	86	0.00	13.74
75	S	toluene-d8 (s)	1.290	1.265	1.9	86	0.00	12.24
76		toluene	0.700	0.642	8.3	85	0.00	12.32
77		trans-1,3-dichloropropene	0.437	0.436	0.2	89	0.00	12.48
78		ethyl methacrylate	0.303	0.277	8.6	79	0.00	12.49
79		1,1,2-trichloroethane	0.196	0.193	1.5	86	0.00	12.70
80		1,3-dichloropropane	0.370	0.358	3.2	87	0.00	12.88
81		tetrachloroethene	0.358	0.330	7.8	84	0.00	12.88
82		2-hexanone	0.094	0.082	12.8	75	-0.01	12.86
83		butyl acetate	0.172	0.144	16.3	79	0.00	12.96
84		n-butyl ether	0.983	0.899	8.5	82	0.00	13.75
85		dibromochloromethane	0.323	0.331	-2.5	89	-0.01	13.13
86		1,2-dibromoethane	0.296	0.275	7.1	80	0.00	13.29
87		chlorobenzene	0.761	0.706	7.2	83	0.00	13.78
88		1,1,1,2-tetrachloroethane	0.306	0.300	2.0	86	0.00	13.84
89		ethylbenzene	1.291	1.204	6.7	85	0.00	13.84
90		m,p-xylene	0.506	0.462	8.7	83	-0.01	13.96
91		o-xylene	0.499	0.458	8.2	82	-0.01	14.36
92		styrene	0.822	0.755	8.2	80	0.00	14.37
93		butyl acrylate	0.493	0.440	10.8	79	-0.01	14.19
94		cis-1,4-dichloro-2-butene	0.136	0.140	-2.9	88	0.00	14.73
95		bromoform	0.241	0.236	2.1	85	0.00	14.59

6.8.6

6

Continuing Calibration Summary

Job Number: JC93827

Sample: VI9197-CC9163

Account: NOREASCA NOREAS, Inc.

Lab FileID: I228137.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

96	isopropylbenzene	1.298	1.213	6.5	83	0.00	14.72
97 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	84	-0.01	16.09
98 S	4-bromofluorobenzene (s)	0.777	0.789	-1.5	89	0.00	14.91
99	1,1,2,2-tetrachloroethane	0.519	0.460	11.4	77	-0.01	14.97
100	trans-1,4-dichloro-2-bute	0.143	0.134	6.3	85	-0.01	15.00
101	1,2,3-trichloropropane	0.147	0.140	4.8	84	0.00	15.06
102	bromobenzene	0.635	0.581	8.5	82	-0.01	15.09
103	n-propylbenzene	2.511	2.325	7.4	83	0.00	15.13
104	2-chlorotoluene	0.540	0.503	6.9	80	-0.01	15.26
105	4-chlorotoluene	1.519	1.445	4.9	85	0.00	15.37
106	1,3,5-trimethylbenzene	1.827	1.712	6.3	83	0.00	15.29
107	tert-butylbenzene	0.366	0.322	12.0	80	-0.01	15.63
108	1,2,4-trimethylbenzene	1.935	1.744	9.9	82	-0.01	15.68
109	sec-butylbenzene	2.417	2.268	6.2	81	-0.01	15.85
110	p-isopropyltoluene	2.177	2.022	7.1	81	-0.01	15.99
111	benzyl chloride	1.054	0.930	11.8	78	-0.01	16.20
112	1,3-dichlorobenzene	1.176	1.106	6.0	83	-0.01	16.01
113	1,4-dichlorobenzene	1.230	1.113	9.5	80	-0.01	16.11
114	1,2-dichlorobenzene	1.176	1.111	5.5	81	-0.01	16.49
115	n-butylbenzene	1.089	1.052	3.4	82	0.00	16.41
116	hexachloroethane	0.462	0.448	3.0	83	-0.01	16.81
117	1,2-dibromo-3-chloropropa	0.181	0.157	13.3	74	0.00	17.28
118	nitrobenzene	0.067	0.056	16.4	70	0.00	17.47
119	1,3,5-trichlorobenzene	1.215	1.175	3.3	83	-0.01	17.50
120	1,2,4-trichlorobenzene	1.119	1.100	1.7	84	-0.01	18.15
121	2-ethylhexyl acrylate	1.155	1.031	10.7	77	0.00	18.18
122	hexachlorobutadiene	0.730	0.717	1.8	82	-0.01	18.28
123	naphthalene	2.367	2.120	10.4	76	-0.01	18.44
124	1,2,3-trichlorobenzene	1.081	1.033	4.4	80	-0.01	18.66
125	2-methylnaphthalene	1.581	1.304	17.5	69	0.00	19.54

(#) = Out of Range
I227384.D MI9163.M

SPCC's out = 0 CCC's out = 0
Fri Aug 30 14:15:42 2019

Continuing Calibration Summary

Job Number: JC93827 **Sample:** VI9197-ECC9163
Account: NOREASCA NOREAS, Inc. **Lab FileID:** I228149.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\da...1-19\vi9197\i228149.d Vial: 15
 Acq On : 30 Aug 2019 1:21 pm Operator: THIENN
 Sample : ECC9163-50 Inst : GCMSI
 Misc : MS37266,VI9197,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MI9163.M (RTE Integrator)
 Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
 Last Update : Mon Sep 13 11:48:20 2010
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	78	-0.02	7.34
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.050	1.082	-3.0	80	-0.02	7.46
4	1,4-dioxane	0.106	0.091	14.2	67	-0.01	11.25
5 I	pentafluorobenzene	1.000	1.000	0.0	84	0.00	9.68
6	dichlorodifluoromethane	0.604	0.571	5.5	87	0.00	3.89
7	chlorodifluoromethane	0.499	0.503	-0.8	93	0.00	3.92
8	chloromethane	0.523	0.428	18.2	78	-0.01	4.28
9	vinyl chloride	0.419	0.389	7.2	83	0.00	4.51
10	1,3-butadiene	0.253	0.248	2.0	86	0.00	4.60
11	bromomethane	0.242	0.246	-1.7	92	0.01	5.17
12	chloroethane	0.223	0.223	0.0	90	0.00	5.37
13	vinyl bromide	0.380	0.279	26.6	66	0.00	5.72
14	trichlorofluoromethane	0.624	0.650	-4.2	91	0.00	5.84
15	ethyl ether	0.151	0.152	-0.7	84	-0.01	6.28
16	2-chloropropane	0.119	0.128	-7.6	94	0.00	6.48
17	acrolein	0.051	0.040	21.6	62	0.00	6.48
18	freon 113	0.278	0.250	10.1	80	0.00	6.70
19	1,1-dichloroethene	0.491	0.506	-3.1	91	0.00	6.69
	----- True Calc. % Drift -----						
20	acetone	200.000	207.051	-3.5	87	0.00	6.67
	----- AvgRF CCRF % Dev -----						
21	iodomethane	0.305	0.266	12.8	69	0.00	6.94
22	carbon disulfide	0.976	0.840	13.9	81	0.00	7.10
23	acetonitrile	0.048	0.046	4.2	86	0.00	7.07
24	methyl acetate	0.265	0.250	5.7	89	0.00	7.17
25	methylene chloride	0.379	0.335	11.6	86	0.00	7.40
26	acrylonitrile	0.098	0.112	-14.3	93	0.00	7.67
27	methyl tert butyl ether	0.941	0.950	-1.0	89	-0.01	7.79
28	trans-1,2-dichloroethene	0.458	0.478	-4.4	90	0.00	7.82
29	hexane	0.525	0.399	24.0	69	0.00	8.21
30	1,1-dichloroethane	0.590	0.599	-1.5	90	-0.01	8.39
31	vinyl acetate	0.058	0.041	29.3	60	0.00	8.34
32	di-isopropyl ether	1.091	1.100	-0.8	92	0.00	8.41
33	chloroprene	0.534	0.556	-4.1	91	-0.01	8.50
34	ethyl tert-butyl ether	1.002	1.087	-8.5	92	0.00	8.87
35	2-butanone	0.037	0.036	2.7	78	0.00	9.04
36	2,2-dichloropropane	0.576	0.511	11.3	81	-0.01	9.14
37	ethyl acetate	0.054	0.047	13.0	87	0.00	9.08

Continuing Calibration Summary

Job Number: JC93827

Sample: VI9197-ECC9163

Account: NOREASCA NOREAS, Inc.

Lab FileID: I228149.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

38		cis-1,2-dichloroethene	0.373	0.351	5.9	83	-0.01	9.11
39		propionitrile	0.051	0.049	3.9	82	-0.02	9.08
40		methyl acrylate	0.279	0.282	-1.1	86	0.00	9.16
41		methacrylonitrile	0.125	0.125	0.0	84	0.00	9.30
42		bromochloromethane	0.179	0.178	0.6	85	-0.01	9.41
43		tetrahydrofuran	0.108	0.096	11.1	82	0.00	9.45
44		chloroform	0.663	0.671	-1.2	91	-0.01	9.50
45		carbon tetrachloride	0.537	0.593	-10.4	94	0.00	9.98
46		1,1-dichloropropene	0.472	0.466	1.3	85	0.00	9.95
47		isobutyl alcohol			-----NA-----			
48	S	dibromofluoromethane (s)	0.457	0.471	-3.1	89	-0.01	9.69
49		1,1,1-trichloroethane	0.601	0.641	-6.7	93	-0.01	9.77
50		cyclohexane	0.507	0.429	15.4	78	0.00	9.91
51		tert-amyl alcohol	0.017	0.016	5.9	81	-0.01	10.05
52	I	1,4-difluorobenzene	1.000	1.000	0.0	85	0.00	10.61
53	S	1,2-dichloroethane-d4 (s)	0.331	0.387	-16.9	99	-0.01	10.11
54		isopropyl acetate	0.047	0.045	4.3	81	0.00	10.11
55		1,2-dichloroethane	0.356	0.385	-8.1	99	0.00	10.20
56		benzene	0.922	0.867	6.0	83	0.00	10.19
57		2,2,4-trimethylpentane	0.780	0.701	10.1	78	-0.01	10.31
58		tert-amyl methyl ether	0.162	0.171	-5.6	88	-0.01	10.29
59		heptane	0.187	0.143	23.5	67	0.00	10.49
60		n-butyl alcohol	0.007	0.006#	14.3	78	-0.01	10.64
61		trichloroethene	0.251	0.239	4.8	84	0.00	10.93
62		ethyl acrylate	0.276	0.264	4.3	82	0.00	10.91
63		methylcyclohexane	0.400	0.339	15.3	75	0.00	11.24
64		1,2-dichloropropane	0.226	0.221	2.2	86	-0.01	11.20
65		methyl methacrylate	0.061	0.052	14.8	71	0.00	11.18
66		dibromomethane	0.145	0.147	-1.4	90	-0.01	11.31
67		bromodichloromethane	0.350	0.369	-5.4	92	0.00	11.46
68		2-nitropropane	0.074	0.070	5.4	85	0.00	11.64
69		2-chloroethyl vinyl ether	0.132	0.129	2.3	82	-0.01	11.70
70		epichlorohydrin	0.026	0.023	11.5	80	-0.01	11.77
71		cis-1,3-dichloropropene	0.391	0.378	3.3	85	0.00	11.92
72		4-methyl-2-pentanone	0.080	0.074	7.5	79	-0.01	12.01
73		3-methyl-1-butanol	0.008	0.006#	25.0	72	-0.01	12.01
74	I	chlorobenzene-d5	1.000	1.000	0.0	83	0.00	13.74
75	S	toluene-d8 (s)	1.290	1.260	2.3	83	0.00	12.24
76		toluene	0.700	0.614	12.3	79	0.00	12.32
77		trans-1,3-dichloropropene	0.437	0.438	-0.2	86	0.00	12.48
78		ethyl methacrylate	0.303	0.288	5.0	80	0.00	12.49
79		1,1,2-trichloroethane	0.196	0.195	0.5	84	0.00	12.70
80		1,3-dichloropropane	0.370	0.364	1.6	85	0.00	12.88
81		tetrachloroethene	0.358	0.314	12.3	77	0.00	12.88
82		2-hexanone	0.094	0.086	8.5	77	-0.01	12.86
83		butyl acetate	0.172	0.148	14.0	79	0.00	12.96
84		n-butyl ether	0.983	0.863	12.2	76	0.00	13.75
85		dibromochloromethane	0.323	0.339	-5.0	88	-0.01	13.13
86		1,2-dibromoethane	0.296	0.283	4.4	80	0.00	13.29
87		chlorobenzene	0.761	0.679	10.8	77	0.00	13.78
88		1,1,1,2-tetrachloroethane	0.306	0.300	2.0	84	0.00	13.84
89		ethylbenzene	1.291	1.147	11.2	78	0.00	13.84
90		m,p-xylene	0.506	0.447	11.7	78	-0.01	13.96
91		o-xylene	0.499	0.442	11.4	77	-0.01	14.36
92		styrene	0.822	0.741	9.9	76	0.00	14.37
93		butyl acrylate	0.493	0.453	8.1	79	-0.01	14.19
94		cis-1,4-dichloro-2-butene	0.136	0.146	-7.4	88	-0.01	14.72
95		bromoform	0.241	0.243	-0.8	85	0.00	14.59

6.8.7

6

Continuing Calibration Summary

Job Number: JC93827

Sample: VI9197-ECC9163

Account: NOREASCA NOREAS, Inc.

Lab FileID: I228149.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

96	isopropylbenzene	1.298	1.165	10.2	77	-0.01	14.71
97 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	80	-0.01	16.09
98 S	4-bromofluorobenzene (s)	0.777	0.792	-1.9	85	0.00	14.91
99	1,1,2,2-tetrachloroethane	0.519	0.478	7.9	76	-0.01	14.97
100	trans-1,4-dichloro-2-bute	0.143	0.138	3.5	83	0.00	15.00
101	1,2,3-trichloropropane	0.147	0.150	-2.0	85	0.00	15.06
102	bromobenzene	0.635	0.582	8.3	78	-0.01	15.09
103	n-propylbenzene	2.511	2.243	10.7	76	0.00	15.13
104	2-chlorotoluene	0.540	0.494	8.5	75	-0.01	15.26
105	4-chlorotoluene	1.519	1.396	8.1	78	0.00	15.37
106	1,3,5-trimethylbenzene	1.827	1.691	7.4	78	0.00	15.29
107	tert-butylbenzene	0.366	0.324	11.5	77	-0.01	15.63
108	1,2,4-trimethylbenzene	1.935	1.710	11.6	77	-0.01	15.68
109	sec-butylbenzene	2.417	2.167	10.3	74	-0.01	15.85
110	p-isopropyltoluene	2.177	1.963	9.8	75	-0.01	15.99
111	benzyl chloride	1.054	0.845	19.8	67	-0.01	16.20
112	1,3-dichlorobenzene	1.176	1.059	9.9	75	0.00	16.02
113	1,4-dichlorobenzene	1.230	1.068	13.2	73	-0.01	16.11
114	1,2-dichlorobenzene	1.176	1.112	5.4	78	0.00	16.50
115	n-butylbenzene	1.089	0.984	9.6	73	0.00	16.41
116	hexachloroethane	0.462	0.453	1.9	80	0.00	16.82
117	1,2-dibromo-3-chloropropa	0.181	0.162	10.5	73	0.00	17.28
118	nitrobenzene	0.067	0.060	10.4	71	0.00	17.47
119	1,3,5-trichlorobenzene	1.215	1.089	10.4	73	-0.01	17.50
120	1,2,4-trichlorobenzene	1.119	1.026	8.3	75	-0.01	18.15
121	2-ethylhexyl acrylate	1.155	1.025	11.3	73	0.00	18.18
122	hexachlorobutadiene	0.730	0.693	5.1	75	-0.01	18.28
123	naphthalene	2.367	2.200	7.1	75	-0.01	18.44
124	1,2,3-trichlorobenzene	1.081	1.030	4.7	76	-0.01	18.66
125	2-methylnaphthalene	1.581	1.325	16.2	67	0.00	19.54

(#) = Out of Range
I227384.D MI9163.M

SPCC's out = 0 CCC's out = 0
Fri Aug 30 14:45:51 2019

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: VI9163	Method: SW846 8260C	Instrument ID: GCMSI
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
VI9163-BFB	I227377.D	07/23/19 16:19	n/a	BFB Tune
VI9163-IC9163	I227378.D	07/23/19 17:08	n/a	Initial cal 0.5
VI9163-IC9163	I227379.D	07/23/19 17:39	n/a	Initial cal 1
VI9163-IC9163	I227380.D	07/23/19 18:10	n/a	Initial cal 2
VI9163-IC9163	I227381.D	07/23/19 18:40	n/a	Initial cal 4
VI9163-IC9163	I227382.D	07/23/19 19:11	n/a	Initial cal 8
VI9163-IC9163	I227383.D	07/23/19 19:42	n/a	Initial cal 20
VI9163-ICC9163	I227384.D	07/23/19 20:13	n/a	Initial cal 50
VI9163-IC9163	I227385.D	07/23/19 20:44	n/a	Initial cal 100
VI9163-IC9163	I227386.D	07/23/19 21:15	n/a	Initial cal 200
VI9163-ICV9163	I227389.D	07/23/19 22:47	n/a	Initial cal verification 50
VI9163-ICV9163	I227390.D	07/23/19 23:18	n/a	Initial cal verification 50

6.9.1
6

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: VI9196	Method: SW846 8260C	Instrument ID: GCMSI
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
VI9196-BFB	I228121.D	08/29/19 07:59	n/a	BFB Tune
VI9196-CC9163	I228121.D	08/29/19 07:59	n/a	Continuing cal 50
VI9196-BS	I228122.D	08/29/19 08:36	n/a	Blank Spike
VI9196-MB	I228124.D	08/29/19 09:34	n/a	Method Blank
JC93733-5	I228125.D	08/29/19 10:13	n/a	(used for QC only; not part of job JC93827)
JC93733-6	I228126.D	08/29/19 10:42	n/a	(used for QC only; not part of job JC93827)
ZZZZZZ	I228128.D	08/29/19 12:39	n/a	(unrelated sample)
JC93733-5MS	I228129.D	08/29/19 13:15	n/a	Matrix Spike
JC93733-6DUP	I228131.D	08/29/19 14:14	n/a	Duplicate
ZZZZZZ	I228132.D	08/29/19 14:43	n/a	(unrelated sample)
JC93827-1	I228133.D	08/29/19 15:12	n/a	NWIRP-S1-WC-C-001
VI9196-ECC9163	I228134.D	08/29/19 15:41	n/a	Ending cal 50

6.9.2
6

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: VI9197	Method: SW846 8260C	Instrument ID: GCMSI
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
VI9197-BFB	I228137.D	08/30/19 07:23	n/a	BFB Tune
VI9197-CC9163	I228137.D	08/30/19 07:23	n/a	Continuing cal 50
VI9197-BS	I228138.D	08/30/19 07:58	n/a	Blank Spike
VI9197-MB	I228140.D	08/30/19 08:56	n/a	Method Blank
JC93827-1	I228141.D	08/30/19 09:25	n/a	NWIRP-S1-WC-C-001
JC93502-2	I228142.D	08/30/19 09:54	n/a	(used for QC only; not part of job JC93827)
JC93502-3	I228143.D	08/30/19 10:24	n/a	(used for QC only; not part of job JC93827)
ZZZZZZ	I228144.D	08/30/19 10:53	n/a	(unrelated sample)
JC93502-2MS	I228145.D	08/30/19 11:24	n/a	Matrix Spike
JC93502-3DUP	I228147.D	08/30/19 12:22	n/a	Duplicate
ZZZZZZ	I228148.D	08/30/19 12:52	n/a	(unrelated sample)
VI9197-ECC9163	I228149.D	08/30/19 13:21	n/a	Ending cal 50

6.9.3

6

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22364-MB1	Z139912.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895

The QC reported here applies to the following samples:

Method: SW846 8270D

JC93827-1

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	67	16	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	28	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	59	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	170	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	170	36	ug/kg	
95-48-7	2-Methylphenol	ND	67	21	ug/kg	
	3&4-Methylphenol	ND	67	27	ug/kg	
88-75-5	2-Nitrophenol	ND	170	22	ug/kg	
100-02-7	4-Nitrophenol	ND	330	89	ug/kg	
87-86-5	Pentachlorophenol	ND	130	31	ug/kg	
108-95-2	Phenol	ND	67	17	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	22	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	20	ug/kg	
83-32-9	Acenaphthene	ND	33	11	ug/kg	
208-96-8	Acenaphthylene	ND	33	17	ug/kg	
98-86-2	Acetophenone	ND	170	7.2	ug/kg	
120-12-7	Anthracene	ND	33	20	ug/kg	
1912-24-9	Atrazine	ND	67	14	ug/kg	
56-55-3	Benzo(a)anthracene	ND	33	9.4	ug/kg	
50-32-8	Benzo(a)pyrene	ND	33	15	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	33	15	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	33	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	33	16	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	67	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	67	8.1	ug/kg	
92-52-4	1,1'-Biphenyl	ND	67	4.6	ug/kg	
100-52-7	Benzaldehyde	ND	170	8.3	ug/kg	
91-58-7	2-Chloronaphthalene	ND	67	7.9	ug/kg	
106-47-8	4-Chloroaniline	ND	170	12	ug/kg	
86-74-8	Carbazole	ND	67	4.8	ug/kg	
105-60-2	Caprolactam	ND	67	13	ug/kg	
218-01-9	Chrysene	ND	33	10	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	67	7.1	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	67	14	ug/kg	

Method Blank Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22364-MB1	Z139912.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895

The QC reported here applies to the following samples:

Method: SW846 8270D

JC93827-1

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	67	12	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	67	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	33	10	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	33	17	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	67	28	ug/kg	
123-91-1	1,4-Dioxane	ND	33	22	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	33	15	ug/kg	
132-64-9	Dibenzofuran	ND	67	14	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	67	5.4	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	67	8.3	ug/kg	
84-66-2	Diethyl phthalate	ND	67	7.1	ug/kg	
131-11-3	Dimethyl phthalate	ND	67	5.9	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	67	7.8	ug/kg	
206-44-0	Fluoranthene	ND	33	15	ug/kg	
86-73-7	Fluorene	ND	33	15	ug/kg	
118-74-1	Hexachlorobenzene	ND	67	8.4	ug/kg	
87-68-3	Hexachlorobutadiene	ND	33	13	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	330	13	ug/kg	
67-72-1	Hexachloroethane	ND	170	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	33	16	ug/kg	
78-59-1	Isophorone	ND	67	7.1	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	7.5	ug/kg	
88-74-4	2-Nitroaniline	ND	170	7.9	ug/kg	
99-09-2	3-Nitroaniline	ND	170	8.3	ug/kg	
100-01-6	4-Nitroaniline	ND	170	8.6	ug/kg	
91-20-3	Naphthalene	ND	33	9.4	ug/kg	
98-95-3	Nitrobenzene	ND	67	13	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	67	9.6	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	12	ug/kg	
85-01-8	Phenanthrene	ND	33	11	ug/kg	
129-00-0	Pyrene	ND	33	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	8.5	ug/kg	

7.1.1
7

Method Blank Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22364-MB1	Z139912.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895

The QC reported here applies to the following samples:

Method: SW846 8270D

JC93827-1

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	63%	23-115%
4165-62-2	Phenol-d5	61%	27-114%
118-79-6	2,4,6-Tribromophenol	60%	19-152%
4165-60-0	Nitrobenzene-d5	68%	26-134%
321-60-8	2-Fluorobiphenyl	60%	39-124%
1718-51-0	Terphenyl-d14	72%	36-134%

Blank Spike Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22364-BS1	Z139913.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895

The QC reported here applies to the following samples:

Method: SW846 8270D

JC93827-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
95-57-8	2-Chlorophenol	1670	1200	72	44-122
59-50-7	4-Chloro-3-methyl phenol	1670	1270	76	50-123
120-83-2	2,4-Dichlorophenol	1670	1250	75	48-122
105-67-9	2,4-Dimethylphenol	1670	1380	83	48-124
51-28-5	2,4-Dinitrophenol	3330	2480	74	34-146
534-52-1	4,6-Dinitro-o-cresol	1670	1210	73	49-140
95-48-7	2-Methylphenol	1670	1240	74	40-126
	3&4-Methylphenol	1670	1260	76	40-127
88-75-5	2-Nitrophenol	1670	1200	72	44-133
100-02-7	4-Nitrophenol	1670	1490	89	35-153
87-86-5	Pentachlorophenol	1670	1500	90	15-149
108-95-2	Phenol	1670	1160	70	50-109
58-90-2	2,3,4,6-Tetrachlorophenol	1670	1290	77	44-132
95-95-4	2,4,5-Trichlorophenol	1670	1270	76	45-124
88-06-2	2,4,6-Trichlorophenol	1670	1350	81	57-122
83-32-9	Acenaphthene	1670	1220	73	53-119
208-96-8	Acenaphthylene	1670	1240	74	41-125
98-86-2	Acetophenone	1670	1210	73	52-112
120-12-7	Anthracene	1670	1290	77	51-120
1912-24-9	Atrazine	1670	1320	79	49-139
56-55-3	Benzo(a)anthracene	1670	1220	73	54-118
50-32-8	Benzo(a)pyrene	1670	1290	77	55-121
205-99-2	Benzo(b)fluoranthene	1670	1310	79	57-116
191-24-2	Benzo(g,h,i)perylene	1670	1300	78	40-124
207-08-9	Benzo(k)fluoranthene	1670	1290	77	59-116
101-55-3	4-Bromophenyl phenyl ether	1670	1300	78	60-122
85-68-7	Butyl benzyl phthalate	1670	1280	77	51-134
92-52-4	1,1'-Biphenyl	1670	1190	71	46-122
100-52-7	Benzaldehyde	1670	859	52	14-139
91-58-7	2-Chloronaphthalene	1670	1250	75	49-120
106-47-8	4-Chloroaniline	1670	898	54	10-115
86-74-8	Carbazole	1670	1210	73	52-124
105-60-2	Caprolactam	1670	1100	66	16-139
218-01-9	Chrysene	1670	1170	70	51-115
111-91-1	bis(2-Chloroethoxy)methane	1670	1280	77	36-131
111-44-4	bis(2-Chloroethyl)ether	1670	1230	74	41-131

* = Outside of Control Limits.

7.2.1
7

Blank Spike Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22364-BS1	Z139913.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895

The QC reported here applies to the following samples:

Method: SW846 8270D

JC93827-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-60-1	2,2'-Oxybis(1-chloropropane)	1670	1450	87	22-134
7005-72-3	4-Chlorophenyl phenyl ether	1670	1350	81	56-118
121-14-2	2,4-Dinitrotoluene	1670	1270	76	57-131
606-20-2	2,6-Dinitrotoluene	1670	1260	76	57-132
91-94-1	3,3'-Dichlorobenzidine	3330	2160	65	10-129
123-91-1	1,4-Dioxane	1670	758	45	10-110
53-70-3	Dibenzo(a,h)anthracene	1670	1240	74	48-121
132-64-9	Dibenzofuran	1670	1220	73	51-119
84-74-2	Di-n-butyl phthalate	1670	1320	79	59-125
117-84-0	Di-n-octyl phthalate	1670	1430	86	47-147
84-66-2	Diethyl phthalate	1670	1270	76	57-116
131-11-3	Dimethyl phthalate	1670	1260	76	56-116
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1270	76	53-133
206-44-0	Fluoranthene	1670	1250	75	58-117
86-73-7	Fluorene	1670	1330	80	56-114
118-74-1	Hexachlorobenzene	1670	1230	74	50-128
87-68-3	Hexachlorobutadiene	1670	1390	83	43-129
77-47-4	Hexachlorocyclopentadiene	3330	2960	89	15-140
67-72-1	Hexachloroethane	1670	1190	71	43-123
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1280	77	49-124
78-59-1	Isophorone	1670	1370	82	38-128
91-57-6	2-Methylnaphthalene	1670	1320	79	37-124
88-74-4	2-Nitroaniline	1670	932	56	45-144
99-09-2	3-Nitroaniline	1670	949	57	10-134
100-01-6	4-Nitroaniline	1670	1200	72	41-130
91-20-3	Naphthalene	1670	1290	77	44-116
98-95-3	Nitrobenzene	1670	1320	79	36-132
621-64-7	N-Nitroso-di-n-propylamine	1670	1290	77	38-125
86-30-6	N-Nitrosodiphenylamine	1670	1280	77	51-122
85-01-8	Phenanthrene	1670	1260	76	53-119
129-00-0	Pyrene	1670	1270	76	54-124
95-94-3	1,2,4,5-Tetrachlorobenzene	1670	1360	82	45-128

* = Outside of Control Limits.

7.2.1
7

Blank Spike Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22364-BS1	Z139913.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895

The QC reported here applies to the following samples:

Method: SW846 8270D

JC93827-1

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	71%	23-115%
4165-62-2	Phenol-d5	72%	27-114%
118-79-6	2,4,6-Tribromophenol	74%	19-152%
4165-60-0	Nitrobenzene-d5	78%	26-134%
321-60-8	2-Fluorobiphenyl	72%	39-124%
1718-51-0	Terphenyl-d14	73%	36-134%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22364-MS	Z139914.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895
OP22364-MSD	Z139915.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895
JC93827-1	Z139916.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895

The QC reported here applies to the following samples:

Method: SW846 8270D

JC93827-1

CAS No.	Compound	JC93827-1 ug/kg	Spike Q	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	70 U		1710	205	12	1710	54.5	3* a	116* b 10-137/34
59-50-7	4-Chloro-3-methyl phenol	180 U		1710	697	41	1710	453	27	42* b 11-147/35
120-83-2	2,4-Dichlorophenol	180 U		1710	133	8* a	1710	ND	0* a	200* b 15-140/34
105-67-9	2,4-Dimethylphenol	180 U		1710	858	50	1710	1050	61	20 10-151/34
51-28-5	2,4-Dinitrophenol	180 U		3430	172	5* a	3420	182	5* a	6 10-148/49
534-52-1	4,6-Dinitro-o-cresol	180 U		1710	115	7* a	1710	161	9* a	33 10-150/48
95-48-7	2-Methylphenol	70 U		1710	871	51	1710	866	51	1 10-138/33
	3&4-Methylphenol	70 U		1710	835	49	1710	775	45	7 10-143/33
88-75-5	2-Nitrophenol	180 U		1710	52.2	3* a	1710	ND	0* a	200* b 10-150/39
100-02-7	4-Nitrophenol	350 U		1710	ND	0* a	1710	ND	0* a	nc 10-163/38
87-86-5	Pentachlorophenol	140 U		1710	154	9* a	1710	135	8* a	13 10-148/39
108-95-2	Phenol	70 U		1710	603	35	1710	476	28	24 24-114/32
58-90-2	2,3,4,6-Tetrachlorophenol	180 U		1710	61.8	4* a	1710	40.4	2* a	42* b 14-140/38
95-95-4	2,4,5-Trichlorophenol	180 U		1710	62.6	4* a	1710	ND	0* a	200* b 10-146/36
88-06-2	2,4,6-Trichlorophenol	180 U		1710	39.7	2* a	1710	24.0	1* a	49* b 16-148/36
83-32-9	Acenaphthene	35 U		1710	2520	147* a	1710	1070	63	81* b 21-136/34
208-96-8	Acenaphthylene	35 U		1710	2550	149* a	1710	1110	65	79* b 10-143/36
98-86-2	Acetophenone	180 U		1710	1170	68	1710	1060	62	10 24-127/31
120-12-7	Anthracene	35 U		1710	2580	151* a	1710	1170	68	75* b 10-147/39
1912-24-9	Atrazine	70 U		1710	1290	75	1710	1260	74	2 10-161/38
56-55-3	Benzo(a)anthracene	35 U		1710	2200	128	1710	1120	66	65* b 10-151/41
50-32-8	Benzo(a)pyrene	35 U		1710	2470	144	1710	1160	68	72* b 10-149/40
205-99-2	Benzo(b)fluoranthene	35 U		1710	2400	140	1710	1130	66	72* b 10-147/42
191-24-2	Benzo(g,h,i)perylene	35 U		1710	2560	149	1710	1180	69	74* b 10-150/41
207-08-9	Benzo(k)fluoranthene	35 U		1710	2410	141	1710	1190	70	68* b 12-142/41
101-55-3	4-Bromophenyl phenyl ether	70 U		1710	2590	151* a	1710	1160	68	76* b 26-138/37
85-68-7	Butyl benzyl phthalate	70 U		1710	2280	133	1710	1210	71	61* b 24-143/36
92-52-4	1,1'-Biphenyl	70 U		1710	1160	68	1710	997	58	15 18-138/32
100-52-7	Benzaldehyde	180 U		1710	785	46	1710	530	31	39* b 10-149/37
91-58-7	2-Chloronaphthalene	70 U		1710	2570	150* a	1710	1070	63	82* b 24-130/31
106-47-8	4-Chloroaniline	180 U		1710	758	44	1710	716	42	6 10-111/52
86-74-8	Carbazole	70 U		1710	1160	68	1710	1130	66	3 12-146/39
105-60-2	Caprolactam	70 U		1710	1040	61	1710	1010	59	3 10-147/40
218-01-9	Chrysene	35 U		1710	2140	125	1710	1090	64	65* b 10-151/41
111-91-1	bis(2-Chloroethoxy)methane	70 U		1710	2550	149* a	1710	1040	61	84* b 10-144/35
111-44-4	bis(2-Chloroethyl)ether	70 U		1710	2520	147* a	1710	1010	59	86* b 12-142/35

* = Outside of Control Limits.

7.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22364-MS	Z139914.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895
OP22364-MSD	Z139915.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895
JC93827-1	Z139916.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895

The QC reported here applies to the following samples:

Method: SW846 8270D

JC93827-1

CAS No.	Compound	JC93827-1 ug/kg	Spike Q	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD	
108-60-1	2,2'-Oxybis(1-chloropropane)	70 U		1710	2780	162* a	1710	1220	71	78* b	10-137/33
7005-72-3	4-Chlorophenyl phenyl ether	70 U		1710	2860	167* a	1710	1220	71	80* b	21-136/35
121-14-2	2,4-Dinitrotoluene	35 U		1710	2380	139	1710	1150	67	70* b	14-148/41
606-20-2	2,6-Dinitrotoluene	35 U		1710	2510	146	1710	1180	69	72* b	14-152/40
91-94-1	3,3'-Dichlorobenzidine	70 U		3430	3270	95	3420	1920	56	52* b	10-137/47
123-91-1	1,4-Dioxane	35 U		1710	724	42	1710	601	35	19	10-110/40
53-70-3	Dibenzo(a,h)anthracene	35 U		1710	2400	140	1710	1080	63	76* b	10-152/38
132-64-9	Dibenzofuran	70 U		1710	1220	71	1710	1130	66	8	17-141/36
84-74-2	Di-n-butyl phthalate	70 U		1710	2570	150* a	1710	1200	70	73* b	26-137/35
117-84-0	Di-n-octyl phthalate	70 U		1710	2670	156* a	1710	1280	75	70* b	23-145/36
84-66-2	Diethyl phthalate	70 U		1710	2470	144* a	1710	1210	71	68* b	25-133/35
131-11-3	Dimethyl phthalate	70 U		1710	2330	136* a	1710	1150	67	68* b	21-134/36
117-81-7	bis(2-Ethylhexyl)phthalate	70 U		1710	2290	134	1710	1210	71	62* b	26-144/39
206-44-0	Fluoranthene	35 U		1710	2510	146	1710	1170	68	73* b	10-151/44
86-73-7	Fluorene	35 U		1710	2810	164* a	1710	1210	71	80* b	19-133/36
118-74-1	Hexachlorobenzene	70 U		1710	2420	141	1710	1110	65	74* b	18-142/37
87-68-3	Hexachlorobutadiene	35 U		1710	2710	158* a	1710	1130	66	82* b	16-137/32
77-47-4	Hexachlorocyclopentadiene	350 U		3430	4190	122	3420	2250	66	60* b	10-150/50
67-72-1	Hexachloroethane	180 U		1710	2450	143* a	1710	1040	61	81* b	10-131/38
193-39-5	Indeno(1,2,3-cd)pyrene	35 U		1710	2580	151* a	1710	1150	67	77* b	10-148/41
78-59-1	Isophorone	70 U		1710	2740	160* a	1710	1160	68	81* b	11-142/33
91-57-6	2-Methylnaphthalene	35 U		1710	1290	75	1710	1140	67	12	10-141/35
88-74-4	2-Nitroaniline	180 U		1710	944	55	1710	914	53	3	14-156/38
99-09-2	3-Nitroaniline	180 U		1710	1040	61	1710	1070	63	3	10-144/45
100-01-6	4-Nitroaniline	180 U		1710	1280	75	1710	1160	68	10	10-156/44
91-20-3	Naphthalene	35 U		1710	2710	158* a	1710	1050	61	88* b	10-136/36
98-95-3	Nitrobenzene	70 U		1710	2560	149* a	1710	1100	64	80* b	10-142/34
621-64-7	N-Nitroso-di-n-propylamine	70 U		1710	2520	147* a	1710	1170	68	73* b	10-142/31
86-30-6	N-Nitrosodiphenylamine	180 U		1710	2580	151	1710	1180	69	74* b	10-156/37
85-01-8	Phenanthrene	35 U		1710	2510	146* a	1710	1140	67	75* b	11-145/45
129-00-0	Pyrene	35 U		1710	2320	135	1710	1160	68	67* b	11-155/44
95-94-3	1,2,4,5-Tetrachlorobenzene	180 U		1710	2710	158* a	1710	1160	68	80* b	23-136/32

* = Outside of Control Limits.

7.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22364-MS	Z139914.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895
OP22364-MSD	Z139915.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895
JC93827-1	Z139916.D	1	08/29/19	CS	08/28/19	OP22364	EZ6895

The QC reported here applies to the following samples:

Method: SW846 8270D

JC93827-1

CAS No.	Surrogate Recoveries	MS	MSD	JC93827-1	Limits
367-12-4	2-Fluorophenol	8% * a	4% * a	3% * c	23-115%
4165-62-2	Phenol-d5	40%	34%	31% c	27-114%
118-79-6	2,4,6-Tribromophenol	4% * a	4% * a	2% * c	19-152%
4165-60-0	Nitrobenzene-d5	73%	67%	67%	26-134%
321-60-8	2-Fluorobiphenyl	68%	62%	58%	39-124%
1718-51-0	Terphenyl-d14	63%	69%	71%	36-134%

- (a) Outside control limits due to matrix interference.
- (b) Outside of control limits.
- (c) Outside control limits due to matrix interference, confirmed by MS/MSD.

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: EZ6880-DFTPP	Injection Date: 08/15/19
Lab File ID: Z139630.D	Injection Time: 15:20
Instrument ID: GCMSZ	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	28440	33.4	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	37928	44.5	Pass
70	Less than 2.0% of mass 69	109	0.13 (0.29) ^a	Pass
127	40.0 - 60.0% of mass 198	41775	49.0	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	85248	100.0	Pass
199	5.0 - 9.0% of mass 198	5925	6.95	Pass
275	10.0 - 30.0% of mass 198	22732	26.7	Pass
365	1.0 - 100.0% of mass 198	3291	3.86	Pass
441	Present, but less than mass 443	7459	8.75 (75.4) ^b	Pass
442	40.0 - 100.0% of mass 198	51883	60.9	Pass
443	17.0 - 23.0% of mass 442	9887	11.6 (19.1) ^c	Pass

- (a) Value is % of mass 69
- (b) Value is % of mass 443
- (c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ6880-IC6880	Z139631.D	08/15/19	15:38	00:18	Initial cal 100
EZ6880-IC6880	Z139632.D	08/15/19	16:05	00:45	Initial cal 80
EZ6880-ICC6880	Z139633.D	08/15/19	16:32	01:12	Initial cal 50
EZ6880-IC6880	Z139634.D	08/15/19	17:00	01:40	Initial cal 25
EZ6880-IC6880	Z139635.D	08/15/19	17:27	02:07	Initial cal 10
EZ6880-IC6880	Z139636.D	08/15/19	17:53	02:33	Initial cal 5
EZ6880-IC6880	Z139637.D	08/15/19	18:20	03:00	Initial cal 2
EZ6880-IC6880	Z139638.D	08/15/19	18:47	03:27	Initial cal 1
EZ6880-ICV6880	Z139640.D	08/15/19	19:41	04:21	Initial cal verification 50
EZ6880-ICV6880	Z139641.D	08/15/19	20:08	04:48	Initial cal verification 50
EZ6880-ICV6880	Z139642.D	08/15/19	20:35	05:15	Initial cal verification 50
EZ6880-ICV6880	Z139643.D	08/15/19	21:02	05:42	Initial cal verification 50
EZ6880-ICV6880	Z139644.D	08/15/19	21:29	06:09	Initial cal verification 50

7.4.1
7

Instrument Performance Check (DFTPP)

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: EZ6881-DFTPP

Injection Date: 08/15/19

Lab File ID: Z139645.D

Injection Time: 21:51

Instrument ID: GCMSZ

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	30132	35.7	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	38518	45.6	Pass
70	Less than 2.0% of mass 69	220	0.26 (0.57) ^a	Pass
127	40.0 - 60.0% of mass 198	42955	50.9	Pass
197	Less than 1.0% of mass 198	314	0.37	Pass
198	Base peak, 100% relative abundance	84459	100.0	Pass
199	5.0 - 9.0% of mass 198	5648	6.69	Pass
275	10.0 - 30.0% of mass 198	21837	25.9	Pass
365	1.0 - 100.0% of mass 198	2893	3.43	Pass
441	Present, but less than mass 443	7129	8.44 (72.9) ^b	Pass
442	40.0 - 100.0% of mass 198	49875	59.1	Pass
443	17.0 - 23.0% of mass 442	9777	11.6 (19.6) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ6881-IC6881	Z139646.D	08/15/19	22:06	00:15	Initial cal 100
EZ6881-IC6881	Z139647.D	08/15/19	22:34	00:43	Initial cal 80
EZ6881-ICC6881	Z139648.D	08/15/19	22:59	01:08	Initial cal 50
EZ6881-IC6881	Z139649.D	08/15/19	23:26	01:35	Initial cal 25
EZ6881-IC6881	Z139650.D	08/15/19	23:53	02:02	Initial cal 10
EZ6881-IC6881	Z139651.D	08/16/19	00:20	02:29	Initial cal 5
EZ6881-IC6881	Z139652.D	08/16/19	00:47	02:56	Initial cal 2
EZ6881-IC6881	Z139653.D	08/16/19	01:14	03:23	Initial cal 1
EZ6881-ICV6881	Z139654.D	08/16/19	01:40	03:49	Initial cal verification 50

7.4.2

7

Instrument Performance Check (DFTPP)

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: EZ6882-DFTPP	Injection Date: 08/16/19
Lab File ID: Z139655.D	Injection Time: 02:03
Instrument ID: GCMSZ	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	29717	35.7	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	37882	45.5	Pass
70	Less than 2.0% of mass 69	118	0.14 (0.31) ^a	Pass
127	40.0 - 60.0% of mass 198	43197	51.9	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	83291	100.0	Pass
199	5.0 - 9.0% of mass 198	5530	6.64	Pass
275	10.0 - 30.0% of mass 198	21851	26.2	Pass
365	1.0 - 100.0% of mass 198	3048	3.66	Pass
441	Present, but less than mass 443	7575	9.09 (76.4) ^b	Pass
442	40.0 - 100.0% of mass 198	53083	63.7	Pass
443	17.0 - 23.0% of mass 442	9916	11.9 (18.7) ^c	Pass

- (a) Value is % of mass 69
- (b) Value is % of mass 443
- (c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ6882-IC6882	Z139656.D	08/16/19	02:17	00:14	Initial cal 100
EZ6882-IC6882	Z139657.D	08/16/19	02:44	00:41	Initial cal 80
EZ6882-ICC6882	Z139658.D	08/16/19	03:11	01:08	Initial cal 50
EZ6882-IC6882	Z139659.D	08/16/19	03:38	01:35	Initial cal 25
EZ6882-IC6882	Z139660.D	08/16/19	04:05	02:02	Initial cal 10
EZ6882-IC6882	Z139661.D	08/16/19	04:31	02:28	Initial cal 5
EZ6882-IC6882	Z139662.D	08/16/19	04:58	02:55	Initial cal 2
EZ6882-IC6882	Z139663.D	08/16/19	05:25	03:22	Initial cal 1
EZ6882-ICV6882	Z139664.D	08/16/19	05:52	03:49	Initial cal verification 50
EZ6882-ICV6882	Z139665.D	08/16/19	06:18	04:15	Initial cal verification 50

7.4.3
7

Instrument Performance Check (DFTPP)

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: EZ6883-DFTPP	Injection Date: 08/16/19
Lab File ID: Z139667.D	Injection Time: 10:50
Instrument ID: GCMSZ	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	16504	33.6	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	20374	41.5	Pass
70	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
127	40.0 - 60.0% of mass 198	23804	48.5	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	49053	100.0	Pass
199	5.0 - 9.0% of mass 198	3443	7.02	Pass
275	10.0 - 30.0% of mass 198	13348	27.2	Pass
365	1.0 - 100.0% of mass 198	1713	3.49	Pass
441	Present, but less than mass 443	4728	9.64 (84.8) ^b	Pass
442	40.0 - 100.0% of mass 198	32764	66.8	Pass
443	17.0 - 23.0% of mass 442	5578	11.4 (17.0) ^c	Pass

- (a) Value is % of mass 69
- (b) Value is % of mass 443
- (c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ6883-ICV6880	Z139668.D	08/16/19	11:15	00:25	Initial cal verification 50
EZ6883-ICV6880	Z139669.D	08/16/19	11:42	00:52	Initial cal verification 50
EZ6883-ICV6882	Z139670.D	08/16/19	14:09	03:19	Initial cal verification 50

7.4.4
7

Instrument Performance Check (DFTPP)

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: EZ6895-DFTPP	Injection Date: 08/29/19
Lab File ID: Z139907.D	Injection Time: 01:54
Instrument ID: GCMSZ	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	17478	35.0	Pass
68	Less than 2.0% of mass 69	263	0.53 (1.13) ^a	Pass
69	Mass 69 relative abundance	23326	46.8	Pass
70	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
127	40.0 - 60.0% of mass 198	24358	48.8	Pass
197	Less than 1.0% of mass 198	213	0.43	Pass
198	Base peak, 100% relative abundance	49866	100.0	Pass
199	5.0 - 9.0% of mass 198	3567	7.15	Pass
275	10.0 - 30.0% of mass 198	12649	25.4	Pass
365	1.0 - 100.0% of mass 198	1978	3.97	Pass
441	Present, but less than mass 443	4339	8.70 (76.2) ^b	Pass
442	40.0 - 100.0% of mass 198	29155	58.5	Pass
443	17.0 - 23.0% of mass 442	5693	11.4 (19.5) ^c	Pass

- (a) Value is % of mass 69
- (b) Value is % of mass 443
- (c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ6895-CC6880	Z139908.D	08/29/19	02:10	00:16	Continuing cal 50
EZ6895-CC6881	Z139909.D	08/29/19	02:36	00:42	Continuing cal 50
EZ6895-CC6882	Z139910.D	08/29/19	03:03	01:09	Continuing cal 50
OP22364-MB1	Z139912.D	08/29/19	04:57	03:03	Method Blank
OP22364-BS1	Z139913.D	08/29/19	05:50	03:56	Blank Spike
OP22364-MS	Z139914.D	08/29/19	06:17	04:23	Matrix Spike
OP22364-MSD	Z139915.D	08/29/19	06:44	04:50	Matrix Spike Duplicate
JC93827-1	Z139916.D	08/29/19	07:10	05:16	NWIRP-S1-WC-C-001
EZ6895-ECC6880	Z139917.D	08/29/19	07:37	05:43	Ending cal 50
EZ6895-ECC6881	Z139918.D	08/29/19	08:03	06:09	Ending cal 50
EZ6895-ECC6882	Z139919.D	08/29/19	08:30	06:36	Ending cal 50

7.4.5
7

Internal Standard Area Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: EZ6895-CC6880	Injection Date: 08/29/19
Lab File ID: Z139908.D	Injection Time: 02:10
Instrument ID: GCMSZ	Method: SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	325081	4.44	1209697	5.36	736156	6.68	1381292	8.19	1417362	11.91	1350895	13.97
Upper Limit ^a	650162	4.94	2419394	5.86	1472312	7.18	2762584	8.69	2834724	12.41	2701790	14.47
Lower Limit ^b	162541	3.94	604849	4.86	368078	6.18	690646	7.69	708681	11.41	675448	13.47

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP22364-MB1	254404	4.44	941127	5.36	561966	6.67	1009541	8.18	821426	11.90	843693	13.96
OP22364-BS1	275653	4.44	999257	5.36	584516	6.67	1049038	8.18	982614	11.91	888148	13.96
OP22364-MS	258651	4.44	970005	5.36	556915	6.68	1001169	8.18	1019489	11.91	874487	13.97
OP22364-MSD	231360	4.45	898807	5.37	529531	6.67	988320	8.18	923435	11.90	858982	13.96
JC93827-1	232465	4.45	931281	5.37	557508	6.67	1042268	8.18	878175	11.90	888673	13.96
EZ6895-ECC6880	283164	4.44	1088897	5.36	662630	6.68	1288842	8.18	1361250	11.91	1271289	13.97
EZ6895-ECC6881	284401	4.44	1073220	5.36	630138	6.67	1200636	8.18	1083546	11.90	1204378	13.97
EZ6895-ECC6882	275634	4.44	1084331	5.36	634648	6.67	1264703	8.18	1256652	11.90	1265710	13.96

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.5.1
7

Surrogate Recovery Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Method: SW846 8270D	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
JC93827-1	Z139916.D	3* a	31 a	2* a	67	58	71
OP22364-BS1	Z139913.D	71	72	74	78	72	73
OP22364-MB1	Z139912.D	63	61	60	68	60	72
OP22364-MS	Z139914.D	8* b	40	4* b	73	68	63
OP22364-MSD	Z139915.D	4* b	34	4* b	67	62	69

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	23-115%
S2 = Phenol-d5	27-114%
S3 = 2,4,6-Tribromophenol	19-152%
S4 = Nitrobenzene-d5	26-134%
S5 = 2-Fluorobiphenyl	39-124%
S6 = Terphenyl-d14	36-134%

(a) Outside control limits due to matrix interference, confirmed by MS/MSD.

(b) Outside control limits due to matrix interference.

7.6.1
7

Initial Calibration Summary

Job Number: JC93827

Sample: EZ6880-ICC6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139633.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report GCMSZ

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Aug 16 10:17:13 2019
Response via : Initial Calibration

Calibration Files

100 =z139631.D 80 =z139632.D 50 =z139633.D 25 =z139634.D
10 =z139635.D 5 =z139636.D 2 =z139637.D 1 =z139638.D

Compound	100	80	50	25	10	5	2	1	Avg	%RSD

1) I 1,4-Dichlorobenzene-d	-----ISTD-----									
2) 1,4-Dioxane	0.514	0.478	0.505	0.473	0.457	0.481	0.514	0.404	0.478	7.57
3) Pyridine	1.419	1.293	1.266	1.256	1.285	1.303	1.215	1.235	1.284	4.83
4) N-Nitrosodim	0.780	0.756	0.750	0.730	0.679	0.729	0.762	0.599	0.723	8.09
5) 2-Fluorophen	1.296	1.272	1.227	1.192	1.116	1.122	1.199	1.210	1.204	5.29
6) Indene	2.230	2.164	2.086	2.039	1.928	1.941	2.076	1.815	2.035	6.64
7) Cumene	3.549	3.441	3.353	3.337	3.059	3.164	3.325	3.224	3.307	4.69
8) Phenol-d5	1.708	1.683	1.576	1.514	1.464	1.455	1.430	1.346	1.522	8.26
9) Phenol	1.932	1.906	1.799	1.688	1.625	1.669	1.684	1.600	1.738	7.26
10) Aniline	1.727	1.712	2.081	1.698	1.843	1.898	1.942	1.695	1.824	7.75
11) bis(2-Chloro	1.214	1.204	1.198	1.120	1.099	1.111	1.248	1.077	1.159	5.52
12) 2-Chlorophen	1.426	1.412	1.356	1.325	1.252	1.278	1.281	1.258	1.323	5.15
13) Decane	1.053	1.024	1.012	0.983	0.932	0.950	0.999	0.954	0.988	4.20
14) 1,3-Dichloro	1.609	1.574	1.558	1.531	1.469	1.438	1.497	1.399	1.509	4.74
15) 1,4-Dichloro	1.675	1.615	1.595	1.545	1.490	1.515	1.546	1.549	1.566	3.79
16) Benzyl alcoh	0.784	0.793	0.742	0.710	0.663	0.582	0.682	0.537	0.687	13.31
17) 1,2-Dichloro	1.554	1.525	1.490	1.472	1.407	1.388	1.464	1.319	1.452	5.30
18) Acetophenone	2.023	2.048	2.006	1.919	1.849	1.878	2.005	1.712	1.930	5.90
19) 2-Methylphen	1.229	1.251	1.220	1.137	1.131	1.196	1.124	0.941	1.154	8.55
20) 2,2'-oxybis(0.347	0.352	0.334	0.356	0.320	0.334	0.357	0.310	0.339	5.16
21) 3&4-Methylph	1.301	1.304	1.230	1.158	1.145	1.107	1.074	1.003	1.165	9.20
22) n-Nitroso-di	1.026	1.041	1.002	0.973	0.998	0.924	0.923	0.954	0.980	4.52
23) Hexachloroet	0.606	0.592	0.601	0.581	0.574	0.579	0.570	0.532	0.579	3.96

24) I Naphthalene-d8	-----ISTD-----									
25) Nitrobenzene	0.426	0.419	0.402	0.407	0.381	0.382	0.386	0.368	0.396	5.15
26) Nitrobenzene	0.435	0.427	0.423	0.416	0.401	0.406	0.407	0.363	0.410	5.45
27) Quinoline	0.729	0.733	0.704	0.704	0.647	0.663	0.652	0.657	0.686	5.16
28) Isophorone	0.647	0.662	0.684	0.654	0.624	0.609	0.641	0.604	0.641	4.23
29) 2-Nitropheno	0.222	0.223	0.212	0.206	0.193	0.184	0.187	0.156	0.198	11.39
30) 2,4-Dimethyl	0.398	0.389	0.377	0.335	0.275	0.265	0.239		0.325	20.11
---- Quadratic regression ---- Coefficient = 0.9997										
Response Ratio = -0.01417 + 0.36065 *A + 0.01736 *A^2										
31) Benzoic Acid	0.312	0.318	0.290	0.289	0.259	0.215		0.281		13.71
32) bis(2-Chloro	0.422	0.418	0.398	0.395	0.385	0.395	0.366	0.345	0.390	6.54
33) 2,4-Dichloro	0.348	0.347	0.323	0.312	0.299	0.292	0.295	0.242	0.307	11.16
34) 2,6-Dichloro	0.338	0.330	0.315	0.299	0.272	0.275	0.282	0.270	0.298	9.10
35) 1,3,5-Trichl	0.431	0.414	0.396	0.389	0.366	0.378	0.375	0.347	0.387	6.93
36) 1,2,4-Trichl	0.383	0.379	0.367	0.365	0.341	0.339	0.346	0.374	0.362	4.84
37) 1,2,3-Trichl	0.398	0.390	0.375	0.368	0.344	0.343	0.370	0.361	0.369	5.32
38) Naphthalene	1.160	1.143	1.074	1.050	0.972	1.013	0.999	0.998	1.051	6.64
39) 4-Chloroanil	0.455	0.437	0.458	0.422	0.414	0.427	0.404	0.377	0.424	6.29
40) 2,3-Dichloro	0.431	0.421	0.406	0.389	0.374	0.368	0.357	0.357	0.388	7.42
41) Caprolactam	0.128	0.129	0.128	0.128	0.120	0.119	0.125	0.101	0.122	7.82
42) Hexachlorobu	0.235	0.232	0.222	0.217	0.207	0.219	0.219	0.174	0.216	8.78

Initial Calibration Summary

Job Number: JC93827 **Sample:** EZ6880-ICC6880
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z139633.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

43)	4-Chloro-3-m	0.355	0.353	0.342	0.325	0.316	0.297	0.304	0.256	0.318	10.36
44)	2-Methylnaph	0.633	0.634	0.599	0.584	0.551	0.536	0.529	0.517	0.573	8.11
45)	1-Methylnaph	0.735	0.713	0.672	0.649	0.608	0.630	0.630	0.585	0.653	7.88
46)	Dimethylnaph	0.723	0.716	0.678	0.654	0.632	0.645	0.641	0.630	0.665	5.57
47)	I Acenaphthene-d10	-----ISTD-----									
48)	Hexachlorocy	0.476	0.452	0.440	0.397	0.359	0.364	0.333		0.403	13.40
49)	2,4,6-Trichl	0.479	0.463	0.443	0.426	0.397	0.394	0.355	0.323	0.410	13.00
50)	2,4,5-Trichl	0.488	0.472	0.450	0.442	0.410	0.420	0.385	0.397	0.433	8.37
51)	2-Fluorobiph	1.602	1.506	1.409	1.400	1.351	1.383	1.330	1.291	1.409	7.15
52)	2-Chloronaph	1.297	1.238	1.167	1.163	1.084	1.115	1.134	1.048	1.156	7.01
53)	Biphenyl	1.779	1.700	1.557	1.585	1.459	1.443	1.435	1.439	1.550	8.50
54)	2-Nitroanili	0.549	0.526	0.513	0.539	0.508	0.494	0.467	0.443	0.505	7.12
55)	Dimethylphth	1.491	1.430	1.377	1.394	1.295	1.355	1.291	1.299	1.366	5.25
56)	Acenaphthyle	2.074	2.001	1.866	1.879	1.720	1.765	1.716	1.669	1.836	7.90
57)	2,6-Dinitrot	0.323	0.317	0.297	0.300	0.275	0.288	0.256	0.242	0.287	9.86
58)	3-Nitroanili	0.358	0.349	0.348	0.338	0.317	0.311	0.276	0.274	0.321	10.13
59)	Acenaphthene	1.351	1.307	1.226	1.212	1.119	1.175	1.178	1.129	1.212	6.73
60)	2,4-Dinitrop	0.230	0.220	0.204	0.190	0.149	0.120	0.097		0.173	29.72
		---- Quadratic regression ---- Coefficient = 0.9999									
		Response Ratio = -0.01441 + 0.18602 *A + 0.00947 *A^2									
61)	4-Nitropheno	0.267	0.264	0.254	0.254	0.227	0.213	0.192	0.180	0.231	14.50
62)	Dibenzofuran	1.869	1.793	1.691	1.696	1.614	1.590	1.588	1.512	1.669	7.06
63)	2,4-Dinitrot	0.461	0.443	0.432	0.438	0.409	0.374	0.377	0.326	0.407	11.13
64)	2,3,4,6-Tetr	0.388	0.377	0.362	0.355	0.324	0.309	0.295	0.260	0.334	13.27
65)	Diethylphtha	1.553	1.510	1.458	1.460	1.413	1.340	1.377	1.308	1.427	5.88
66)	Fluorene	1.606	1.539	1.431	1.409	1.291	1.272	1.261	1.254	1.383	9.84
67)	4-Chlorophen	0.799	0.761	0.712	0.711	0.653	0.662	0.620	0.616	0.692	9.51
68)	4-Nitroanili	0.350	0.363	0.364	0.366	0.338	0.334	0.312	0.255	0.335	11.14
69)	I Phenanthrene-d10	-----ISTD-----									
70)	4,6-Dinitro-	0.167	0.166	0.153	0.150	0.128	0.111	0.089		0.138	21.32
		---- Quadratic regression ---- Coefficient = 0.9997									
		Response Ratio = -0.00453 + 0.14973 *A + 0.00784 *A^2									
71)	n-Nitrosodip	0.558	0.547	0.520	0.514	0.470	0.491	0.479	0.436	0.502	8.13
72)	1,2-Diphenyl	0.838	0.815	0.779	0.780	0.731	0.746	0.755	0.686	0.766	6.27
73)	2,4,6-Tribo	0.132	0.130	0.121	0.118	0.105	0.108	0.099		0.116	10.86
74)	4-Bromopheny	0.242	0.236	0.225	0.220	0.206	0.212	0.213	0.193	0.218	7.46
75)	Hexachlorobe	0.268	0.263	0.247	0.245	0.235	0.247	0.238	0.240	0.248	4.72
76)	Pentachlorop	0.196	0.190	0.167	0.162	0.140	0.127	0.120		0.157	18.90
		---- Quadratic regression ---- Coefficient = 0.9996									
		Response Ratio = -0.00486 + 0.14868 *A + 0.00991 *A^2									
77)	Phenanthrene	1.209	1.165	1.092	1.080	1.010	1.041	1.039	1.073	1.088	6.16
78)	Anthracene	1.204	1.168	1.123	1.090	1.032	1.061	1.052	1.011	1.093	6.16
79)	Carbazole	1.101	1.066	1.001	1.002	0.937	0.957	0.961	0.899	0.991	6.75
80)	Di-n-butylph	1.461	1.432	1.337	1.323	1.216	1.182	1.166	1.075	1.274	10.67
81)	Fluoranthene	1.374	1.314	1.229	1.237	1.141	1.150	1.086	1.069	1.200	9.01
82)	Octadecane	0.399	0.388	0.362	0.363	0.338	0.343	0.319	0.316	0.354	8.47
83)	I Chrysene-d12	-----ISTD-----									
84)	Pyrene	1.322	1.351	1.312	1.333	1.299	1.307	1.297	1.238	1.307	2.56
85)	Terphenyl-d1	0.891	0.905	0.860	0.887	0.839	0.865	0.883	0.854	0.873	2.53
86)	Butylbenzylp	0.610	0.624	0.610	0.622	0.600	0.569	0.549	0.540	0.591	5.57
87)	Benzo[a]anth	1.244	1.229	1.215	1.243	1.205	1.226	1.253	1.277	1.237	1.85
88)	3,3'-Dichlor	0.526	0.522	0.512	0.524	0.493	0.489	0.479	0.439	0.498	5.96
89)	Chrysene	1.162	1.137	1.133	1.173	1.139	1.152	1.173	1.238	1.163	2.92
90)	bis(2-Ethylh	0.838	0.853	0.833	0.854	0.816	0.792	0.785	0.665	0.804	7.72

7.7.1
7

Initial Calibration Verification

Job Number: JC93827

Sample: EZ6880-ICV6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139640.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6880\z139640.D Vial: 11
Acq On : 15 Aug 2019 7:41 pm Operator: hennys
Sample : icv6880-50 Inst : GCMSZ
Misc : op22063,ez6880,30.0,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Aug 16 10:17:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	4.47
2	1,4-Dioxane	0.478	0.467	2.3	94	0.02	1.96
6 t	Indene	2.035	2.297	-12.9	112	0.00	4.66
7 t	Cumene	3.307	3.282	0.8	100	0.00	3.88
13 t	Decane	0.988	0.999	-1.1	101	0.00	4.36
18 t	Acetophenone	1.930	1.896	1.8	96	0.00	4.76
24 I	Naphthalene-d8	1.000	1.000	0.0	102	0.00	5.39
27 t	Quinoline	0.686	0.700	-2.0	102	0.00	5.64
40 t	2,3-Dichloroaniline	0.388	0.339	12.6	85	0.00	6.10
41 t	Caprolactam	0.122	0.115	5.7	92	-0.02	5.68
45 t	1-Methylnaphthalene	0.653	0.618	5.4	94	0.00	5.97
46 t	Dimethylnaphthalene	0.665	0.647	2.7	98	0.00	6.36
47 I	Acenaphthene-d10	1.000	1.000	0.0	99	0.00	6.70
48 t	Hexachlorocyclopentadiene	0.403	0.372	7.7	90	0.00	6.01
53 t	Biphenyl	1.550	1.534	1.0	97	0.00	6.24
69 I	Phenanthrene-d10	1.000	1.000	0.0	96	0.00	8.22
82 t	Octadecane	0.354	0.364	-2.8	97	0.00	8.14

(#) = Out of Range
z139633.D MZ6880.M

SPCC's out = 0 CCC's out = 0
Fri Aug 16 12:27:44 2019 YING

Initial Calibration Verification

Job Number: JC93827

Sample: EZ6880-ICV6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139641.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6880\z139641.D Vial: 12
Acq On : 15 Aug 2019 8:08 pm Operator: hennys
Sample : icv6880-50 Inst : GCMSZ
Misc : op22063,ez6880,30.0,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Aug 16 10:17:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	4.47
3 t	Pyridine	1.284	1.327	-3.3	106	0.00	2.28
24 I	Naphthalene-d8	1.000	1.000	0.0	104	0.00	5.39
39 t	4-Chloroaniline	0.424	0.484	-14.2	110	0.00	5.44
44 t	2-Methylnaphthalene	0.573	0.676	-18.0	117	0.00	5.90
47 I	Acenaphthene-d10	1.000	1.000	0.0	95	0.00	6.70
54 t	2-Nitroaniline	0.505	0.436	13.7	81	0.00	6.33
68 t	4-Nitroaniline	0.335	0.397	-18.5	104	0.00	7.23
69 I	Phenanthrene-d10	1.000	1.000	0.0	106	0.00	8.22
79 t	Carbazole	0.991	1.067	-7.7	113	0.00	8.52

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z139633.D MZ6880.M Fri Aug 16 12:49:20 2019 YING

Initial Calibration Verification

Job Number: JC93827

Sample: EZ6880-ICV6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139642.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6880\z139642.D Vial: 13
 Acq On : 15 Aug 2019 8:35 pm Operator: hennys
 Sample : icv6880-50 Inst : GCMSZ
 Misc : op22063,ez6880,30.0,,,1,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
 Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
 Last Update : Fri Aug 16 10:17:13 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	4.47
9 t	Phenol	1.738	1.429	17.8	83	0.00	4.23
12 t	2-Chlorophenol	1.323	1.227	7.3	94	0.00	4.32
19 t	2-Methylphenol	1.154	1.031	10.7	88	0.00	4.67
21 t	3&4-Methylphenol	1.165	1.091	6.4	92	0.00	4.78
24 I	Naphthalene-d8	1.000	1.000	0.0	100	0.00	5.39
29 t	2-Nitrophenol	0.198	0.193	2.5	91	0.00	5.12
	----- True	Calc.	% Drift	-----			
30 t	2,4-Dimethylphenol	50.000	48.581	2.8	96	0.00	5.16
	----- AvgRF	CCRF	% Dev	-----			
31	Benzoic Acid	0.281	0.238	15.3	82	-0.01	5.25
33 t	2,4-Dichlorophenol	0.307	0.296	3.6	92	0.00	5.30
34	2,6-Dichlorophenol	0.298	0.290	2.7	92	0.00	5.45
43 t	4-Chloro-3-methylphenol	0.318	0.307	3.5	90	-0.01	5.79
47 I	Acenaphthene-d10	1.000	1.000	0.0	99	0.00	6.70
49 t	2,4,6-Trichlorophenol	0.410	0.387	5.6	87	0.00	6.10
50 t	2,4,5-Trichlorophenol	0.433	0.394	9.0	87	-0.01	6.13
	----- True	Calc.	% Drift	-----			
60 t	2,4-Dinitrophenol	50.000	40.730	18.5	75	0.00	6.75
	----- AvgRF	CCRF	% Dev	-----			
61 t	4-Nitrophenol	0.231	0.205	11.3	80	-0.01	6.83
64	2,3,4,6-Tetrachlorophenol	0.334	0.318	4.8	87	0.00	7.00
69 I	Phenanthrene-d10	1.000	1.000	0.0	96	0.00	8.22
	----- True	Calc.	% Drift	-----			
70 t	4,6-Dinitro-2-methylpheno	50.000	40.672	18.7	79	-0.01	7.25
	----- True	Calc.	% Drift	-----			
76 t	Pentachlorophenol	50.000	50.155	-0.3	91	0.00	8.01

7.7.4

7

Initial Calibration Verification

Job Number: JC93827

Sample: EZ6880-ICV6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139642.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

(#) = Out of Range
z139633.D MZ6880.M

SPCC's out = 0 CCC's out = 0
Fri Aug 16 12:28:09 2019 YING

Initial Calibration Verification

Job Number: JC93827

Sample: EZ6880-ICV6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139643.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6880\z139643.D Vial: 14
Acq On : 15 Aug 2019 9:02 pm Operator: hennys
Sample : icv6880-50 Inst : GCMSZ
Misc : op22063,ez6880,30.0,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Aug 16 10:17:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	107	0.00	4.47
5 S	2-Fluorophenol	1.204	1.119	7.1	98	0.00	3.50
8 S	Phenol-d5	1.522	1.375	9.7	94	0.00	4.22
24 I	Naphthalene-d8	1.000	1.000	0.0	108	0.00	5.39
25 S	Nitrobenzene-d5	0.396	0.374	5.6	100	0.00	4.87
47 I	Acenaphthene-d10	1.000	1.000	0.0	106	0.00	6.70
51 S	2-Fluorobiphenyl	1.409	1.258	10.7	95	0.00	6.16
69 I	Phenanthrene-d10	1.000	1.000	0.0	102	0.00	8.22
73 S	2,4,6-Tribromophenol	0.116	0.098	15.5	83	0.00	7.45
83 I	Chrysene-d12	1.000	1.000	0.0	86	-0.01	11.94
85 S	Terphenyl-d14	0.873	0.907	-3.9	90	0.00	10.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z139633.D MZ6880.M Fri Aug 16 12:28:26 2019 YING

Initial Calibration Verification

Job Number: JC93827

Sample: EZ6880-ICV6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139644.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6880\z139644.D Vial: 15
Acq On : 15 Aug 2019 9:29 pm Operator: hennys
Sample : icv6880-50 Inst : GCMSZ
Misc : op22063,ez6880,30.0,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Aug 16 10:17:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
83 I Chrysene-d12	1.000	1.000	0.0	136	-0.01	11.94
88 t 3,3'-Dichlorobenzidine	0.498	0.456	8.4	121	0.00	11.95

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z139633.D MZ6880.M Fri Aug 16 12:28:46 2019 YING

7.7.6
7

Initial Calibration Summary

Job Number: JC93827 **Sample:** EZ6881-ICC6881
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z139648.D
Project: Site 1-Fnr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report GCMSZ

Method : C:\MSDCHEM\1\METHODS\MZ6881.M (RTE Integrator)
 Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
 Last Update : Fri Aug 16 13:14:15 2019
 Response via : Initial Calibration

Calibration Files

100 =z139646.D 80 =z139647.D 50 =z139648.D 25 =z139649.D
 10 =z139650.D 5 =z139651.D 2 =z139652.D 1 =z139653.D

Compound	100	80	50	25	10	5	2	1	Avg %RSD
----------	-----	----	----	----	----	---	---	---	----------

101)	1,4-Dichlorobenzene-d										
102)	Benzaldehyde	1.125	1.114	1.072	1.077	1.026	1.009	1.117	0.916	1.057	6.71
103)	Phenanthrene-d10a										
106)	Atrazine	0.100	0.102	0.097	0.097	0.095	0.090	0.078	0.102	0.095	8.57
113)	Phenanthrene-d10b										
114)	Pentachloron	0.051	0.053	0.051	0.049	0.044	0.042	0.035	0.046	0.046#	12.84

(#) = Out of Range ### Number of calibration levels exceeded format ###

MZ6880.M Fri Aug 16 13:18:15 2019 YING

7.7.7
7

Initial Calibration Verification

Job Number: JC93827

Sample: EZ6881-ICV6881

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139654.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6880\z139654.D Vial: 24
Acq On : 16 Aug 2019 1:40 am Operator: hennys
Sample : icv6881-50 Inst : GCMSZ
Misc : op22063,ez6881,30.0,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Aug 16 13:14:15 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101 1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	93	0.00	4.47
102 Benzaldehyde	1.057	1.060	-0.3	92	0.04	4.14
103 Phenanthrene-d10a	1.000	1.000	0.0	92	0.00	8.22
106 Atrazine	0.095	0.097	-2.1	92	0.06	7.92
113 Phenanthrene-d10b	1.000	1.000	0.0	92	0.00	8.22
114 Pentachloronitrobenzene	0.046	0.039#	15.2	71	0.06	8.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z139648a.D MZ6880.M Fri Aug 16 13:18:27 2019 YING

Initial Calibration Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fnr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Sample: EZ6882-ICC6882
Lab FileID: Z139658.D

Response Factor Report GCMSZ

Method : C:\MSDCHEM\1\METHODS\MZ6882.M (RTE Integrator)
 Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
 Last Update : Fri Aug 16 13:55:10 2019
 Response via : Initial Calibration

Calibration Files
 100 =z139656.D 80 =z139657.D 50 =z139658.D 25 =z139659.D
 10 =z139660.D 5 =z139661.D 2 =z139662.D 1 =z139663.D

Compound	100	80	50	25	10	5	2	1	Avg %RSD

105) Chrysene-d12a									
106) Benzidine	0.595	0.729	0.719	0.795	0.767	0.713	0.609	0.582	0.689
107) Acenaphthene-d10a									
108) 1,2,4,5-Tetr	0.586	0.587	0.565	0.585	0.566	0.587	0.602	0.580	0.582
109) I Naphthalene-d8a									
110) Hydroquinone	0.317	0.321	0.311	0.279	0.241	0.185		0.276	19.51
113) Phenanthrene-d10c									
114) 1-chloroocta	0.238	0.230	0.229	0.222	0.207	0.192	0.188	0.178	0.211
115) o-terphenyl	0.569	0.563	0.542	0.526	0.512	0.478	0.475	0.482	0.518

105)	Chrysene-d12a									
106)	Benzidine	0.595	0.729	0.719	0.795	0.767	0.713	0.609	0.582	0.689
										11.93
107)	Acenaphthene-d10a									
108)	1,2,4,5-Tetr	0.586	0.587	0.565	0.585	0.566	0.587	0.602	0.580	0.582
										2.07
109) I	Naphthalene-d8a									
110)	Hydroquinone	0.317	0.321	0.311	0.279	0.241	0.185		0.276	19.51
113)	Phenanthrene-d10c									
114)	1-chloroocta	0.238	0.230	0.229	0.222	0.207	0.192	0.188	0.178	0.211
										10.67
115)	o-terphenyl	0.569	0.563	0.542	0.526	0.512	0.478	0.475	0.482	0.518
										7.30

(#) = Out of Range ### Number of calibration levels exceeded format ###

MZ6880.M Fri Aug 16 14:37:53 2019 YING

Initial Calibration Verification

Job Number: JC93827 **Sample:** EZ6882-ICV6882
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z139664.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6880\z139664.D Vial: 33
Acq On : 16 Aug 2019 5:52 am Operator: hennys
Sample : icv6882-50 Inst : GCMSZ
Misc : op22063,ez6882,30.0,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Aug 16 13:55:10 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
107 Acenaphthene-d10a	1.000	1.000	0.0	89	0.00	6.70
108 1,2,4,5-Tetrachlorobenzen	0.582	0.654	-12.4	102	0.05	6.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z139658a.D MZ6880.M Fri Aug 16 14:41:17 2019 YING

7.7.10
7

Initial Calibration Verification

Job Number: JC93827 **Sample:** EZ6882-ICV6882
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z139665.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6880\z139665.D Vial: 34
Acq On : 16 Aug 2019 6:18 am Operator: hennys
Sample : icv6882-50 Inst : GCMSZ
Misc : op22063,ez6882,30.0,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Aug 16 13:55:10 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
109 I Naphthalene-d8a	1.000	1.000	0.0	148	0.00	5.39
110 Hydroquinone	0.276	0.280	-1.4	134	0.06	5.70

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z139658a.D MZ6880.M Fri Aug 16 14:41:38 2019 YING

7.7.11
7

Initial Calibration Verification

Job Number: JC93827

Sample: EZ6883-ICV6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139668.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6883\z139668.D Vial: 2
Acq On : 16 Aug 2019 11:15 am Operator: angelar
Sample : icv6880-50 Inst : GCMSZ
Misc : op21695,ez6883,30.0,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Aug 16 10:17:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	4.47
4 t	N-Nitrosodimethylamine	0.723	0.619	14.4	80	0.01	2.26
11 t	bis(2-Chloroethyl)ether	1.159	1.123	3.1	91	0.00	4.27
14 t	1,3-Dichlorobenzene	1.509	1.405	6.9	87	0.00	4.43
15 t	1,4-Dichlorobenzene	1.566	1.494	4.6	91	0.00	4.48
17 t	1,2-Dichlorobenzene	1.452	1.342	7.6	87	0.00	4.59
20 t	2,2'-oxybis(1-Chloropropa	0.339	0.368	-8.6	106	0.00	4.67
22 t	n-Nitroso-di-n-propylamin	0.980	0.930	5.1	90	0.00	4.76
23 t	Hexachloroethane	0.579	0.545	5.9	88	0.00	4.84
24 I	Naphthalene-d8	1.000	1.000	0.0	95	0.00	5.39
26 t	Nitrobenzene	0.410	0.392	4.4	88	0.00	4.89
28 t	Isophorone	0.641	0.659	-2.8	92	0.00	5.06
32 t	bis(2-Chloroethoxy)methan	0.390	0.386	1.0	92	0.00	5.21
36 t	1,2,4-Trichlorobenzene	0.362	0.339	6.4	88	0.00	5.35
38 t	Naphthalene	1.051	1.027	2.3	91	0.00	5.40
42 t	Hexachlorobutadiene	0.216	0.212	1.9	91	0.00	5.50
47 I	Acenaphthene-d10	1.000	1.000	0.0	91	0.00	6.70
52 t	2-Chloronaphthalene	1.156	1.121	3.0	88	0.00	6.25
55 t	Dimethylphthalate	1.366	1.283	6.1	85	0.00	6.47
56 t	Acenaphthylene	1.836	1.775	3.3	87	0.00	6.58
57 t	2,6-Dinitrotoluene	0.287	0.273	4.9	84	0.00	6.52
59 t	Acenaphthene	1.212	1.125	7.2	84	0.00	6.73
63 t	2,4-Dinitrotoluene	0.407	0.366	10.1	77	0.00	6.87
65 t	Diethylphthalate	1.427	1.331	6.7	83	0.00	7.10
66 t	Fluorene	1.383	1.329	3.9	85	0.00	7.20
67 t	4-Chlorophenyl-phenylethe	0.692	0.668	3.5	86	0.00	7.20
69 I	Phenanthrene-d10	1.000	1.000	0.0	88	0.00	8.22
71 t	n-Nitrosodiphenylamine	0.502	0.461	8.2	78	0.00	7.32
72 t	1,2-Diphenylhydrazine	0.766	0.770	-0.5	87	0.00	7.36
74 t	4-Bromophenyl-phenylether	0.218	0.205	6.0	80	0.00	7.71
75 t	Hexachlorobenzene	0.248	0.227	8.5	81	0.00	7.79
77 t	Phenanthrene	1.088	1.019	6.3	82	0.00	8.25
78 t	Anthracene	1.093	1.013	7.3	79	0.00	8.31
80 t	Di-n-butylphthalate	1.274	1.183	7.1	78	0.00	9.02
81 t	Fluoranthene	1.200	1.108	7.7	79	0.00	9.81
83 I	Chrysene-d12	1.000	1.000	0.0	81	0.00	11.95
84 t	Pyrene	1.307	1.257	3.8	78	0.00	10.13
86 t	Butylbenzylphthalate	0.591	0.560	5.2	74	0.00	11.20

Initial Calibration Verification

Job Number: JC93827

Sample: EZ6883-ICV6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139668.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

87 t	Benzo[a]anthracene	1.237	1.127	8.9	75	0.00	11.93
89 t	Chrysene	1.163	1.069	8.1	76	0.00	11.99
90 t	bis(2-Ethylhexyl)phthalat	0.804	0.766	4.7	74	0.00	12.14
91 I	Perylene-d12	1.000	1.000	0.0	80	0.00	14.01
92 t	Di-n-octylphthalate	1.368	1.319	3.6	72	0.00	13.11
93 t	Benzo[b]fluoranthene	1.238	1.065	14.0	65	0.00	13.50
94 t	Benzo[k]fluoranthene	1.119	1.074	4.0	77	-0.01	13.54
95 t	Benzo[a]pyrene	1.052	1.006	4.4	75	0.00	13.94
96 t	Indeno[1,2,3-cd]pyrene	1.018	1.003	1.5	75	0.00	15.32
98 t	Dibenz[a,h]anthracene	1.054	0.975	7.5	72	0.00	15.35
100 t	Benzo[g,h,i]perylene	0.969	0.968	0.1	80	0.00	15.63

(#) = Out of Range
z139633.D MZ6880.M

SPCC's out = 0 CCC's out = 0
Fri Aug 16 12:40:52 2019 YING

7.7.12
7

Initial Calibration Verification

Job Number: JC93827

Sample: EZ6883-ICV6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139669.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6883\z139669.D Vial: 3
Acq On : 16 Aug 2019 11:42 am Operator: angular
Sample : icv6880-50 Inst : GCMSZ
Misc : op21695,ez6883,30.0,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Aug 16 10:17:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	94	0.00	4.47
10 t	Aniline	1.824	1.877	-2.9	85	0.00	4.23
16 t	Benzyl alcohol	0.687	0.772	-12.4	98	0.00	4.58
47 I	Acenaphthene-d10	1.000	1.000	0.0	99	0.00	6.70
58 t	3-Nitroaniline	0.321	0.303	5.6	87	0.00	6.67
62 t	Dibenzofuran	1.669	1.532	8.2	90	0.00	6.88

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z139633.D MZ6880.M Fri Aug 16 12:41:12 2019 YING

Initial Calibration Verification

Job Number: JC93827 **Sample:** EZ6883-ICV6882
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z139670.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6883\z139670.D Vial: 4
Acq On : 16 Aug 2019 2:09 pm Operator: angelar
Sample : icv6882-50 Inst : GCMSZ
Misc : op21695,ez6883,30.0,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Aug 16 13:55:10 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
105 Chrysene-d12a	1.000	1.000	0.0	73	-0.01	11.94
106 Benzidine	0.689	0.866	-25.7	88	0.06	10.04

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z139658a.D MZ6880.M Fri Aug 16 14:36:08 2019 YING

7.7.14
7

Continuing Calibration Summary

Job Number: JC93827

Sample: EZ6895-CC6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139908.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6895\z139908.D Vial: 2
 Acq On : 29 Aug 2019 2:10 am Operator: chriss2
 Sample : cc6880-50 Inst : GCMSZ
 Misc : op21695,ez6895,1000,,,1,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
 Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
 Last Update : Wed Aug 28 13:26:10 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	170	0.00	4.44
2	1,4-Dioxane	0.478	0.473	1.0	159	-0.02	1.91
3 t	Pyridine	1.284	1.276	0.6	171	-0.02	2.25
4 t	N-Nitrosodimethylamine	0.723	0.701	3.0	159	-0.02	2.22
5 S	2-Fluorophenol	1.204	1.194	0.8	166	0.00	3.47
6 t	Indene	2.035	2.074	-1.9	169	0.00	4.63
7 t	Cumene	3.307	3.412	-3.2	173	0.00	3.84
8 S	Phenol-d5	1.522	1.555	-2.2	168	0.00	4.21
9 t	Phenol	1.738	1.735	0.2	164	0.00	4.22
10 t	Aniline	1.824	1.757	3.7	144	0.00	4.20
11 t	bis(2-Chloroethyl)ether	1.159	1.162	-0.3	165	0.00	4.25
12 t	2-Chlorophenol	1.323	1.330	-0.5	167	0.00	4.30
13 t	Decane	0.988	1.016	-2.8	171	0.00	4.34
14 t	1,3-Dichlorobenzene	1.509	1.534	-1.7	168	0.00	4.40
15 t	1,4-Dichlorobenzene	1.566	1.562	0.3	167	0.00	4.45
16 t	Benzyl alcohol	0.687	0.750	-9.2	172	0.00	4.56
17 t	1,2-Dichlorobenzene	1.452	1.480	-1.9	169	0.00	4.57
18 t	Acetophenone	1.930	2.037	-5.5	173	0.00	4.74
19 t	2-Methylphenol	1.154	1.168	-1.2	163	0.01	4.66
20 t	2,2'-oxybis(1-Chloropropa	0.339	0.329	2.9	168	0.00	4.65
21 t	3&4-Methylphenol	1.165	1.201	-3.1	166	0.00	4.76
22 t	n-Nitroso-di-n-propylamin	0.980	1.026	-4.7	174	0.00	4.75
23 t	Hexachloroethane	0.579	0.607	-4.8	172	0.00	4.81
24 I	Naphthalene-d8	1.000	1.000	0.0	171	0.00	5.36
25 S	Nitrobenzene-d5	0.396	0.418	-5.6	178	0.00	4.85
26 t	Nitrobenzene	0.410	0.437	-6.6	176	0.00	4.86
27 t	Quinoline	0.686	0.688	-0.3	167	0.00	5.62
28 t	Isophorone	0.641	0.677	-5.6	169	0.00	5.04
29 t	2-Nitrophenol	0.198	0.210	-6.1	169	0.00	5.09
----- True Calc. % Drift -----							
30 t	2,4-Dimethylphenol	50.000	50.076	-0.2	168	0.00	5.14
----- AvgRF CCRF % Dev -----							
31	Benzoic Acid	0.281	0.312	-11.0	184	0.02	5.25
32 t	bis(2-Chloroethoxy)methan	0.390	0.393	-0.8	168	0.00	5.19
33 t	2,4-Dichlorophenol	0.307	0.322	-4.9	170	0.00	5.28
34	2,6-Dichlorophenol	0.298	0.317	-6.4	172	0.00	5.43
35 t	1,3,5-Trichlorobenzene	0.387	0.400	-3.4	173	0.00	5.10
36 t	1,2,4-Trichlorobenzene	0.362	0.359	0.8	167	0.00	5.32
37 t	1,2,3-Trichlorobenzene	0.369	0.369	0.0	168	0.00	5.48

7.7.15
7

Continuing Calibration Summary

Job Number: JC93827

Sample: EZ6895-CC6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139908.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

38 t	Naphthalene	1.051	1.085	-3.2	172	0.00	5.38
39 t	4-Chloroaniline	0.424	0.433	-2.1	161	0.00	5.43
40 t	2,3-Dichloroaniline	0.388	0.411	-5.9	173	0.00	6.08
41 t	Caprolactam	0.122	0.122	0.0	163	0.01	5.69
42 t	Hexachlorobutadiene	0.216	0.227	-5.1	175	0.00	5.47
43 t	4-Chloro-3-methylphenol	0.318	0.341	-7.2	171	0.01	5.79
44 t	2-Methylnaphthalene	0.573	0.599	-4.5	171	0.00	5.87
45 t	1-Methylnaphthalene	0.653	0.679	-4.0	172	0.00	5.94
46 t	Dimethylnaphthalene	0.665	0.698	-5.0	176	0.00	6.33
47 I	Acenaphthene-d10	1.000	1.000	0.0	172	0.00	6.68
48 t	Hexachlorocyclopentadiene	0.403	0.459	-13.9	180	0.00	5.99
49 t	2,4,6-Trichlorophenol	0.410	0.440	-7.3	171	0.00	6.08
50 t	2,4,5-Trichlorophenol	0.433	0.445	-2.8	170	0.00	6.12
51 S	2-Fluorobiphenyl	1.409	1.436	-1.9	175	0.00	6.14
52 t	2-Chloronaphthalene	1.156	1.188	-2.8	175	0.00	6.23
53 t	Biphenyl	1.550	1.627	-5.0	180	0.00	6.21
54 t	2-Nitroaniline	0.505	0.555	-9.9	186	0.00	6.31
55 t	Dimethylphthalate	1.366	1.410	-3.2	176	0.00	6.45
56 t	Acenaphthylene	1.836	1.875	-2.1	173	0.00	6.55
57 t	2,6-Dinitrotoluene	0.287	0.299	-4.2	173	0.00	6.50
58 t	3-Nitroaniline	0.321	0.330	-2.8	163	0.00	6.64
59 t	Acenaphthene	1.212	1.243	-2.6	175	0.00	6.70
		----- True	Calc.	% Drift	-----		
60 t	2,4-Dinitrophenol	100.000	101.175	-1.2	175	0.00	6.73
		----- AvgRF	CCRF	% Dev	-----		
61 t	4-Nitrophenol	0.231	0.286	-23.8#	193	0.01	6.81
62 t	Dibenzofuran	1.669	1.696	-1.6	173	0.00	6.86
63 t	2,4-Dinitrotoluene	0.407	0.439	-7.9	175	0.00	6.85
64	2,3,4,6-Tetrachlorophenol	0.334	0.354	-6.0	168	0.00	6.98
65 t	Diethylphthalate	1.427	1.491	-4.5	176	0.00	7.07
66 t	Fluorene	1.383	1.517	-9.7	182	0.00	7.17
67 t	4-Chlorophenyl-phenylethe	0.692	0.751	-8.5	182	0.00	7.17
68 t	4-Nitroaniline	0.335	0.322	3.9	152	0.01	7.21
69 I	Phenanthrene-d10	1.000	1.000	0.0	171	0.01	8.19
		----- True	Calc.	% Drift	-----		
70 t	4,6-Dinitro-2-methylpheno	50.000	49.016	2.0	171	0.00	7.23
		----- AvgRF	CCRF	% Dev	-----		
71 t	n-Nitrosodiphenylamine	0.502	0.513	-2.2	168	0.00	7.30
72 t	1,2-Diphenylhydrazine	0.766	0.820	-7.0	180	0.00	7.33
73 S	2,4,6-Tribromophenol	0.116	0.116	0.0	164	0.00	7.42
74 t	4-Bromophenyl-phenylether	0.218	0.221	-1.4	168	0.00	7.68
75 t	Hexachlorobenzene	0.248	0.243	2.0	168	0.00	7.76
		----- True	Calc.	% Drift	-----		
76 t	Pentachlorophenol	100.000	101.961	-2.0	180	0.00	7.98
		----- AvgRF	CCRF	% Dev	-----		
77 t	Phenanthrene	1.088	1.093	-0.5	171	0.00	8.21
78 t	Anthracene	1.093	1.118	-2.3	170	0.00	8.27
79 t	Carbazole	0.991	1.005	-1.4	171	0.00	8.48
80 t	Di-n-butylphthalate	1.274	1.380	-8.3	176	0.00	8.97
81 t	Fluoranthene	1.200	1.226	-2.2	170	0.01	9.77
82 t	Octadecane	0.354	0.361	-2.0	170	0.00	8.10

7.7.15
7

Continuing Calibration Summary

Job Number: JC93827

Sample: EZ6895-CC6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139908.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

83	I	Chrysene-d12	1.000	1.000	0.0	178	0.01	11.91
84	t	Pyrene	1.307	1.270	2.8	173	0.00	10.08
85	S	Terphenyl-d14	0.873	0.823	5.7	171	0.00	10.37
86	t	Butylbenzylphthalate	0.591	0.602	-1.9	176	0.00	11.15
87	t	Benzo[a]anthracene	1.237	1.184	4.3	174	0.01	11.89
88	t	3,3'-Dichlorobenzidine	0.498	0.505	-1.4	176	0.02	11.91
89	t	Chrysene	1.163	1.095	5.8	172	0.02	11.95
90	t	bis(2-Ethylhexyl)phthalat	0.804	0.825	-2.6	177	0.00	12.09
91	I	Perylene-d12	1.000	1.000	0.0	168	0.01	13.97
92	t	Di-n-octylphthalate	1.368	1.547	-13.1	178	0.00	13.06
93	t	Benzo[b]fluoranthene	1.238	1.309	-5.7	168	0.00	13.46
94	t	Benzo[k]fluoranthene	1.119	1.137	-1.6	172	0.00	13.50
95	t	Benzo[a]pyrene	1.052	1.074	-2.1	168	0.01	13.89
96	t	Indeno[1,2,3-cd]pyrene	1.018	1.091	-7.2	171	0.02	15.28
97	t	Dibenz(a,h)acridine	0.940	0.972	-3.4	168	0.01	15.02
98	t	Dibenz[a,h]anthracene	1.054	1.092	-3.6	170	0.02	15.31
			----- True	Calc.	% Drift	-----		
99	t	7,12-Dimethylbenz(a)anthr	50.000	49.544	0.9	164	0.00	13.47
			----- AvgRF	CCRF	% Dev	-----		
100	t	Benzo[g,h,i]perylene	0.969	0.981	-1.2	170	0.02	15.59

(#) = Out of Range
z139658a.D MZ6880.M

SPCC's out = 0 CCC's out = 0
Thu Aug 29 08:14:52 2019 YING

7.7.15
7

Continuing Calibration Summary

Job Number: JC93827 **Sample:** EZ6895-CC6881
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z139909.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6895\z139909.D Vial: 3
Acq On : 29 Aug 2019 2:36 am Operator: chriss2
Sample : cc6881-50 Inst : GCMSZ
Misc : op21695,ez6895,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Wed Aug 28 13:26:10 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101 1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	152	0.00	4.44
102 Benzaldehyde	1.057	1.059	-0.2	150	0.03	4.11
103 Phenanthrene-d10a	1.000	1.000	0.0	129	0.00	8.18
104 Atrazine	0.095	0.102	-7.4	135	0.07	7.88
111 Phenanthrene-d10b	1.000	1.000	0.0	129	0.00	8.18
112 Pentachloronitrobenzene	0.046	0.053	-15.2	134	0.07	7.99

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z139658a.D MZ6880.M Thu Aug 29 08:16:30 2019 YING

7.7.16
7

Continuing Calibration Summary

Job Number: JC93827 **Sample:** EZ6895-CC6882
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z139910.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6895\z139910.D Vial: 4
Acq On : 29 Aug 2019 3:03 am Operator: chriss2
Sample : cc6882-50 Inst : GCMSZ
Misc : op21695,ez6895,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Wed Aug 28 13:26:10 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
105	Chrysene-d12a	1.000	1.000	0.0	145	0.00	11.90
106	Benzidine	0.689	0.668	3.0	135	0.07	10.00
107	Acenaphthene-d10a	1.000	1.000	0.0	137	0.00	6.67
108	1,2,4,5-Tetrachlorobenzen	0.582	0.592	-1.7	143	0.05	5.99
109 I	Naphthalene-d8a	1.000	1.000	0.0	147	0.00	5.36
110	Hydroquinone	0.276	0.302	-9.4	143	0.07	5.68
113	Phenanthrene-d10c	1.000	1.000	0.0	137	0.00	8.18
114 s	1-chlorooctadecane	0.211	0.229	-8.5	138	0.09	9.71
115 s	o-terphenyl	0.518	0.542	-4.6	137	0.07	8.68

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z139658a.D MZ6880.M Thu Aug 29 08:16:49 2019 YING

7.7.17
7

Continuing Calibration Summary

Job Number: JC93827 **Sample:** EZ6895-ECC6880
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z139917.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6895\z139917.D Vial: 2
 Acq On : 29 Aug 2019 7:37 am Operator: chriss2
 Sample : ecc6880-50 Inst : GCMSZ
 Misc : op22364,ez6895,30.0,,,1,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
 Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
 Last Update : Wed Aug 28 13:26:10 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	148	0.00	4.44
2	1,4-Dioxane	0.478	0.468	2.1	137	-0.03	1.91
3 t	Pyridine	1.284	1.282	0.2	150	-0.02	2.25
4 t	N-Nitrosodimethylamine	0.723	0.716	1.0	142	-0.02	2.22
5 S	2-Fluorophenol	1.204	1.175	2.4	142	0.00	3.47
6 t	Indene	2.035	2.133	-4.8	152	0.00	4.63
7 t	Cumene	3.307	3.528	-6.7	156	0.00	3.84
8 S	Phenol-d5	1.522	1.588	-4.3	149	0.00	4.21
9 t	Phenol	1.738	1.762	-1.4	145	0.00	4.22
10 t	Aniline	1.824	1.798	1.4	128	0.00	4.20
11 t	bis(2-Chloroethyl)ether	1.159	1.166	-0.6	144	0.00	4.25
12 t	2-Chlorophenol	1.323	1.336	-1.0	146	0.00	4.30
13 t	Decane	0.988	1.011	-2.3	148	0.00	4.34
14 t	1,3-Dichlorobenzene	1.509	1.567	-3.8	149	0.00	4.40
15 t	1,4-Dichlorobenzene	1.566	1.626	-3.8	151	0.00	4.45
16 t	Benzyl alcohol	0.687	0.715	-4.1	143	0.00	4.56
17 t	1,2-Dichlorobenzene	1.452	1.521	-4.8	151	0.00	4.57
18 t	Acetophenone	1.930	2.104	-9.0	156	0.00	4.74
19 t	2-Methylphenol	1.154	1.230	-6.6	149	0.00	4.65
20 t	2,2'-oxybis(1-Chloropropa	0.339	0.342	-0.9	152	0.00	4.65
21 t	3&4-Methylphenol	1.165	1.238	-6.3	149	0.00	4.76
22 t	n-Nitroso-di-n-propylamin	0.980	1.084	-10.6	160	0.00	4.75
23 t	Hexachloroethane	0.579	0.607	-4.8	150	0.00	4.81
24 I	Naphthalene-d8	1.000	1.000	0.0	154	0.00	5.36
25 S	Nitrobenzene-d5	0.396	0.418	-5.6	160	0.00	4.85
26 t	Nitrobenzene	0.410	0.441	-7.6	160	0.00	4.86
27 t	Quinoline	0.686	0.689	-0.4	150	0.00	5.62
28 t	Isophorone	0.641	0.684	-6.7	154	0.00	5.04
29 t	2-Nitrophenol	0.198	0.208	-5.1	151	0.00	5.09
	----- True Calc. % Drift -----						
30 t	2,4-Dimethylphenol	50.000	49.783	0.4	150	0.00	5.14
	----- AvgRF CCRF % Dev -----						
31	Benzoic Acid	0.281	0.320	-13.9	169	0.02	5.25
32 t	bis(2-Chloroethoxy)methan	0.390	0.398	-2.1	154	0.00	5.19
33 t	2,4-Dichlorophenol	0.307	0.322	-4.9	153	0.00	5.28
34	2,6-Dichlorophenol	0.298	0.319	-7.0	155	0.00	5.43
35 t	1,3,5-Trichlorobenzene	0.387	0.408	-5.4	158	0.00	5.10
36 t	1,2,4-Trichlorobenzene	0.362	0.363	-0.3	152	0.00	5.32
37 t	1,2,3-Trichlorobenzene	0.369	0.376	-1.9	154	0.00	5.48

7.7.18
7

Continuing Calibration Summary

Job Number: JC93827

Sample: EZ6895-ECC6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139917.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

38 t	Naphthalene	1.051	1.073	-2.1	154	0.00	5.38
39 t	4-Chloroaniline	0.424	0.442	-4.2	148	0.00	5.42
40 t	2,3-Dichloroaniline	0.388	0.413	-6.4	156	0.00	6.08
41 t	Caprolactam	0.122	0.124	-1.6	148	0.01	5.69
42 t	Hexachlorobutadiene	0.216	0.230	-6.5	159	0.00	5.47
43 t	4-Chloro-3-methylphenol	0.318	0.341	-7.2	153	0.00	5.78
44 t	2-Methylnaphthalene	0.573	0.610	-6.5	157	0.00	5.87
45 t	1-Methylnaphthalene	0.653	0.692	-6.0	158	0.00	5.94
46 t	Dimethylnaphthalene	0.665	0.704	-5.9	160	0.00	6.33
47 I	Acenaphthene-d10	1.000	1.000	0.0	155	0.00	6.68
48 t	Hexachlorocyclopentadiene	0.403	0.461	-14.4	162	0.00	5.99
49 t	2,4,6-Trichlorophenol	0.410	0.449	-9.5	157	0.00	6.08
50 t	2,4,5-Trichlorophenol	0.433	0.453	-4.6	156	0.00	6.12
51 S	2-Fluorobiphenyl	1.409	1.458	-3.5	160	0.00	6.14
52 t	2-Chloronaphthalene	1.156	1.209	-4.6	160	0.00	6.23
53 t	Biphenyl	1.550	1.631	-5.2	162	0.00	6.21
54 t	2-Nitroaniline	0.505	0.589	-16.6	178	0.00	6.31
55 t	Dimethylphthalate	1.366	1.425	-4.3	160	0.00	6.45
56 t	Acenaphthylene	1.836	1.909	-4.0	158	0.00	6.55
57 t	2,6-Dinitrotoluene	0.287	0.311	-8.4	162	0.00	6.50
58 t	3-Nitroaniline	0.321	0.324	-0.9	144	0.00	6.64
59 t	Acenaphthene	1.212	1.264	-4.3	160	0.00	6.70
		----- True	Calc.	% Drift	-----		
60 t	2,4-Dinitrophenol	100.000	97.406	2.6	151	0.00	6.73
		----- AvgRF	CCRF	% Dev	-----		
61 t	4-Nitrophenol	0.231	0.312	-35.1	190	0.01	6.81
62 t	Dibenzofuran	1.669	1.719	-3.0	157	0.00	6.85
63 t	2,4-Dinitrotoluene	0.407	0.442	-8.6	159	0.00	6.84
64	2,3,4,6-Tetrachlorophenol	0.334	0.364	-9.0	156	0.00	6.98
65 t	Diethylphthalate	1.427	1.540	-7.9	164	0.00	7.07
66 t	Fluorene	1.383	1.566	-13.2	170	0.00	7.17
67 t	4-Chlorophenyl-phenylethe	0.692	0.788	-13.9	171	0.00	7.17
68 t	4-Nitroaniline	0.335	0.326	2.7	139	0.00	7.20
69 I	Phenanthrene-d10	1.000	1.000	0.0	159	0.00	8.18
		----- True	Calc.	% Drift	-----		
70 t	4,6-Dinitro-2-methylpheno	50.000	47.387	5.2	153	0.00	7.23
		----- AvgRF	CCRF	% Dev	-----		
71 t	n-Nitrosodiphenylamine	0.502	0.505	-0.6	155	0.00	7.30
72 t	1,2-Diphenylhydrazine	0.766	0.836	-9.1	171	0.00	7.33
73 S	2,4,6-Tribromophenol	0.116	0.114	1.7	150	0.00	7.42
74 t	4-Bromophenyl-phenylether	0.218	0.215	1.4	152	0.00	7.67
75 t	Hexachlorobenzene	0.248	0.241	2.8	156	0.00	7.76
		----- True	Calc.	% Drift	-----		
76 t	Pentachlorophenol	100.000	100.708	-0.7	165	0.00	7.98
		----- AvgRF	CCRF	% Dev	-----		
77 t	Phenanthrene	1.088	1.077	1.0	157	0.00	8.21
78 t	Anthracene	1.093	1.091	0.2	155	0.00	8.27
79 t	Carbazole	0.991	1.003	-1.2	160	0.00	8.48
80 t	Di-n-butylphthalate	1.274	1.366	-7.2	163	0.00	8.97
81 t	Fluoranthene	1.200	1.237	-3.1	160	0.00	9.77
82 t	Octadecane	0.354	0.363	-2.5	160	0.00	8.10

7.7.18
7

Continuing Calibration Summary

Job Number: JC93827

Sample: EZ6895-ECC6880

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139917.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

83	I	Chrysene-d12	1.000	1.000	0.0	171	0.01	11.91
84	t	Pyrene	1.307	1.235	5.5	161	0.00	10.08
85	S	Terphenyl-d14	0.873	0.805	7.8	160	0.00	10.37
86	t	Butylbenzylphthalate	0.591	0.586	0.8	164	0.01	11.15
87	t	Benzo[a]anthracene	1.237	1.168	5.6	165	0.01	11.89
88	t	3,3'-Dichlorobenzidine	0.498	0.510	-2.4	171	0.02	11.91
89	t	Chrysene	1.163	1.087	6.5	164	0.02	11.95
90	t	bis(2-Ethylhexyl)phthalat	0.804	0.805	-0.1	165	0.01	12.09
91	I	Perylene-d12	1.000	1.000	0.0	158	0.01	13.97
92	t	Di-n-octylphthalate	1.368	1.537	-12.4	167	0.00	13.06
93	t	Benzo[b]fluoranthene	1.238	1.329	-7.4	161	0.00	13.46
94	t	Benzo[k]fluoranthene	1.119	1.166	-4.2	166	0.01	13.51
95	t	Benzo[a]pyrene	1.052	1.070	-1.7	157	0.02	13.89
96	t	Indeno[1,2,3-cd]pyrene	1.018	1.073	-5.4	158	0.02	15.28
97	t	Dibenz(a,h)acridine	0.940	0.991	-5.4	162	0.02	15.03
98	t	Dibenz[a,h]anthracene	1.054	1.101	-4.5	161	0.02	15.31
			----- True	Calc.	% Drift	-----		
99	t	7,12-Dimethylbenz(a)anthr	50.000	51.042	-2.1	160	0.00	13.47
			----- AvgRF	CCRF	% Dev	-----		
100	t	Benzo[g,h,i]perylene	0.969	0.973	-0.4	159	0.02	15.59

(#) = Out of Range
z139658a.D MZ6880.M

SPCC's out = 0 CCC's out = 0
Thu Aug 29 08:26:31 2019 YING

7.7.18
7

Continuing Calibration Summary

Job Number: JC93827

Sample: EZ6895-ECC6881

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139918.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6895\z139918.D Vial: 3
Acq On : 29 Aug 2019 8:03 am Operator: chriss2
Sample : ecc6881-50 Inst : GCMSZ
Misc : op22364,ez6895,30.0,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Wed Aug 28 13:26:10 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101 1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	137	0.00	4.44
102 Benzaldehyde	1.057	1.122	-6.1	143	0.03	4.11
103 Phenanthrene-d10a	1.000	1.000	0.0	123	0.00	8.18
104 Atrazine	0.095	0.102	-7.4	130	0.07	7.88
111 Phenanthrene-d10b	1.000	1.000	0.0	123	0.00	8.18
112 Pentachloronitrobenzene	0.046	0.052	-13.0	126	0.07	7.99

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z139658a.D MZ6880.M Thu Aug 29 08:28:20 2019 YING

7.7.19
7

Continuing Calibration Summary

Job Number: JC93827

Sample: EZ6895-ECC6882

Account: NOREASCA NOREAS, Inc.

Lab FileID: Z139919.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6895\z139919.D Vial: 4
 Acq On : 29 Aug 2019 8:30 am Operator: chriss2
 Sample : ecc6882-50 Inst : GCMSZ
 Misc : op22364,ez6895,30.0,,,1,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6880.M (RTE Integrator)
 Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
 Last Update : Wed Aug 28 13:26:10 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
105	Chrysene-d12a	1.000	1.000	0.0	145	0.00	11.90
106	Benzidine	0.689	0.706	-2.5	142	0.00	10.00
107	Acenaphthene-d10a	1.000	1.000	0.0	133	0.00	6.67
108	1,2,4,5-Tetrachlorobenzen	0.582	0.590	-1.4	139	0.05	5.99
109 I	Naphthalene-d8a	1.000	1.000	0.0	141	0.00	5.36
110	Hydroquinone	0.276	0.298	-8.0	135	0.08	5.68
113	Phenanthrene-d10c	1.000	1.000	0.0	136	0.00	8.18
114 s	1-chlorooctadecane	0.211	0.232	-10.0	138	0.09	9.71
115 s	o-terphenyl	0.518	0.563	-8.7	141	0.07	8.68

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 z139658a.D MZ6880.M Thu Aug 29 08:55:32 2019 YING

7.7.20
7

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: EZ6880	Method: SW846 8270D	Instrument ID: GCMSZ
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
EZ6880-DFTPP	Z139630.D	08/15/19 15:20	n/a	DFTPP Tune
EZ6880-IC6880	Z139631.D	08/15/19 15:38	n/a	Initial cal 100
EZ6880-IC6880	Z139632.D	08/15/19 16:05	n/a	Initial cal 80
EZ6880-ICC6880	Z139633.D	08/15/19 16:32	n/a	Initial cal 50
EZ6880-IC6880	Z139634.D	08/15/19 17:00	n/a	Initial cal 25
EZ6880-IC6880	Z139635.D	08/15/19 17:27	n/a	Initial cal 10
EZ6880-IC6880	Z139636.D	08/15/19 17:53	n/a	Initial cal 5
EZ6880-IC6880	Z139637.D	08/15/19 18:20	n/a	Initial cal 2
EZ6880-IC6880	Z139638.D	08/15/19 18:47	n/a	Initial cal 1
EZ6880-ICV6880	Z139640.D	08/15/19 19:41	n/a	Initial cal verification 50
EZ6880-ICV6880	Z139641.D	08/15/19 20:08	n/a	Initial cal verification 50
EZ6880-ICV6880	Z139642.D	08/15/19 20:35	n/a	Initial cal verification 50
EZ6880-ICV6880	Z139643.D	08/15/19 21:02	n/a	Initial cal verification 50
EZ6880-ICV6880	Z139644.D	08/15/19 21:29	n/a	Initial cal verification 50

7.8.1

7

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: EZ6881	Method: SW846 8270D	Instrument ID: GCMSZ
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
EZ6881-DFTPP	Z139645.D	08/15/19 21:51	n/a	DFTPP Tune
EZ6881-IC6881	Z139646.D	08/15/19 22:06	n/a	Initial cal 100
EZ6881-IC6881	Z139647.D	08/15/19 22:34	n/a	Initial cal 80
EZ6881-ICC6881	Z139648.D	08/15/19 22:59	n/a	Initial cal 50
EZ6881-IC6881	Z139649.D	08/15/19 23:26	n/a	Initial cal 25
EZ6881-IC6881	Z139650.D	08/15/19 23:53	n/a	Initial cal 10
EZ6881-IC6881	Z139651.D	08/16/19 00:20	n/a	Initial cal 5
EZ6881-IC6881	Z139652.D	08/16/19 00:47	n/a	Initial cal 2
EZ6881-IC6881	Z139653.D	08/16/19 01:14	n/a	Initial cal 1
EZ6881-ICV6881	Z139654.D	08/16/19 01:40	n/a	Initial cal verification 50

7.8.2

7

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: EZ6882	Method: SW846 8270D	Instrument ID: GCMSZ
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
EZ6882-DFTPP	Z139655.D	08/16/19 02:03	n/a	DFTPP Tune
EZ6882-IC6882	Z139656.D	08/16/19 02:17	n/a	Initial cal 100
EZ6882-IC6882	Z139657.D	08/16/19 02:44	n/a	Initial cal 80
EZ6882-ICC6882	Z139658.D	08/16/19 03:11	n/a	Initial cal 50
EZ6882-IC6882	Z139659.D	08/16/19 03:38	n/a	Initial cal 25
EZ6882-IC6882	Z139660.D	08/16/19 04:05	n/a	Initial cal 10
EZ6882-IC6882	Z139661.D	08/16/19 04:31	n/a	Initial cal 5
EZ6882-IC6882	Z139662.D	08/16/19 04:58	n/a	Initial cal 2
EZ6882-IC6882	Z139663.D	08/16/19 05:25	n/a	Initial cal 1
EZ6882-ICV6882	Z139664.D	08/16/19 05:52	n/a	Initial cal verification 50
EZ6882-ICV6882	Z139665.D	08/16/19 06:18	n/a	Initial cal verification 50

7.8.3
7

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: EZ6883	Method: SW846 8270D	Instrument ID: GCMSZ
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
EZ6883-DFTPP	Z139667.D	08/16/19 10:50	n/a	DFTPP Tune
EZ6883-ICV6880	Z139668.D	08/16/19 11:15	n/a	Initial cal verification 50
EZ6883-ICV6880	Z139669.D	08/16/19 11:42	n/a	Initial cal verification 50
EZ6883-ICV6882	Z139670.D	08/16/19 14:09	n/a	Initial cal verification 50

7.8.4
7

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: EZ6895	Method: SW846 8270D	Instrument ID: GCMSZ
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
EZ6895-DFTPP	Z139907.D	08/29/19 01:54	n/a	DFTPP Tune
EZ6895-CC6880	Z139908.D	08/29/19 02:10	n/a	Continuing cal 50
EZ6895-CC6881	Z139909.D	08/29/19 02:36	n/a	Continuing cal 50
EZ6895-CC6882	Z139910.D	08/29/19 03:03	n/a	Continuing cal 50
OP22364-MB1	Z139912.D	08/29/19 04:57	OP22364	Method Blank
OP22364-BS1	Z139913.D	08/29/19 05:50	OP22364	Blank Spike
OP22364-MS	Z139914.D	08/29/19 06:17	OP22364	Matrix Spike
OP22364-MSD	Z139915.D	08/29/19 06:44	OP22364	Matrix Spike Duplicate
JC93827-1	Z139916.D	08/29/19 07:10	OP22364	NWIRP-S1-WC-C-001
EZ6895-ECC6880	Z139917.D	08/29/19 07:37	n/a	Ending cal 50
EZ6895-ECC6881	Z139918.D	08/29/19 08:03	n/a	Ending cal 50
EZ6895-ECC6882	Z139919.D	08/29/19 08:30	n/a	Ending cal 50

7.8.5
7

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- DDT/Endrin Breakdown Checks
- GC Identification Summaries (Hits)
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22369-MB1	OA142082.D	1	08/30/19	VDT	08/28/19	OP22369	GOA4910

The QC reported here applies to the following samples:

Method: SW846 8151A

JC93827-1

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	17	4.2	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	3.3	3.0	ug/kg	
93-76-5	2,4,5-T	ND	3.3	2.7	ug/kg	
75-99-0	Dalapon	ND	3.3	3.0	ug/kg	
1918-00-9	Dicamba	ND	3.3	2.7	ug/kg	
120-36-5	Dichloroprop	ND	17	13	ug/kg	
88-85-7	Dinoseb	ND	17	8.0	ug/kg	
94-74-6	MCPA	ND	1700	300	ug/kg	
93-65-2	MCPP	ND	1700	500	ug/kg	
87-86-5	Pentachlorophenol	ND	1.7	0.94	ug/kg	
94-82-6	2,4-DB	ND	17	12	ug/kg	

CAS No.	Surrogate Recoveries	Limits
19719-28-9	2,4-DCAA	95% 10-159%
19719-28-9	2,4-DCAA	94% 10-159%

8.1.1

8

Method Blank Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22361-MB1	1G155377.D	1	08/30/19	CP	08/29/19	OP22361	G1G5043

The QC reported here applies to the following samples:

Method: SW846 8081B

JC93827-1

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.67	0.55	ug/kg	
319-84-6	alpha-BHC	ND	0.67	0.54	ug/kg	
319-85-7	beta-BHC	ND	0.67	0.60	ug/kg	
319-86-8	delta-BHC	ND	0.67	0.64	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.67	0.49	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.67	0.54	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.67	0.30	ug/kg	
60-57-1	Dieldrin	ND	0.67	0.46	ug/kg	
72-54-8	4,4' -DDD	ND	0.67	0.61	ug/kg	
72-55-9	4,4' -DDE	ND	0.67	0.58	ug/kg	
50-29-3	4,4' -DDT	ND	0.67	0.59	ug/kg	
72-20-8	Endrin	ND	0.67	0.52	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.67	0.52	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.67	0.38	ug/kg	
959-98-8	Endosulfan-I	ND	0.67	0.38	ug/kg	
33213-65-9	Endosulfan-II	ND	0.67	0.42	ug/kg	
76-44-8	Heptachlor	ND	0.67	0.57	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.67	0.47	ug/kg	
72-43-5	Methoxychlor	ND	1.3	0.53	ug/kg	
53494-70-5	Endrin ketone	ND	0.67	0.48	ug/kg	
8001-35-2	Toxaphene	ND	17	16	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	78%	25-135%
877-09-8	Tetrachloro-m-xylene	80%	25-135%
2051-24-3	Decachlorobiphenyl	92%	10-156%
2051-24-3	Decachlorobiphenyl	83%	10-156%

8.1.2
8

Method Blank Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22361-MB1	6G67542.D	1	08/30/19	AB	08/29/19	OP22361	G6G2122

The QC reported here applies to the following samples:

Method: SW846 8081B

JC93827-1

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.67	0.55	ug/kg	
319-84-6	alpha-BHC	ND	0.67	0.54	ug/kg	
319-85-7	beta-BHC	ND	0.67	0.60	ug/kg	
319-86-8	delta-BHC	ND	0.67	0.64	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.67	0.49	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.67	0.54	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.67	0.30	ug/kg	
60-57-1	Dieldrin	ND	0.67	0.46	ug/kg	
72-54-8	4,4' -DDD	ND	0.67	0.61	ug/kg	
72-55-9	4,4' -DDE	ND	0.67	0.58	ug/kg	
50-29-3	4,4' -DDT	ND	0.67	0.59	ug/kg	
72-20-8	Endrin	ND	0.67	0.52	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.67	0.52	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.67	0.38	ug/kg	
959-98-8	Endosulfan-I	ND	0.67	0.38	ug/kg	
33213-65-9	Endosulfan-II	ND	0.67	0.42	ug/kg	
76-44-8	Heptachlor	ND	0.67	0.57	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.67	0.47	ug/kg	
72-43-5	Methoxychlor	ND	1.3	0.53	ug/kg	
53494-70-5	Endrin ketone	ND	0.67	0.48	ug/kg	
8001-35-2	Toxaphene	ND	17	16	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	86%	25-135%
877-09-8	Tetrachloro-m-xylene	82%	25-135%
2051-24-3	Decachlorobiphenyl	95%	10-156%
2051-24-3	Decachlorobiphenyl	74%	10-156%

8.1.3
8

Method Blank Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22362-MB1	XX2439236.D	1	08/29/19	TR	08/29/19	OP22362	GXX6789

The QC reported here applies to the following samples:

Method: SW846 8082A

JC93827-1

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	16	ug/kg	
11104-28-2	Aroclor 1221	ND	33	21	ug/kg	
11141-16-5	Aroclor 1232	ND	33	21	ug/kg	
53469-21-9	Aroclor 1242	ND	33	14	ug/kg	
12672-29-6	Aroclor 1248	ND	33	30	ug/kg	
11097-69-1	Aroclor 1254	ND	33	18	ug/kg	
11096-82-5	Aroclor 1260	ND	33	14	ug/kg	
11100-14-4	Aroclor 1268	ND	33	14	ug/kg	
37324-23-5	Aroclor 1262	ND	33	22	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	91%	31-146%
877-09-8	Tetrachloro-m-xylene	100%	31-146%
2051-24-3	Decachlorobiphenyl	100%	17-164%
2051-24-3	Decachlorobiphenyl	113%	17-164%

8.1.4

8

Blank Spike Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22369-BS1	OA142083.D	1	08/30/19	VDT	08/28/19	OP22369	GOA4910

The QC reported here applies to the following samples:

Method: SW846 8151A

JC93827-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
94-75-7	2,4-D	133	72.4	54	39-153
93-72-1	2,4,5-TP (Silvex)	26.7	17.9	67	49-139
93-76-5	2,4,5-T	26.7	16.5	62	37-135
75-99-0	Dalapon	26.7	11.3	42	28-144
1918-00-9	Dicamba	26.7	17.7	66	39-151
120-36-5	Dichloroprop	133	85.8	64	57-144
88-85-7	Dinoseb	133	27.2	20	10-159
94-74-6	MCPA	6670	4180	63	32-180
93-65-2	MCPP	6670	4790	72	45-193
87-86-5	Pentachlorophenol	13.3	9.8	74	29-141
94-82-6	2,4-DB	133	66.7	50	23-157

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	63%	10-159%
19719-28-9	2,4-DCAA	61%	10-159%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22361-BS1	6G67543.D	1	08/30/19	AB	08/29/19	OP22361	G6G2122

The QC reported here applies to the following samples:

Method: SW846 8081B

JC93827-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
309-00-2	Aldrin	16.7	15.3	92	46-120
319-84-6	alpha-BHC	16.7	16.2	97	45-116
319-85-7	beta-BHC	16.7	14.1	85	42-121
319-86-8	delta-BHC	16.7	15.2	91	42-121
58-89-9	gamma-BHC (Lindane)	16.7	15.8	95	46-118
5103-71-9	alpha-Chlordane	16.7	15.6	94	49-119
5103-74-2	gamma-Chlordane	16.7	15.6	94	48-121
60-57-1	Dieldrin	16.7	15.9	95	48-126
72-54-8	4,4'-DDD	16.7	16.5	99	47-120
72-55-9	4,4'-DDE	16.7	15.0	90	48-121
50-29-3	4,4'-DDT	16.7	14.9	89	45-135
72-20-8	Endrin	16.7	15.2	91	51-137
1031-07-8	Endosulfan sulfate	16.7	15.8	95	48-128
7421-93-4	Endrin aldehyde	16.7	16.0	96	46-125
959-98-8	Endosulfan-I	16.7	15.5	93	47-118
33213-65-9	Endosulfan-II	16.7	16.4	98	49-121
76-44-8	Heptachlor	16.7	15.4	92	48-120
1024-57-3	Heptachlor epoxide	16.7	15.8	95	46-122
72-43-5	Methoxychlor	16.7	13.7	82	44-136
53494-70-5	Endrin ketone	16.7	16.8	101	44-139

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	84%	25-135%
877-09-8	Tetrachloro-m-xylene	75%	25-135%
2051-24-3	Decachlorobiphenyl	104%	10-156%
2051-24-3	Decachlorobiphenyl	77%	10-156%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22362-BS1	XX2439237.D	1	08/29/19	TR	08/29/19	OP22362	GXX6789

The QC reported here applies to the following samples:

Method: SW846 8082A

JC93827-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	133	94.3	71	67-157
11104-28-2	Aroclor 1221		ND		70-130
11141-16-5	Aroclor 1232		ND		70-130
53469-21-9	Aroclor 1242		ND		70-130
12672-29-6	Aroclor 1248		ND		70-130
11097-69-1	Aroclor 1254		ND		70-130
11096-82-5	Aroclor 1260	133	94.4	71	63-155
11100-14-4	Aroclor 1268		ND		50-150 ^a
37324-23-5	Aroclor 1262		ND		50-150 ^a

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	96%	31-146%
877-09-8	Tetrachloro-m-xylene	105%	31-146%
2051-24-3	Decachlorobiphenyl	107%	17-164%
2051-24-3	Decachlorobiphenyl	120%	17-164%

(a) Advisory control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22369-MS	OA142090.D	1	08/30/19	VDT	08/28/19	OP22369	GOA4910
OP22369-MSD	OA142091.D	1	08/30/19	VDT	08/28/19	OP22369	GOA4910
JC93827-1	OA142089.D	1	08/30/19	VDT	08/28/19	OP22369	GOA4910

The QC reported here applies to the following samples:

Method: SW846 8151A

JC93827-1

CAS No.	Compound	JC93827-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	17 U	135	80.2	59	141	87.9	62	9	10-164/54
93-72-1	2,4,5-TP (Silvex)	3.5 U	27.1	21.5	79	28.2	23.5	83	9	10-159/51
93-76-5	2,4,5-T	3.5 U	27.1	19.0	70	28.2	21.2	75	11	10-144/56
75-99-0	Dalapon	3.5 U	27.1	18.7	69	28.2	19.7	70	5	10-165/50
1918-00-9	Dicamba	3.5 U	27.1	21.7	80	28.2	23.7	84	9	10-178/52
120-36-5	Dichloroprop	17 U	135	99.3	73	141	108	77	8	10-166/55
88-85-7	Dinoseb	17 U	135	133	98	141	137	97	3	10-156/44
94-74-6	MCPA	1700 U	6770	4930	73	7040	5650	80	14	10-208/51
93-65-2	MCPP	1700 U	6770	6630	98	7040	7260	103	9	10-240/52
87-86-5	Pentachlorophenol	1.7 U	13.5	19.0	140	14.1	19.4	138	2	10-171/47
94-82-6	2,4-DB	17 U	135	69.8	52	141	69.3	49	1	10-153/57

CAS No.	Surrogate Recoveries	MS	MSD	JC93827-1	Limits
19719-28-9	2,4-DCAA	64%	63%	68%	10-159%
19719-28-9	2,4-DCAA	63%	63%	67%	10-159%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22361-MS	1G155421.D	1	08/30/19	AB	08/29/19	OP22361	G1G5044
OP22361-MSD	1G155422.D	1	08/30/19	AB	08/29/19	OP22361	G1G5044
JC93548-1	1G155420.D	1	08/30/19	AB	08/29/19	OP22361	G1G5044
JC93548-1 ^a	1G155469.D	5	09/03/19	AB	08/29/19	OP22361	G1G5046

The QC reported here applies to the following samples:

Method: SW846 8081B

JC93827-1

CAS No.	Compound	JC93548-1 ug/kg	Spike Q	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	ND		17.2	7.6	44	17.3	22.7	131	100* ^b 23-143/44
319-84-6	alpha-BHC	ND		17.2	30.3	176* ^b	17.3	27.4	158* ^b	10 18-152/47
319-85-7	beta-BHC	ND		17.2	11.0	64	17.3	42.3	244* ^b	117* ^b 7-143/48
319-86-8	delta-BHC	ND		17.2	80.9	469* ^b	17.3	128	738* ^b	45 13-155/49
58-89-9	gamma-BHC (Lindane)	23.8		17.2	9.0	-86* ^b	17.3	40.8	98	128* ^b 23-138/49
5103-71-9	alpha-Chlordane	ND		17.2	21.4	124	17.3	50.2	289* ^b	80* ^b 16-149/46
5103-74-2	gamma-Chlordane	ND		17.2	24.3	141	17.3	363	2092* ^b	175* ^b 14-152/45
60-57-1	Dieldrin	ND		17.2	154	893* ^b	17.3	190	1095* ^b	21 14-154/46
72-54-8	4,4'-DDD	ND		17.2	166	963* ^b	17.3	201	1159* ^b	19 18-149/51
72-55-9	4,4'-DDE	ND		17.2	607	3522* ^b	17.3	737	4248* ^b	19 10-154/49
50-29-3	4,4'-DDT	ND		17.2	45.5	264* ^b	17.3	35.7	206* ^b	24 10-170/50
72-20-8	Endrin	ND		17.2	113	656* ^b	17.3	109	628* ^b	4 18-173/49
1031-07-8	Endosulfan sulfate	ND		17.2	78.4	455* ^b	17.3	80.6	465* ^b	3 19-132/50
7421-93-4	Endrin aldehyde	ND		17.2	156	905* ^b	17.3	395	2277* ^b	87* ^b 10-160/53
959-98-8	Endosulfan-I	ND		17.2	19.9	115	17.3	17.7	102	12 18-143/46
33213-65-9	Endosulfan-II	ND		17.2	24.0	139* ^b	17.3	34.9	201* ^b	37 21-132/46
76-44-8	Heptachlor	ND		17.2	43.2	251* ^b	17.3	46.4	267* ^b	7 22-146/46
1024-57-3	Heptachlor epoxide	ND		17.2	614	3562* ^b	17.3	846	4876* ^b	32 21-151/45
72-43-5	Methoxychlor	ND		17.2	146	847* ^b	17.3	182	1049* ^b	22 11-166/50
53494-70-5	Endrin ketone	ND		17.2	21.4	124	17.3	23.0	133	7 8-179/51
8001-35-2	Toxaphene	ND						ND		0 50-150/30

CAS No.	Surrogate Recoveries	MS	MSD	JC93548-1	JC93548-1	Limits
877-09-8	Tetrachloro-m-xylene	493%* ^b	188%* ^b	181%* ^b	145%* ^c	25-135%
877-09-8	Tetrachloro-m-xylene	4%* ^b	3%* ^b	6%* ^d	57%	25-135%
2051-24-3	Decachlorobiphenyl	107%	100%	132%	76%	10-156%
2051-24-3	Decachlorobiphenyl	4%* ^b	3%* ^b	9%* ^d	45%	10-156%

(a) Confirmation run.

(b) Outside control limits due to matrix interference.

(c) More than 40 % RPD for detected concentrations between the two GC columns.

(d) Outside control limits due to matrix interference with the internal standard.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22362-MS	XX2439239.D	1	08/29/19	TR	08/29/19	OP22362	GXX6789
OP22362-MSD	XX2439240.D	1	08/29/19	TR	08/29/19	OP22362	GXX6789
JC93812-1	XX2439238.D	1	08/29/19	TR	08/29/19	OP22362	GXX6789

The QC reported here applies to the following samples:

Method: SW846 8082A

JC93827-1

CAS No.	Compound	JC93812-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND	143	69.7	49	139	94.8	68	31	36-191/60
11104-28-2	Aroclor 1221	ND		ND			ND		nc	70-130/50
11141-16-5	Aroclor 1232	ND		ND			ND		nc	70-130/1
53469-21-9	Aroclor 1242	ND		ND			ND		nc	70-130/6
12672-29-6	Aroclor 1248	ND		ND			ND		nc	70-130/33
11097-69-1	Aroclor 1254	ND		ND			ND		nc	70-130/38
11096-82-5	Aroclor 1260	25.1	J 143	143	82	139	225	144	45	15-200/68
11100-14-4	Aroclor 1268	ND		ND			ND		nc	-/50
37324-23-5	Aroclor 1262	ND		ND			ND		nc	-/17

CAS No.	Surrogate Recoveries	MS	MSD	JC93812-1	Limits
877-09-8	Tetrachloro-m-xylene	68%	71%	55%	31-146%
877-09-8	Tetrachloro-m-xylene	77%	82%	61%	31-146%
2051-24-3	Decachlorobiphenyl	67%	68%	55%	17-164%
2051-24-3	Decachlorobiphenyl	86%	92%	70%	17-164%

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G1G5043-CC4995	Injection Date:	08/29/19
Lab File ID:	1G155375.D	Injection Time:	23:47
Instrument ID:	GC1G	Method:	SW846 8081B

IS 1		IS 2	
AREA	RT	AREA	RT

Check Std	169150833	1.87	117282580	1.65
Upper Limit ^a	338301666	2.37	234565160	2.15
Lower Limit ^b	84575417	1.37	58641290	1.15

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT
OP22361-MB1	148885299	1.87	107612486	1.65
ZZZZZZ	148848727	1.88	94733315	1.67
ZZZZZZ	143673392	1.88	89558772	1.66
ZZZZZZ	138343982	1.88	92102134	1.66
ZZZZZZ	152476280	1.88	100294060	1.66
ZZZZZZ	148584784	1.88	97417645	1.66
ZZZZZZ	148389744	1.87	97862710	1.66
ZZZZZZ	139787352	1.88	89999227	1.66
ZZZZZZ	144913850	1.87	93403536	1.66
ZZZZZZ	156758168	1.88	102847914	1.66
ZZZZZZ	163019060	1.88	106195308	1.66

IS 1 = 1-Bromo-2-nitrobenzene (Signal #2)
IS 2 = 1-Bromo-2-nitrobenzene (Signal #1)

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

8.4.1
8

Internal Standard Area Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G1G5044-CC4995	Injection Date:	08/30/19
Lab File ID:	1G155416.D	Injection Time:	14:56
Instrument ID:	GC1G	Method:	SW846 8081B

IS 1		IS 2	
AREA	RT	AREA	RT

Check Std	160740451	1.87	105717056	1.65
Upper Limit ^a	321480902	2.37	211434112	2.15
Lower Limit ^b	80370226	1.37	52858528	1.15

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT
ZZZZZZ	155703208	1.86	99115572	1.64
ZZZZZZ	133539408	1.87	91860336	1.65
JC93548-1	2903759163*	1.87	62854492	1.65
OP22361-MS	4244203048*	1.87	74968669	1.65
OP22361-MSD	3825301502*	1.87	51863916*	1.65

IS 1 = 1-Bromo-2-nitrobenzene (Signal #2)
IS 2 = 1-Bromo-2-nitrobenzene (Signal #1)

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

8.4.2
8

Internal Standard Area Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G6G2121-CC2063	Injection Date:	08/29/19
Lab File ID:	6G67524.D	Injection Time:	23:47
Instrument ID:	GC6G	Method:	SW846 8081B

IS 1		IS 2	
AREA	RT	AREA	RT

Check Std	254419556	1.92	228790287	1.67
Upper Limit ^a	508839112	2.42	457580574	2.17
Lower Limit ^b	127209778	1.42	114395144	1.17

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT
JC93827-1 ^c	232813460	1.93	210501657	1.68
G6G2121-ECC2063	247583910	1.93	214099984	1.68

IS 1 = 1-Bromo-2-nitrobenzene (Signal #2)
IS 2 = 1-Bromo-2-nitrobenzene (Signal #1)

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

(c) Confirmation run.

Internal Standard Area Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G6G2122-CC2063	Injection Date:	08/30/19
Lab File ID:	6G67538.D	Injection Time:	09:14
Instrument ID:	GC6G	Method:	SW846 8081B

IS 1		IS 2	
AREA	RT	AREA	RT

Check Std	258201221	1.92	220411321	1.66
Upper Limit ^a	516402442	2.42	440822642	2.16
Lower Limit ^b	129100611	1.42	110205661	1.16

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT
OP22361-MB1	230373523	1.92	195265083	1.66
OP22361-BS1	221593273	1.92	184799756	1.66
JC93827-1	237995576	1.92	203419000	1.67
G6G2122-ECC2063	349485392	1.93	204884128	1.67

IS 1 = 1-Bromo-2-nitrobenzene (Signal #2)

IS 2 = 1-Bromo-2-nitrobenzene (Signal #1)

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

8.4.4
8

DDT/Endrin Breakdown Check

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: G1G4995-DDT	Injection Date: 07/25/19
Lab File ID: 1G154464.D	Injection Time: 11:38
Instrument ID: GC1G	

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	2248960	3089029
4,4'-DDE	1954255	2463174
4,4'-DDT	185221442	251825945

DDT Breakdown ^a	2.2 %	2.2 %
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Endrin aldehyde	1100426	1212241
Endrin ketone	1901208	2476763
Endrin	115283451	162229128

Endrin Breakdown ^b	2.5 %	2.2 %
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(a) Calculated as: $(DDD + DDE) / (DDD + DDE + DDT) \times 100$

(b) Calculated as: $(\text{Endrin Aldehyde} + \text{Endrin Ketone}) / (\text{Endrin Aldehyde} + \text{Endrin Ketone} + \text{Endrin}) \times 100$

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
G1G4995-IC4995	1G154466.D	07/25/19	12:14	00:36	Initial cal 1
G1G4995-IC4995	1G154467.D	07/25/19	12:32	00:54	Initial cal 2
G1G4995-IC4995	1G154468.D	07/25/19	12:50	01:12	Initial cal 5
G1G4995-IC4995	1G154469.D	07/25/19	13:08	01:31	Initial cal 10
G1G4995-ICC4995	1G154470.D	07/25/19	13:26	01:49	Initial cal 25
G1G4995-IC4995	1G154471.D	07/25/19	13:44	02:07	Initial cal 50
G1G4995-IC4995	1G154472.D	07/25/19	14:03	02:25	Initial cal 75
G1G4995-IC4995	1G154473.D	07/25/19	14:21	02:43	Initial cal 100
G1G4995-IC4995	1G154474.D	07/25/19	14:39	03:01	Initial cal 500
G1G4995-IC4995	1G154475.D	07/25/19	14:57	03:19	Initial cal 500
G1G4995-ICV4995	1G154476.D	07/25/19	15:15	03:37	Initial cal verification 25
G1G4995-ICV4995	1G154477.D	07/25/19	15:33	03:55	Initial cal verification 500
G1G4995-ICV4995	1G154478.D	07/25/19	15:51	04:13	Initial cal verification 500
G1G4995-ICV4995	1G154479.D	07/25/19	16:09	04:31	Initial cal verification 50
G1G4995-ICV4995	1G154480.D	07/25/19	16:27	04:49	Initial cal verification 50

8.5.1
8

DDT/Endrin Breakdown Check

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: G1G5043-DDT	Injection Date: 08/29/19
Lab File ID: 1G155374.D	Injection Time: 23:28
Instrument ID: GC1G	

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	1622002	3977862
4,4'-DDE	2237291	4124624
4,4'-DDT	189677553	255996095
DDT Breakdown ^a	2 %	3.1 %

Endrin aldehyde	594355	755022
Endrin ketone	1103071	1729200
Endrin	123519299	183590660
Endrin Breakdown ^b	1.4 %	1.3 %

(a) Calculated as: $(DDD + DDE) / (DDD + DDE + DDT) \times 100$

(b) Calculated as: $(\text{Endrin Aldehyde} + \text{Endrin Ketone}) / (\text{Endrin Aldehyde} + \text{Endrin Ketone} + \text{Endrin}) \times 100$

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
G1G5043-CC4995	1G155375.D	08/29/19	23:47	00:19	Continuing cal 50
OP22361-MB1	1G155377.D	08/30/19	00:33	01:05	Method Blank
ZZZZZZ	1G155382.D	08/30/19	02:03	02:35	(unrelated sample)
ZZZZZZ	1G155384.D	08/30/19	02:39	03:11	(unrelated sample)
ZZZZZZ	1G155385.D	08/30/19	02:58	03:30	(unrelated sample)
ZZZZZZ	1G155386.D	08/30/19	03:16	03:48	(unrelated sample)
ZZZZZZ	1G155387.D	08/30/19	03:34	04:06	(unrelated sample)
ZZZZZZ	1G155388.D	08/30/19	03:52	04:24	(unrelated sample)
ZZZZZZ	1G155389.D	08/30/19	04:10	04:42	(unrelated sample)
ZZZZZZ	1G155391.D	08/30/19	04:47	05:19	(unrelated sample)
ZZZZZZ	1G155392.D	08/30/19	05:05	05:37	(unrelated sample)
ZZZZZZ	1G155393.D	08/30/19	05:23	05:55	(unrelated sample)

8.5.2
8

DDT/Endrin Breakdown Check

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: G1G5044-DDT	Injection Date: 08/30/19
Lab File ID: 1G155404.D	Injection Time: 09:33
Instrument ID: GC1G	

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	1495400	823393
4,4'-DDE	2281618	880440
4,4'-DDT	160240853	242812402

DDT Breakdown ^a	2.3 %	0.7 %
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Endrin aldehyde	1404809	858425
Endrin ketone	559318	1007150
Endrin	98320278	155615849

Endrin Breakdown ^b	2 %	1.2 %
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(a) Calculated as: $(DDD + DDE) / (DDD + DDE + DDT) \times 100$
 (b) Calculated as: $(\text{Endrin Aldehyde} + \text{Endrin Ketone}) / (\text{Endrin Aldehyde} + \text{Endrin Ketone} + \text{Endrin}) \times 100$

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
G1G5044-CC4995	1G155405.D	08/30/19	09:51	00:18	Continuing cal 50
ZZZZZZ	1G155409.D	08/30/19	11:07	01:34	(unrelated sample)
ZZZZZZ	1G155411.D	08/30/19	11:44	02:11	(unrelated sample)
ZZZZZZ	1G155412.D	08/30/19	12:02	02:29	(unrelated sample)
ZZZZZZ	1G155413.D	08/30/19	12:31	02:58	(unrelated sample)
ZZZZZZ	1G155414.D	08/30/19	12:49	03:16	(unrelated sample)
ZZZZZZ	1G155415.D	08/30/19	13:07	03:34	(unrelated sample)
G1G5044-CC4995	1G155416.D	08/30/19	14:56	05:23	Continuing cal 25
ZZZZZZ	1G155418.D	08/30/19	15:36	06:04	(unrelated sample)
ZZZZZZ	1G155419.D	08/30/19	15:55	06:22	(unrelated sample)
JC93548-1	1G155420.D	08/30/19	16:13	06:40	(used for QC only; not part of job JC93827)
OP22361-MS	1G155421.D	08/30/19	16:31	06:58	Matrix Spike
OP22361-MSD	1G155422.D	08/30/19	16:49	07:16	Matrix Spike Duplicate

8.5.3
8

DDT/Endrin Breakdown Check

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: G6G2063-DDT	Injection Date: 07/12/19
Lab File ID: 6G66158.D	Injection Time: 10:36
Instrument ID: GC6G	

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	5151191	4115533
4,4'-DDE	3244404	2050693
4,4'-DDT	368680210	357500782

DDT Breakdown ^a	2.2 %	1.7 %
----------------------------	-------	-------

Endrin aldehyde	52688	40867
Endrin ketone	2275840	2454949
Endrin	218916340	206552143

Endrin Breakdown ^b	1.1 %	1.2 %
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(a) Calculated as: $(DDD + DDE) / (DDD + DDE + DDT) \times 100$

(b) Calculated as: $(\text{Endrin Aldehyde} + \text{Endrin Ketone}) / (\text{Endrin Aldehyde} + \text{Endrin Ketone} + \text{Endrin}) \times 100$

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
G6G2063-IC2063	6G66161.D	07/12/19	13:36	03:00	Initial cal 1
G6G2063-IC2063	6G66162.D	07/12/19	13:53	03:17	Initial cal 2
G6G2063-IC2063	6G66163.D	07/12/19	14:11	03:35	Initial cal 5
G6G2063-IC2063	6G66164.D	07/12/19	14:28	03:52	Initial cal 10
G6G2063-ICC2063	6G66165.D	07/12/19	14:46	04:10	Initial cal 25
G6G2063-IC2063	6G66166.D	07/12/19	15:03	04:27	Initial cal 50
G6G2063-IC2063	6G66167.D	07/12/19	15:23	04:46	Initial cal 75
G6G2063-IC2063	6G66168.D	07/12/19	15:40	05:04	Initial cal 100
G6G2063-IC2063	6G66169.D	07/12/19	15:58	05:22	Initial cal 500
G6G2063-IC2063	6G66170.D	07/12/19	16:15	05:39	Initial cal 500
G6G2063-ICV2063	6G66171.D	07/12/19	16:33	05:57	Initial cal verification 25
G6G2063-ICV2063	6G66172.D	07/12/19	16:50	06:14	Initial cal verification 500
G6G2063-ICV2063	6G66173.D	07/12/19	17:08	06:32	Initial cal verification 500
G6G2063-ICV2063	6G66174.D	07/12/19	17:25	06:49	Initial cal verification 50
G6G2063-ICV2063	6G66175.D	07/12/19	17:43	07:07	Initial cal verification 50

8.5.4
8

DDT/Endrin Breakdown Check

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: G6G2121-DDT	Injection Date: 08/29/19
Lab File ID: 6G67523.D	Injection Time: 23:29
Instrument ID: GC6G	

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	3618768	3976667
4,4'-DDE	2545526	3385038
4,4'-DDT	496486464	426659389

DDT Breakdown ^a	1.2 %	1.7 %
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Endrin aldehyde	2800450	1155006
Endrin ketone	2136561	2246237
Endrin	306643520	265259720

Endrin Breakdown ^b	1.6 %	1.3 %
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(a) Calculated as: $(DDD + DDE) / (DDD + DDE + DDT) \times 100$
 (b) Calculated as: $(\text{Endrin Aldehyde} + \text{Endrin Ketone}) / (\text{Endrin Aldehyde} + \text{Endrin Ketone} + \text{Endrin}) \times 100$

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
G6G2121-CC2063	6G67524.D	08/29/19	23:47	00:17	Continuing cal 25
G6G2121-CC2063	6G67525.D	08/30/19	00:11	00:42	Continuing cal 500
G6G2121-CC2063	6G67526.D	08/30/19	00:28	00:59	Continuing cal 500
JC93827-1	6G67533.D	08/30/19	02:44	03:15	NWIRP-S1-WC-C-001
G6G2121-ECC2063	6G67535.D	08/30/19	04:13	04:44	Ending cal 50

8.5.5
8

DDT/Endrin Breakdown Check

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: G6G2122-DDT	Injection Date: 08/30/19
Lab File ID: 6G67537.D	Injection Time: 08:57
Instrument ID: GC6G	

Compound	Response Signal 1	Response Signal 2
4,4' -DDD	2248905	3994944
4,4' -DDE	2856949	2784703
4,4' -DDT	474589026	409628880

DDT Breakdown ^a	1.1 %	1.6 %
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Endrin aldehyde	1287051	930580
Endrin ketone	2087839	2702794
Endrin	282181379	253897727

Endrin Breakdown ^b	1.2 %	1.4 %
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(a) Calculated as: $(DDD + DDE) / (DDD + DDE + DDT) \times 100$

(b) Calculated as: $(\text{Endrin Aldehyde} + \text{Endrin Ketone}) / (\text{Endrin Aldehyde} + \text{Endrin Ketone} + \text{Endrin}) \times 100$

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
G6G2122-CC2063	6G67538.D	08/30/19	09:14	00:18	Continuing cal 25
G6G2122-CC2063	6G67539.D	08/30/19	09:44	00:47	Continuing cal 500
G6G2122-CC2063	6G67540.D	08/30/19	10:01	01:05	Continuing cal 500
OP22361-MB1	6G67542.D	08/30/19	10:54	01:57	Method Blank
OP22361-BS1	6G67543.D	08/30/19	11:11	02:15	Blank Spike
JC93827-1	6G67547.D	08/30/19	12:21	03:25	NWIRP-S1-WC-C-001
G6G2122-ECC2063	6G67548.D	08/30/19	13:08	04:12	Ending cal 50

8.5.6
8

GC Identification Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: GOA4910-CC4909	Injection Date: 08/30/19
Lab File ID: OA142080.D	Injection Time: 09:27
Instrument ID: GCOA	Method: SW846 8151A

Sample ID: OP22369-BS1	Injection Date: 08/30/19
Lab File ID: OA142083.D	Injection Time: 10:52
Client ID: Blank Spike	

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
2,4-D	1 ^a	8.67	8.69	72.4		ug/kg	4.5
2,4-D	2	9.94	9.94	75.7		ug/kg	
2,4,5-TP (Silvex)	1 ^a	9.94	9.96	17.9		ug/kg	1.7
2,4,5-TP (Silvex)	2	11.38	11.38	18.2		ug/kg	
2,4,5-T	1	10.38	10.41	17.2		ug/kg	4.2
2,4,5-T	2 ^a	12.12	12.13	16.5		ug/kg	
Dalapon	1	2.26	2.26	11.9		ug/kg	5.2
Dalapon	2 ^a	2.41	2.41	11.3		ug/kg	
Dicamba	1	7.38	7.40	17.8		ug/kg	0.6
Dicamba	2 ^a	8.31	8.31	17.7		ug/kg	
Dichloroprop	1	8.35	8.37	88.4		ug/kg	3.0
Dichloroprop	2 ^a	9.41	9.41	85.8		ug/kg	
Dinoseb	1 ^a	13.20	13.22	27.2		ug/kg	19.9
Dinoseb	2	13.69	13.69	33.2		ug/kg	
MCPA	1 ^a	7.85	7.86	4180		ug/kg	10.2
MCPA	2	8.86	8.86	4630		ug/kg	
MCPP	1	7.66	7.67	4960		ug/kg	3.5
MCPP	2 ^a	8.49	8.49	4790		ug/kg	
Pentachlorophenol	1	8.93	8.96	9.9		ug/kg	1.0
Pentachlorophenol	2 ^a	10.53	10.54	9.8		ug/kg	
2,4-DB	1	11.32	11.34	73.3		ug/kg	9.4
2,4-DB	2 ^a	13.14	13.14	66.7		ug/kg	

(a) QC results reported from this column.

8.6.1
8

GC Identification Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: GOA4910-CC4909	Injection Date: 08/30/19
Lab File ID: OA142087.D	Injection Time: 12:53
Instrument ID: GCOA	Method: SW846 8151A

Sample ID: OP22369-MS	Injection Date: 08/30/19
Lab File ID: OA142090.D	Injection Time: 14:19
Client ID: Matrix Spike	

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
2,4-D	1 ^a	8.66	8.67	80.2		ug/kg	6.2
2,4-D	2	9.94	9.94	85.3		ug/kg	
2,4,5-TP (Silvex)	1 ^a	9.93	9.95	21.5		ug/kg	5.7
2,4,5-TP (Silvex)	2	11.37	11.39	20.3		ug/kg	
2,4,5-T	1 ^a	10.38	10.40	19.0		ug/kg	3.1
2,4,5-T	2	12.12	12.13	19.6		ug/kg	
Dalapon	1 ^a	2.27	2.26	18.7		ug/kg	2.1
Dalapon	2	2.42	2.42	19.1		ug/kg	
Dicamba	1 ^a	7.38	7.39	21.7		ug/kg	7.7
Dicamba	2	8.31	8.31	20.1		ug/kg	
Dichloroprop	1 ^a	8.35	8.36	99.3		ug/kg	0.0
Dichloroprop	2	9.40	9.41	99.3		ug/kg	
Dinoseb	1 ^a	13.19	13.21	133		ug/kg	6.5
Dinoseb	2	13.69	13.69	142		ug/kg	
MCPA	1 ^a	7.85	7.85	4930		ug/kg	5.7
MCPA	2	8.86	8.86	5220		ug/kg	
MCPP	1 ^a	7.66	7.66	6630		ug/kg	19.2
MCPP	2	8.49	8.49	5470		ug/kg	
Pentachlorophenol	1 ^a	8.93	8.94	19.0	E	ug/kg	9.9
Pentachlorophenol	2	10.53	10.54	17.2	E	ug/kg	
2,4-DB	1 ^a	11.32	11.33	69.8		ug/kg	17.6
2,4-DB	2	13.14	13.15	58.5		ug/kg	

(a) QC results reported from this column.

8.6.2
8

GC Identification Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: GOA4910-CC4909	Injection Date: 08/30/19
Lab File ID: OA142087.D	Injection Time: 12:53
Instrument ID: GCOA	Method: SW846 8151A

Sample ID: OP22369-MSD	Injection Date: 08/30/19
Lab File ID: OA142091.D	Injection Time: 14:47
Client ID: Matrix Spike Duplicate	

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
2,4-D	1 ^a	8.66	8.67	87.9		ug/kg	10.4
2,4-D	2	9.94	9.94	97.5		ug/kg	
2,4,5-TP (Silvex)	1 ^a	9.93	9.95	23.5		ug/kg	4.8
2,4,5-TP (Silvex)	2	11.38	11.39	22.4		ug/kg	
2,4,5-T	1 ^a	10.37	10.40	21.2		ug/kg	3.4
2,4,5-T	2	12.12	12.13	20.5		ug/kg	
Dalapon	1 ^a	2.27	2.26	19.7		ug/kg	2.0
Dalapon	2	2.42	2.42	20.1		ug/kg	
Dicamba	1 ^a	7.38	7.39	23.7		ug/kg	10.2
Dicamba	2	8.31	8.31	21.4		ug/kg	
Dichloroprop	1 ^a	8.35	8.36	108		ug/kg	0.9
Dichloroprop	2	9.40	9.41	109		ug/kg	
Dinoseb	1 ^a	13.19	13.21	137		ug/kg	4.3
Dinoseb	2	13.68	13.69	143		ug/kg	
MCPA	1 ^a	7.85	7.85	5650		ug/kg	4.8
MCPA	2	8.86	8.86	5930		ug/kg	
MCPP	1 ^a	7.66	7.66	7260		ug/kg	20.0
MCPP	2	8.49	8.49	5940		ug/kg	
Pentachlorophenol	1 ^a	8.93	8.94	19.4	E	ug/kg	9.2
Pentachlorophenol	2	10.53	10.54	17.7	E	ug/kg	
2,4-DB	1 ^a	11.31	11.33	69.3		ug/kg	25.2
2,4-DB	2	13.14	13.15	53.8		ug/kg	

(a) QC results reported from this column.

8.6.3
8

GC Identification Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: G6G2122-CC2063	Injection Date: 08/30/19
Lab File ID: 6G67538.D	Injection Time: 09:14
Instrument ID: GC6G	Method: SW846 8081B

Sample ID: OP22361-BS1	Injection Date: 08/30/19
Lab File ID: 6G67543.D	Injection Time: 11:11
Client ID: Blank Spike	

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aldrin	1	3.77	3.77	16.4		ug/kg	6.9
Aldrin	2 ^a	4.73	4.73	15.3		ug/kg	
alpha-BHC	1	2.70	2.70	17.0		ug/kg	4.8
alpha-BHC	2 ^a	3.33	3.33	16.2		ug/kg	
beta-BHC	1	3.06	3.05	16.1		ug/kg	13.2
beta-BHC	2 ^a	3.83	3.83	14.1		ug/kg	
delta-BHC	1	3.23	3.23	16.7		ug/kg	9.4
delta-BHC	2 ^a	4.21	4.21	15.2		ug/kg	
gamma-BHC (Lindane)	1	2.98	2.98	16.8		ug/kg	6.1
gamma-BHC (Lindane)	2 ^a	3.74	3.74	15.8		ug/kg	
alpha-Chlordane	1	4.78	4.78	16.8		ug/kg	7.4
alpha-Chlordane	2 ^a	6.03	6.03	15.6		ug/kg	
gamma-Chlordane	1	4.61	4.61	16.8		ug/kg	7.4
gamma-Chlordane	2 ^a	5.81	5.81	15.6		ug/kg	
Dieldrin	1	5.26	5.26	17.5		ug/kg	9.6
Dieldrin	2 ^a	6.55	6.55	15.9		ug/kg	
4,4'-DDD	1	5.72	5.71	17.2		ug/kg	4.2
4,4'-DDD	2 ^a	7.23	7.23	16.5		ug/kg	
4,4'-DDE	1 ^a	4.90	4.90	15.0		ug/kg	4.6
4,4'-DDE	2	6.30	6.30	15.7		ug/kg	
4,4'-DDT	1	6.12	6.12	17.7		ug/kg	17.2
4,4'-DDT	2 ^a	7.76	7.76	14.9		ug/kg	
Endrin	1	5.57	5.57	17.5		ug/kg	14.1
Endrin	2 ^a	7.04	7.04	15.2		ug/kg	
Endosulfan sulfate	1	7.17	7.17	18.3		ug/kg	14.7
Endosulfan sulfate	2 ^a	8.42	8.42	15.8		ug/kg	
Endrin aldehyde	1	6.50	6.50	18.2		ug/kg	12.9
Endrin aldehyde	2 ^a	7.95	7.95	16.0		ug/kg	
Endosulfan-I	1	4.95	4.94	17.6		ug/kg	12.7
Endosulfan-I	2 ^a	6.12	6.12	15.5		ug/kg	
Endosulfan-II	1	5.89	5.89	17.8		ug/kg	8.2
Endosulfan-II	2 ^a	7.39	7.39	16.4		ug/kg	
Heptachlor	1	3.45	3.45	18.0		ug/kg	15.6
Heptachlor	2 ^a	4.29	4.29	15.4		ug/kg	
Heptachlor epoxide	1	4.45	4.45	17.3		ug/kg	9.1
Heptachlor epoxide	2 ^a	5.53	5.53	15.8		ug/kg	
Methoxychlor	1	6.91	6.90	18.2		ug/kg	28.2
Methoxychlor	2 ^a	9.00	8.99	13.7		ug/kg	
Endrin ketone	1	7.60	7.60	20.6		ug/kg	20.3
Endrin ketone	2 ^a	9.36	9.36	16.8		ug/kg	

(a) QC results reported from this column.

8.6.4
8

GC Identification Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: G1G5044-CC4995	Injection Date: 08/30/19
Lab File ID: 1G155416.D	Injection Time: 14:56
Instrument ID: GC1G	Method: SW846 8081B

Sample ID: OP22361-MS	Injection Date: 08/30/19
Lab File ID: 1G155421.D	Injection Time: 16:31
Client ID: Matrix Spike	

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aldrin	1 ^a	3.57	3.57	7.6		ug/kg	167.1
Aldrin	2	4.68	4.68	0.68	J	ug/kg	
alpha-BHC	1 ^a	2.53	2.53	30.3		ug/kg	184.8
alpha-BHC	2	3.22	3.22	1.2		ug/kg	
beta-BHC	1 ^a	2.87	2.86	11.0		ug/kg	154.8
beta-BHC	2	3.74	3.72	1.4		ug/kg	
delta-BHC	1 ^a	3.04	3.04	80.9	E	ug/kg	
delta-BHC	2	4.12	4.12	ND		ug/kg	
gamma-BHC (Lindane)	1 ^a	2.80	2.79	9.0		ug/kg	90.3
gamma-BHC (Lindane)	2	3.66	3.64	3.4		ug/kg	
alpha-Chlordane	1 ^a	4.60	4.60	21.4		ug/kg	
alpha-Chlordane	2	6.07	6.07	ND		ug/kg	
gamma-Chlordane	1 ^a	4.42	4.43	24.3		ug/kg	184.2
gamma-Chlordane	2	5.83	5.83	1.0		ug/kg	
Dieldrin	1 ^a	5.11	5.10	154	E	ug/kg	197.2
Dieldrin	2	6.65	6.63	1.1		ug/kg	
4,4'-DDD	1 ^a	5.55	5.56	166	E	ug/kg	197.4
4,4'-DDD	2	7.36	7.36	1.1		ug/kg	
4,4'-DDE	1 ^a	4.73	4.71	607	E	ug/kg	199.5
4,4'-DDE	2	6.35	6.34	0.71		ug/kg	
4,4'-DDT	1 ^a	5.98	5.99	45.5		ug/kg	194.0
4,4'-DDT	2	7.93	7.93	0.69		ug/kg	
Endrin	1 ^a	5.43	5.42	113	E	ug/kg	192.0
Endrin	2	7.18	7.17	2.3		ug/kg	
Endosulfan sulfate	1 ^a	7.12	7.11	78.4	E	ug/kg	
Endosulfan sulfate	2	8.66	8.66	ND		ug/kg	
Endrin aldehyde	1 ^a	6.44	6.40	156	E	ug/kg	196.4
Endrin aldehyde	2	8.19	8.15	1.4		ug/kg	
Endosulfan-I	1 ^a	4.76	4.77	19.9		ug/kg	184.2
Endosulfan-I	2	6.15	6.17	0.82		ug/kg	
Endosulfan-II	1 ^a	5.75	5.76	24.0		ug/kg	188.2
Endosulfan-II	2	7.55	7.54	0.73		ug/kg	
Heptachlor	1 ^a	3.27	3.25	43.2		ug/kg	
Heptachlor	2	4.22	4.22	ND		ug/kg	
Heptachlor epoxide	1 ^a	4.25	4.26	614	E	ug/kg	198.2
Heptachlor epoxide	2	5.55	5.53	2.8		ug/kg	
Methoxychlor	1 ^a	6.86	6.81	146	E	ug/kg	195.1
Methoxychlor	2	9.30	9.27	1.8		ug/kg	
Endrin ketone	1 ^a	7.58	7.57	21.4		ug/kg	189.1
Endrin ketone	2	9.66	9.66	0.60	J	ug/kg	

(a) QC results reported from this column.

8.6.5
8

GC Identification Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: G1G5044-CC4995	Injection Date: 08/30/19
Lab File ID: 1G155416.D	Injection Time: 14:56
Instrument ID: GC1G	Method: SW846 8081B

Sample ID: OP22361-MSD	Injection Date: 08/30/19
Lab File ID: 1G155422.D	Injection Time: 16:49
Client ID: Matrix Spike Duplicate	

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aldrin	1 ^a	3.58	3.57	22.7		ug/kg	184.3
Aldrin	2	4.68	4.68	0.93		ug/kg	
alpha-BHC	1 ^a	2.53	2.53	27.4		ug/kg	180.6
alpha-BHC	2	3.22	3.22	1.4		ug/kg	
beta-BHC	1 ^a	2.87	2.86	42.3		ug/kg	185.4
beta-BHC	2	3.74	3.72	1.6		ug/kg	
delta-BHC	1 ^a	3.05	3.04	128	E	ug/kg	
delta-BHC	2	4.12	4.12	ND		ug/kg	
gamma-BHC (Lindane)	1 ^a	2.82	2.79	40.8		ug/kg	167.6
gamma-BHC (Lindane)	2	3.66	3.64	3.6		ug/kg	
alpha-Chlordane	1 ^a	4.60	4.60	50.2		ug/kg	193.5
alpha-Chlordane	2	6.07	6.07	0.83		ug/kg	
gamma-Chlordane	1 ^a	4.40	4.43	363	E	ug/kg	197.9
gamma-Chlordane	2	5.83	5.83	1.9		ug/kg	
Dieldrin	1 ^a	5.11	5.10	190	E	ug/kg	198.1
Dieldrin	2	6.65	6.63	0.89		ug/kg	
4,4'-DDD	1 ^a	5.55	5.56	201	E	ug/kg	196.6
4,4'-DDD	2	7.36	7.36	1.7		ug/kg	
4,4'-DDE	1 ^a	4.73	4.71	737	E	ug/kg	199.0
4,4'-DDE	2	6.35	6.34	1.9		ug/kg	
4,4'-DDT	1 ^a	5.98	5.99	35.7		ug/kg	192.5
4,4'-DDT	2	7.93	7.93	0.68	J	ug/kg	
Endrin	1 ^a	5.43	5.42	109	E	ug/kg	190.7
Endrin	2	7.18	7.17	2.6		ug/kg	
Endosulfan sulfate	1 ^a	7.11	7.11	80.6	E	ug/kg	
Endosulfan sulfate	2	8.66	8.66	ND		ug/kg	
Endrin aldehyde	1 ^a	6.45	6.40	395	E	ug/kg	195.0
Endrin aldehyde	2	8.20	8.15	5.0		ug/kg	
Endosulfan-I	1 ^a	4.78	4.77	17.7		ug/kg	190.7
Endosulfan-I	2	6.16	6.17	0.42	J	ug/kg	
Endosulfan-II	1 ^a	5.76	5.76	34.9		ug/kg	192.9
Endosulfan-II	2	7.55	7.54	0.63	J	ug/kg	
Heptachlor	1 ^a	3.27	3.25	46.4		ug/kg	
Heptachlor	2	4.22	4.22	ND		ug/kg	
Heptachlor epoxide	1 ^a	4.25	4.26	846	E	ug/kg	198.1
Heptachlor epoxide	2	5.55	5.53	4.0		ug/kg	
Methoxychlor	1 ^a	6.86	6.81	182	E	ug/kg	195.2
Methoxychlor	2	9.31	9.27	2.2		ug/kg	
Endrin ketone	1 ^a	7.58	7.57	23.0		ug/kg	190.8
Endrin ketone	2	9.66	9.66	0.54	J	ug/kg	

(a) QC results reported from this column.

8.6.6
8

GC Identification Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: GXX6789-CC6782	Injection Date: 08/29/19
Lab File ID: XX2439234.D	Injection Time: 12:58
Instrument ID: GCXX	Method: SW846 8082A

Sample ID: OP22362-BS1	Injection Date: 08/29/19
Lab File ID: XX2439237.D	Injection Time: 16:43
Client ID: Blank Spike	

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aroclor 1016	1 ^a			94.3		ug/kg	11.7
Aroclor 1016	2			106		ug/kg	
AR1016-A	1	3.73	3.73	104		ug/kg	
AR1016-A	2	4.73	4.73	121		ug/kg	
AR1016-B	1	4.17	4.17	95.0		ug/kg	
AR1016-B	2	5.31	5.30	106		ug/kg	
AR1016-C	1	4.75	4.75	84.0		ug/kg	
AR1016-C	2	5.95	5.95	99.2		ug/kg	
AR1016-D	1	4.92	4.92	95.3		ug/kg	
AR1016-D	2	6.15	6.15	102		ug/kg	
AR1016-E	1	5.46	5.46	93.4		ug/kg	
AR1016-E	2	6.82	6.82	101		ug/kg	
Aroclor 1260	1 ^a			94.4		ug/kg	12.5
Aroclor 1260	2			107		ug/kg	
AR1260-A	1	7.89	7.89	91.4		ug/kg	
AR1260-A	2	9.45	9.45	105		ug/kg	
AR1260-B	1	8.05	8.05	97.2		ug/kg	
AR1260-B	2	9.57	9.57	108		ug/kg	
AR1260-C	1	8.40	8.40	98.6		ug/kg	
AR1260-C	2	10.01	10.01	109		ug/kg	
AR1260-D	1	8.83	8.83	92.2		ug/kg	
AR1260-D	2	10.35	10.35	106		ug/kg	
AR1260-E	1	9.23	9.23	92.6		ug/kg	
AR1260-E	2	10.91	10.91	106		ug/kg	

(a) QC results reported from this column.

8.6.7
8

GC Identification Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: GXX6789-CC6782	Injection Date: 08/29/19
Lab File ID: XX2439234.D	Injection Time: 12:58
Instrument ID: GCXX	Method: SW846 8082A

Sample ID: OP22362-MS	Injection Date: 08/29/19
Lab File ID: XX2439239.D	Injection Time: 17:19
Client ID: Matrix Spike	

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aroclor 1016	1 ^a			69.7		ug/kg	36.7
Aroclor 1016	2			88.2		ug/kg	
AR1016-A	1	3.73	3.73	65.1		ug/kg	
AR1016-A	2	4.73	4.73	96.0		ug/kg	
AR1016-B	1	4.16	4.17	67.0		ug/kg	
AR1016-B	2	5.31	5.30	86.2		ug/kg	
AR1016-C	1	4.75	4.75	55.4		ug/kg	
AR1016-C	2	5.94	5.95	87.5		ug/kg	
AR1016-D	1	4.92	4.92	91.2		ug/kg	
AR1016-D	2	6.15	6.15	83.2		ug/kg	
Aroclor 1260	1			98.7		ug/kg	36.7
Aroclor 1260	2 ^a			143		ug/kg	
AR1260-A	1	7.89	7.89	86.6		ug/kg	
AR1260-A	2	9.45	9.45	179		ug/kg	
AR1260-B	1	8.06	8.05	99.5		ug/kg	
AR1260-B	2	9.57	9.57	170		ug/kg	
AR1260-C	1	8.39	8.40	94.7		ug/kg	
AR1260-C	2	10.01	10.01	121		ug/kg	
AR1260-D	1	8.83	8.83	114		ug/kg	
AR1260-D	2	10.35	10.35	99.9		ug/kg	

(a) QC results reported from this column.

8.6.8
8

GC Identification Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: GXX6789-CC6782	Injection Date: 08/29/19
Lab File ID: XX2439234.D	Injection Time: 12:58
Instrument ID: GCXX	Method: SW846 8082A

Sample ID: OP22362-MSD	Injection Date: 08/29/19
Lab File ID: XX2439240.D	Injection Time: 17:37
Client ID: Matrix Spike Duplicate	

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aroclor 1016	1 ^a			94.8		ug/kg	22.6
Aroclor 1016	2			119		ug/kg	
AR1016-A	1	3.74	3.73	92.8		ug/kg	
AR1016-A	2	4.73	4.73	126		ug/kg	
AR1016-B	1	4.17	4.17	89.4		ug/kg	
AR1016-B	2	5.31	5.30	115		ug/kg	
AR1016-C	1	4.75	4.75	75.3		ug/kg	
AR1016-C	2	5.94	5.95	120		ug/kg	
AR1016-D	1	4.92	4.92	122		ug/kg	
AR1016-D	2	6.15	6.15	114		ug/kg	
Aroclor 1260	1			144		ug/kg	43.9
Aroclor 1260	2 ^a			225		ug/kg	
AR1260-A	1	7.89	7.89	126		ug/kg	
AR1260-A	2	9.45	9.45	283		ug/kg	
AR1260-B	1	8.06	8.05	153		ug/kg	
AR1260-B	2	9.57	9.57	272		ug/kg	
AR1260-C	1	8.40	8.40	131		ug/kg	
AR1260-C	2	10.01	10.01	193		ug/kg	
AR1260-D	1	8.83	8.83	166		ug/kg	
AR1260-D	2	10.36	10.35	153		ug/kg	

(a) QC results reported from this column.

8.6.9
8

Surrogate Recovery Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Method: SW846 8151A

Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b
JC93827-1	OA142089.D	68	67
OP22369-BS1	OA142083.D	63	61
OP22369-MB1	OA142082.D	95	94
OP22369-MS	OA142090.D	64	63
OP22369-MSD	OA142091.D	63	63

Surrogate Compounds

Recovery Limits

S1 = 2,4-DCAA

10-159%

(a) Recovery from GC signal #2

(b) Recovery from GC signal #1

Surrogate Recovery Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Method: SW846 8081B	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b	S2 ^a	S2 ^b
JC93827-1	6G67533.D	86	85	75	68
JC93827-1	6G67547.D	85	81	72	56
OP22361-BS1	6G67543.D	84	75	104	77
OP22361-MB1	1G155377.D	78	80	92	83
OP22361-MB1	6G67542.D	86	82	95	74
OP22361-MS	1G155421.D	493* ^c	4* ^c	107	4* ^c
OP22361-MSD	1G155422.D	188* ^c	3* ^c	100	3* ^c

Surrogate Compounds	Recovery Limits
----------------------------	------------------------

S1 = Tetrachloro-m-xylene	25-135%
S2 = Decachlorobiphenyl	10-156%

- (a) Recovery from GC signal #1
- (b) Recovery from GC signal #2
- (c) Outside control limits due to matrix interference.

8.7.2
8

Surrogate Recovery Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Method: SW846 8082A	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b	S2 ^a	S2 ^b
JC93827-1	XX2439269.D	92	105	92	102
OP22362-BS1	XX2439237.D	96	105	107	120
OP22362-MB1	XX2439236.D	91	100	100	113
OP22362-MS	XX2439239.D	68	77	67	86
OP22362-MSD	XX2439240.D	71	82	68	92

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	31-146%
S2 = Decachlorobiphenyl	17-164%

- (a) Recovery from GC signal #1
- (b) Recovery from GC signal #2

8.7.3
8

GC Surrogate Retention Time Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	GOA4910-CC4909	Injection Date:	08/30/19
Lab File ID:	OA142080.D	Injection Time:	09:27
Instrument ID:	GCOA	Method:	SW846 8151A

S1^a **S1^b**
RT **RT**

Check Std	8.05	7.20
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Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
OP22369-MB1	OA142082.D	08/30/19	10:24	8.06	7.19
OP22369-BS1	OA142083.D	08/30/19	10:52	8.05	7.18
ZZZZZZ	OA142084.D	08/30/19	11:25	8.06	7.19
ZZZZZZ	OA142085.D	08/30/19	11:53	8.06	7.19
ZZZZZZ	OA142086.D	08/30/19	12:25	8.05	7.19

Surrogate Compounds

S1 = 2,4-DCAA

(a) Retention time from GC signal #2

(b) Retention time from GC signal #1

8.8.1
8

GC Surrogate Retention Time Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	GOA4910-CC4909	Injection Date:	08/30/19
Lab File ID:	OA142087.D	Injection Time:	12:53
Instrument ID:	GCOA	Method:	SW846 8151A

S1^a **S1^b**
RT **RT**

Check Std	8.05	7.18
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Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
JC93827-1	OA142089.D	08/30/19	13:50	8.06	7.19
OP22369-MS	OA142090.D	08/30/19	14:19	8.05	7.18
OP22369-MSD	OA142091.D	08/30/19	14:47	8.05	7.18

Surrogate Compounds

S1 = 2,4-DCAA

(a) Retention time from GC signal #2

(b) Retention time from GC signal #1

8.8.2
8

GC Surrogate Retention Time Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: G1G5044-CC4995	Injection Date: 08/30/19
Lab File ID: 1G155416.D	Injection Time: 14:56
Instrument ID: GC1G	Method: SW846 8081B

	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
Check Std	2.12	2.59	9.50	11.51

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
ZZZZZZ	1G155418.D	08/30/19	15:36	2.12	2.59	9.50	11.52
ZZZZZZ	1G155419.D	08/30/19	15:55	2.12	2.59	9.50	11.52
JC93548-1	1G155420.D	08/30/19	16:13	2.12	2.59	9.50	11.52
OP22361-MS	1G155421.D	08/30/19	16:31	2.10	2.59	9.50	11.52
OP22361-MSD	1G155422.D	08/30/19	16:49	2.13	2.59	9.50	11.52

Surrogate Compounds

S1 = Tetrachloro-m-xylene

S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: G6G2121-CC2063	Injection Date: 08/29/19
Lab File ID: 6G67524.D	Injection Time: 23:47
Instrument ID: GC6G	Method: SW846 8081B

	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
Check Std	2.25	2.71	9.42	11.51

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
JC93827-1	6G67533.D	08/30/19	02:44	2.26	2.71	9.41	11.51
G6G2121-ECC2063	6G67535.D	08/30/19	04:13	2.26	2.71	9.41	11.51

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

- (a) Retention time from GC signal #1
- (b) Retention time from GC signal #2

8.8.4
8

GC Surrogate Retention Time Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: G6G2122-CC2063	Injection Date: 08/30/19
Lab File ID: 6G67538.D	Injection Time: 09:14
Instrument ID: GC6G	Method: SW846 8081B

	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
Check Std	2.24	2.70	9.41	11.51

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
OP22361-MB1	6G67542.D	08/30/19	10:54	2.24	2.70	9.41	11.51
OP22361-BS1	6G67543.D	08/30/19	11:11	2.25	2.70	9.41	11.51
JC93827-1	6G67547.D	08/30/19	12:21	2.25	2.71	9.41	11.51
G6G2122-ECC2063	6G67548.D	08/30/19	13:08	2.25	2.71	9.41	11.51

Surrogate Compounds

S1 = Tetrachloro-m-xylene

S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: G1G5043-CC4995	Injection Date: 08/29/19
Lab File ID: 1G155375.D	Injection Time: 23:47
Instrument ID: GC1G	Method: SW846 8081B

	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
Check Std	2.13	2.59	9.51	11.51

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
OP22361-MB1	1G155377.D	08/30/19	00:33	2.13	2.59	9.51	11.51
ZZZZZZ	1G155382.D	08/30/19	02:03	2.14	2.60	9.50	11.51
ZZZZZZ	1G155384.D	08/30/19	02:39	2.13	2.60	9.50	11.51
ZZZZZZ	1G155385.D	08/30/19	02:58	2.13	2.60	9.50	11.51
ZZZZZZ	1G155386.D	08/30/19	03:16	2.13	2.60	9.50	11.51
ZZZZZZ	1G155387.D	08/30/19	03:34	2.13	2.60	9.50	11.51
ZZZZZZ	1G155388.D	08/30/19	03:52	2.13	2.59	9.50	11.51
ZZZZZZ	1G155389.D	08/30/19	04:10	2.13	2.60	9.50	11.51
ZZZZZZ	1G155391.D	08/30/19	04:47	2.13	2.59	9.50	11.51
ZZZZZZ	1G155392.D	08/30/19	05:05	2.14	2.60	9.50	11.51
ZZZZZZ	1G155393.D	08/30/19	05:23	2.13	2.60	9.50	11.51

Surrogate Compounds

S1 = Tetrachloro-m-xylene
 S2 = Decachlorobiphenyl

- (a) Retention time from GC signal #1
- (b) Retention time from GC signal #2

8.8.6

GC Surrogate Retention Time Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: GXX6789-CC6782	Injection Date: 08/29/19
Lab File ID: XX2439234.D	Injection Time: 12:58
Instrument ID: GCXX	Method: SW846 8082A

	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
Check Std	3.33	4.05	10.79	12.59

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
OP22362-MB1	XX2439236.D	08/29/19	16:24	3.32	4.05	10.79	12.60
OP22362-BS1	XX2439237.D	08/29/19	16:43	3.33	4.05	10.79	12.59
JC93812-1	XX2439238.D	08/29/19	17:01	3.33	4.05	10.79	12.60
OP22362-MS	XX2439239.D	08/29/19	17:19	3.33	4.05	10.79	12.59
OP22362-MSD	XX2439240.D	08/29/19	17:37	3.33	4.05	10.79	12.59
ZZZZZZ	XX2439241.D	08/29/19	17:56	3.33	4.05	10.79	12.59
ZZZZZZ	XX2439242.D	08/29/19	18:14	3.32	4.04	10.79	12.59

Surrogate Compounds

S1 = Tetrachloro-m-xylene
 S2 = Decachlorobiphenyl

- (a) Retention time from GC signal #1
- (b) Retention time from GC signal #2

8.8.7
8

GC Surrogate Retention Time Summary

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std: GXX6789-CC6782	Injection Date: 08/30/19
Lab File ID: XX2439267.D	Injection Time: 01:50
Instrument ID: GCXX	Method: SW846 8082A

	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
Check Std	3.33	4.05	10.79	12.59

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
JC93827-1	XX2439269.D	08/30/19	02:26	3.33	4.05	10.79	12.59
ZZZZZZ	XX2439270.D	08/30/19	02:44	3.33	4.05	10.79	12.60
ZZZZZZ	XX2439271.D	08/30/19	03:02	3.33	4.05	10.79	12.59

Surrogate Compounds

S1 = Tetrachloro-m-xylene
 S2 = Decachlorobiphenyl

- (a) Retention time from GC signal #1
- (b) Retention time from GC signal #2



Initial Calibration Summary

Job Number: JC93827 **Sample:** G1G4995-ICC4995
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G154470.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report GC1G

Method : C:\MSDCHEM\1\METHODS\1PST4995.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Mon Jul 29 10:51:13 2019
Response via : Initial Calibration

Calibration Files

2 =1G154467.D 5 =1G154468.D 10 =1G154469.D 25 =1G154470.D
50 =1G154471.D 100 =1G154473.D 1 =1G154466.D 75 =1G154472.D

Compound	2	5	10	25	50	100	1	75	Avg	%RSD
1) I 1-bromo-2-nitrobenzen -----ISTD-----										
2) Tetrachloro-	1.189	1.128	1.062	1.006	0.965	0.975	1.354	0.967	1.081	12.72
3) Hexachlorobe	1.463	1.344	1.324	1.195	1.135	1.108	1.639	1.114	1.290	14.73
4) alpha-BHC	1.336	1.300	1.310	1.294	1.320	1.400	1.501	1.361	1.353	5.12
5) gamma-BHC	1.338	1.240	1.215	1.204	1.197	1.251	1.413	1.224	1.260	6.03
6) Heptachlor	1.413	1.292	1.253	1.197	1.158	1.179	1.570	1.167	1.279	11.34
7) beta-BHC	0.757	0.685	0.639	0.618	0.578	0.565	0.761	0.565	0.646	12.51
8) delta-BHC	1.146	1.168	1.136	1.173	1.155	1.216	1.352	1.186	1.192	5.84
9) Aldrin	1.284	1.209	1.154	1.097	1.070	1.101	1.407	1.086	1.176	10.07
10) Alachlor		0.214	0.215	0.194	0.182	0.167		0.173	0.191	10.91
11) Heptachlor E	1.302	1.206	1.127	1.048	0.999	1.007	1.465	0.996	1.144	14.90
12) gamma-Chlord	1.256	1.151	1.093	1.022	0.970	0.991	1.324	0.973	1.097	12.32
13) alpha-Chlord	1.281	1.168	1.096	1.009	0.950	0.961	1.330	0.949	1.093	13.95
14) Endosulfan I	1.207	1.145	1.076	1.012	0.948	0.960	1.306	0.953	1.076	12.35
15) 4,4'-DDE	1.027	0.998	0.935	0.903	0.867	0.901	1.144	0.882	0.957	9.82
16) Dieldrin	1.206	1.119	1.058	1.017	0.966	0.990	1.274	0.966	1.075	10.75
17) Endrin	1.086	1.006	0.981	0.927	0.880	0.890	1.189	0.893	0.981	11.15
18) 4,4'-DDD	0.908	0.872	0.830	0.796	0.761	0.772	0.871	0.770	0.823	6.79
19) Endosulfan I	1.097	1.029	0.990	0.913	0.852	0.855	1.194	0.866	0.974	12.92
20) 4,4'-DDT	0.776	0.802	0.789	0.787	0.754	0.774	0.884	0.769	0.792	5.01
21) Endrin Aldeh	0.958	0.872	0.839	0.755	0.704	0.685	0.974	0.687	0.809	14.63
22) Endosulfan S	1.001	0.899	0.873	0.802	0.734	0.707	1.048	0.722	0.848	15.27
23) Methoxychlor	0.601	0.567	0.537	0.505	0.464	0.442	0.543	0.449	0.514	11.31
24) Mirex	1.035	0.956	0.909	0.802	0.714	0.667	1.124	0.681	0.861	19.93
25) Endrin Keton	1.068	1.011	0.977	0.901	0.848	0.819	1.194	0.823	0.955	13.92
26) Decachlorobi	1.000	0.931	0.894	0.801	0.728	0.680	1.080	0.690	0.850	17.57
27) I 1-bromo-2-nitrobenzen -----ISTD-----										
28) Toxaphene{A}					0.036			0.036	0.00	
29) Toxaphene{B}					0.045			0.045	0.00	
30) Toxaphene{C}					0.034			0.034	0.00	
31) Toxaphene{D}					0.028			0.028	0.00	
32) Toxaphene{E}					0.031			0.031	0.00	
33) I 1-bromo-2-nitrobenzen -----ISTD-----										
34) Chlordane {A}					0.071			0.071	0.00	
35) Chlordane {B}					0.046			0.046	0.00	
36) Chlordane {C}					0.138			0.138	0.00	
37) Chlordane {D}					0.211			0.211	0.00	
38) Chlordane {E}					0.035			0.035	0.00	

Signal #2

1) I 1-bromo-2-nitrobenzen -----ISTD-----
2) Tetrachloro- 0.761 0.723 0.702 0.679 0.670 0.684 0.875 0.664 0.720 9.76

Initial Calibration Summary

Job Number: JC93827

Sample: G1G4995-ICC4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G154470.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

3)	Hexachlorobe	1.639	1.598	1.543	1.479	1.468	1.513	1.745	1.463	1.556	6.36
4)	alpha-BHC	1.363	1.316	1.322	1.376	1.433	1.563	1.500	1.481	1.419	6.33
5)	gamma-BHC	1.267	1.230	1.240	1.285	1.316	1.428	1.413	1.354	1.317	5.73
6)	Heptachlor	1.331	1.286	1.278	1.268	1.280	1.363	1.497	1.290	1.324	5.80
7)	beta-BHC	0.571	0.541	0.524	0.518	0.504	0.516	0.659	0.500	0.542	9.68
8)	delta-BHC	1.222	1.194	1.210	1.260	1.311	1.428	1.326	1.358	1.288	6.32
9)	Aldrin	1.385	1.233	1.230	1.212	1.216	1.302	1.470	1.236	1.285	7.36
10)	Alachlor		0.146	0.145	0.139	0.133	0.130		0.129	0.137	5.49
11)	Heptachlor E	1.196	1.132	1.132	1.126	1.119	1.175	1.287	1.126	1.162	4.95
12)	gamma-Chlord	1.204	1.111	1.119	1.095	1.090	1.157	1.318	1.099	1.149	6.80
13)	alpha-Chlord	1.229	1.109	1.111	1.080	1.066	1.117	1.281	1.071	1.133	6.98
14)	Endosulfan I	1.180	1.073	1.089	1.068	1.049	1.097	1.282	1.052	1.111	7.22
15)	4,4'-DDE	1.167	1.081	1.099	1.092	1.074	1.140	1.206	1.086	1.118	4.27
16)	Dieldrin	1.211	1.199	1.177	1.141	1.151	1.215	1.281	1.161	1.192	3.78
17)	Endrin	1.104	1.033	1.043	1.033	1.028	1.082	1.142	1.047	1.064	3.88
18)	4,4'-DDD	0.873	0.814	0.814	0.815	0.814	0.864	0.935	0.829	0.845	5.13
19)	Endosulfan I	1.142	1.055	1.040	1.015	0.996	1.025	1.239	0.995	1.063	8.01
20)	4,4'-DDT	0.853	0.755	0.772	0.816	0.816	0.867	0.777	0.832	0.811	4.95
21)	Endrin Aldeh	0.891	0.833	0.851	0.811	0.788	0.802	0.940	0.779	0.837	6.59
22)	Endosulfan S	0.963	0.884	0.892	0.865	0.852	0.867	1.069	0.842	0.904	8.45
23)	Methoxychlor	0.521	0.457	0.454	0.464	0.446	0.455	0.480	0.447	0.466	5.32
24)	Mirex	0.826	0.760	0.760	0.712	0.677	0.664	0.720	0.655	0.722	8.09
25)	Endrin Keton	1.062	0.986	1.007	0.981	0.971	0.994	1.079	0.963	1.005	4.23
26)	Decachlorobi	0.973	0.922	0.944	0.879	0.852	0.846	1.069	0.826	0.914	8.88
27)	I 1-bromo-2-nitrobenzen	-----ISTD-----									
28)	Toxaphene{A}					0.023			0.023	0.00	
29)	Toxaphene{B}					0.028			0.028	0.00	
30)	Toxaphene{C}					0.051			0.051	0.00	
31)	Toxaphene{D}					0.032			0.032	0.00	
32)	Toxaphene{E}					0.027			0.027	0.00	
33)	I 1-bromo-2-nitrobenzen	-----ISTD-----									
34)	Chlordane {A}					0.076			0.076	0.00	
35)	Chlordane {B}					0.042			0.042	0.00	
36)	Chlordane {C}					0.148			0.148	0.00	
37)	Chlordane {D}					0.241			0.241	0.00	
38)	Chlordane {E}					0.040			0.040	0.00	

(#) = Out of Range ### Number of calibration levels exceeded format ###

1PST4995.M

Mon Jul 29 10:59:13 2019

RPT1

Initial Calibration Verification

Job Number: JC93827

Sample: G1G4995-ICV4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G154476.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4995\1G154476.D\ECD1A.CH Vial: 13
 Signal #2 : C:\MSDCHEM\1\DATA\1G4995\1G154476.D\ECD2B.CH
 Acq On : 7-25-2019 03:15:10 PM Operator: vinced
 Sample : icv4995-25 Inst : GC1G
 Misc : op21640,g1g4995,1000,,,10,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4995.M (Chemstation Integrator)
 Title : PEST/PCB
 Last Update : Mon Jul 29 10:51:13 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.62-	1.68
2 SAB	Tetrachloro-m-xylene	1.081	0.943	12.8	95	0.00	2.10-	2.16
3	Hexachlorobenzene			-----NA-----				
4 A	alpha-BHC	1.353	1.435	-6.1	112	0.00	2.51-	2.57
5 MA	gamma-BHC	1.260	1.318	-4.6	111	0.00	2.77-	2.83
6 MA	Heptachlor	1.279	1.298	-1.5	110	0.00	3.24-	3.30
7 B	beta-BHC	0.646	0.639	1.1	105	0.00	2.84-	2.90
8 B	delta-BHC	1.192	1.276	-7.0	110	0.00	3.02-	3.08
9 MB	Aldrin	1.176	1.210	-2.9	112	0.00	3.56-	3.62
10	Alachlor			-----NA-----				
11 B	Heptachlor Epoxide	1.144	1.153	-0.8	111	0.00	4.25-	4.31
12 B	gamma-Chlordane	1.097	1.128	-2.8	112	0.00	4.41-	4.47
13 B	alpha-Chlordane	1.093	1.102	-0.8	111	0.00	4.59-	4.65
14 A	Endosulfan I	1.076	1.110	-3.2	111	0.00	4.76-	4.82
15 B	4,4'-DDE	0.957	0.991	-3.6	111	0.00	4.70-	4.76
16 MA	Dieldrin	1.075	1.123	-4.5	112	0.00	5.09-	5.15
17 MA	Endrin	0.981	1.040	-6.0	114	0.00	5.42-	5.48
18 A	4,4'-DDD	0.823	0.871	-5.8	111	0.00	5.55-	5.62
19 B	Endosulfan II	0.974	0.987	-1.3	109	0.00	5.75-	5.81
20 MA	4,4'-DDT	0.792	0.869	-9.7	112	0.00	5.98-	6.04
21 B	Endrin Aldehyde	0.809	0.842	-4.1	113	0.00	6.40-	6.46
22 B	Endosulfan Sulfate	0.848	0.859	-1.3	108	0.00	7.11-	7.17
23 A	Methoxychlor	0.514	0.543	-5.6	109	0.00	6.81-	6.87
24	Mirex	0.861	0.712	17.3	90	0.00	6.95-	7.01
25 B	Endrin Ketone	0.955	0.991	-3.8	111	0.00	7.58-	7.64
26 SA	Decachlorobiphenyl	0.850	0.773	9.1	98	0.00	9.49-	9.55
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.55-	1.75
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.55-	1.75
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

Initial Calibration Verification

Job Number: JC93827

Sample: G1G4995-ICV4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G154476.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.84-	1.90
2	SAB	Tetrachloro-m-xylene	0.720	0.650	9.7	96	0.00	2.57-	2.63
3		Hexachlorobenzene			-----NA-----				
4	A	alpha-BHC	1.419	1.530	-7.8	112	0.00	3.21-	3.27
5	MA	gamma-BHC	1.317	1.417	-7.6	111	0.00	3.63-	3.69
6	MA	Heptachlor	1.324	1.400	-5.7	111	0.00	4.22-	4.28
7	B	beta-BHC	0.542	0.564	-4.1	109	0.00	3.71-	3.77
8	B	delta-BHC	1.288	1.427	-10.8	114	0.00	4.11-	4.17
9	MB	Aldrin	1.285	1.343	-4.5	111	0.00	4.68-	4.74
10		Alachlor			-----NA-----				
11	B	Heptachlor Epoxide	1.162	1.235	-6.3	110	0.00	5.53-	5.59
12	B	gamma-Chlordane	1.149	1.206	-5.0	111	0.00	5.83-	5.89
13	B	alpha-Chlordane	1.133	1.190	-5.0	111	0.00	6.07-	6.13
14	A	Endosulfan I	1.111	1.157	-4.1	109	0.00	6.17-	6.23
15	B	4,4'-DDE	1.118	1.192	-6.6	110	0.00	6.35-	6.41
16	MA	Dieldrin	1.192	1.287	-8.0	113	0.00	6.64-	6.70
17	MA	Endrin	1.064	1.167	-9.7	113	0.00	7.17-	7.23
18	A	4,4'-DDD	0.845	0.901	-6.6	111	0.00	7.36-	7.42
19	B	Endosulfan II	1.063	1.101	-3.6	109	0.00	7.55-	7.61
20	MA	4,4'-DDT	0.811	0.903	-11.3	111	0.00	7.94-	8.00
21	B	Endrin Aldehyde	0.837	0.890	-6.3	110	0.00	8.16-	8.22
22	B	Endosulfan Sulfate	0.904	0.941	-4.1	109	0.00	8.67-	8.73
23	A	Methoxychlor	0.466	0.491	-5.4	106	0.00	9.27-	9.33
24		Mirex	0.722	0.627	13.2	88	0.00	9.61-	9.67
25	B	Endrin Ketone	1.005	1.097	-9.2	112	0.00	9.67-	9.73
26	SA	Decachlorobiphenyl	0.914	0.861	5.8	98	0.00	11.52-	11.58
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.77-	1.97
28	L8	Toxaphene{A}			-----NA-----				
29	L8	Toxaphene{B}			-----NA-----				
30	L8	Toxaphene{C}			-----NA-----				
31	L8	Toxaphene{D}			-----NA-----				
32	L8	Toxaphene{E}			-----NA-----				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.77-	1.97
34		Chlordane {A}			-----NA-----				
35		Chlordane {B}			-----NA-----				
36		Chlordane {C}			-----NA-----				
37		Chlordane {D}			-----NA-----				
38		Chlordane {E}			-----NA-----				

(#) = Out of Range
1G154470.D 1PST4995.M

SPCC's out = 0 CCC's out = 0
Mon Jul 29 11:00:15 2019 RPT1

89.2
8

Initial Calibration Verification

Job Number: JC93827 **Sample:** G1G4995-ICV4995
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G154477.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4995\1G154477.D\ECD1A.CH Vial: 14
 Signal #2 : C:\MSDCHEM\1\DATA\1G4995\1G154477.D\ECD2B.CH
 Acq On : 7-25-2019 03:33:09 PM Operator: vinced
 Sample : icv4995-500 Inst : GC1G
 Misc : op21640,g1g4995,1000,,,10,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4995.M (Chemstation Integrator)
 Title : PEST/PCB
 Last Update : Fri Jul 26 11:20:06 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	110	0.00	1.62-	1.68
2 SAB	Tetrachloro-m-xylene	1.081	1.031	4.6	117	0.00	2.10-	2.16
3	Hexachlorobenzene			-----NA-----				
4 A	alpha-BHC			-----NA-----				
5 MA	gamma-BHC			-----NA-----				
6 MA	Heptachlor			-----NA-----				
7 B	beta-BHC			-----NA-----				
8 B	delta-BHC			-----NA-----				
9 MB	Aldrin			-----NA-----				
10	Alachlor			-----NA-----				
11 B	Heptachlor Epoxide			-----NA-----				
12 B	gamma-Chlordane			-----NA-----				
13 B	alpha-Chlordane			-----NA-----				
14 A	Endosulfan I			-----NA-----				
15 B	4,4'-DDE			-----NA-----				
16 MA	Dieldrin			-----NA-----				
17 MA	Endrin			-----NA-----				
18 A	4,4'-DDD			-----NA-----				
19 B	Endosulfan II			-----NA-----				
20 MA	4,4'-DDT			-----NA-----				
21 B	Endrin Aldehyde			-----NA-----				
22 B	Endosulfan Sulfate			-----NA-----				
23 A	Methoxychlor			-----NA-----				
24	Mirex			-----NA-----				
25 B	Endrin Ketone			-----NA-----				
26 SA	Decachlorobiphenyl	0.850	0.780	8.2	118	0.00	9.50-	9.56
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	110	0.00	1.55-	1.75
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	110	0.00	1.55-	1.75
34	Chlordane {A}	0.071	0.062	12.7	96	0.00	3.17-	3.37
35	Chlordane {B}	0.046	0.041	10.9	98	0.00	3.62-	3.82
36	Chlordane {C}	0.138	0.125	9.4	99	0.00	4.35-	4.55
37	Chlordane {D}	0.211	0.195	7.6	102	0.00	4.51-	4.71
38	Chlordane {E}	0.035	0.032	8.6	100	0.00	5.58-	5.78

89.3
8

Initial Calibration Verification

Job Number: JC93827

Sample: G1G4995-ICV4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G154477.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	112	0.00	1.85- 1.91
2	SAB	Tetrachloro-m-xylene	0.720	0.701	2.6	117	0.00	2.57- 2.63
3		Hexachlorobenzene					NA	
4	A	alpha-BHC					NA	
5	MA	gamma-BHC					NA	
6	MA	Heptachlor					NA	
7	B	beta-BHC					NA	
8	B	delta-BHC					NA	
9	MB	Aldrin					NA	
10		Alachlor					NA	
11	B	Heptachlor Epoxide					NA	
12	B	gamma-Chlordane					NA	
13	B	alpha-Chlordane					NA	
14	A	Endosulfan I					NA	
15	B	4,4'-DDE					NA	
16	MA	Dieldrin					NA	
17	MA	Endrin					NA	
18	A	4,4'-DDD					NA	
19	B	Endosulfan II					NA	
20	MA	4,4'-DDT					NA	
21	B	Endrin Aldehyde					NA	
22	B	Endosulfan Sulfate					NA	
23	A	Methoxychlor					NA	
24		Mirex					NA	
25	B	Endrin Ketone					NA	
26	SA	Decachlorobiphenyl	0.914	0.914	0.0	120	0.00	11.52-11.58
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	112	0.00	1.78- 1.98
28	L8	Toxaphene{A}					NA	
29	L8	Toxaphene{B}					NA	
30	L8	Toxaphene{C}					NA	
31	L8	Toxaphene{D}					NA	
32	L8	Toxaphene{E}					NA	
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	112	0.00	1.78- 1.98
34		Chlordane {A}	0.076	0.065	14.5	94	0.00	4.14- 4.34
35		Chlordane {B}	0.042	0.036	14.3	95	0.00	4.81- 5.01
36		Chlordane {C}	0.148	0.128	13.5	97	0.00	5.76- 5.96
37		Chlordane {D}	0.241	0.212	12.0	98	0.00	6.00- 6.20
38		Chlordane {E}	0.040	0.034	15.0	95	0.00	7.56- 7.76

(#) = Out of Range
1G154477.D 1PST4995.M

SPCC's out = 0 CCC's out = 0
Fri Jul 26 11:33:56 2019 RPT1

Initial Calibration Verification

Job Number: JC93827

Sample: G1G4995-ICV4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G154478.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4995\1G154478.D\ECD1A.CH Vial: 15
Signal #2 : C:\MSDCHEM\1\DATA\1G4995\1G154478.D\ECD2B.CH
Acq On : 7-25-2019 03:51:11 PM Operator: vinced
Sample : icv4995-500 Inst : GC1G
Misc : op21640,g1g4995,1000,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4995.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jul 26 11:20:06 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	113	0.00	1.62-	1.68
2 SAB	Tetrachloro-m-xylene	1.081	1.012	6.4	119	0.00	2.10-	2.16
3	Hexachlorobenzene			-----NA-----				
4 A	alpha-BHC			-----NA-----				
5 MA	gamma-BHC			-----NA-----				
6 MA	Heptachlor			-----NA-----				
7 B	beta-BHC			-----NA-----				
8 B	delta-BHC			-----NA-----				
9 MB	Aldrin			-----NA-----				
10	Alachlor			-----NA-----				
11 B	Heptachlor Epoxide			-----NA-----				
12 B	gamma-Chlordane			-----NA-----				
13 B	alpha-Chlordane			-----NA-----				
14 A	Endosulfan I			-----NA-----				
15 B	4,4'-DDE			-----NA-----				
16 MA	Dieldrin			-----NA-----				
17 MA	Endrin			-----NA-----				
18 A	4,4'-DDD			-----NA-----				
19 B	Endosulfan II			-----NA-----				
20 MA	4,4'-DDT			-----NA-----				
21 B	Endrin Aldehyde			-----NA-----				
22 B	Endosulfan Sulfate			-----NA-----				
23 A	Methoxychlor			-----NA-----				
24	Mirex			-----NA-----				
25 B	Endrin Ketone			-----NA-----				
26 SA	Decachlorobiphenyl	0.850	0.758	10.8	118	0.00	9.50-	9.56
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	113	0.00	1.55-	1.75
28 L8	Toxaphene{A}	0.036	0.029	19.4	91	0.00	5.41-	5.61
29 L8	Toxaphene{B}	0.045	0.040	11.1	100	0.00	5.67-	5.87
30 L8	Toxaphene{C}	0.034	0.028	17.6	94	0.00	5.85-	6.05
31 L8	Toxaphene{D}	0.028	0.025	10.7	101	0.00	6.20-	6.40
32 L8	Toxaphene{E}	0.031	0.025	19.4	93	0.00	6.88-	7.08
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	113	0.00	1.55-	1.75
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

Initial Calibration Verification

Job Number: JC93827

Sample: G1G4995-ICV4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G154478.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	115	0.00	1.84- 1.90
2	SAB	Tetrachloro-m-xylene	0.720	0.706	1.9	122	0.00	2.57- 2.63
3		Hexachlorobenzene					NA	
4	A	alpha-BHC					NA	
5	MA	gamma-BHC					NA	
6	MA	Heptachlor					NA	
7	B	beta-BHC					NA	
8	B	delta-BHC					NA	
9	MB	Aldrin					NA	
10		Alachlor					NA	
11	B	Heptachlor Epoxide					NA	
12	B	gamma-Chlordane					NA	
13	B	alpha-Chlordane					NA	
14	A	Endosulfan I					NA	
15	B	4,4'-DDE					NA	
16	MA	Dieldrin					NA	
17	MA	Endrin					NA	
18	A	4,4'-DDD					NA	
19	B	Endosulfan II					NA	
20	MA	4,4'-DDT					NA	
21	B	Endrin Aldehyde					NA	
22	B	Endosulfan Sulfate					NA	
23	A	Methoxychlor					NA	
24		Mirex					NA	
25	B	Endrin Ketone					NA	
26	SA	Decachlorobiphenyl	0.914	0.894	2.2	121	0.00	11.52-11.58
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	115	0.00	1.77- 1.97
28	L8	Toxaphene{A}	0.023	0.022	4.3	108	0.00	6.53- 6.73
29	L8	Toxaphene{B}	0.028	0.025	10.7	106	0.00	7.45- 7.65
30	L8	Toxaphene{C}	0.051	0.047	7.8	108	0.00	7.62- 7.82
31	L8	Toxaphene{D}	0.032	0.029	9.4	105	0.00	8.09- 8.29
32	L8	Toxaphene{E}	0.027	0.024	11.1	105	0.00	9.07- 9.27
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	115	0.00	1.77- 1.97
34		Chlordane {A}					NA	
35		Chlordane {B}					NA	
36		Chlordane {C}					NA	
37		Chlordane {D}					NA	
38		Chlordane {E}					NA	

(#) = Out of Range
1G154471.D 1PST4995.M

SPPC's out = 0 CCC's out = 0
Fri Jul 26 11:33:59 2019 RPT1

Initial Calibration Verification

Job Number: JC93827

Sample: G1G4995-ICV4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G154479.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4995\1G154479.D\ECD1A.CH Vial: 16
Signal #2 : C:\MSDCHEM\1\DATA\1G4995\1G154479.D\ECD2B.CH
Acq On : 7-25-2019 04:09:17 PM Operator: vinced
Sample : icv4995-50 Inst : GC1G
Misc : op21640,g1g4995,1000,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4995.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jul 26 11:20:06 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	114	0.00	1.62- 1.68
2 SAB	Tetrachloro-m-xylene			-----NA-----			
3	Hexachlorobenzene	1.290	1.125	12.8	113	0.00	2.39- 2.45
4 A	alpha-BHC			-----NA-----			
5 MA	gamma-BHC			-----NA-----			
6 MA	Heptachlor			-----NA-----			
7 B	beta-BHC			-----NA-----			
8 B	delta-BHC			-----NA-----			
9 MB	Aldrin			-----NA-----			
10	Alachlor			-----NA-----			
11 B	Heptachlor Epoxide			-----NA-----			
12 B	gamma-Chlordane			-----NA-----			
13 B	alpha-Chlordane			-----NA-----			
14 A	Endosulfan I			-----NA-----			
15 B	4,4'-DDE			-----NA-----			
16 MA	Dieldrin			-----NA-----			
17 MA	Endrin			-----NA-----			
18 A	4,4'-DDD			-----NA-----			
19 B	Endosulfan II			-----NA-----			
20 MA	4,4'-DDT			-----NA-----			
21 B	Endrin Aldehyde			-----NA-----			
22 B	Endosulfan Sulfate			-----NA-----			
23 A	Methoxychlor			-----NA-----			
24	Mirex			-----NA-----			
25 B	Endrin Ketone			-----NA-----			
26 SA	Decachlorobiphenyl			-----NA-----			
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	114	0.00	1.55- 1.75
28 L8	Toxaphene{A}			-----NA-----			
29 L8	Toxaphene{B}			-----NA-----			
30 L8	Toxaphene{C}			-----NA-----			
31 L8	Toxaphene{D}			-----NA-----			
32 L8	Toxaphene{E}			-----NA-----			
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	114	0.00	1.55- 1.75
34	Chlordane {A}			-----NA-----			
35	Chlordane {B}			-----NA-----			
36	Chlordane {C}			-----NA-----			
37	Chlordane {D}			-----NA-----			
38	Chlordane {E}			-----NA-----			

Initial Calibration Verification

Job Number: JC93827

Sample: G1G4995-ICV4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G154479.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	115	0.00	1.84- 1.90
2	SAB	Tetrachloro-m-xylene					-----NA-----	
3		Hexachlorobenzene	1.556	1.450	6.8	114	0.00	3.06- 3.12
4	A	alpha-BHC					-----NA-----	
5	MA	gamma-BHC					-----NA-----	
6	MA	Heptachlor					-----NA-----	
7	B	beta-BHC					-----NA-----	
8	B	delta-BHC					-----NA-----	
9	MB	Aldrin					-----NA-----	
10		Alachlor					-----NA-----	
11	B	Heptachlor Epoxide					-----NA-----	
12	B	gamma-Chlordane					-----NA-----	
13	B	alpha-Chlordane					-----NA-----	
14	A	Endosulfan I					-----NA-----	
15	B	4,4'-DDE					-----NA-----	
16	MA	Dieldrin					-----NA-----	
17	MA	Endrin					-----NA-----	
18	A	4,4'-DDD					-----NA-----	
19	B	Endosulfan II					-----NA-----	
20	MA	4,4'-DDT					-----NA-----	
21	B	Endrin Aldehyde					-----NA-----	
22	B	Endosulfan Sulfate					-----NA-----	
23	A	Methoxychlor					-----NA-----	
24		Mirex					-----NA-----	
25	B	Endrin Ketone					-----NA-----	
26	SA	Decachlorobiphenyl					-----NA-----	

27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	115	0.00	1.77- 1.97
28	L8	Toxaphene{A}					-----NA-----	
29	L8	Toxaphene{B}					-----NA-----	
30	L8	Toxaphene{C}					-----NA-----	
31	L8	Toxaphene{D}					-----NA-----	
32	L8	Toxaphene{E}					-----NA-----	

33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	115	0.00	1.77- 1.97
34		Chlordane {A}					-----NA-----	
35		Chlordane {B}					-----NA-----	
36		Chlordane {C}					-----NA-----	
37		Chlordane {D}					-----NA-----	
38		Chlordane {E}					-----NA-----	

(#) = Out of Range
1G154471.D 1PST4995.M

SPCC's out = 0 CCC's out = 0
Fri Jul 26 11:34:03 2019 RPT1

8.9.5
8

Initial Calibration Verification

Job Number: JC93827

Sample: G1G4995-ICV4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G154480.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4995\1G154480.D\ECD1A.CH Vial: 17
Signal #2 : C:\MSDCHEM\1\DATA\1G4995\1G154480.D\ECD2B.CH
Acq On : 7-25-2019 04:27:28 PM Operator: vinced
Sample : icv4995-50 Inst : GC1G
Misc : op21640,g1g4995,1000,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4995.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Mon Jul 29 10:51:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.62-	1.68
2 SAB	Tetrachloro-m-xylene			-----NA-----				
3	Hexachlorobenzene			-----NA-----				
4 A	alpha-BHC			-----NA-----				
5 MA	gamma-BHC			-----NA-----				
6 MA	Heptachlor			-----NA-----				
7 B	beta-BHC			-----NA-----				
8 B	delta-BHC			-----NA-----				
9 MB	Aldrin			-----NA-----				
10	Alachlor	0.191	0.194	-1.6	109	0.00	3.69-	3.75
11 B	Heptachlor Epoxide			-----NA-----				
12 B	gamma-Chlordane			-----NA-----				
13 B	alpha-Chlordane			-----NA-----				
14 A	Endosulfan I			-----NA-----				
15 B	4,4'-DDE			-----NA-----				
16 MA	Dieldrin			-----NA-----				
17 MA	Endrin			-----NA-----				
18 A	4,4'-DDD			-----NA-----				
19 B	Endosulfan II			-----NA-----				
20 MA	4,4'-DDT			-----NA-----				
21 B	Endrin Aldehyde			-----NA-----				
22 B	Endosulfan Sulfate			-----NA-----				
23 A	Methoxychlor			-----NA-----				
24	Mirex			-----NA-----				
25 B	Endrin Ketone			-----NA-----				
26 SA	Decachlorobiphenyl			-----NA-----				
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.55-	1.75
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.55-	1.75
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

Initial Calibration Verification

Job Number: JC93827

Sample: G1G4995-ICV4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G154480.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	103	0.00	1.85-	1.91
2	SAB	Tetrachloro-m-xylene						-----NA-----	
3		Hexachlorobenzene						-----NA-----	
4	A	alpha-BHC						-----NA-----	
5	MA	gamma-BHC						-----NA-----	
6	MA	Heptachlor						-----NA-----	
7	B	beta-BHC						-----NA-----	
8	B	delta-BHC						-----NA-----	
9	MB	Aldrin						-----NA-----	
10		Alachlor	0.137	0.147	-7.3	114	0.00	4.47-	4.53
11	B	Heptachlor Epoxide						-----NA-----	
12	B	gamma-Chlordane						-----NA-----	
13	B	alpha-Chlordane						-----NA-----	
14	A	Endosulfan I						-----NA-----	
15	B	4,4'-DDE						-----NA-----	
16	MA	Dieldrin						-----NA-----	
17	MA	Endrin						-----NA-----	
18	A	4,4'-DDD						-----NA-----	
19	B	Endosulfan II						-----NA-----	
20	MA	4,4'-DDT						-----NA-----	
21	B	Endrin Aldehyde						-----NA-----	
22	B	Endosulfan Sulfate						-----NA-----	
23	A	Methoxychlor						-----NA-----	
24		Mirex						-----NA-----	
25	B	Endrin Ketone						-----NA-----	
26	SA	Decachlorobiphenyl						-----NA-----	
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	103	0.00	1.78-	1.98
28	L8	Toxaphene{A}						-----NA-----	
29	L8	Toxaphene{B}						-----NA-----	
30	L8	Toxaphene{C}						-----NA-----	
31	L8	Toxaphene{D}						-----NA-----	
32	L8	Toxaphene{E}						-----NA-----	
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	103	0.00	1.78-	1.98
34		Chlordane {A}						-----NA-----	
35		Chlordane {B}						-----NA-----	
36		Chlordane {C}						-----NA-----	
37		Chlordane {D}						-----NA-----	
38		Chlordane {E}						-----NA-----	

(#) = Out of Range
1G154471.D 1PST4995.M

SPCC's out = 0 CCC's out = 0
Mon Jul 29 10:59:50 2019 RPT1

Continuing Calibration Summary

Job Number: JC93827

Sample: G1G5043-CC4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G155375.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\an...3\lg155375.d\ECD1A.CH Vial: 4
Signal #2 : C:\msdchem\1\data\anndg\lg5043\lg155375.d\ECD2B.CH
Acq On : 29 Aug 2019 11:47 pm Operator: christp
Sample : cc4995-50 Inst : GC1G
Misc : op22417,lg5043,1000,,,1,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\lpst4995.m (ChemStation Integrator)
Title : PEST/PCB
Last Update : Fri Aug 30 10:04:21 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	88	0.00	1.62-	1.68
2 SAB	Tetrachloro-m-xylene	1.081	0.952	11.9	87	0.00	2.10-	2.16
3	Hexachlorobenzene	1.290	1.107	14.2	86	0.00	2.38-	2.44
4 A	alpha-BHC	1.353	1.386	-2.4	93	0.00	2.50-	2.56
5 MA	gamma-BHC	1.260	1.250	0.8	92	0.00	2.77-	2.83
6 MA	Heptachlor	1.279	1.263	1.3	96	0.00	3.23-	3.29
7 B	beta-BHC	0.646	0.559	13.5	86	0.00	2.84-	2.90
8 B	delta-BHC	1.192	1.137	4.6	87	0.00	3.01-	3.07
9 MB	Aldrin	1.176	1.163	1.1	96	0.00	3.55-	3.61
10	Alachlor	0.191	0.167	12.6	81	0.00	3.68-	3.74
11 B	Heptachlor Epoxide	1.144	1.103	3.6	98	0.00	4.24-	4.30
12 B	gamma-Chlordane	1.097	1.093	0.4	100	0.00	4.40-	4.46
13 B	alpha-Chlordane	1.093	1.063	2.7	99	0.00	4.57-	4.63
14 A	Endosulfan I	1.076	1.189	-10.5	111	0.00	4.75-	4.81
15 B	4,4'-DDE	0.957	0.780	18.5	79	0.00	4.70-	4.76
16 MA	Dieldrin	1.075	1.091	-1.5	100	0.00	5.07-	5.13
17 MA	Endrin	0.981	1.008	-2.8	101	0.00	5.40-	5.46
18 A	4,4'-DDD	0.823	0.780	5.2	91	0.00	5.55-	5.62
19 B	Endosulfan II	0.974	1.008	-3.5	105	0.00	5.73-	5.79
20 MA	4,4'-DDT	0.792	0.830	-4.8	97	0.00	5.97-	6.03
21 B	Endrin Aldehyde	0.809	0.767	5.2	96	0.00	6.38-	6.44
22 B	Endosulfan Sulfate	0.848	0.823	2.9	99	0.00	7.09-	7.15
23 A	Methoxychlor	0.514	0.465	9.5	89	0.00	6.81-	6.87
24	Mirex	0.861	0.800	7.1	99	0.00	6.93-	6.99
25 B	Endrin Ketone	0.955	0.919	3.8	96	0.00	7.55-	7.61
26 SA	Decachlorobiphenyl	0.850	0.822	3.3	100	0.00	9.48-	9.54
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	88	0.00	1.55-	1.75
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	88	0.00	1.55-	1.75
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

Continuing Calibration Summary

Job Number: JC93827

Sample: G1G5043-CC4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G155375.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	118	0.00	1.84-	1.90
2	SAB	Tetrachloro-m-xylene	0.720	0.634	11.9	112	0.00	2.56-	2.62
3		Hexachlorobenzene	1.556	1.378	11.4	111	0.00	3.04-	3.10
4	A	alpha-BHC	1.419	1.400	1.3	115	0.00	3.19-	3.25
5	MA	gamma-BHC	1.317	1.287	2.3	115	0.00	3.61-	3.67
6	MA	Heptachlor	1.324	1.246	5.9	115	0.00	4.19-	4.25
7	B	beta-BHC	0.542	0.479	11.6	112	0.00	3.69-	3.75
8	B	delta-BHC	1.288	1.230	4.5	111	0.00	4.09-	4.15
9	MB	Aldrin	1.285	1.227	4.5	119	0.00	4.65-	4.71
10		Alachlor	0.137	0.129	5.8	114	0.00	4.45-	4.51
11	B	Heptachlor Epoxide	1.162	1.089	6.3	115	0.00	5.50-	5.56
12	B	gamma-Chlordane	1.149	1.056	8.1	114	0.00	5.80-	5.86
13	B	alpha-Chlordane	1.133	1.031	9.0	114	0.00	6.04-	6.10
14	A	Endosulfan I	1.111	0.988	11.1	111	0.00	6.14-	6.20
15	B	4,4'-DDE	1.118	1.012	9.5	111	0.00	6.32-	6.38
16	MA	Dieldrin	1.192	1.128	5.4	116	0.00	6.60-	6.66
17	MA	Endrin	1.064	1.031	3.1	118	0.00	7.14-	7.20
18	A	4,4'-DDD	0.845	0.743	12.1	108	0.00	7.34-	7.40
19	B	Endosulfan II	1.063	0.946	11.0	112	0.00	7.51-	7.57
20	MA	4,4'-DDT	0.811	0.718	11.5	104	0.00	7.90-	7.96
21	B	Endrin Aldehyde	0.837	0.711	15.1	106	0.00	8.13-	8.19
22	B	Endosulfan Sulfate	0.904	0.807	10.7	112	0.00	8.63-	8.69
23	A	Methoxychlor	0.466	0.390	16.3	103	0.00	9.24-	9.30
24		Mirex	0.722	0.623	13.7	108	0.00	9.57-	9.63
25	B	Endrin Ketone	1.005	0.889	11.5	108	0.00	9.63-	9.69
26	SA	Decachlorobiphenyl	0.914	0.805	11.9	112	0.00	11.48-	11.54
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	118	0.00	1.77-	1.97
28	L8	Toxaphene{A}						-----NA-----	
29	L8	Toxaphene{B}						-----NA-----	
30	L8	Toxaphene{C}						-----NA-----	
31	L8	Toxaphene{D}						-----NA-----	
32	L8	Toxaphene{E}						-----NA-----	
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	118	0.00	1.77-	1.97
34		Chlordane {A}						-----NA-----	
35		Chlordane {B}						-----NA-----	
36		Chlordane {C}						-----NA-----	
37		Chlordane {D}						-----NA-----	
38		Chlordane {E}						-----NA-----	

(#) = Out of Range
1g155375.d lpst4995.m

SPCC's out = 0 CCC's out = 0
Fri Aug 30 10:06:08 2019

Continuing Calibration Summary

Job Number: JC93827 **Sample:** G1G5044-CC4995
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G155405.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G5044\1G155405.D\ECD1A.CH Vial: 4
 Signal #2 : C:\MSDCHEM\1\DATA\1G5044\1G155405.D\ECD2B.CH
 Acq On : 8-30-2019 09:51:22 AM Operator: arielb
 Sample : cc4995-50 Inst : GC1G
 Misc : op22343,g1g5044,1000,,,5,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4995.M (Chemstation Integrator)
 Title : PEST/PCB
 Last Update : Thu Aug 29 10:38:12 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	70	0.00	1.62-	1.68
2 SAB	Tetrachloro-m-xylene	1.081	0.934	13.6	68	0.00	2.09-	2.15
3	Hexachlorobenzene	1.290	1.073	16.8	66	0.00	2.38-	2.44
4 A	alpha-BHC	1.353	1.321	2.4	70	0.00	2.50-	2.56
5 MA	gamma-BHC	1.260	1.217	3.4	71	0.00	2.77-	2.83
6 MA	Heptachlor	1.279	1.260	1.5	76	0.00	3.23-	3.29
7 B	beta-BHC	0.646	0.529	18.1	64	0.00	2.84-	2.90
8 B	delta-BHC	1.192	1.083	9.1	66	0.00	3.01-	3.07
9 MB	Aldrin	1.176	0.994	15.5	65	0.00	3.55-	3.61
10	Alachlor	0.191	0.147	23.0#	56	0.00	3.68-	3.74
11 B	Heptachlor Epoxide	1.144	1.014	11.4	71	0.00	4.24-	4.30
12 B	gamma-Chlordane	1.097	0.994	9.4	72	0.00	4.40-	4.46
13 B	alpha-Chlordane	1.093	0.985	9.9	72	0.00	4.57-	4.63
14 A	Endosulfan I	1.076	1.051	2.3	77	0.00	4.75-	4.81
15 B	4,4'-DDE	0.957	0.916	4.3	74	-0.01	4.69-	4.75
16 MA	Dieldrin	1.075	1.008	6.2	73	0.00	5.07-	5.13
17 MA	Endrin	0.981	0.970	1.1	77	0.00	5.40-	5.46
18 A	4,4'-DDD	0.823	0.778	5.5	71	-0.02	5.53-	5.60
19 B	Endosulfan II	0.974	0.889	8.7	73	0.00	5.73-	5.79
20 MA	4,4'-DDT	0.792	0.784	1.0	73	-0.01	5.96-	6.02
21 B	Endrin Aldehyde	0.809	0.731	9.6	73	0.00	6.38-	6.44
22 B	Endosulfan Sulfate	0.848	0.792	6.6	75	-0.01	7.09-	7.15
23 A	Methoxychlor	0.514	0.477	7.2	72	-0.02	6.78-	6.84
24	Mirex	0.861	0.727	15.6	71	0.00	6.93-	6.99
25 B	Endrin Ketone	0.955	0.871	8.8	72	0.00	7.55-	7.61
26 SA	Decachlorobiphenyl	0.850	0.781	8.1	75	-0.01	9.47-	9.53
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	70	0.00	1.55-	1.75
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	70	0.00	1.55-	1.75
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

8.9.8

Continuing Calibration Summary

Job Number: JC93827

Sample: G1G5044-CC4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G155405.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	104	0.00	1.84-	1.90
2	SAB	Tetrachloro-m-xylene	0.720	0.603	16.3	94	0.00	2.56-	2.62
3		Hexachlorobenzene	1.556	1.298	16.6	92	0.00	3.04-	3.10
4	A	alpha-BHC	1.419	1.285	9.4	93	0.00	3.19-	3.25
5	MA	gamma-BHC	1.317	1.197	9.1	95	0.00	3.61-	3.67
6	MA	Heptachlor	1.324	1.044	21.1#	85	0.00	4.19-	4.25
7	B	beta-BHC	0.542	0.456	15.9	94	0.00	3.69-	3.75
8	B	delta-BHC	1.288	1.116	13.4	89	0.00	4.09-	4.15
9	MB	Aldrin	1.285	0.991	22.9#	85	0.00	4.65-	4.71
10		Alachlor	0.137	0.108	21.2#	85	0.00	4.45-	4.51
11	B	Heptachlor Epoxide	1.162	1.087	6.5	101	0.00	5.50-	5.56
12	B	gamma-Chlordane	1.149	0.975	15.1	93	0.00	5.80-	5.86
13	B	alpha-Chlordane	1.133	0.922	18.6	90	-0.01	6.04-	6.10
14	A	Endosulfan I	1.111	0.944	15.0	94	0.00	6.14-	6.20
15	B	4,4'-DDE	1.118	0.928	17.0	90	-0.01	6.32-	6.38
16	MA	Dieldrin	1.192	1.020	14.4	92	0.00	6.60-	6.66
17	MA	Endrin	1.064	0.955	10.2	97	0.00	7.14-	7.20
18	A	4,4'-DDD	0.845	0.708	16.2	91	-0.02	7.33-	7.39
19	B	Endosulfan II	1.063	0.881	17.1	92	-0.01	7.51-	7.57
20	MA	4,4'-DDT	0.811	0.734	9.5	94	-0.02	7.90-	7.96
21	B	Endrin Aldehyde	0.837	0.638	23.8#	84	-0.01	8.13-	8.19
22	B	Endosulfan Sulfate	0.904	0.774	14.4	95	-0.01	8.63-	8.69
23	A	Methoxychlor	0.466	0.399	14.4	93	-0.02	9.24-	9.30
24		Mirex	0.722	0.583	19.3	90	0.00	9.57-	9.63
25	B	Endrin Ketone	1.005	0.864	14.0	93	-0.01	9.63-	9.69
26	SA	Decachlorobiphenyl	0.914	0.760	16.8	93	0.00	11.48-	11.54
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	104	0.00	1.77-	1.97
28	L8	Toxaphene{A}			-----NA-----				
29	L8	Toxaphene{B}			-----NA-----				
30	L8	Toxaphene{C}			-----NA-----				
31	L8	Toxaphene{D}			-----NA-----				
32	L8	Toxaphene{E}			-----NA-----				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	104	0.00	1.77-	1.97
34		Chlordane {A}			-----NA-----				
35		Chlordane {B}			-----NA-----				
36		Chlordane {C}			-----NA-----				
37		Chlordane {D}			-----NA-----				
38		Chlordane {E}			-----NA-----				

(#) = Out of Range
1G154471.D 1PST4995.M

SPCC's out = 0 CCC's out = 0
Fri Aug 30 16:40:29 2019 RPT1

Continuing Calibration Summary

Job Number: JC93827 **Sample:** G1G5044-CC4995
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G155416.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G5044\1G155416.D\ECD1A.CH Vial: 2
 Signal #2 : C:\MSDCHEM\1\DATA\1G5044\1G155416.D\ECD2B.CH
 Acq On : 8-30-2019 02:56:09 PM Operator: arielb
 Sample : cc4995-25 Inst : GC1G
 Misc : op22361,g1g5044,15.0,,,10,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4995.M (Chemstation Integrator)
 Title : PEST/PCB
 Last Update : Thu Aug 29 10:38:12 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	73	0.00	1.62-	1.68
2 SAB	Tetrachloro-m-xylene	1.081	0.944	12.7	68	0.00	2.09-	2.15
3	Hexachlorobenzene	1.290	1.066	17.4	65	0.00	2.38-	2.44
4 A	alpha-BHC	1.353	1.288	4.8	72	0.00	2.50-	2.56
5 MA	gamma-BHC	1.260	1.137	9.8	69	0.00	2.76-	2.82
6 MA	Heptachlor	1.279	1.162	9.1	71	0.00	3.22-	3.28
7 B	beta-BHC	0.646	0.521	19.3	61	-0.01	2.83-	2.89
8 B	delta-BHC	1.192	1.064	10.7	66	-0.01	3.01-	3.07
9 MB	Aldrin	1.176	1.085	7.7	72	-0.01	3.54-	3.60
10	Alachlor	0.191	0.163	14.7	61	-0.01	3.67-	3.73
11 B	Heptachlor Epoxide	1.144	0.981	14.2	68	-0.01	4.23-	4.29
12 B	gamma-Chlordane	1.097	0.962	12.3	68	-0.01	4.40-	4.46
13 B	alpha-Chlordane	1.093	0.985	9.9	71	-0.01	4.57-	4.63
14 A	Endosulfan I	1.076	0.972	9.7	70	-0.01	4.74-	4.80
15 B	4,4'-DDE	0.957	0.871	9.0	70	-0.02	4.68-	4.74
16 MA	Dieldrin	1.075	0.996	7.3	71	-0.01	5.07-	5.13
17 MA	Endrin	0.981	0.945	3.7	74	-0.01	5.39-	5.45
18 A	4,4'-DDD	0.823	0.739	10.2	67	-0.03	5.53-	5.60
19 B	Endosulfan II	0.974	0.882	9.4	70	-0.01	5.73-	5.79
20 MA	4,4'-DDT	0.792	0.721	9.0	67	-0.02	5.96-	6.02
21 B	Endrin Aldehyde	0.809	0.717	11.4	69	-0.02	6.37-	6.43
22 B	Endosulfan Sulfate	0.848	0.795	6.2	72	-0.02	7.08-	7.14
23 A	Methoxychlor	0.514	0.472	8.2	68	-0.02	6.78-	6.84
24	Mirex	0.861	0.756	12.2	68	-0.01	6.92-	6.98
25 B	Endrin Ketone	0.955	0.881	7.7	71	-0.02	7.54-	7.60
26 SA	Decachlorobiphenyl	0.850	0.790	7.1	72	-0.02	9.47-	9.53
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	73	0.00	1.55-	1.75
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	73	0.00	1.55-	1.75
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

8.9.9
8

Continuing Calibration Summary

Job Number: JC93827

Sample: G1G5044-CC4995

Account: NOREASCA NOREAS, Inc.

Lab FileID: 1G155416.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.84-	1.90
2	SAB	Tetrachloro-m-xylene	0.720	0.630	12.5	94	0.00	2.56-	2.62
3		Hexachlorobenzene	1.556	1.402	9.9	96	0.00	3.04-	3.10
4	A	alpha-BHC	1.419	1.340	5.6	98	0.00	3.19-	3.25
5	MA	gamma-BHC	1.317	1.218	7.5	96	0.00	3.61-	3.67
6	MA	Heptachlor	1.324	1.148	13.3	92	0.00	4.19-	4.25
7	B	beta-BHC	0.542	0.455	16.1	89	0.00	3.69-	3.75
8	B	delta-BHC	1.288	1.178	8.5	95	0.00	4.09-	4.15
9	MB	Aldrin	1.285	1.085	15.6	90	0.00	4.65-	4.71
10		Alachlor	0.137	0.122	10.9	89	-0.01	4.45-	4.51
11	B	Heptachlor Epoxide	1.162	1.116	4.0	100	-0.01	5.50-	5.56
12	B	gamma-Chlordane	1.149	1.016	11.6	94	-0.01	5.80-	5.86
13	B	alpha-Chlordane	1.133	1.088	4.0	102	-0.01	6.04-	6.10
14	A	Endosulfan I	1.111	1.186	-6.8	112	-0.01	6.14-	6.20
15	B	4,4'-DDE	1.118	1.020	8.8	94	-0.01	6.31-	6.37
16	MA	Dieldrin	1.192	1.051	11.8	93	-0.01	6.60-	6.66
17	MA	Endrin	1.064	1.001	5.9	98	0.00	7.14-	7.20
18	A	4,4'-DDD	0.845	0.757	10.4	94	-0.02	7.33-	7.39
19	B	Endosulfan II	1.063	0.933	12.2	93	-0.01	7.51-	7.57
20	MA	4,4'-DDT	0.811	0.691	14.8	86	-0.02	7.90-	7.96
21	B	Endrin Aldehyde	0.837	0.738	11.8	92	-0.02	8.12-	8.18
22	B	Endosulfan Sulfate	0.904	0.813	10.1	95	-0.01	8.63-	8.69
23	A	Methoxychlor	0.466	0.368	21.0#	80	-0.02	9.24-	9.30
24		Mirex	0.722	0.611	15.4	87	-0.01	9.57-	9.63
25	B	Endrin Ketone	1.005	0.869	13.5	90	-0.01	9.63-	9.69
26	SA	Decachlorobiphenyl	0.914	0.804	12.0	92	-0.02	11.48-	11.54
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.77-	1.97
28	L8	Toxaphene{A}						-----NA-----	
29	L8	Toxaphene{B}						-----NA-----	
30	L8	Toxaphene{C}						-----NA-----	
31	L8	Toxaphene{D}						-----NA-----	
32	L8	Toxaphene{E}						-----NA-----	
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.77-	1.97
34		Chlordane {A}						-----NA-----	
35		Chlordane {B}						-----NA-----	
36		Chlordane {C}						-----NA-----	
37		Chlordane {D}						-----NA-----	
38		Chlordane {E}						-----NA-----	

(#) = Out of Range
1G154470.D 1PST4995.M

SPCC's out = 0 CCC's out = 0
Tue Sep 03 13:26:02 2019 RPT1

Initial Calibration Summary

Job Number: JC93827 **Sample:** G6G2063-ICC2063
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G66165.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report GC6G

Method : C:\MSDCHEM\1\METHODS\6PST2063.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Jul 15 10:49:16 2019
 Response via : Initial Calibration

Calibration Files

5 =6g66163.d 10 =6g66164.d 25 =6g66165.d 50 =6g66166.d
 100 =6g66168.d 1 =6g66161.d 75 =6g66167.d 2 =6g66162.d
 = =

Compound	5	10	25	50	100	1	75	2	Avg	%RSD
1) I 1-bromo-2-nitrobenzen -----ISTD-----										
2) Tetrachloro-m-xylene	0.708	0.741	0.752	0.764	0.798	0.794	0.776	0.772	0.763	3.89
3) hexachlorobenzene	1.647	1.681	1.727	1.745	1.812	1.841	1.800	1.804	1.757	3.91
4) alpha-BHC	1.073	1.145	1.333	1.503	1.726	1.191	1.642	1.107	1.340	18.98
5) gamma-BHC	1.081	1.134	1.276	1.411	1.592	1.202	1.514	1.067	1.285	15.61
6) Heptachlor	1.059	1.108	1.196	1.289	1.439	1.253	1.372	1.076	1.224	11.41
7) beta-BHC	0.524	0.539	0.555	0.570	0.600	0.582	0.585	0.546	0.563	4.59
8) delta-BHC	0.988	1.047	1.223	1.384	1.598	1.118	1.507	1.012	1.235	19.05
9) Aldrin	1.098	1.123	1.245	1.369	1.537	1.261	1.464	1.130	1.278	12.87
10) alachlor	0.160	0.150	0.155	0.152	0.146		0.148		0.152	3.38
11) Heptachlor Epoxide	1.064	1.125	1.148	1.231	1.376	1.329	1.303	1.081	1.207	9.89
12) gamma-Chlordane	1.018	1.071	1.133	1.230	1.394	1.243	1.319	1.130	1.192	10.66
13) alpha-Chlordane	1.012	1.065	1.136	1.218	1.362	1.110	1.300	1.021	1.153	11.20
14) Endosulfan I	1.018	1.058	1.128	1.198	1.329	1.179	1.276	1.081	1.158	9.32
15) 4,4'-DDE	1.050	1.063	1.135	1.218	1.354	1.222	1.296	1.115	1.182	9.26
16) Dieldrin	1.028	1.063	1.158	1.262	1.421	1.126	1.353	1.004	1.177	13.08
17) Endrin	0.988	1.007	1.085	1.174	1.332	1.168	1.256	1.008	1.127	11.24
18) 4,4'-DDD	0.732	0.753	0.806	0.881	0.997	0.770	0.945	0.727	0.826	12.43
19) Endosulfan II	0.991	0.993	1.050	1.109	1.224	1.043	1.176	0.984	1.071	8.44
20) 4,4'-DDT	0.805	0.803	0.857	0.913	1.032	0.802	0.979	0.761	0.869	11.09
21) Endrin Aldehyde	0.867	0.883	0.894	0.923	0.995	1.071	0.964	0.892	0.936	7.43
22) Endosulfan Sulfate	0.909	0.886	0.944	0.984	1.088	0.995	1.058	0.887	0.969	7.88
23) Methoxychlor										

8.9.10
8

Initial Calibration Summary

Job Number: JC93827 Sample: G6G2063-ICC2063
 Account: NOREASCA NOREAS, Inc. Lab FileID: 6G66165.D
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

	0.519	0.478	0.480	0.480	0.496	0.561	0.492	0.461	0.496	6.30
24) Mirex										
	0.970	0.903	0.914	0.906	0.939	1.035	0.931	0.895	0.937	4.96
25) Endrin Ketone										
	1.023	1.013	1.077	1.119	1.216	1.091	1.185	0.989	1.089	7.49
26) Decachlorobiphenyl										
	1.213	1.268	1.280	1.295	1.370	1.300	1.340	1.251	1.290	3.84
27) I 1-bromo-2-nitrobenzen -----ISTD-----										
28) Toxaphene{A}										
					0.015				0.015	0.00
29) Toxaphene{B}										
					0.043				0.043	0.00
30) Toxaphene{C}										
					0.032				0.032	0.00
31) Toxaphene{D}										
					0.029				0.029	0.00
32) Toxaphene{E}										
					0.032				0.032	0.00
33) I 1-bromo-2-nitrobenzen -----ISTD-----										
34) Chlordane {A}										
					0.066				0.066	0.00
35) Chlordane {B}										
					0.044				0.044	0.00
36) Chlordane {C}										
					0.159				0.159	0.00
37) Chlordane {D}										
					0.256				0.256	0.00
38) Chlordane {E}										
					0.039				0.039	0.00

Signal #2

1) I 1-bromo-2-nitrobenzen -----ISTD-----										
2) Tetrachloro-m-xylene										
	1.000	0.998	0.979	0.965	0.982	1.149	0.977	1.058	1.014	6.09
3) hexachlorobenzene										
	1.157	1.111	1.053	1.020	1.025	1.360	1.022	1.210	1.120	10.69
4) alpha-BHC										
	1.294	1.307	1.344	1.372	1.449	1.452	1.423	1.310	1.369	4.77
5) gamma-BHC										
	1.218	1.217	1.234	1.245	1.305	1.381	1.287	1.269	1.269	4.34
6) Heptachlor										
	1.305	1.263	1.225	1.210	1.249	1.579	1.246	1.344	1.303	9.18
7) beta-BHC										
	0.625	0.606	0.582	0.559	0.559	0.753	0.561	0.663	0.614	10.97
8) delta-BHC										
	1.135	1.149	1.176	1.203	1.273	1.318	1.261	1.154	1.209	5.60
9) Aldrin										
	1.167	1.133	1.116	1.112	1.152	1.416	1.141	1.283	1.190	8.92
10) alachlor										
	0.178	0.180	0.171	0.159	0.152		0.157		0.166	7.14
11) Heptachlor Epoxide										
	1.115	1.079	1.067	1.038	1.062	1.265	1.055	1.164	1.106	6.86
12) gamma-Chlordane										
	1.129	1.083	1.049	1.033	1.065	1.252	1.056	1.165	1.104	6.73
13) alpha-Chlordane										
	1.101	1.068	1.030	1.005	1.029	1.365	1.027	1.184	1.101	11.00

8.9.10

8

Initial Calibration Summary

Job Number: JC93827 **Sample:** G6G2063-ICC2063
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G66165.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

14)	Endosulfan I	1.031	1.012	0.983	0.957	0.976	1.314	0.973	1.121	1.046	11.49
15)	4,4'-DDE	0.996	0.995	0.997	0.995	1.045	1.255	1.032	1.054	1.046	8.41
16)	Dieldrin	1.080	1.061	1.055	1.048	1.090	1.247	1.083	1.129	1.099	5.90
17)	Endrin	1.009	0.983	0.975	0.966	1.003	1.200	1.001	1.070	1.026	7.51
18)	4,4'-DDD	0.854	0.839	0.839	0.837	0.868	0.973	0.861	0.884	0.869	5.17
19)	Endosulfan II	1.010	0.966	0.955	0.927	0.946	1.036	0.949	1.024	0.977	4.17
20)	4,4'-DDT	0.831	0.820	0.838	0.842	0.892	0.861	0.880	0.815	0.847	3.29
21)	Endrin Aldehyde	0.825	0.813	0.766	0.750	0.757	0.969	0.765	0.850	0.812	9.02
22)	Endosulfan Sulfate	0.962	0.894	0.860	0.823	0.833	1.084	0.840	0.990	0.911	10.20
23)	Methoxychlor	0.539	0.528	0.509	0.486	0.490	0.549	0.495	0.629	0.528	8.89
24)	Mirex	0.932	0.876	0.802	0.749	0.735	1.025	0.749	1.002	0.859	13.65
25)	Endrin Ketone	1.006	0.957	0.933	0.907	0.933	1.120	0.936	1.024	0.977	7.16
26)	Decachlorobiphenyl	0.889	0.843	0.801	0.739	0.739	1.039	0.756	0.933	0.842	12.65
27)	I 1-bromo-2-nitrobenzen	-----ISTD-----									
28)	Toxaphene{A}									0.022	0.00
29)	Toxaphene{B}									0.029	0.00
30)	Toxaphene{C}									0.053	0.00
31)	Toxaphene{D}									0.030	0.00
32)	Toxaphene{E}									0.032	0.00
33)	I 1-bromo-2-nitrobenzen	-----ISTD-----									
34)	Chlordane {A}									0.069	0.00
35)	Chlordane {B}									0.038	0.00
36)	Chlordane {C}									0.127	0.00
37)	Chlordane {D}									0.211	0.00
38)	Chlordane {E}									0.034	0.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

6PST2063.M

Mon Jul 15 11:06:05 2019

8.9.10

8

Initial Calibration Verification

Job Number: JC93827 **Sample:** G6G2063-ICV2063
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G66171.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2063\6g66171.d\ECD1A.CH Vial: 13
 Signal #2 : C:\msdchem\1\data\G6G2063\6g66171.d\ECD2B.CH
 Acq On : 12-Jul-19, 16:33:16 Operator: vinced
 Sample : icv2063-25 Inst : GC6G
 Misc : op21464,g6g2063,1000,,,5,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2063.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Jul 15 10:49:16 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.17-	2.17
2 SAB	Tetrachloro-m-xylene	0.763	0.706	7.5	95	0.00	2.22-	2.28
3	hexachlorobenzene			-----NA-----				
4 A	alpha-BHC	1.340	1.476	-10.1	113	0.00	2.68-	2.74
5 MA	gamma-BHC	1.285	1.400	-8.9	111	0.00	2.96-	3.02
6 MA	Heptachlor	1.224	1.309	-6.9	111	0.00	3.43-	3.49
7 B	beta-BHC	0.563	0.607	-7.8	111	0.00	3.04-	3.10
8 B	delta-BHC	1.235	1.373	-11.2	114	0.00	3.21-	3.27
9 MB	Aldrin	1.278	1.372	-7.4	112	0.00	3.75-	3.81
10	alachlor			-----NA-----				
11 B	Heptachlor Epoxide	1.207	1.282	-6.2	114	0.00	4.44-	4.50
12 B	gamma-Chlordane	1.192	1.284	-7.7	115	0.00	4.60-	4.66
13 B	alpha-Chlordane	1.153	1.263	-9.5	113	0.00	4.77-	4.83
14 A	Endosulfan I	1.158	1.247	-7.7	112	0.00	4.94-	5.00
15 B	4,4'-DDE	1.182	1.258	-6.4	113	0.00	4.89-	4.95
16 MA	Dieldrin	1.177	1.298	-10.3	114	0.00	5.25-	5.31
17 MA	Endrin	1.127	1.231	-9.2	115	0.00	5.57-	5.63
18 A	4,4'-DDD	0.826	0.902	-9.2	114	0.00	5.70-	5.76
19 B	Endosulfan II	1.071	1.153	-7.7	112	0.00	5.88-	5.94
20 MA	4,4'-DDT	0.869	0.939	-8.1	111	0.00	6.11-	6.17
21 B	Endrin Aldehyde	0.936	1.011	-8.0	115	0.00	6.50-	6.56
22 B	Endosulfan Sulfate	0.969	0.995	-2.7	107	0.00	7.17-	7.23
23 A	Methoxychlor	0.496	0.493	0.6	105	0.00	6.89-	6.95
24	Mirex	0.937	0.791	15.6	88	0.00	7.02-	7.08
25 B	Endrin Ketone	1.089	1.187	-9.0	112	0.00	7.60-	7.66
26 SA	Decachlorobiphenyl	1.290	1.233	4.4	98	0.00	9.41-	9.47
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.17-	2.17
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.17-	2.17
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

Initial Calibration Verification

Job Number: JC93827

Sample: G6G2063-ICV2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G66171.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.42-	2.42
2	SAB	Tetrachloro-m-xylene	1.014	0.928	8.5	97	0.00	2.68-	2.74
3		hexachlorobenzene						-----NA-----	
4	A	alpha-BHC	1.369	1.464	-6.9	111	0.00	3.31-	3.37
5	MA	gamma-BHC	1.269	1.341	-5.7	111	0.00	3.73-	3.79
6	MA	Heptachlor	1.303	1.304	-0.1	109	0.00	4.28-	4.34
7	B	beta-BHC	0.614	0.629	-2.4	110	0.00	3.81-	3.87
8	B	delta-BHC	1.209	1.300	-7.5	113	0.00	4.19-	4.25
9	MB	Aldrin	1.190	1.222	-2.7	112	0.00	4.71-	4.77
10		alachlor						-----NA-----	
11	B	Heptachlor Epoxide	1.106	1.155	-4.4	111	0.00	5.52-	5.58
12	B	gamma-Chlordane	1.104	1.152	-4.3	112	0.00	5.79-	5.85
13	B	alpha-Chlordane	1.101	1.129	-2.5	112	0.00	6.02-	6.08
14	A	Endosulfan I	1.046	1.060	-1.3	110	0.00	6.11-	6.17
15	B	4,4'-DDE	1.046	1.089	-4.1	112	0.00	6.28-	6.34
16	MA	Dieldrin	1.099	1.159	-5.5	112	0.00	6.54-	6.60
17	MA	Endrin	1.026	1.083	-5.6	113	0.00	7.03-	7.09
18	A	4,4'-DDD	0.869	0.923	-6.2	112	0.00	7.22-	7.28
19	B	Endosulfan II	0.977	1.018	-4.2	109	0.00	7.38-	7.44
20	MA	4,4'-DDT	0.847	0.928	-9.6	113	0.00	7.75-	7.81
21	B	Endrin Aldehyde	0.812	0.854	-5.2	114	0.00	7.95-	8.01
22	B	Endosulfan Sulfate	0.911	0.923	-1.3	110	0.00	8.41-	8.47
23	A	Methoxychlor	0.528	0.538	-1.9	108	0.00	8.99-	9.05
24		Mirex	0.859	0.704	18.0	90	0.00	9.28-	9.34
25	B	Endrin Ketone	0.977	1.023	-4.7	112	0.00	9.36-	9.42
26	SA	Decachlorobiphenyl	0.842	0.776	7.8	99	0.00	11.51-	11.57
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.42-	2.42
28	L8	Toxaphene{A}						-----NA-----	
29	L8	Toxaphene{B}						-----NA-----	
30	L8	Toxaphene{C}						-----NA-----	
31	L8	Toxaphene{D}						-----NA-----	
32	L8	Toxaphene{E}						-----NA-----	
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.42-	2.42
34		Chlordane {A}						-----NA-----	
35		Chlordane {B}						-----NA-----	
36		Chlordane {C}						-----NA-----	
37		Chlordane {D}						-----NA-----	
38		Chlordane {E}						-----NA-----	

(#) = Out of Range
6g66165.d 6PST2063.M

SPCC's out = 0 CCC's out = 0
Mon Jul 15 10:58:49 2019

8.9.11

8

Initial Calibration Verification

Job Number: JC93827

Sample: G6G2063-ICV2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G66172.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2063\6g66172.d\ECD1A.CH Vial: 14
Signal #2 : C:\msdchem\1\data\G6G2063\6g66172.d\ECD2B.CH
Acq On : 12-Jul-19, 16:50:54 Operator: vinced
Sample : icv2063-500 Inst : GC6G
Misc : op21464,g6g2063,1000,,,5,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2063.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Mon Jul 15 10:49:16 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.17-	2.17
2 SAB	Tetrachloro-m-xylene	0.763	0.809	-6.0	106	0.00	2.22-	2.28
3	hexachlorobenzene			-----NA-----				
4 A	alpha-BHC			-----NA-----				
5 MA	gamma-BHC			-----NA-----				
6 MA	Heptachlor			-----NA-----				
7 B	beta-BHC			-----NA-----				
8 B	delta-BHC			-----NA-----				
9 MB	Aldrin			-----NA-----				
10	alachlor			-----NA-----				
11 B	Heptachlor Epoxide			-----NA-----				
12 B	gamma-Chlordane			-----NA-----				
13 B	alpha-Chlordane			-----NA-----				
14 A	Endosulfan I			-----NA-----				
15 B	4,4'-DDE			-----NA-----				
16 MA	Dieldrin			-----NA-----				
17 MA	Endrin			-----NA-----				
18 A	4,4'-DDD			-----NA-----				
19 B	Endosulfan II			-----NA-----				
20 MA	4,4'-DDT			-----NA-----				
21 B	Endrin Aldehyde			-----NA-----				
22 B	Endosulfan Sulfate			-----NA-----				
23 A	Methoxychlor			-----NA-----				
24	Mirex			-----NA-----				
25 B	Endrin Ketone			-----NA-----				
26 SA	Decachlorobiphenyl	1.290	1.412	-9.5	109	0.00	9.42-	9.48
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.17-	2.17
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.17-	2.17
34	Chlordane {A}	0.066	0.061	7.6	92	0.00	3.37-	3.57
35	Chlordane {B}	0.044	0.046	-4.5	104	0.00	3.83-	4.03
36	Chlordane {C}	0.159	0.153	3.8	96	0.00	4.53-	4.73
37	Chlordane {D}	0.256	0.252	1.6	98	0.00	4.69-	4.89
38	Chlordane {E}	0.039	0.034	12.8	86	0.00	5.72-	5.92

Initial Calibration Verification

Job Number: JC93827

Sample: G6G2063-ICV2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G66172.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.42-	2.42
2	SAB	Tetrachloro-m-xylene	1.014	1.013	0.1	105	0.00	2.68-	2.74
3		hexachlorobenzene						-----NA-----	
4	A	alpha-BHC						-----NA-----	
5	MA	gamma-BHC						-----NA-----	
6	MA	Heptachlor						-----NA-----	
7	B	beta-BHC						-----NA-----	
8	B	delta-BHC						-----NA-----	
9	MB	Aldrin						-----NA-----	
10		alachlor						-----NA-----	
11	B	Heptachlor Epoxide						-----NA-----	
12	B	gamma-Chlordane						-----NA-----	
13	B	alpha-Chlordane						-----NA-----	
14	A	Endosulfan I						-----NA-----	
15	B	4,4'-DDE						-----NA-----	
16	MA	Dieldrin						-----NA-----	
17	MA	Endrin						-----NA-----	
18	A	4,4'-DDD						-----NA-----	
19	B	Endosulfan II						-----NA-----	
20	MA	4,4'-DDT						-----NA-----	
21	B	Endrin Aldehyde						-----NA-----	
22	B	Endosulfan Sulfate						-----NA-----	
23	A	Methoxychlor						-----NA-----	
24		Mirex						-----NA-----	
25	B	Endrin Ketone						-----NA-----	
26	SA	Decachlorobiphenyl	0.842	0.821	2.5	111	0.00	11.51-	11.57
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.42-	2.42
28	L8	Toxaphene{A}						-----NA-----	
29	L8	Toxaphene{B}						-----NA-----	
30	L8	Toxaphene{C}						-----NA-----	
31	L8	Toxaphene{D}						-----NA-----	
32	L8	Toxaphene{E}						-----NA-----	
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.42-	2.42
34		Chlordane {A}	0.069	0.064	7.2	93	0.00	4.21-	4.41
35		Chlordane {B}	0.038	0.036	5.3	94	0.00	4.84-	5.04
36		Chlordane {C}	0.127	0.120	5.5	95	0.00	5.72-	5.92
37		Chlordane {D}	0.211	0.202	4.3	96	0.00	5.95-	6.15
38		Chlordane {E}	0.034	0.033	2.9	97	0.00	7.38-	7.58

(#) = Out of Range
6g66166.d 6PST2063.M

SPCC's out = 0 CCC's out = 0
Mon Jul 15 10:59:49 2019

8.9.12
8

Initial Calibration Verification

Job Number: JC93827 **Sample:** G6G2063-ICV2063
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G66173.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2063\6g66173.d\ECD1A.CH Vial: 15
 Signal #2 : C:\msdchem\1\data\G6G2063\6g66173.d\ECD2B.CH
 Acq On : 12-Jul-19, 17:08:24 Operator: vinced
 Sample : icv2063-500 Inst : GC6G
 Misc : op21464,g6g2063,1000,,,5,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2063.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Jul 15 10:49:16 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.17-	2.17
2 SAB	Tetrachloro-m-xylene	0.763	0.808	-5.9	106	0.00	2.22-	2.28
3	hexachlorobenzene			-----NA-----				
4 A	alpha-BHC			-----NA-----				
5 MA	gamma-BHC			-----NA-----				
6 MA	Heptachlor			-----NA-----				
7 B	beta-BHC			-----NA-----				
8 B	delta-BHC			-----NA-----				
9 MB	Aldrin			-----NA-----				
10	alachlor			-----NA-----				
11 B	Heptachlor Epoxide			-----NA-----				
12 B	gamma-Chlordane			-----NA-----				
13 B	alpha-Chlordane			-----NA-----				
14 A	Endosulfan I			-----NA-----				
15 B	4,4'-DDE			-----NA-----				
16 MA	Dieldrin			-----NA-----				
17 MA	Endrin			-----NA-----				
18 A	4,4'-DDD			-----NA-----				
19 B	Endosulfan II			-----NA-----				
20 MA	4,4'-DDT			-----NA-----				
21 B	Endrin Aldehyde			-----NA-----				
22 B	Endosulfan Sulfate			-----NA-----				
23 A	Methoxychlor			-----NA-----				
24	Mirex			-----NA-----				
25 B	Endrin Ketone			-----NA-----				
26 SA	Decachlorobiphenyl	1.290	1.420	-10.1	110	0.00	9.42-	9.48
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.17-	2.17
28 L8	Toxaphene{A}	0.015	0.014	6.7	90	0.00	5.19-	5.39
29 L8	Toxaphene{B}	0.043	0.041	4.7	95	0.00	5.80-	6.00
30 L8	Toxaphene{C}	0.032	0.031	3.1	97	0.00	5.97-	6.17
31 L8	Toxaphene{D}	0.029	0.026	10.3	89	0.00	6.31-	6.51
32 L8	Toxaphene{E}	0.032	0.030	6.3	95	0.00	6.94-	7.14
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.17-	2.17
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

8.9.13

8

Initial Calibration Verification

Job Number: JC93827

Sample: G6G2063-ICV2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G66173.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42-	2.42
2	SAB	Tetrachloro-m-xylene	1.014	1.026	-1.2	108	0.00	2.68-	2.74
3		hexachlorobenzene						-----NA-----	
4	A	alpha-BHC						-----NA-----	
5	MA	gamma-BHC						-----NA-----	
6	MA	Heptachlor						-----NA-----	
7	B	beta-BHC						-----NA-----	
8	B	delta-BHC						-----NA-----	
9	MB	Aldrin						-----NA-----	
10		alachlor						-----NA-----	
11	B	Heptachlor Epoxide						-----NA-----	
12	B	gamma-Chlordane						-----NA-----	
13	B	alpha-Chlordane						-----NA-----	
14	A	Endosulfan I						-----NA-----	
15	B	4,4'-DDE						-----NA-----	
16	MA	Dieldrin						-----NA-----	
17	MA	Endrin						-----NA-----	
18	A	4,4'-DDD						-----NA-----	
19	B	Endosulfan II						-----NA-----	
20	MA	4,4'-DDT						-----NA-----	
21	B	Endrin Aldehyde						-----NA-----	
22	B	Endosulfan Sulfate						-----NA-----	
23	A	Methoxychlor						-----NA-----	
24		Mirex						-----NA-----	
25	B	Endrin Ketone						-----NA-----	
26	SA	Decachlorobiphenyl	0.842	0.813	3.4	111	0.00	11.51-	11.57
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42-	2.42
28	L8	Toxaphene{A}	0.022	0.021	4.5	97	0.00	6.44-	6.64
29	L8	Toxaphene{B}	0.029	0.028	3.4	98	0.00	7.28-	7.48
30	L8	Toxaphene{C}	0.053	0.052	1.9	99	0.00	7.44-	7.64
31	L8	Toxaphene{D}	0.030	0.030	0.0	101	0.00	7.88-	8.08
32	L8	Toxaphene{E}	0.032	0.031	3.1	100	0.00	8.77-	8.97
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42-	2.42
34		Chlordane {A}						-----NA-----	
35		Chlordane {B}						-----NA-----	
36		Chlordane {C}						-----NA-----	
37		Chlordane {D}						-----NA-----	
38		Chlordane {E}						-----NA-----	

(#) = Out of Range
6g66166.d 6PST2063.M

SPPC's out = 0 CCC's out = 0
Mon Jul 15 10:59:53 2019

Initial Calibration Verification

Job Number: JC93827 **Sample:** G6G2063-ICV2063
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G66174.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2063\6g66174.d\ECD1A.CH Vial: 16
Signal #2 : C:\msdchem\1\data\G6G2063\6g66174.d\ECD2B.CH
Acq On : 12-Jul-19, 17:25:55 Operator: vinced
Sample : icv2063-50 Inst : GC6G
Misc : op21464,g6g2063,1000,,,5,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2063.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Mon Jul 15 10:49:16 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.17-	2.17
2 SAB	Tetrachloro-m-xylene			-----NA-----				
3	hexachlorobenzene	1.757	1.713	2.5	99	0.00	2.54-	2.60
4 A	alpha-BHC			-----NA-----				
5 MA	gamma-BHC			-----NA-----				
6 MA	Heptachlor			-----NA-----				
7 B	beta-BHC			-----NA-----				
8 B	delta-BHC			-----NA-----				
9 MB	Aldrin			-----NA-----				
10	alachlor			-----NA-----				
11 B	Heptachlor Epoxide			-----NA-----				
12 B	gamma-Chlordane			-----NA-----				
13 B	alpha-Chlordane			-----NA-----				
14 A	Endosulfan I			-----NA-----				
15 B	4,4'-DDE			-----NA-----				
16 MA	Dieldrin			-----NA-----				
17 MA	Endrin			-----NA-----				
18 A	4,4'-DDD			-----NA-----				
19 B	Endosulfan II			-----NA-----				
20 MA	4,4'-DDT			-----NA-----				
21 B	Endrin Aldehyde			-----NA-----				
22 B	Endosulfan Sulfate			-----NA-----				
23 A	Methoxychlor			-----NA-----				
24	Mirex			-----NA-----				
25 B	Endrin Ketone			-----NA-----				
26 SA	Decachlorobiphenyl			-----NA-----				
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.17-	2.17
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.17-	2.17
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

8.9.14

8

Initial Calibration Verification

Job Number: JC93827

Sample: G6G2063-ICV2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G66174.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42-	2.42
2	SAB	Tetrachloro-m-xylene					-----NA-----		
3		hexachlorobenzene	1.120	1.009	9.9	100	0.00	3.17-	3.23
4	A	alpha-BHC					-----NA-----		
5	MA	gamma-BHC					-----NA-----		
6	MA	Heptachlor					-----NA-----		
7	B	beta-BHC					-----NA-----		
8	B	delta-BHC					-----NA-----		
9	MB	Aldrin					-----NA-----		
10		alachlor					-----NA-----		
11	B	Heptachlor Epoxide					-----NA-----		
12	B	gamma-Chlordane					-----NA-----		
13	B	alpha-Chlordane					-----NA-----		
14	A	Endosulfan I					-----NA-----		
15	B	4,4'-DDE					-----NA-----		
16	MA	Dieldrin					-----NA-----		
17	MA	Endrin					-----NA-----		
18	A	4,4'-DDD					-----NA-----		
19	B	Endosulfan II					-----NA-----		
20	MA	4,4'-DDT					-----NA-----		
21	B	Endrin Aldehyde					-----NA-----		
22	B	Endosulfan Sulfate					-----NA-----		
23	A	Methoxychlor					-----NA-----		
24		Mirex					-----NA-----		
25	B	Endrin Ketone					-----NA-----		
26	SA	Decachlorobiphenyl					-----NA-----		
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42-	2.42
28	L8	Toxaphene{A}					-----NA-----		
29	L8	Toxaphene{B}					-----NA-----		
30	L8	Toxaphene{C}					-----NA-----		
31	L8	Toxaphene{D}					-----NA-----		
32	L8	Toxaphene{E}					-----NA-----		
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42-	2.42
34		Chlordane {A}					-----NA-----		
35		Chlordane {B}					-----NA-----		
36		Chlordane {C}					-----NA-----		
37		Chlordane {D}					-----NA-----		
38		Chlordane {E}					-----NA-----		

(#) = Out of Range
6g66166.d 6PST2063.M

SPCC's out = 0 CCC's out = 0
Mon Jul 15 10:59:56 2019

8.9.14

8

Initial Calibration Verification

Job Number: JC93827

Sample: G6G2063-ICV2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G66175.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2063\6g66175.d\ECD1A.CH Vial: 17
Signal #2 : C:\msdchem\1\data\G6G2063\6g66175.d\ECD2B.CH
Acq On : 12-Jul-19, 17:43:25 Operator: vinced
Sample : icv2063-50 Inst : GC6G
Misc : op21464,g6g2063,1000,,,5,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2063.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Mon Jul 15 10:49:16 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.17-	2.17
2 SAB	Tetrachloro-m-xylene			-----NA-----				
3	hexachlorobenzene			-----NA-----				
4 A	alpha-BHC			-----NA-----				
5 MA	gamma-BHC			-----NA-----				
6 MA	Heptachlor			-----NA-----				
7 B	beta-BHC			-----NA-----				
8 B	delta-BHC			-----NA-----				
9 MB	Aldrin			-----NA-----				
10	alachlor	0.152	0.145	4.6	95	0.00	3.90-	3.96
11 B	Heptachlor Epoxide			-----NA-----				
12 B	gamma-Chlordane			-----NA-----				
13 B	alpha-Chlordane			-----NA-----				
14 A	Endosulfan I			-----NA-----				
15 B	4,4'-DDE			-----NA-----				
16 MA	Dieldrin			-----NA-----				
17 MA	Endrin			-----NA-----				
18 A	4,4'-DDD			-----NA-----				
19 B	Endosulfan II			-----NA-----				
20 MA	4,4'-DDT			-----NA-----				
21 B	Endrin Aldehyde			-----NA-----				
22 B	Endosulfan Sulfate			-----NA-----				
23 A	Methoxychlor			-----NA-----				
24	Mirex			-----NA-----				
25 B	Endrin Ketone			-----NA-----				
26 SA	Decachlorobiphenyl			-----NA-----				
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.17-	2.17
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.17-	2.17
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

Initial Calibration Verification

Job Number: JC93827

Sample: G6G2063-ICV2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G66175.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42-	2.42
2	SAB	Tetrachloro-m-xylene						-----NA-----	
3		hexachlorobenzene						-----NA-----	
4	A	alpha-BHC						-----NA-----	
5	MA	gamma-BHC						-----NA-----	
6	MA	Heptachlor						-----NA-----	
7	B	beta-BHC						-----NA-----	
8	B	delta-BHC						-----NA-----	
9	MB	Aldrin						-----NA-----	
10		alachlor	0.166	0.160	3.6	102	0.00	4.54-	4.60
11	B	Heptachlor Epoxide						-----NA-----	
12	B	gamma-Chlordane						-----NA-----	
13	B	alpha-Chlordane						-----NA-----	
14	A	Endosulfan I						-----NA-----	
15	B	4,4'-DDE						-----NA-----	
16	MA	Dieldrin						-----NA-----	
17	MA	Endrin						-----NA-----	
18	A	4,4'-DDD						-----NA-----	
19	B	Endosulfan II						-----NA-----	
20	MA	4,4'-DDT						-----NA-----	
21	B	Endrin Aldehyde						-----NA-----	
22	B	Endosulfan Sulfate						-----NA-----	
23	A	Methoxychlor						-----NA-----	
24		Mirex						-----NA-----	
25	B	Endrin Ketone						-----NA-----	
26	SA	Decachlorobiphenyl						-----NA-----	
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42-	2.42
28	L8	Toxaphene{A}						-----NA-----	
29	L8	Toxaphene{B}						-----NA-----	
30	L8	Toxaphene{C}						-----NA-----	
31	L8	Toxaphene{D}						-----NA-----	
32	L8	Toxaphene{E}						-----NA-----	
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42-	2.42
34		Chlordane {A}						-----NA-----	
35		Chlordane {B}						-----NA-----	
36		Chlordane {C}						-----NA-----	
37		Chlordane {D}						-----NA-----	
38		Chlordane {E}						-----NA-----	

(#) = Out of Range
6g66166.d 6PST2063.M

SPCC's out = 0 CCC's out = 0
Mon Jul 15 10:59:59 2019

8.9.15

8

Continuing Calibration Summary

Job Number: JC93827

Sample: G6G2121-CC2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G67524.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\an...21\6g67524.d\ECD1A.CH Vial: 2
Signal #2 : C:\msdchem\1\data\anndg\6g67524.d\ECD2B.CH
Acq On : 29-Aug-19, 23:47:12 Operator: christp
Sample : cc2063-25 Inst : GC6G
Misc : op22406,6g67524,30,,,2,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2063.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Fri Aug 30 12:51:32 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	105	0.00	1.17-	2.17
2 SAB	Tetrachloro-m-xylene	0.763	0.718	5.9	100	0.00	2.22-	2.28
3	hexachlorobenzene	1.757	1.703	3.1	103	0.00	2.54-	2.60
4 A	alpha-BHC	1.340	1.341	-0.1	106	0.00	2.67-	2.73
5 MA	gamma-BHC	1.285	1.247	3.0	102	0.00	2.95-	3.01
6 MA	Heptachlor	1.224	1.295	-5.8	114	0.00	3.42-	3.48
7 B	beta-BHC	0.563	0.530	5.9	100	0.00	3.03-	3.09
8 B	delta-BHC	1.235	1.160	6.1	99	0.00	3.21-	3.27
9 MB	Aldrin	1.278	1.243	2.7	105	0.00	3.74-	3.80
10	alachlor	0.152	0.150	1.3	101	0.00	3.89-	3.95
11 B	Heptachlor Epoxide	1.207	1.174	2.7	107	0.00	4.43-	4.49
12 B	gamma-Chlordane	1.192	1.181	0.9	109	0.00	4.59-	4.65
13 B	alpha-Chlordane	1.153	1.173	-1.7	108	0.00	4.75-	4.81
14 A	Endosulfan I	1.158	1.279	-10.4	119	0.00	4.92-	4.98
15 B	4,4'-DDE	1.182	0.992	16.1	92	0.00	4.87-	4.93
16 MA	Dieldrin	1.177	1.201	-2.0	109	0.00	5.23-	5.29
17 MA	Endrin	1.127	1.134	-0.6	110	0.00	5.54-	5.60
18 A	4,4'-DDD	0.826	0.787	4.7	102	0.00	5.69-	5.75
19 B	Endosulfan II	1.071	1.108	-3.5	111	0.00	5.86-	5.92
20 MA	4,4'-DDT	0.869	0.847	2.5	104	0.00	6.09-	6.15
21 B	Endrin Aldehyde	0.936	0.911	2.7	107	0.00	6.47-	6.53
22 B	Endosulfan Sulfate	0.969	0.967	0.2	107	0.00	7.14-	7.20
23 A	Methoxychlor	0.496	0.477	3.8	104	0.00	6.88-	6.94
24	Mirex	0.937	0.950	-1.4	109	0.00	6.99-	7.05
25 B	Endrin Ketone	1.089	1.158	-6.3	113	0.00	7.57-	7.63
26 SA	Decachlorobiphenyl	1.290	1.254	2.8	103	0.00	9.39-	9.45
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	105	0.00	1.17-	2.17
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	105	0.00	1.17-	2.17
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

Continuing Calibration Summary

Job Number: JC93827

Sample: G6G2121-CC2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G67524.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42-	2.42
2	SAB	Tetrachloro-m-xylene	1.014	0.958	5.5	98	0.00	2.68-	2.74
3		hexachlorobenzene	1.120	1.014	9.5	97	0.00	3.16-	3.22
4	A	alpha-BHC	1.369	1.313	4.1	98	0.00	3.31-	3.37
5	MA	gamma-BHC	1.269	1.213	4.4	99	0.00	3.72-	3.78
6	MA	Heptachlor	1.303	1.250	4.1	103	0.00	4.26-	4.32
7	B	beta-BHC	0.614	0.562	8.5	97	0.00	3.80-	3.86
8	B	delta-BHC	1.209	1.126	6.9	96	0.00	4.18-	4.24
9	MB	Aldrin	1.190	1.132	4.9	102	0.00	4.70-	4.76
10		alachlor	0.166	0.163	1.8	95	0.00	4.53-	4.59
11	B	Heptachlor Epoxide	1.106	1.075	2.8	101	0.00	5.50-	5.56
12	B	gamma-Chlordane	1.104	1.060	4.0	102	0.00	5.78-	5.84
13	B	alpha-Chlordane	1.101	1.041	5.4	102	0.00	6.00-	6.06
14	A	Endosulfan I	1.046	0.981	6.2	100	0.00	6.09-	6.15
15	B	4,4'-DDE	1.046	0.978	6.5	99	0.00	6.27-	6.33
16	MA	Dieldrin	1.099	1.050	4.5	100	0.00	6.52-	6.58
17	MA	Endrin	1.026	0.997	2.8	103	0.00	7.01-	7.07
18	A	4,4'-DDD	0.869	0.831	4.4	100	0.00	7.21-	7.27
19	B	Endosulfan II	0.977	0.945	3.3	99	0.00	7.36-	7.42
20	MA	4,4'-DDT	0.847	0.730	13.8	88	0.00	7.73-	7.79
21	B	Endrin Aldehyde	0.812	0.752	7.4	99	0.00	7.93-	7.99
22	B	Endosulfan Sulfate	0.911	0.857	5.9	100	0.00	8.39-	8.45
23	A	Methoxychlor	0.528	0.438	17.0	86	0.00	8.97-	9.03
24		Mirex	0.859	0.796	7.3	100	0.00	9.25-	9.31
25	B	Endrin Ketone	0.977	0.961	1.6	104	0.00	9.34-	9.40
26	SA	Decachlorobiphenyl	0.842	0.773	8.2	97	0.00	11.48-	11.54
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42-	2.42
28	L8	Toxaphene{A}			-----NA-----				
29	L8	Toxaphene{B}			-----NA-----				
30	L8	Toxaphene{C}			-----NA-----				
31	L8	Toxaphene{D}			-----NA-----				
32	L8	Toxaphene{E}			-----NA-----				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42-	2.42
34		Chlordane {A}			-----NA-----				
35		Chlordane {B}			-----NA-----				
36		Chlordane {C}			-----NA-----				
37		Chlordane {D}			-----NA-----				
38		Chlordane {E}			-----NA-----				

(#) = Out of Range
6g67524.d 6PST2063.M

SPCC's out = 0 CCC's out = 0
Fri Aug 30 12:52:12 2019

8.9.16

8

Continuing Calibration Summary

Job Number: JC93827 **Sample:** G6G2121-CC2063
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G67525.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\an...21\6g67525.d\ECD1A.CH Vial: 5
 Signal #2 : C:\msdchem\1\data\anndg\6g67525.d\ECD2B.CH
 Acq On : 30-Aug-19, 00:11:17 Operator: christp
 Sample : cc2063-500 Inst : GC6G
 Misc : op22406,6g67525,30,,,2,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6pst2063.m (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Fri Aug 30 12:51:32 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	106	0.00	1.18-	2.18
2 SAB	Tetrachloro-m-xylene	0.763	0.731	4.2	102	0.00	2.23-	2.29
3	hexachlorobenzene			-----NA-----				
4 A	alpha-BHC			-----NA-----				
5 MA	gamma-BHC			-----NA-----				
6 MA	Heptachlor			-----NA-----				
7 B	beta-BHC			-----NA-----				
8 B	delta-BHC			-----NA-----				
9 MB	Aldrin			-----NA-----				
10	alachlor			-----NA-----				
11 B	Heptachlor Epoxide			-----NA-----				
12 B	gamma-Chlordane			-----NA-----				
13 B	alpha-Chlordane			-----NA-----				
14 A	Endosulfan I			-----NA-----				
15 B	4,4'-DDE			-----NA-----				
16 MA	Dieldrin			-----NA-----				
17 MA	Endrin			-----NA-----				
18 A	4,4'-DDD			-----NA-----				
19 B	Endosulfan II			-----NA-----				
20 MA	4,4'-DDT			-----NA-----				
21 B	Endrin Aldehyde			-----NA-----				
22 B	Endosulfan Sulfate			-----NA-----				
23 A	Methoxychlor			-----NA-----				
24	Mirex			-----NA-----				
25 B	Endrin Ketone			-----NA-----				
26 SA	Decachlorobiphenyl	1.290	1.270	1.6	104	0.00	9.39-	9.45
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	106	0.00	1.18-	2.18
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	106	0.00	1.18-	2.18
34	Chlordane {A}	0.066	0.069	-4.5	110	0.00	3.36-	3.56
35	Chlordane {B}	0.044	0.046	-4.5	111	0.00	3.82-	4.02
36	Chlordane {C}	0.159	0.162	-1.9	108	0.00	4.53-	4.73
37	Chlordane {D}	0.256	0.259	-1.2	108	0.00	4.68-	4.88
38	Chlordane {E}	0.039	0.037	5.1	100	-0.01	5.71-	5.91

8.9.17

8

Continuing Calibration Summary

Job Number: JC93827

Sample: G6G2121-CC2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G67525.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42- 2.42
2	SAB	Tetrachloro-m-xylene	1.014	0.922	9.1	96	0.00	2.67- 2.73
3		hexachlorobenzene					-----NA-----	
4	A	alpha-BHC					-----NA-----	
5	MA	gamma-BHC					-----NA-----	
6	MA	Heptachlor					-----NA-----	
7	B	beta-BHC					-----NA-----	
8	B	delta-BHC					-----NA-----	
9	MB	Aldrin					-----NA-----	
10		alachlor					-----NA-----	
11	B	Heptachlor Epoxide					-----NA-----	
12	B	gamma-Chlordane					-----NA-----	
13	B	alpha-Chlordane					-----NA-----	
14	A	Endosulfan I					-----NA-----	
15	B	4,4'-DDE					-----NA-----	
16	MA	Dieldrin					-----NA-----	
17	MA	Endrin					-----NA-----	
18	A	4,4'-DDD					-----NA-----	
19	B	Endosulfan II					-----NA-----	
20	MA	4,4'-DDT					-----NA-----	
21	B	Endrin Aldehyde					-----NA-----	
22	B	Endosulfan Sulfate					-----NA-----	
23	A	Methoxychlor					-----NA-----	
24		Mirex					-----NA-----	
25	B	Endrin Ketone					-----NA-----	
26	SA	Decachlorobiphenyl	0.842	0.732	13.1	100	0.00	11.49-11.55
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42- 2.42
28	L8	Toxaphene{A}					-----NA-----	
29	L8	Toxaphene{B}					-----NA-----	
30	L8	Toxaphene{C}					-----NA-----	
31	L8	Toxaphene{D}					-----NA-----	
32	L8	Toxaphene{E}					-----NA-----	
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.42- 2.42
34		Chlordane {A}	0.069	0.066	4.3	96	-0.01	4.19- 4.39
35		Chlordane {B}	0.038	0.038	0.0	100	-0.01	4.82- 5.02
36		Chlordane {C}	0.127	0.128	-0.8	102	-0.01	5.71- 5.91
37		Chlordane {D}	0.211	0.207	1.9	99	-0.02	5.93- 6.13
38		Chlordane {E}	0.034	0.033	2.9	99	-0.02	7.37- 7.57

(#) = Out of Range
6g67390.d 6pst2063.m

SPCC's out = 0 CCC's out = 0
Fri Aug 30 13:15:14 2019

Continuing Calibration Summary

Job Number: JC93827 Sample: G6G2121-CC2063
Account: NOREASCA NOREAS, Inc. Lab FileID: 6G67526.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\an...21\6g67526.d\ECD1A.CH Vial: 6
Signal #2 : C:\msdchem\1\data\anndg\6g67526.d\ECD2B.CH
Acq On : 30-Aug-19, 00:28:48 Operator: christp
Sample : cc2063-500 Inst : GC6G
Misc : op22406,6g67526,30,,,2,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6pst2063.m (ChemStation Integrator)
Title : PEST/PCB
Last Update : Fri Aug 30 12:51:32 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	88	0.00	1.17-	2.17
2 SAB	Tetrachloro-m-xylene	0.763	0.812	-6.4	94	0.00	2.22-	2.28
3	hexachlorobenzene			-----NA-----				
4 A	alpha-BHC			-----NA-----				
5 MA	gamma-BHC			-----NA-----				
6 MA	Heptachlor			-----NA-----				
7 B	beta-BHC			-----NA-----				
8 B	delta-BHC			-----NA-----				
9 MB	Aldrin			-----NA-----				
10	alachlor			-----NA-----				
11 B	Heptachlor Epoxide			-----NA-----				
12 B	gamma-Chlordane			-----NA-----				
13 B	alpha-Chlordane			-----NA-----				
14 A	Endosulfan I			-----NA-----				
15 B	4,4'-DDE			-----NA-----				
16 MA	Dieldrin			-----NA-----				
17 MA	Endrin			-----NA-----				
18 A	4,4'-DDD			-----NA-----				
19 B	Endosulfan II			-----NA-----				
20 MA	4,4'-DDT			-----NA-----				
21 B	Endrin Aldehyde			-----NA-----				
22 B	Endosulfan Sulfate			-----NA-----				
23 A	Methoxychlor			-----NA-----				
24	Mirex			-----NA-----				
25 B	Endrin Ketone			-----NA-----				
26 SA	Decachlorobiphenyl	1.290	1.399	-8.4	95	0.00	9.39-	9.45
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	88	0.00	1.17-	2.17
28 L8	Toxaphene{A}	0.015	0.019	-26.7#	107	-0.02	5.17-	5.37
29 L8	Toxaphene{B}	0.043	0.052	-20.9#	106	-0.02	5.78-	5.98
30 L8	Toxaphene{C}	0.032	0.039	-21.9#	109	-0.03	5.95-	6.15
31 L8	Toxaphene{D}	0.029	0.046	-58.6#	141	-0.02	6.29-	6.49
32 L8	Toxaphene{E}	0.032	0.032	0.0	88	-0.03	6.92-	7.12
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	88	0.00	1.17-	2.17
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

Continuing Calibration Summary

Job Number: JC93827

Sample: G6G2121-CC2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G67526.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	84	0.00	1.42- 2.42
2	SAB	Tetrachloro-m-xylene	1.014	1.055	-4.0	92	0.00	2.67- 2.73
3		hexachlorobenzene			-----NA-----			
4	A	alpha-BHC			-----NA-----			
5	MA	gamma-BHC			-----NA-----			
6	MA	Heptachlor			-----NA-----			
7	B	beta-BHC			-----NA-----			
8	B	delta-BHC			-----NA-----			
9	MB	Aldrin			-----NA-----			
10		alachlor			-----NA-----			
11	B	Heptachlor Epoxide			-----NA-----			
12	B	gamma-Chlordane			-----NA-----			
13	B	alpha-Chlordane			-----NA-----			
14	A	Endosulfan I			-----NA-----			
15	B	4,4'-DDE			-----NA-----			
16	MA	Dieldrin			-----NA-----			
17	MA	Endrin			-----NA-----			
18	A	4,4'-DDD			-----NA-----			
19	B	Endosulfan II			-----NA-----			
20	MA	4,4'-DDT			-----NA-----			
21	B	Endrin Aldehyde			-----NA-----			
22	B	Endosulfan Sulfate			-----NA-----			
23	A	Methoxychlor			-----NA-----			
24		Mirex			-----NA-----			
25	B	Endrin Ketone			-----NA-----			
26	SA	Decachlorobiphenyl	0.842	0.823	2.3	94	0.00	11.48-11.54
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	84	0.00	1.42- 2.42
28	L8	Toxaphene{A}	0.022	0.027	-22.7#	104	-0.01	6.42- 6.62
29	L8	Toxaphene{B}	0.029	0.035	-20.7#	102	-0.02	7.26- 7.46
30	L8	Toxaphene{C}	0.053	0.054	-1.9	86	-0.02	7.42- 7.62
31	L8	Toxaphene{D}	0.030	0.033	-10.0	91	-0.02	7.86- 8.06
32	L8	Toxaphene{E}	0.032	0.032	0.0	86	-0.02	8.74- 8.94
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	84	0.00	1.42- 2.42
34		Chlordane {A}			-----NA-----			
35		Chlordane {B}			-----NA-----			
36		Chlordane {C}			-----NA-----			
37		Chlordane {D}			-----NA-----			
38		Chlordane {E}			-----NA-----			

(#) = Out of Range
6g67390.d 6pst2063.m

SPPC's out = 0 CCC's out = 0
Fri Aug 30 13:15:18 2019

8.9.18

8

Continuing Calibration Summary

Job Number: JC93827

Sample: G6G2121-ECC2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G67535.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\an...21\6g67535.d\ECD1A.CH Vial: 4
Signal #2 : C:\msdchem\1\data\anndg\6g67535.d\ECD2B.CH
Acq On : 30-Aug-19, 04:13:45 Operator: christp
Sample : cc2063-50 Inst : GC6G
Misc : op22361,6g67535,15.7,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6pst2063.m (ChemStation Integrator)
Title : PEST/PCB
Last Update : Fri Aug 30 12:51:32 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	96	0.00	1.18-	2.18
2 SAB	Tetrachloro-m-xylene	0.763	0.790	-3.5	99	0.00	2.23-	2.29
3	hexachlorobenzene	1.757	1.828	-4.0	101	0.00	2.54-	2.60
4 A	alpha-BHC	1.340	1.590	-18.7	102	0.00	2.68-	2.74
5 MA	gamma-BHC	1.285	1.443	-12.3	98	0.00	2.96-	3.02
6 MA	Heptachlor	1.224	1.244	-1.6	93	0.00	3.43-	3.49
7 B	beta-BHC	0.563	0.587	-4.3	99	0.00	3.03-	3.09
8 B	delta-BHC	1.235	1.367	-10.7	95	0.00	3.21-	3.27
9 MB	Aldrin	1.278	1.401	-9.6	98	0.00	3.74-	3.80
10	alachlor	0.152	0.151	0.7	96	0.00	3.89-	3.95
11 B	Heptachlor Epoxide	1.207	1.318	-9.2	103	0.00	4.43-	4.49
12 B	gamma-Chlordane	1.192	1.288	-8.1	101	0.00	4.59-	4.65
13 B	alpha-Chlordane	1.153	1.244	-7.9	98	0.00	4.75-	4.81
14 A	Endosulfan I	1.158	1.291	-11.5	104	0.00	4.92-	4.98
15 B	4,4'-DDE	1.182	1.111	6.0	88	0.00	4.87-	4.93
16 MA	Dieldrin	1.177	1.301	-10.5	99	0.00	5.23-	5.29
17 MA	Endrin	1.127	1.171	-3.9	96	0.00	5.54-	5.60
18 A	4,4'-DDD	0.826	1.081	-30.9#	118	0.00	5.68-	5.74
19 B	Endosulfan II	1.071	1.126	-5.1	98	0.00	5.86-	5.92
20 MA	4,4'-DDT	0.869	0.458	47.3#	48#	0.00	6.09-	6.15
21 B	Endrin Aldehyde	0.936	0.937	-0.1	98	0.00	6.47-	6.53
22 B	Endosulfan Sulfate	0.969	0.937	3.3	91	0.00	7.14-	7.20
23 A	Methoxychlor	0.496	0.325	34.5#	65	-0.01	6.87-	6.93
24	Mirex	0.937	0.880	6.1	93	0.00	6.99-	7.05
25 B	Endrin Ketone	1.089	1.081	0.7	93	0.00	7.57-	7.63
26 SA	Decachlorobiphenyl	1.290	1.249	3.2	93	0.00	9.38-	9.44
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	96	0.00	1.18-	2.18
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	96	0.00	1.18-	2.18
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

Continuing Calibration Summary

Job Number: JC93827

Sample: G6G2121-ECC2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G67535.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	96	0.00	1.43-	2.43
2	SAB	Tetrachloro-m-xylene	1.014	0.999	1.5	99	0.00	2.68-	2.74
3		hexachlorobenzene	1.120	1.047	6.5	98	0.00	3.16-	3.22
4	A	alpha-BHC	1.369	1.436	-4.9	100	0.00	3.31-	3.37
5	MA	gamma-BHC	1.269	1.259	0.8	97	0.00	3.72-	3.78
6	MA	Heptachlor	1.303	1.086	16.7	86	0.00	4.27-	4.33
7	B	beta-BHC	0.614	0.557	9.3	95	0.00	3.81-	3.87
8	B	delta-BHC	1.209	1.176	2.7	94	0.00	4.19-	4.25
9	MB	Aldrin	1.190	1.155	2.9	99	0.00	4.70-	4.76
10		alachlor	0.166	0.156	6.0	94	0.00	4.53-	4.59
11	B	Heptachlor Epoxide	1.106	1.053	4.8	97	0.00	5.50-	5.56
12	B	gamma-Chlordane	1.104	1.034	6.3	96	0.00	5.78-	5.84
13	B	alpha-Chlordane	1.101	1.004	8.8	96	0.00	6.00-	6.06
14	A	Endosulfan I	1.046	0.948	9.4	95	0.00	6.09-	6.15
15	B	4,4'-DDE	1.046	0.956	8.6	92	0.00	6.27-	6.33
16	MA	Dieldrin	1.099	1.024	6.8	94	0.00	6.52-	6.58
17	MA	Endrin	1.026	0.912	11.1	90	0.00	7.01-	7.07
18	A	4,4'-DDD	0.869	0.975	-12.2	112	0.00	7.21-	7.27
19	B	Endosulfan II	0.977	0.938	4.0	97	0.00	7.36-	7.42
20	MA	4,4'-DDT	0.847	0.359	57.6#	41#	0.00	7.73-	7.79
21	B	Endrin Aldehyde	0.812	0.711	12.4	91	0.00	7.93-	7.99
22	B	Endosulfan Sulfate	0.911	0.728	20.1#	85	0.00	8.39-	8.45
23	A	Methoxychlor	0.528	0.243	54.0#	48#	0.00	8.97-	9.03
24		Mirex	0.859	0.658	23.4#	84	0.00	9.26-	9.32
25	B	Endrin Ketone	0.977	0.790	19.1	83	0.00	9.33-	9.39
26	SA	Decachlorobiphenyl	0.842	0.610	27.6#	79	0.00	11.48-	11.54
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	96	0.00	1.43-	2.43
28	L8	Toxaphene{A}			-----NA-----				
29	L8	Toxaphene{B}			-----NA-----				
30	L8	Toxaphene{C}			-----NA-----				
31	L8	Toxaphene{D}			-----NA-----				
32	L8	Toxaphene{E}			-----NA-----				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	96	0.00	1.43-	2.43
34		Chlordane {A}			-----NA-----				
35		Chlordane {B}			-----NA-----				
36		Chlordane {C}			-----NA-----				
37		Chlordane {D}			-----NA-----				
38		Chlordane {E}			-----NA-----				

(#) = Out of Range
6g67390.d 6pst2063.m

SPCC's out = 0 CCC's out = 0
Fri Aug 30 13:44:05 2019

8.9.19
8

Continuing Calibration Summary

Job Number: JC93827

Sample: G6G2122-CC2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G67538.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2122\6g67538.d\ECD1A.CH Vial: 2
Signal #2 : C:\msdchem\1\data\G6G2122\6g67538.d\ECD2B.CH
Acq On : 30-Aug-19, 09:14:33 Operator: arielb
Sample : cc2063-25 Inst : GC6G
Misc : op22406,g6g2122,30,,,2,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2063.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Fri Aug 23 10:21:24 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.16-	2.16
2 SAB	Tetrachloro-m-xylene	0.763	0.748	2.0	100	0.00	2.21-	2.27
3	hexachlorobenzene	1.757	1.760	-0.2	103	0.00	2.53-	2.59
4 A	alpha-BHC	1.340	1.377	-2.8	104	0.00	2.67-	2.73
5 MA	gamma-BHC	1.285	1.305	-1.6	103	0.00	2.95-	3.01
6 MA	Heptachlor	1.224	1.307	-6.8	110	0.00	3.42-	3.48
7 B	beta-BHC	0.563	0.550	2.3	100	0.00	3.02-	3.08
8 B	delta-BHC	1.235	1.182	4.3	98	0.00	3.20-	3.26
9 MB	Aldrin	1.278	1.254	1.9	102	-0.01	3.74-	3.80
10	alachlor	0.152	0.147	3.3	96	-0.01	3.88-	3.94
11 B	Heptachlor Epoxide	1.207	1.157	4.1	102	-0.01	4.42-	4.48
12 B	gamma-Chlordane	1.192	1.072	10.1	96	-0.01	4.58-	4.64
13 B	alpha-Chlordane	1.153	1.085	5.9	96	-0.02	4.75-	4.81
14 A	Endosulfan I	1.158	1.148	0.9	103	-0.01	4.91-	4.97
15 B	4,4'-DDE	1.182	1.046	11.5	93	-0.01	4.87-	4.93
16 MA	Dieldrin	1.177	1.174	0.3	102	-0.02	5.23-	5.29
17 MA	Endrin	1.127	1.115	1.1	104	-0.02	5.54-	5.60
18 A	4,4'-DDD	0.826	0.797	3.5	100	-0.01	5.68-	5.74
19 B	Endosulfan II	1.071	1.064	0.7	102	-0.02	5.86-	5.92
20 MA	4,4'-DDT	0.869	0.882	-1.5	104	-0.02	6.09-	6.15
21 B	Endrin Aldehyde	0.936	0.912	2.6	103	-0.02	6.47-	6.53
22 B	Endosulfan Sulfate	0.969	0.979	-1.0	105	-0.02	7.14-	7.20
23 A	Methoxychlor	0.496	0.530	-6.9	111	-0.01	6.87-	6.93
24	Mirex	0.937	0.912	2.7	101	-0.02	6.99-	7.05
25 B	Endrin Ketone	1.089	1.190	-9.3	112	-0.02	7.57-	7.63
26 SA	Decachlorobiphenyl	1.290	1.364	-5.7	108	-0.02	9.38-	9.44
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.16-	2.16
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.16-	2.16
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

Continuing Calibration Summary

Job Number: JC93827

Sample: G6G2122-CC2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G67538.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.01	1.42-	2.42
2	SAB	Tetrachloro-m-xylene	1.014	0.939	7.4	98	0.00	2.67-	2.73
3		hexachlorobenzene	1.120	1.009	9.9	98	0.00	3.16-	3.22
4	A	alpha-BHC	1.369	1.302	4.9	99	0.00	3.30-	3.36
5	MA	gamma-BHC	1.269	1.163	8.4	96	0.00	3.71-	3.77
6	MA	Heptachlor	1.303	1.196	8.2	100	0.00	4.26-	4.32
7	B	beta-BHC	0.614	0.526	14.3	92	0.00	3.80-	3.86
8	B	delta-BHC	1.209	1.117	7.6	97	0.00	4.18-	4.24
9	MB	Aldrin	1.190	1.078	9.4	98	0.00	4.70-	4.76
10		alachlor	0.166	0.157	5.4	94	0.00	4.52-	4.58
11	B	Heptachlor Epoxide	1.106	1.007	9.0	96	0.00	5.50-	5.56
12	B	gamma-Chlordane	1.104	1.000	9.4	97	0.00	5.78-	5.84
13	B	alpha-Chlordane	1.101	0.974	11.5	96	0.00	6.00-	6.06
14	A	Endosulfan I	1.046	0.924	11.7	96	0.00	6.09-	6.15
15	B	4,4'-DDE	1.046	0.926	11.5	95	0.00	6.27-	6.33
16	MA	Dieldrin	1.099	0.993	9.6	96	0.00	6.52-	6.58
17	MA	Endrin	1.026	0.940	8.4	98	0.00	7.01-	7.07
18	A	4,4'-DDD	0.869	0.798	8.2	97	0.00	7.20-	7.26
19	B	Endosulfan II	0.977	0.882	9.7	94	0.00	7.36-	7.42
20	MA	4,4'-DDT	0.847	0.715	15.6	87	0.00	7.73-	7.79
21	B	Endrin Aldehyde	0.812	0.706	13.1	94	0.00	7.92-	7.98
22	B	Endosulfan Sulfate	0.911	0.818	10.2	97	-0.01	8.39-	8.45
23	A	Methoxychlor	0.528	0.423	19.9	85	-0.01	8.96-	9.02
24		Mirex	0.859	0.727	15.4	92	-0.01	9.25-	9.31
25	B	Endrin Ketone	0.977	0.913	6.6	100	0.00	9.33-	9.39
26	SA	Decachlorobiphenyl	0.842	0.693	17.7	88	-0.01	11.48-	11.54
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.01	1.42-	2.42
28	L8	Toxaphene{A}			-----NA-----				
29	L8	Toxaphene{B}			-----NA-----				
30	L8	Toxaphene{C}			-----NA-----				
31	L8	Toxaphene{D}			-----NA-----				
32	L8	Toxaphene{E}			-----NA-----				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.01	1.42-	2.42
34		Chlordane {A}			-----NA-----				
35		Chlordane {B}			-----NA-----				
36		Chlordane {C}			-----NA-----				
37		Chlordane {D}			-----NA-----				
38		Chlordane {E}			-----NA-----				

(#) = Out of Range
6g66165.d 6PST2063.M

SPCC's out = 0 CCC's out = 0
Fri Aug 30 10:50:29 2019

8.9.20

8

Continuing Calibration Summary

Job Number: JC93827 **Sample:** G6G2122-CC2063
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G67539.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2122\6g67539.d\ECD1A.CH Vial: 5
 Signal #2 : C:\msdchem\1\data\G6G2122\6g67539.d\ECD2B.CH
 Acq On : 30-Aug-19, 09:44:06 Operator: arielb
 Sample : cc2063-500 Inst : GC6G
 Misc : op22406,g6g2122,30,,,2,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2063.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Fri Aug 23 10:21:24 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.02	1.17-	2.17
2 SAB	Tetrachloro-m-xylene	0.763	0.722	5.4	95	0.00	2.22-	2.28
3	hexachlorobenzene			-----NA-----				
4 A	alpha-BHC			-----NA-----				
5 MA	gamma-BHC			-----NA-----				
6 MA	Heptachlor			-----NA-----				
7 B	beta-BHC			-----NA-----				
8 B	delta-BHC			-----NA-----				
9 MB	Aldrin			-----NA-----				
10	alachlor			-----NA-----				
11 B	Heptachlor Epoxide			-----NA-----				
12 B	gamma-Chlordane			-----NA-----				
13 B	alpha-Chlordane			-----NA-----				
14 A	Endosulfan I			-----NA-----				
15 B	4,4'-DDE			-----NA-----				
16 MA	Dieldrin			-----NA-----				
17 MA	Endrin			-----NA-----				
18 A	4,4'-DDD			-----NA-----				
19 B	Endosulfan II			-----NA-----				
20 MA	4,4'-DDT			-----NA-----				
21 B	Endrin Aldehyde			-----NA-----				
22 B	Endosulfan Sulfate			-----NA-----				
23 A	Methoxychlor			-----NA-----				
24	Mirex			-----NA-----				
25 B	Endrin Ketone			-----NA-----				
26 SA	Decachlorobiphenyl	1.290	1.373	-6.4	106	-0.01	9.39-	9.45
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.02	1.17-	2.17
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.02	1.17-	2.17
34	Chlordane {A}	0.066	0.066	0.0	101	0.00	3.36-	3.56
35	Chlordane {B}	0.044	0.040	9.1	90	0.00	3.82-	4.02
36	Chlordane {C}	0.159	0.146	8.2	92	0.00	4.53-	4.73
37	Chlordane {D}	0.256	0.240	6.3	94	0.00	4.68-	4.88
38	Chlordane {E}	0.039	0.036	7.7	93	-0.01	5.71-	5.91

8.9.21

8

Continuing Calibration Summary

Job Number: JC93827

Sample: G6G2122-CC2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G67539.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	97	0.01	1.42- 2.42
2	SAB	Tetrachloro-m-xylene	1.014	0.909	10.4	92	0.00	2.67- 2.73
3		hexachlorobenzene						-----NA-----
4	A	alpha-BHC						-----NA-----
5	MA	gamma-BHC						-----NA-----
6	MA	Heptachlor						-----NA-----
7	B	beta-BHC						-----NA-----
8	B	delta-BHC						-----NA-----
9	MB	Aldrin						-----NA-----
10		alachlor						-----NA-----
11	B	Heptachlor Epoxide						-----NA-----
12	B	gamma-Chlordane						-----NA-----
13	B	alpha-Chlordane						-----NA-----
14	A	Endosulfan I						-----NA-----
15	B	4,4'-DDE						-----NA-----
16	MA	Dieldrin						-----NA-----
17	MA	Endrin						-----NA-----
18	A	4,4'-DDD						-----NA-----
19	B	Endosulfan II						-----NA-----
20	MA	4,4'-DDT						-----NA-----
21	B	Endrin Aldehyde						-----NA-----
22	B	Endosulfan Sulfate						-----NA-----
23	A	Methoxychlor						-----NA-----
24		Mirex						-----NA-----
25	B	Endrin Ketone						-----NA-----
26	SA	Decachlorobiphenyl	0.842	0.692	17.8	91	0.00	11.48-11.54
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	97	0.01	1.42- 2.42
28	L8	Toxaphene{A}						-----NA-----
29	L8	Toxaphene{B}						-----NA-----
30	L8	Toxaphene{C}						-----NA-----
31	L8	Toxaphene{D}						-----NA-----
32	L8	Toxaphene{E}						-----NA-----
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	97	0.01	1.42- 2.42
34		Chlordane {A}	0.069	0.064	7.2	91	-0.01	4.19- 4.39
35		Chlordane {B}	0.038	0.035	7.9	87	-0.01	4.82- 5.02
36		Chlordane {C}	0.127	0.124	2.4	95	-0.02	5.71- 5.91
37		Chlordane {D}	0.211	0.205	2.8	95	-0.02	5.93- 6.13
38		Chlordane {E}	0.034	0.031	8.8	87	-0.02	7.36- 7.56

(#) = Out of Range
6g66166.d 6PST2063.M

SPCC's out = 0 CCC's out = 0
Fri Aug 30 10:50:11 2019

Continuing Calibration Summary

Job Number: JC93827

Sample: G6G2122-CC2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G67540.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2122\6g67540.d\ECD1A.CH Vial: 6
Signal #2 : C:\msdchem\1\data\G6G2122\6g67540.d\ECD2B.CH
Acq On : 30-Aug-19, 10:01:40 Operator: arielb
Sample : cc2063-500 Inst : GC6G
Misc : op22406,g6g2122,30,,,2,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2063.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Fri Aug 23 10:21:24 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	86	0.01	1.16-	2.16
2 SAB	Tetrachloro-m-xylene	0.763	0.819	-7.3	92	0.00	2.22-	2.28
3	hexachlorobenzene			-----NA-----				
4 A	alpha-BHC			-----NA-----				
5 MA	gamma-BHC			-----NA-----				
6 MA	Heptachlor			-----NA-----				
7 B	beta-BHC			-----NA-----				
8 B	delta-BHC			-----NA-----				
9 MB	Aldrin			-----NA-----				
10	alachlor			-----NA-----				
11 B	Heptachlor Epoxide			-----NA-----				
12 B	gamma-Chlordane			-----NA-----				
13 B	alpha-Chlordane			-----NA-----				
14 A	Endosulfan I			-----NA-----				
15 B	4,4'-DDE			-----NA-----				
16 MA	Dieldrin			-----NA-----				
17 MA	Endrin			-----NA-----				
18 A	4,4'-DDD			-----NA-----				
19 B	Endosulfan II			-----NA-----				
20 MA	4,4'-DDT			-----NA-----				
21 B	Endrin Aldehyde			-----NA-----				
22 B	Endosulfan Sulfate			-----NA-----				
23 A	Methoxychlor			-----NA-----				
24	Mirex			-----NA-----				
25 B	Endrin Ketone			-----NA-----				
26 SA	Decachlorobiphenyl	1.290	1.488	-15.3	98	-0.02	9.38-	9.44
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	86	0.01	1.16-	2.16
28 L8	Toxaphene{A}	0.015	0.017	-13.3	96	-0.02	5.17-	5.37
29 L8	Toxaphene{B}	0.043	0.048	-11.6	94	-0.02	5.78-	5.98
30 L8	Toxaphene{C}	0.032	0.037	-15.6	98	-0.03	5.95-	6.15
31 L8	Toxaphene{D}	0.029	0.027	6.9	79	-0.03	6.28-	6.48
32 L8	Toxaphene{E}	0.032	0.033	-3.1	90	-0.03	6.92-	7.12
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	86	0.01	1.16-	2.16
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

Continuing Calibration Summary

Job Number: JC93827

Sample: G6G2122-CC2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G67540.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	87	0.01	1.42- 2.42
2	SAB	Tetrachloro-m-xylene	1.014	1.012	0.2	91	0.00	2.67- 2.73
3		hexachlorobenzene						-----NA-----
4	A	alpha-BHC						-----NA-----
5	MA	gamma-BHC						-----NA-----
6	MA	Heptachlor						-----NA-----
7	B	beta-BHC						-----NA-----
8	B	delta-BHC						-----NA-----
9	MB	Aldrin						-----NA-----
10		alachlor						-----NA-----
11	B	Heptachlor Epoxide						-----NA-----
12	B	gamma-Chlordane						-----NA-----
13	B	alpha-Chlordane						-----NA-----
14	A	Endosulfan I						-----NA-----
15	B	4,4'-DDE						-----NA-----
16	MA	Dieldrin						-----NA-----
17	MA	Endrin						-----NA-----
18	A	4,4'-DDD						-----NA-----
19	B	Endosulfan II						-----NA-----
20	MA	4,4'-DDT						-----NA-----
21	B	Endrin Aldehyde						-----NA-----
22	B	Endosulfan Sulfate						-----NA-----
23	A	Methoxychlor						-----NA-----
24		Mirex						-----NA-----
25	B	Endrin Ketone						-----NA-----
26	SA	Decachlorobiphenyl	0.842	0.730	13.3	85	0.00	11.48-11.54
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	87	0.01	1.42- 2.42
28	L8	Toxaphene{A}	0.022	0.018	18.2	72	-0.02	6.42- 6.62
29	L8	Toxaphene{B}	0.029	0.024	17.2	72	-0.02	7.26- 7.46
30	L8	Toxaphene{C}	0.053	0.043	18.9	71	-0.02	7.42- 7.62
31	L8	Toxaphene{D}	0.030	0.028	6.7	79	-0.02	7.86- 8.06
32	L8	Toxaphene{E}	0.032	0.026	18.8	72	-0.02	8.74- 8.94
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	87	0.01	1.42- 2.42
34		Chlordane {A}						-----NA-----
35		Chlordane {B}						-----NA-----
36		Chlordane {C}						-----NA-----
37		Chlordane {D}						-----NA-----
38		Chlordane {E}						-----NA-----

(#) = Out of Range
6g66166.d 6PST2063.M

SPPC's out = 0 CCC's out = 0
Fri Aug 30 10:50:14 2019

8.9.22

8

Continuing Calibration Summary

Job Number: JC93827

Sample: G6G2122-ECC2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G67548.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2122\6g67548.d\ECD1A.CH Vial: 4
 Signal #2 : C:\msdchem\1\data\G6G2122\6g67548.d\ECD2B.CH
 Acq On : 30-Aug-19, 13:08:47 Operator: arielb
 Sample : cc2063-50 Inst : GC6G
 Misc : op22361,g6g2122,15.0,,,10,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2063.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Fri Aug 23 10:21:24 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	92	0.02	1.17-	2.17
2 SAB	Tetrachloro-m-xylene	0.763	0.787	-3.1	95	0.01	2.22-	2.28
3	hexachlorobenzene	1.757	1.806	-2.8	95	0.00	2.54-	2.60
4 A	alpha-BHC	1.340	1.569	-17.1	96	0.00	2.67-	2.73
5 MA	gamma-BHC	1.285	1.423	-10.7	93	0.00	2.95-	3.01
6 MA	Heptachlor	1.224	1.267	-3.5	90	0.00	3.42-	3.48
7 B	beta-BHC	0.563	0.581	-3.2	94	0.00	3.03-	3.09
8 B	delta-BHC	1.235	1.395	-13.0	93	0.00	3.20-	3.26
9 MB	Aldrin	1.278	1.426	-11.6	96	0.00	3.74-	3.80
10	alachlor	0.152	0.157	-3.3	95	-0.01	3.88-	3.94
11 B	Heptachlor Epoxide	1.207	1.316	-9.0	98	-0.01	4.42-	4.48
12 B	gamma-Chlordane	1.192	1.292	-8.4	97	-0.01	4.58-	4.64
13 B	alpha-Chlordane	1.153	1.255	-8.8	95	-0.01	4.75-	4.81
14 A	Endosulfan I	1.158	1.289	-11.3	99	-0.01	4.91-	4.97
15 B	4,4'-DDE	1.182	1.149	2.8	87	-0.01	4.87-	4.93
16 MA	Dieldrin	1.177	1.315	-11.7	96	-0.02	5.23-	5.29
17 MA	Endrin	1.127	1.162	-3.1	91	-0.02	5.54-	5.60
18 A	4,4'-DDD	0.826	1.136	-37.5#	119	-0.02	5.68-	5.74
19 B	Endosulfan II	1.071	1.144	-6.8	95	-0.02	5.85-	5.91
20 MA	4,4'-DDT	0.869	0.398	54.2#	40#	-0.02	6.08-	6.14
21 B	Endrin Aldehyde	0.936	0.950	-1.5	95	-0.02	6.47-	6.53
22 B	Endosulfan Sulfate	0.969	0.993	-2.5	93	-0.02	7.14-	7.20
23 A	Methoxychlor	0.496	0.304	38.7#	58	-0.02	6.87-	6.93
24	Mirex	0.937	0.877	6.4	89	-0.02	6.99-	7.05
25 B	Endrin Ketone	1.089	1.104	-1.4	91	-0.02	7.56-	7.62
26 SA	Decachlorobiphenyl	1.290	1.240	3.9	88	-0.02	9.38-	9.44
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	92	0.02	1.17-	2.17
28 L8	Toxaphene{A}			-----NA-----				
29 L8	Toxaphene{B}			-----NA-----				
30 L8	Toxaphene{C}			-----NA-----				
31 L8	Toxaphene{D}			-----NA-----				
32 L8	Toxaphene{E}			-----NA-----				
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	92	0.02	1.17-	2.17
34	Chlordane {A}			-----NA-----				
35	Chlordane {B}			-----NA-----				
36	Chlordane {C}			-----NA-----				
37	Chlordane {D}			-----NA-----				
38	Chlordane {E}			-----NA-----				

8.9.23

8

Continuing Calibration Summary

Job Number: JC93827

Sample: G6G2122-ECC2063

Account: NOREASCA NOREAS, Inc.

Lab FileID: 6G67548.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	97	0.02	1.43-	2.43
2	SAB	Tetrachloro-m-xylene	1.014	0.962	5.1	96	0.01	2.68-	2.74
3		hexachlorobenzene	1.120	1.016	9.3	96	0.01	3.16-	3.22
4	A	alpha-BHC	1.369	1.395	-1.9	98	0.00	3.31-	3.37
5	MA	gamma-BHC	1.269	1.221	3.8	95	0.00	3.72-	3.78
6	MA	Heptachlor	1.303	1.050	19.4	84	0.00	4.27-	4.33
7	B	beta-BHC	0.614	0.542	11.7	94	0.00	3.81-	3.87
8	B	delta-BHC	1.209	1.169	3.3	94	0.00	4.18-	4.24
9	MB	Aldrin	1.190	1.108	6.9	96	0.00	4.70-	4.76
10		alachlor	0.166	0.157	5.4	96	0.00	4.53-	4.59
11	B	Heptachlor Epoxide	1.106	1.003	9.3	93	0.00	5.50-	5.56
12	B	gamma-Chlordane	1.104	0.989	10.4	92	0.00	5.78-	5.84
13	B	alpha-Chlordane	1.101	0.957	13.1	92	0.00	6.00-	6.06
14	A	Endosulfan I	1.046	0.903	13.7	91	0.00	6.09-	6.15
15	B	4,4'-DDE	1.046	0.919	12.1	89	0.00	6.27-	6.33
16	MA	Dieldrin	1.099	0.987	10.2	91	0.00	6.52-	6.58
17	MA	Endrin	1.026	0.853	16.9	85	0.00	7.01-	7.07
18	A	4,4'-DDD	0.869	0.957	-10.1	110	0.00	7.20-	7.26
19	B	Endosulfan II	0.977	0.905	7.4	94	0.00	7.36-	7.42
20	MA	4,4'-DDT	0.847	0.291	65.6#	33#	0.00	7.73-	7.79
21	B	Endrin Aldehyde	0.812	0.684	15.8	88	0.00	7.92-	7.98
22	B	Endosulfan Sulfate	0.911	0.726	20.3#	85	-0.01	8.39-	8.45
23	A	Methoxychlor	0.528	0.207	60.8#	41#	0.00	8.96-	9.02
24		Mirex	0.859	0.601	30.0#	77	-0.01	9.25-	9.31
25	B	Endrin Ketone	0.977	0.744	23.8#	79	0.00	9.33-	9.39
26	SA	Decachlorobiphenyl	0.842	0.560	33.5#	73	0.00	11.48-	11.54
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	97	0.02	1.43-	2.43
28	L8	Toxaphene{A}			-----NA-----				
29	L8	Toxaphene{B}			-----NA-----				
30	L8	Toxaphene{C}			-----NA-----				
31	L8	Toxaphene{D}			-----NA-----				
32	L8	Toxaphene{E}			-----NA-----				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	97	0.02	1.43-	2.43
34		Chlordane {A}			-----NA-----				
35		Chlordane {B}			-----NA-----				
36		Chlordane {C}			-----NA-----				
37		Chlordane {D}			-----NA-----				
38		Chlordane {E}			-----NA-----				

(#) = Out of Range
6g66166.d 6PST2063.M

SPCC's out = 0 CCC's out = 0
Fri Aug 30 14:33:26 2019

Initial Calibration Summary

Job Number: JC93827 **Sample:** GOA4909-ICC4909
Account: NOREASCA NOREAS, Inc. **Lab FileID:** OA142076.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report SVOAGCOA

Method : C:\MSDCHEM\1\METHODS\HOA4909.M (ChemStation Integrator)
Title : HERB
Last Update : Fri Aug 30 09:47:41 2019
Response via : Initial Calibration

Calibration Files

500 =oa142078.d 400 =oa142077.d 300 =oa142076.d 200 =oa142075.d
100 =oa142074.d 50 =oa142073.d

Compound	500	400	300	200	100	50	Avg	%RSD
1) Dalapon	3.313	3.401	3.427	3.433	3.699	3.568	3.474	E6 3.95
2) S 2,4-DCAA	1.799	1.865	1.901	1.919	2.111	2.170	1.961	E6 7.46
3) Dicamba	9.251	9.575	9.649	9.160	9.297	8.973	9.317	E6 2.74
4) MCPP	4.603	4.663	4.565	4.320	4.067		4.444	E3 5.57
5) MCPA	7.447	7.607	7.747	7.252	7.306		7.472	E3 2.76
6) Dichloroprop	2.145	2.221	2.278	2.302	2.548	2.529	2.337	E6 7.07
7) 2,4-D	2.742	2.868	2.925	2.970	3.243	3.120	2.978	E6 6.03
8) Pentachlorophenol	4.388	4.522	4.396	4.257	4.279	3.808	4.275	E7 5.80
9) 2,4,5-TP	1.734	1.727	1.772	1.705	1.760	1.686	1.730	E7 1.88
10) 2,4,5-T	1.633	1.625	1.698	1.631	1.656	1.527	1.628	E7 3.47
11) 2,4-DB	1.559	1.607	1.645	1.628	1.692	1.727	1.643	E6 3.66
12) Dinoseb	1.064	1.111	1.146	1.161	1.257	1.198	1.156	E7 5.81
13) Picloram	1.830	1.898	1.919	1.905	1.963	1.786	1.883	E7 3.41

Signal #2

1) Dalapon	1.163	1.220	1.258	1.288	1.425	1.398	1.292	E7 7.88
2) S 2,4-DCAA	0.755	0.790	0.808	0.842	0.966	1.042	0.867	E7 12.96
3) Dicamba	3.141	3.287	3.416	3.455	3.874	3.921	3.516	E7 8.99
4) MCPP	3.168	3.268	3.279	3.212	3.295		3.244	E4 1.63
5) MCPA	4.909	5.200	4.993	5.110	5.514		5.145	E4 4.55
6) Dichloroprop	0.732	0.776	0.812	0.852	1.002	1.082	0.876	E7 15.61
7) 2,4-D	1.098	1.143	1.187	1.208	1.385	1.452	1.246	E7 11.32
8) Pentachlorophenol	1.255	1.319	1.322	1.330	1.430	1.387	1.340	E8 4.51
9) 2,4,5-TP	4.908	5.161	5.362	5.429	5.955	5.806	5.437	E7 7.20
10) 2,4,5-T	5.141	5.363	5.550	5.557	5.868	6.166	5.607	E7 6.50
11) 2,4-DB	6.884	7.177	7.345	7.247	7.896	7.940	7.415	E6 5.65
12) Dinoseb	2.509	2.657	2.760	2.889	3.320	3.504	2.940	E7 13.30
13) Picloram	4.229	4.456	4.566	4.676	5.267	5.263	4.743	E7 9.08

(#) = Out of Range

HOA4909.M

Fri Aug 30 09:50:43 2019

8.9.24

8

Initial Calibration Verification

Job Number: JC93827

Sample: GOA4909-ICV4909

Account: NOREASCA NOREAS, Inc.

Lab FileID: OA142079.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\OA4909\oa142079.d\ECD1A.CH Vial: 0
Signal #2 : C:\msdchem\1\data\OA4909\oa142079.d\ECD2B.CH
Acq On : 29 Aug 2019 6:44 pm Operator: vinced
Sample : icv4909-300 Inst : SVOAGCOA
Misc : op22172,goa4909,15.0,,,5,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\HOA4909.M (ChemStation Integrator)
Title : HERB
Last Update : Fri Aug 30 09:47:41 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1	Dalapon	3.474	3.439 E6	1.0	100	0.00	2.23-	2.29
2 S	2,4-DCAA	1.961	1.901 E6	3.1	100	0.00	7.15-	7.21
3	Dicamba	9.317	9.968 E6	-7.0	103	0.00	7.36-	7.42
4	MCPD	4.444	4.604 E3	-3.6	101	0.00	7.63-	7.69
5	MCPA	7.472	7.716 E3	-3.3	100	0.00	7.82-	7.88
6	Dichloroprop	2.337	2.240 E6	4.2	98	0.00	8.34-	8.40
7	2,4-D	2.978	2.731 E6	8.3	93	0.00	8.64-	8.71
8	Pentachlorophenol	42.749	48.424 E6	-13.3	110	0.00	8.91-	8.97
9	2,4,5-TP	17.305	17.615 E6	-1.8	99	0.00	9.92-	9.98
10	2,4,5-T	16.283	17.946 E6	-10.2	106	0.00	10.37-	10.44
11	2,4-DB	1.643	1.721 E6	-4.7	105	0.00	11.29-	11.38
12	Dinoseb	11.563	11.753 E6	-1.6	103	0.00	13.18-	13.24
13	Picloram	18.835	18.952 E6	-0.6	99	0.00	12.84-	12.90

***** Signal #2 *****

1	Dalapon	12.920	12.902 E6	0.1	103	0.00	2.39-	2.45
2 S	2,4-DCAA	8.670	7.957 E6	8.2	99	0.00	8.02-	8.08
3	Dicamba	35.159	34.908 E6	0.7	102	0.00	8.28-	8.34
4	MCPD	32.443	33.167 E3	-2.2	101	0.00	8.46-	8.52
5	MCPA	51.453	53.882 E3	-4.7	108	0.00	8.83-	8.89
6	Dichloroprop	8.762	8.008 E6	8.6	99	0.00	9.39-	9.45
7	2,4-D	12.456	11.774 E6	5.5	99	0.00	9.90-	10.00
8	Pentachlorophenol	134.045	142.428 E6	-6.3	108	0.00	10.51-	10.57
9	2,4,5-TP	54.368	53.145 E6	2.2	99	0.00	11.36-	11.42
10	2,4,5-T	56.072	58.072 E6	-3.6	105	0.00	12.09-	12.17
11	2,4-DB	7.415	7.361 E6	0.7	100	0.00	13.10-	13.20
12	Dinoseb	29.399	27.569 E6	6.2	100	0.00	13.66-	13.73
13	Picloram	47.428	45.954 E6	3.1	101	0.00	15.74-	15.80

(#) = Out of Range
oal42076.d HOA4909.M

SPCC's out = 0 CCC's out = 0
Fri Aug 30 09:50:31 2019

Continuing Calibration Summary

Job Number: JC93827 **Sample:** GOA4910-CC4909
Account: NOREASCA NOREAS, Inc. **Lab FileID:** OA142080.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\OA4910\oa142080.d\ECD1A.CH Vial: 0
 Signal #2 : C:\msdchem\1\data\OA4910\oa142080.d\ECD2B.CH
 Acq On : 30 Aug 2019 9:27 am Operator: vinced
 Sample : cc4909-200 Inst : SVOAGCOA
 Misc : op22172,goa4910,15.0,,,5,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\HOA4909.M (ChemStation Integrator)
 Title : HERB
 Last Update : Fri Aug 30 09:47:41 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1	Dalapon	3.474	3.252 E6	6.4	95	0.00	2.23-	2.29
2 S	2,4-DCAA	1.961	1.949 E6	0.6	102	0.02	7.17-	7.23
3	Dicamba	9.317	8.994 E6	3.5	98	0.02	7.37-	7.43
4	MCPD	4.444	4.081 E3	8.2	94	0.01	7.64-	7.70
5	MCPA	7.472	6.697 E3	10.4	92	0.02	7.83-	7.89
6	Dichloroprop	2.337	2.180 E6	6.7	95	0.01	8.34-	8.40
7	2,4-D	2.978	2.597 E6	12.8	87	0.01	8.65-	8.72
8	Pentachlorophenol	42.749	41.858 E6	2.1	98	0.02	8.93-	8.99
9	2,4,5-TP	17.305	16.495 E6	4.7	97	0.00	9.93-	9.99
10	2,4,5-T	16.283	15.672 E6	3.8	96	0.00	10.37-	10.44
11	2,4-DB	1.643	1.623 E6	1.2	100	0.01	11.29-	11.39
12	Dinoseb	11.563	11.227 E6	2.9	97	0.01	13.19-	13.25
13	Picloram	18.835	17.951 E6	4.7	94	0.00	12.84-	12.90

***** Signal #2 *****

1	Dalapon	12.920	11.708 E6	9.4	91	0.00	2.38-	2.44
2 S	2,4-DCAA	8.670	8.635 E6	0.4	103	0.00	8.02-	8.08
3	Dicamba	35.159	33.740 E6	4.0	98	0.00	8.28-	8.34
4	MCPD	32.443	33.356 E3	-2.8	104	0.00	8.46-	8.52
5	MCPA	51.453	57.680 E3	-12.1	113	0.00	8.83-	8.89
6	Dichloroprop	8.762	8.432 E6	3.8	99	0.00	9.38-	9.44
7	2,4-D	12.456	12.224 E6	1.9	101	0.00	9.89-	9.99
8	Pentachlorophenol	134.045	127.942 E6	4.6	96	0.00	10.51-	10.57
9	2,4,5-TP	54.368	53.440 E6	1.7	98	0.00	11.35-	11.41
10	2,4,5-T	56.072	56.045 E6	0.0	101	0.00	12.09-	12.17
11	2,4-DB	7.415	6.574 E6	11.3	91	0.00	13.10-	13.19
12	Dinoseb	29.399	29.225 E6	0.6	101	0.00	13.66-	13.73
13	Picloram	47.428	41.279 E6	13.0	88	0.00	15.73-	15.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 oal42075.d HOA4909.M Fri Aug 30 14:31:29 2019

Continuing Calibration Summary

Job Number: JC93827

Sample: GOA4910-CC4909

Account: NOREASCA NOREAS, Inc.

Lab FileID: OA142087.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\OA4910\oa142087.d\ECD1A.CH Vial: 0
 Signal #2 : C:\msdchem\1\data\OA4910\oa142087.d\ECD2B.CH
 Acq On : 30 Aug 2019 12:53 pm Operator: vinced
 Sample : cc4909-300 Inst : SVOAGCOA
 Misc : op22407,goa4910,30,,,2.5,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\HOA4909.M (ChemStation Integrator)
 Title : HERB
 Last Update : Fri Aug 30 09:47:41 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1	Dalapon	3.474	3.171 E6	8.7	93	0.00	2.23-	2.29
2 S	2,4-DCAA	1.961	1.850 E6	5.7	97	0.00	7.15-	7.21
3	Dicamba	9.317	9.182 E6	1.4	95	0.00	7.36-	7.42
4	MCPD	4.444	4.541 E3	-2.2	99	0.00	7.63-	7.69
5	MCPA	7.472	7.529 E3	-0.8	97	0.00	7.82-	7.88
6	Dichloroprop	2.337	2.235 E6	4.4	98	0.00	8.33-	8.39
7	2,4-D	2.978	2.886 E6	3.1	99	0.00	8.64-	8.71
8	Pentachlorophenol	42.749	42.486 E6	0.6	97	0.00	8.91-	8.97
9	2,4,5-TP	17.305	17.166 E6	0.8	97	0.00	9.92-	9.98
10	2,4,5-T	16.283	16.448 E6	-1.0	97	0.00	10.36-	10.43
11	2,4-DB	1.643	1.650 E6	-0.4	100	0.00	11.29-	11.38
12	Dinoseb	11.563	11.051 E6	4.4	96	0.00	13.18-	13.24
13	Picloram	18.835	18.265 E6	3.0	95	0.00	12.84-	12.90

***** Signal #2 *****

1	Dalapon	12.920	11.997 E6	7.1	95	0.00	2.39-	2.45
2 S	2,4-DCAA	8.670	8.193 E6	5.5	101	0.00	8.02-	8.08
3	Dicamba	35.159	33.946 E6	3.5	99	0.00	8.28-	8.34
4	MCPD	32.443	33.802 E3	-4.2	103	0.00	8.46-	8.52
5	MCPA	51.453	51.166 E3	0.6	102	0.00	8.83-	8.89
6	Dichloroprop	8.762	8.158 E6	6.9	100	0.00	9.38-	9.44
7	2,4-D	12.456	11.891 E6	4.5	100	0.00	9.89-	9.99
8	Pentachlorophenol	134.045	129.927 E6	3.1	98	0.00	10.51-	10.57
9	2,4,5-TP	54.368	52.817 E6	2.9	99	0.00	11.36-	11.42
10	2,4,5-T	56.072	55.042 E6	1.8	99	0.00	12.09-	12.17
11	2,4-DB	7.415	7.286 E6	1.7	99	0.00	13.10-	13.19
12	Dinoseb	29.399	27.442 E6	6.7	99	0.00	13.66-	13.73
13	Picloram	47.428	40.488 E6	14.6	89	0.00	15.74-	15.80

(#) = Out of Range
 oal42076.d HOA4909.M

SPCC's out = 0 CCC's out = 0
 Fri Aug 30 14:31:44 2019

8.9.27

8

Continuing Calibration Summary

Job Number: JC93827

Sample: GOA4910-CC4909

Account: NOREASCA NOREAS, Inc.

Lab FileID: OA142093.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\OA4910\oa142093.d\ECD1A.CH Vial: 0
Signal #2 : C:\msdchem\1\data\OA4910\oa142093.d\ECD2B.CH
Acq On : 30 Aug 2019 3:44 pm Operator: vinced
Sample : cc4909-200 Inst : SVOAGCOA
Misc : op22369,goa4910,15.0,,,5,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\HOA4909.M (ChemStation Integrator)
Title : HERB
Last Update : Fri Aug 30 09:47:41 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1	Dalapon	3.474	3.624 E6	-4.3	106	0.00	2.23-	2.29
2 S	2,4-DCAA	1.961	2.086 E6	-6.4	109	0.00	7.16-	7.22
3	Dicamba	9.317	10.083 E6	-8.2	110	0.00	7.36-	7.42
4	MCPD	4.444	4.857 E3	-9.3	112	0.00	7.63-	7.69
5	MCPA	7.472	8.416 E3	-12.6	116	0.00	7.82-	7.88
6	Dichloroprop	2.337	2.522 E6	-7.9	110	0.00	8.34-	8.40
7	2,4-D	2.978	3.260 E6	-9.5	110	0.00	8.64-	8.71
8	Pentachlorophenol	42.749	47.094 E6	-10.2	111	0.00	8.91-	8.97
9	2,4,5-TP	17.305	18.818 E6	-8.7	110	0.00	9.92-	9.98
10	2,4,5-T	16.283	18.090 E6	-11.1	111	0.00	10.37-	10.44
11	2,4-DB	1.643	1.873 E6	-14.0	115	0.00	11.29-	11.38
12	Dinoseb	11.563	12.336 E6	-6.7	106	0.00	13.17-	13.23
13	Picloram	18.835	19.057 E6	-1.2	100	0.00	12.85-	12.91

***** Signal #2 *****

1	Dalapon	12.920	13.188 E6	-2.1	102	0.00	2.39-	2.45
2 S	2,4-DCAA	8.670	8.892 E6	-2.6	106	0.00	8.03-	8.09
3	Dicamba	35.159	37.416 E6	-6.4	108	0.00	8.28-	8.34
4	MCPD	32.443	35.787 E3	-10.3	111	0.00	8.47-	8.53
5	MCPA	51.453	59.186 E3	-15.0	116	0.00	8.83-	8.89
6	Dichloroprop	8.762	9.230 E6	-5.3	108	0.00	9.39-	9.45
7	2,4-D	12.456	13.377 E6	-7.4	111	0.00	9.90-	10.00
8	Pentachlorophenol	134.045	146.077 E6	-9.0	110	0.00	10.51-	10.57
9	2,4,5-TP	54.368	59.759 E6	-9.9	110	0.00	11.36-	11.42
10	2,4,5-T	56.072	61.276 E6	-9.3	110	0.00	12.10-	12.18
11	2,4-DB	7.415	8.091 E6	-9.1	112	0.00	13.11-	13.20
12	Dinoseb	29.399	29.742 E6	-1.2	103	0.00	13.66-	13.73
13	Picloram	47.428	48.902 E6	-3.1	105	0.00	15.74-	15.80

(#) = Out of Range
oal42075.d HOA4909.M

SPCC's out = 0 CCC's out = 0
Fri Aug 30 16:11:20 2019

Initial Calibration Summary

Job Number: JC93827

Sample: GXX6782-ICC6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2438959.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report HP G1530A

Method Path : C:\msdchem\1\METHODS\
 Method File : PCB6782.M
 Title :
 Last Update : Fri Aug 23 08:28:22 2019
 Response Via : Initial Calibration

Calibration Files

50 =XX2438956.D 250 =XX2438957.D 500 =XX2438958.D
 1000 =XX2438959.D 2000 =XX2438960.D 3000 =XX2438961.D

	Compound	50	250	500	1000	2000	3000	Avg		%RSD
1)	S Tetrachloro-m...	1.727	1.813	1.779	1.795	1.843	1.878	1.806	E7	2.90
2)	AR1221-A				1.358			1.358	E5	0.00
3)	AR1221-B				2.067			2.067	E5	0.00
4)	AR1221-C				6.179			6.179	E5	0.00
5)	AR1221-D				1.026			1.026	E5	0.00
6)	AR1221-E				6.377			6.377	E4	0.00
7)	AR1232-A				4.611			4.611	E5	0.00
8)	AR1232-B				3.087			3.087	E5	0.00
9)	AR1232-C				6.540			6.540	E5	0.00
10)	AR1232-D				2.477			2.477	E5	0.00
11)	AR1232-E				2.382			2.382	E5	0.00
12)	AR1242-A				5.410			5.410	E5	0.00
13)	AR1242-B				1.238			1.238	E6	0.00
14)	AR1242-C				4.648			4.648	E5	0.00
15)	AR1242-D				4.771			4.771	E5	0.00
16)	AR1242-E				4.001			4.001	E5	0.00
17)	AR1248-A				2.701			2.701	E5	0.00
18)	AR1248-B				7.249			7.249	E5	0.00
19)	AR1248-C				7.558			7.558	E5	0.00
20)	AR1248-D				7.364			7.364	E5	0.00
21)	AR1248-E				3.858			3.858	E5	0.00
22)	AR1248-F				6.309			6.309	E5	0.00
23)	AR1248-G				5.448			5.448	E5	0.00
24)	AR1254-A				5.466			5.466	E5	0.00
25)	AR1254-B				8.214			8.214	E5	0.00
26)	AR1254-C				6.443			6.443	E5	0.00
27)	AR1254-D				1.146			1.146	E6	0.00
28)	AR1254-E				8.463			8.463	E5	0.00
29)	AR1254-F				7.628			7.628	E5	0.00
30)	AR1254-G				1.165			1.165	E6	0.00
31)	AR1262-A				9.027			9.027	E5	0.00
32)	AR1262-B				1.119			1.119	E6	0.00
33)	AR1262-C				1.082			1.082	E6	0.00
34)	AR1262-D				2.378			2.378	E6	0.00
35)	AR1262-E				2.701			2.701	E6	0.00
36)	AR1268-A				2.649			2.649	E6	0.00
37)	AR1268-B				2.651			2.651	E6	0.00
38)	AR1268-C				2.231			2.231	E6	0.00
39)	AR1268-D				9.323			9.323	E5	0.00
40)	AR1268-E				7.845			7.845	E6	0.00
41)	AR1016-A	4.190	3.858	3.816	3.695	3.603	3.586	3.791	E5	5.91
42)	AR1016-B	7.515	7.105	6.775	6.558	6.434	6.405	6.799	E5	6.42
43)	AR1016-C	1.652	1.514	1.546	1.527	1.535	1.553	1.555	E6	3.20
44)	AR1016-D	6.236	6.030	5.801	5.686	5.667	5.709	5.855	E5	3.93
45)	AR1016-E	6.509	5.974	5.917	5.784	5.751	5.809	5.957	E5	4.75
46)	AR1260-A	1.386	1.339	1.366	1.383	1.403	1.436	1.385	E6	2.37

8.9.29

8

Initial Calibration Summary

Job Number: JC93827

Sample: GXX6782-ICC6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2438959.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

47)	AR1260-B	7.413	6.949	7.043	7.083	7.146	7.279	7.152	E5	2.36
48)	AR1260-C	8.931	7.826	7.832	7.907	7.975	8.124	8.099	E5	5.21
49)	AR1260-D	1.753	1.841	1.891	1.930	1.970	2.015	1.900	E6	4.94
50)	AR1260-E	2.168	1.962	1.959	1.998	2.033	2.071	2.032	E6	3.89
51) S	Decachlorobip...	1.798	1.688	1.697	1.683	1.717	1.754	1.723	E7	2.61

Signal #2 Calibration Files

50	=XX2438956.D	250	=XX2438957.D	500	=XX2438958.D
1000	=XX2438959.D	2000	=XX2438960.D	3000	=XX2438961.D

	Compound	50	250	500	1000	2000	3000	Avg		%RSD
1) S	Tetrachloro-m...		9.458	9.493	9.628	9.730	9.872	9.636	E6	1.78
2)	AR1221-A				6.936			6.936	E4	0.00
3)	AR1221-B				1.057			1.057	E5	0.00
4)	AR1221-C				2.562			2.562	E5	0.00
5)	AR1221-D				5.103			5.103	E4	0.00
6)	AR1221-E				3.252			3.252	E4	0.00
7)	AR1232-A				1.978			1.978	E5	0.00
8)	AR1232-B				1.575			1.575	E5	0.00
9)	AR1232-C				3.389			3.389	E5	0.00
10)	AR1232-D				1.306			1.306	E5	0.00
11)	AR1232-E				9.012			9.012	E4	0.00
12)	AR1242-A				2.958			2.958	E5	0.00
13)	AR1242-B				6.358			6.358	E5	0.00
14)	AR1242-C				2.416			2.416	E5	0.00
15)	AR1242-D				1.852			1.852	E5	0.00
16)	AR1242-E				2.252			2.252	E5	0.00
17)	AR1248-A				1.475			1.475	E5	0.00
18)	AR1248-B				3.981			3.981	E5	0.00
19)	AR1248-C				2.192			2.192	E5	0.00
20)	AR1248-D				2.954			2.954	E5	0.00
21)	AR1248-E				2.915			2.915	E5	0.00
22)	AR1248-F				3.953			3.953	E5	0.00
23)	AR1248-G				3.846			3.846	E5	0.00
24)	AR1254-A				3.508			3.508	E5	0.00
25)	AR1254-B				3.951			3.951	E5	0.00
26)	AR1254-C				3.249			3.249	E5	0.00
27)	AR1254-D				6.291			6.291	E5	0.00
28)	AR1254-E				4.889			4.889	E5	0.00
29)	AR1254-F				5.216			5.216	E5	0.00
30)	AR1254-G				6.303			6.303	E5	0.00
31)	AR1262-A				4.848			4.848	E5	0.00
32)	AR1262-B				7.782			7.782	E5	0.00
33)	AR1262-C				6.142			6.142	E5	0.00
34)	AR1262-D				1.517			1.517	E6	0.00
35)	AR1262-E				1.636			1.636	E6	0.00
36)	AR1268-A				1.797			1.797	E6	0.00
37)	AR1268-B				1.599			1.599	E6	0.00
38)	AR1268-C				1.393			1.393	E6	0.00
39)	AR1268-D				5.676			5.676	E5	0.00
40)	AR1268-E				4.069			4.069	E6	0.00
41)	AR1016-A	1.781	1.790	1.698	1.618	1.594	1.605	1.681	E5	5.29
42)	AR1016-B	4.122	3.772	3.659	3.572	3.521	3.551	3.700	E5	6.11
43)	AR1016-C	8.862	8.071	7.923	7.813	7.902	8.035	8.101	E5	4.74
44)	AR1016-D	3.245	3.031	2.960	2.896	2.917	2.964	3.002	E5	4.25
45)	AR1016-E	2.670	2.352	2.304	2.251	2.268	2.301	2.358	E5	6.66
46)	AR1260-A	8.456	7.706	7.656	7.563	7.792	7.983	7.859	E5	4.14
47)	AR1260-B	5.359	4.946	4.936	4.872	5.016	5.128	5.043	E5	3.52
48)	AR1260-C	5.106	4.709	4.703	4.624	4.791	4.909	4.807	E5	3.65

8.9.29

8

Initial Calibration Summary

Job Number: JC93827

Sample: GXX6782-ICC6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2438959.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

49)	AR1260-D	1.255	1.216	1.245	1.242	1.277	1.291	1.254	E6	2.12
50)	AR1260-E	1.230	1.160	1.156	1.134	1.183	1.218	1.180	E6	3.18
51) S	Decachlorobip...	8.875	8.608	8.323	7.909	8.441	8.603	8.460	E6	3.88

(#) = Out of Range

PCB6782.M Fri Aug 23 08:34:17 2019

Initial Calibration Verification

Job Number: JC93827

Sample: GXX6782-ICV6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2438966.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6782\
Data File : XX2438966.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 22 Aug 2019 6:37 pm
Operator : rebeccak
Sample : icv6782-1000
Misc : op22160,gxx6782,15.6,,,10,1
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 23 08:29:17 2019
Quant Method : C:\msdchem\1\METHODS\PCB6782.M
Quant Title :
QLast Update : Fri Aug 23 08:28:22 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 S	Tetrachloro-m-xylene	18.059	18.811 E6	-4.2	105	0.00
41	AR1016-A	379.112	366.669 E3	3.3	99	0.00
42	AR1016-B	679.879	664.154 E3	2.3	101	0.00
43	AR1016-C	1.555	1.543 E6	0.8	101	0.00
44	AR1016-D	585.477	577.394 E3	1.4	102	0.00
45	AR1016-E	595.729	579.643 E3	2.7	100	0.00
46	AR1260-A	1.385	1.446 E6	-4.4	105	0.00
47	AR1260-B	715.219	739.716 E3	-3.4	104	0.00
48	AR1260-C	809.929	821.219 E3	-1.4	104	0.00
49	AR1260-D	1.900	1.988 E6	-4.6	103	0.00
50	AR1260-E	2.032	2.003 E6	1.4	100	0.00
51 S	Decachlorobiphenyl	17.227	19.350 E6	-12.3	115	0.00

Signal #2

1 S	Tetrachloro-m-xylene	9.636	10.009 E6	-3.9	104	0.00
41	AR1016-A	168.099	164.832 E3	1.9	102	0.00
42	AR1016-B	369.965	361.764 E3	2.2	101	0.00
43	AR1016-C	810.109	794.104 E3	2.0	102	0.00
44	AR1016-D	300.211	295.295 E3	1.6	102	0.00
45	AR1016-E	235.773	222.020 E3	5.8	99	0.00
46	AR1260-A	785.919	803.236 E3	-2.2	106	0.00
47	AR1260-B	504.288	514.718 E3	-2.1	106	0.00
48	AR1260-C	480.716	487.623 E3	-1.4	105	0.00
49	AR1260-D	1.254	1.300 E6	-3.7	105	0.00
50	AR1260-E	1.180	1.165 E6	1.3	103	0.00
51 S	Decachlorobiphenyl	8.460	8.799 E6	-4.0	111	0.00

Initial Calibration Verification

Job Number: JC93827

Sample: GXX6782-ICV6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2438966.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

PCB6782.M Fri Aug 23 08:33:47 2019

8.9.30

8

Initial Calibration Verification

Job Number: JC93827

Sample: GXX6782-ICV6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2438967.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6782\
Data File : XX2438967.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 22 Aug 2019 6:55 pm
Operator : rebeccak
Sample : icv6782-1000
Misc : op22160,gxx6782,15.6,,,10,1
ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 23 08:30:13 2019
Quant Method : C:\msdchem\1\METHODS\PCB6782.M
Quant Title :
QLast Update : Fri Aug 23 08:25:49 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 S	Tetrachloro-m-xylene	18.059	23.999 E6	-32.9#	134	0.00
2	AR1221-A	135.794	134.776 E3	0.7	99	0.00
3	AR1221-B	206.719	192.427 E3	6.9	93	0.00
4	AR1221-C	617.861	578.894 E3	6.3	94	0.00
5	AR1221-D	102.564	85.261 E3	16.9	83	0.00
6	AR1221-E	63.774	64.539 E3	-1.2	101	0.00
24	AR1254-A	546.572	570.460 E3	-4.4	104	0.00
25	AR1254-B	821.401	860.734 E3	-4.8	105	0.00
26	AR1254-C	644.324	661.054 E3	-2.6	103	0.00
27	AR1254-D	1.146	1.186 E6	-3.5	104	0.00
28	AR1254-E	846.273	865.865 E3	-2.3	102	0.00
29	AR1254-F	762.847	778.633 E3	-2.1	102	0.00
30	AR1254-G	1.165	1.211 E6	-3.9	104	0.00
51 S	Decachlorobiphenyl	17.227	23.294 E6	-35.2#	138	0.00

Signal #2

1 S	Tetrachloro-m-xylene	9.636	12.260 E6	-27.2#	127	0.00
2	AR1221-A	69.358	69.989 E3	-0.9	101	0.00
3	AR1221-B	105.658	100.001 E3	5.4	95	0.00
4	AR1221-C	256.166	241.268 E3	5.8	94	0.00
5	AR1221-D	51.033	42.572 E3	16.6	83	0.00
6	AR1221-E	32.518	34.032 E3	-4.7	105	0.00
24	AR1254-A	350.787	361.130 E3	-2.9	103	0.00
25	AR1254-B	395.112	406.141 E3	-2.8	103	0.00
26	AR1254-C	324.905	328.192 E3	-1.0	101	0.00
27	AR1254-D	629.130	650.891 E3	-3.5	103	0.00
28	AR1254-E	488.894	497.346 E3	-1.7	102	0.00
29	AR1254-F	521.626	537.641 E3	-3.1	103	0.00
30	AR1254-G	630.299	655.903 E3	-4.1	104	0.00

Initial Calibration Verification

Job Number: JC93827

Sample: GXX6782-ICV6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2438967.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

51 S	Decachlorobiphenyl	8.460	11.342	E6	-34.1#	143	0.00
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(#) = Out of Range

SPCC's out = 0 CCC's out = 0

PCB6782.M Fri Aug 23 08:33:48 2019

8.9.31

8

Initial Calibration Verification

Job Number: JC93827

Sample: GXX6782-ICV6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2438968.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6782\
Data File : XX2438968.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 22 Aug 2019 7:14 pm
Operator : rebeccak
Sample : icv6782-1000
Misc : op22160,gxx6782,15.6,,,10,1
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 23 08:31:43 2019
Quant Method : C:\msdchem\1\METHODS\PCB6782.M
Quant Title :
QLast Update : Fri Aug 23 08:28:22 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 S	Tetrachloro-m-xylene	18.059	22.400 E6	-24.0#	125	0.00
7	AR1232-A	461.070	488.809 E3	-6.0	106	0.00
8	AR1232-B	308.720	330.202 E3	-7.0	107	0.00
9	AR1232-C	654.016	694.244 E3	-6.2	106	0.00
10	AR1232-D	247.691	265.001 E3	-7.0	107	0.00
11	AR1232-E	238.161	252.779 E3	-6.1	106	0.00
31	AR1262-A	902.695	911.227 E3	-0.9	101	0.00
32	AR1262-B	1.119	1.128 E6	-0.8	101	0.00
33	AR1262-C	1.082	1.089 E6	-0.6	101	0.00
34	AR1262-D	2.378	2.389 E6	-0.5	100	0.00
35	AR1262-E	2.701	2.716 E6	-0.6	101	0.00
51 S	Decachlorobiphenyl	17.227	21.933 E6	-27.3#	130	0.00

Signal #2

1 S	Tetrachloro-m-xylene	9.636	11.607 E6	-20.5#	121	0.00
7	AR1232-A	197.781	213.088 E3	-7.7	108	0.00
8	AR1232-B	157.477	169.115 E3	-7.4	107	0.00
9	AR1232-C	338.947	359.940 E3	-6.2	106	0.00
10	AR1232-D	130.601	138.042 E3	-5.7	106	0.00
11	AR1232-E	90.116	98.614 E3	-9.4	109	0.00
31	AR1262-A	484.822	492.394 E3	-1.6	102	0.00
32	AR1262-B	778.231	786.392 E3	-1.0	101	0.00
33	AR1262-C	614.218	621.060 E3	-1.1	101	0.00
34	AR1262-D	1.517	1.527 E6	-0.7	101	0.00
35	AR1262-E	1.636	1.647 E6	-0.7	101	0.00
51 S	Decachlorobiphenyl	8.460	10.484 E6	-23.9#	133	0.00

Initial Calibration Verification

Job Number: JC93827

Sample: GXX6782-ICV6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2438968.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

PCB6782.M Fri Aug 23 08:33:49 2019

8.9.32

8

Initial Calibration Verification

Job Number: JC93827 **Sample:** GXX6782-ICV6782
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2438969.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6782\
Data File : XX2438969.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 22 Aug 2019 7:32 pm
Operator : rebeccak
Sample : icv6782-1000
Misc : op22160,gxx6782,15.6,,,10,1
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 23 08:32:20 2019
Quant Method : C:\msdchem\1\METHODS\PCB6782.M
Quant Title :
QLast Update : Fri Aug 23 08:28:22 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 S	Tetrachloro-m-xylene	18.059	20.754 E6	-14.9	116	0.00
12	AR1242-A	540.976	530.712 E3	1.9	98	0.00
13	AR1242-B	1.238	1.206 E6	2.6	97	0.00
14	AR1242-C	464.753	463.358 E3	0.3	100	0.00
15	AR1242-D	477.144	466.843 E3	2.2	98	0.00
16	AR1242-E	400.150	390.828 E3	2.3	98	0.00
36	AR1268-A	2.649	2.617 E6	1.2	99	0.00
37	AR1268-B	2.651	2.609 E6	1.6	98	0.00
38	AR1268-C	2.231	2.186 E6	2.0	98	0.00
39	AR1268-D	932.252	898.463 E3	3.6	96	0.00
40	AR1268-E	7.845	7.649 E6	2.5	98	0.00
51 S	Decachlorobiphenyl	17.227	57.173 E6	-231.9#	340#	0.00

Signal #2

1 S	Tetrachloro-m-xylene	9.636	11.011 E6	-14.3	114	0.00
12	AR1242-A	295.784	292.538 E3	1.1	99	0.00
13	AR1242-B	635.829	624.703 E3	1.7	98	0.00
14	AR1242-C	241.573	236.408 E3	2.1	98	0.00
15	AR1242-D	185.199	183.250 E3	1.1	99	0.00
16	AR1242-E	225.222	224.626 E3	0.3	100	0.00
36	AR1268-A	1.797	1.766 E6	1.7	98	0.00
37	AR1268-B	1.599	1.564 E6	2.2	98	0.00
38	AR1268-C	1.393	1.368 E6	1.8	98	0.00
39	AR1268-D	567.619	550.366 E3	3.0	97	0.00
40	AR1268-E	4.069	3.987 E6	2.0	98	0.00
51 S	Decachlorobiphenyl	8.460	28.096 E6	-232.1#	355#	0.00

8.9.33
8

Initial Calibration Verification

Job Number: JC93827

Sample: GXX6782-ICV6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2438969.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

PCB6782.M Fri Aug 23 08:33:50 2019

8.9.33

8

Initial Calibration Verification

Job Number: JC93827

Sample: GXX6782-ICV6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2438970.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6782\
Data File : XX2438970.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 22 Aug 2019 7:50 pm
Operator : rebeccak
Sample : icv6782-1000
Misc : op22160,gxx6782,15.6,,,10,1
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 23 08:32:50 2019
Quant Method : C:\msdchem\1\METHODS\PCB6782.M
Quant Title :
QLast Update : Fri Aug 23 08:28:22 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 S	Tetrachloro-m-xylene	18.059	21.266 E6	-17.8	118	0.00
17	AR1248-A	270.107	251.445 E3	6.9	93	0.00
18	AR1248-B	724.881	711.026 E3	1.9	98	0.00
19	AR1248-C	755.816	774.126 E3	-2.4	102	0.00
20	AR1248-D	736.435	774.183 E3	-5.1	105	0.00
21	AR1248-E	385.791	422.883 E3	-9.6	110	0.00
22	AR1248-F	630.866	697.073 E3	-10.5	110	0.00
23	AR1248-G	544.781	583.638 E3	-7.1	107	0.00
51 S	Decachlorobiphenyl	17.227	21.862 E6	-26.9#	130	0.00

Signal #2

1 S	Tetrachloro-m-xylene	9.636	11.596 E6	-20.3#	120	0.00
17	AR1248-A	147.507	133.677 E3	9.4	91	0.00
18	AR1248-B	398.085	390.608 E3	1.9	98	0.00
19	AR1248-C	219.158	227.614 E3	-3.9	104	0.00
20	AR1248-D	295.386	310.345 E3	-5.1	105	0.00
21	AR1248-E	291.541	308.421 E3	-5.8	106	0.00
22	AR1248-F	395.323	424.617 E3	-7.4	107	0.00
23	AR1248-G	384.609	418.446 E3	-8.8	109	0.00
51 S	Decachlorobiphenyl	8.460	10.711 E6	-26.6#	135	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

PCB6782.M Fri Aug 23 08:33:51 2019

Continuing Calibration Summary

Job Number: JC93827 **Sample:** GXX6789-CC6782
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2439234.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\sar...\xx2439234.d\ECD1A.CH Vial: 1
Signal #2 : C:\msdchem\1\data\sarah\gxx6789\xx2439234.d\ECD2B.CH
Acq On : 29 Aug 2019 12:58 pm Operator: tianweir
Sample : cc6782-1000 Inst : HP G1530A
Misc : op22297,gxx6789,15.7,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\PCB6782.M (ChemStation Integrator)
Title :
Last Update : Fri Aug 23 08:28:22 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 S	Tetrachloro-m-xylene	18.059	18.031 E6	0.2	100	0.00	3.30-	3.36
2	AR1221-A			NA				
3	AR1221-B			NA				
4	AR1221-C			NA				
5	AR1221-D			NA				
6	AR1221-E			NA				
7	AR1232-A			NA				
8	AR1232-B			NA				
9	AR1232-C			NA				
10	AR1232-D			NA				
11	AR1232-E			NA				
12	AR1242-A			NA				
13	AR1242-B			NA				
14	AR1242-C			NA				
15	AR1242-D			NA				
16	AR1242-E			NA				
17	AR1248-A			NA				
18	AR1248-B			NA				
19	AR1248-C			NA				
20	AR1248-D			NA				
21	AR1248-E			NA				
22	AR1248-F			NA				
23	AR1248-G			NA				
24	AR1254-A			NA				
25	AR1254-B			NA				
26	AR1254-C			NA				
27	AR1254-D			NA				
28	AR1254-E			NA				
29	AR1254-F			NA				
30	AR1254-G			NA				
31	AR1262-A			NA				
32	AR1262-B			NA				
33	AR1262-C			NA				
34	AR1262-D			NA				
35	AR1262-E			NA				
36	AR1268-A			NA				
37	AR1268-B			NA				
38	AR1268-C			NA				
39	AR1268-D			NA				
40	AR1268-E			NA				
41	AR1016-A	379.112	366.386 E3	3.4	99	0.00	3.70-	3.76

8.9.35
8

Continuing Calibration Summary

Job Number: JC93827

Sample: GXX6789-CC6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2439234.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42	AR1016-B	679.879	654.496	E3	3.7	100	0.00	4.14-	4.20
43	AR1016-C	1.555	1.391	E6	10.5	91	0.00	4.72-	4.78
44	AR1016-D	585.477	556.504	E3	4.9	98	0.00	4.89-	4.95
45	AR1016-E	595.729	559.763	E3	6.0	97	0.00	5.42-	5.49
46	AR1260-A	1.385	1.376	E6	0.6	99	0.00	7.86-	7.92
47	AR1260-B	715.219	711.939	E3	0.5	101	0.00	8.02-	8.08
48	AR1260-C	809.929	795.246	E3	1.8	101	0.00	8.36-	8.43
49	AR1260-D	1.900	1.907	E6	-0.4	99	0.00	8.80-	8.86
50	AR1260-E	2.032	1.978	E6	2.7	99	0.00	9.20-	9.26
51 S	Decachlorobiphenyl	17.227	16.913	E6	1.8	101	0.00	10.75-	10.82

***** Signal #2 *****

1 S	Tetrachloro-m-xylene	9.636	10.432	E6	-8.3	108	0.00	4.02-	4.08
2	AR1221-A				-----NA-----				
3	AR1221-B				-----NA-----				
4	AR1221-C				-----NA-----				
5	AR1221-D				-----NA-----				
6	AR1221-E				-----NA-----				
7	AR1232-A				-----NA-----				
8	AR1232-B				-----NA-----				
9	AR1232-C				-----NA-----				
10	AR1232-D				-----NA-----				
11	AR1232-E				-----NA-----				
12	AR1242-A				-----NA-----				
13	AR1242-B				-----NA-----				
14	AR1242-C				-----NA-----				
15	AR1242-D				-----NA-----				
16	AR1242-E				-----NA-----				
17	AR1248-A				-----NA-----				
18	AR1248-B				-----NA-----				
19	AR1248-C				-----NA-----				
20	AR1248-D				-----NA-----				
21	AR1248-E				-----NA-----				
22	AR1248-F				-----NA-----				
23	AR1248-G				-----NA-----				
24	AR1254-A				-----NA-----				
25	AR1254-B				-----NA-----				
26	AR1254-C				-----NA-----				
27	AR1254-D				-----NA-----				
28	AR1254-E				-----NA-----				
29	AR1254-F				-----NA-----				
30	AR1254-G				-----NA-----				
31	AR1262-A				-----NA-----				
32	AR1262-B				-----NA-----				
33	AR1262-C				-----NA-----				
34	AR1262-D				-----NA-----				
35	AR1262-E				-----NA-----				
36	AR1268-A				-----NA-----				
37	AR1268-B				-----NA-----				
38	AR1268-C				-----NA-----				
39	AR1268-D				-----NA-----				
40	AR1268-E				-----NA-----				
41	AR1016-A	168.099	176.679	E3	-5.1	109	0.00	4.70-	4.76
42	AR1016-B	369.965	391.307	E3	-5.8	110	0.00	5.27-	5.33
43	AR1016-C	810.109	855.315	E3	-5.6	109	0.00	5.92-	5.98
44	AR1016-D	300.211	319.857	E3	-6.5	110	0.00	6.12-	6.18
45	AR1016-E	235.773	250.817	E3	-6.4	111	0.00	6.79-	6.85
46	AR1260-A	785.919	868.374	E3	-10.5	115	0.00	9.42-	9.48
47	AR1260-B	504.288	567.605	E3	-12.6	116	0.00	9.54-	9.60

8.9.35

8

Continuing Calibration Summary

Job Number: JC93827

Sample: GXX6789-CC6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2439234.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

48	AR1260-C	480.716	547.180	E3	-13.8	118	0.00	9.98-10.04
49	AR1260-D	1.254	1.448	E6	-15.5	117	0.00	10.32-10.38
50	AR1260-E	1.180	1.312	E6	-11.2	116	0.00	10.88-10.94
51 S	Decachlorobiphenyl	8.460	9.646	E6	-14.0	122	0.00	12.56-12.62

(#) = Out of Range
XX2438959.D PCB6782.M

SPCC's out = 0 CCC's out = 0
Thu Aug 29 22:46:38 2019

Continuing Calibration Summary

Job Number: JC93827 **Sample:** GXX6789-CC6782
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2439245.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\sar...\xx2439245.d\ECD1A.CH Vial: 10
Signal #2 : C:\msdchem\1\data\sarah\gxx6789\xx2439245.d\ECD2B.CH
Acq On : 29 Aug 2019 7:09 pm Operator: tianweir
Sample : cc6782-500 Inst : HP G1530A
Misc : op22362,gxx6789,15.0,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\PCB6782.M (ChemStation Integrator)
Title :
Last Update : Fri Aug 23 08:28:22 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 S	Tetrachloro-m-xylene	18.059	18.648 E6	-3.3	105	0.00	3.29-	3.35
2	AR1221-A			NA				
3	AR1221-B			NA				
4	AR1221-C			NA				
5	AR1221-D			NA				
6	AR1221-E			NA				
7	AR1232-A			NA				
8	AR1232-B			NA				
9	AR1232-C			NA				
10	AR1232-D			NA				
11	AR1232-E			NA				
12	AR1242-A			NA				
13	AR1242-B			NA				
14	AR1242-C			NA				
15	AR1242-D			NA				
16	AR1242-E			NA				
17	AR1248-A			NA				
18	AR1248-B			NA				
19	AR1248-C			NA				
20	AR1248-D			NA				
21	AR1248-E			NA				
22	AR1248-F			NA				
23	AR1248-G			NA				
24	AR1254-A			NA				
25	AR1254-B			NA				
26	AR1254-C			NA				
27	AR1254-D			NA				
28	AR1254-E			NA				
29	AR1254-F			NA				
30	AR1254-G			NA				
31	AR1262-A			NA				
32	AR1262-B			NA				
33	AR1262-C			NA				
34	AR1262-D			NA				
35	AR1262-E			NA				
36	AR1268-A			NA				
37	AR1268-B			NA				
38	AR1268-C			NA				
39	AR1268-D			NA				
40	AR1268-E			NA				
41	AR1016-A	379.112	394.991 E3	-4.2	104	0.00	3.70-	3.76

8.9.36
8

Continuing Calibration Summary

Job Number: JC93827

Sample: GXX6789-CC6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2439245.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42	AR1016-B	679.879	694.581	E3	-2.2	103	0.00	4.13- 4.19
43	AR1016-C	1.555	1.475	E6	5.1	95	0.00	4.72- 4.78
44	AR1016-D	585.477	596.751	E3	-1.9	103	0.00	4.89- 4.95
45	AR1016-E	595.729	602.464	E3	-1.1	102	0.00	5.42- 5.49
46	AR1260-A	1.385	1.405	E6	-1.4	103	0.00	7.86- 7.92
47	AR1260-B	715.219	724.434	E3	-1.3	103	0.00	8.02- 8.08
48	AR1260-C	809.929	808.237	E3	0.2	103	0.00	8.36- 8.43
49	AR1260-D	1.900	1.940	E6	-2.1	103	0.00	8.80- 8.86
50	AR1260-E	2.032	2.021	E6	0.5	103	0.00	9.20- 9.26
51 S	Decachlorobiphenyl	17.227	17.702	E6	-2.8	104	0.00	10.76-10.83

***** Signal #2 *****

1 S	Tetrachloro-m-xylene	9.636	10.381	E6	-7.7	109	0.00	4.02- 4.08
2	AR1221-A				-----NA-----			
3	AR1221-B				-----NA-----			
4	AR1221-C				-----NA-----			
5	AR1221-D				-----NA-----			
6	AR1221-E				-----NA-----			
7	AR1232-A				-----NA-----			
8	AR1232-B				-----NA-----			
9	AR1232-C				-----NA-----			
10	AR1232-D				-----NA-----			
11	AR1232-E				-----NA-----			
12	AR1242-A				-----NA-----			
13	AR1242-B				-----NA-----			
14	AR1242-C				-----NA-----			
15	AR1242-D				-----NA-----			
16	AR1242-E				-----NA-----			
17	AR1248-A				-----NA-----			
18	AR1248-B				-----NA-----			
19	AR1248-C				-----NA-----			
20	AR1248-D				-----NA-----			
21	AR1248-E				-----NA-----			
22	AR1248-F				-----NA-----			
23	AR1248-G				-----NA-----			
24	AR1254-A				-----NA-----			
25	AR1254-B				-----NA-----			
26	AR1254-C				-----NA-----			
27	AR1254-D				-----NA-----			
28	AR1254-E				-----NA-----			
29	AR1254-F				-----NA-----			
30	AR1254-G				-----NA-----			
31	AR1262-A				-----NA-----			
32	AR1262-B				-----NA-----			
33	AR1262-C				-----NA-----			
34	AR1262-D				-----NA-----			
35	AR1262-E				-----NA-----			
36	AR1268-A				-----NA-----			
37	AR1268-B				-----NA-----			
38	AR1268-C				-----NA-----			
39	AR1268-D				-----NA-----			
40	AR1268-E				-----NA-----			
41	AR1016-A	168.099	186.430	E3	-10.9	110	0.00	4.70- 4.76
42	AR1016-B	369.965	402.547	E3	-8.8	110	0.00	5.27- 5.33
43	AR1016-C	810.109	859.064	E3	-6.0	108	0.00	5.92- 5.98
44	AR1016-D	300.211	339.320	E3	-13.0	115	0.00	6.12- 6.18
45	AR1016-E	235.773	254.382	E3	-7.9	110	0.00	6.79- 6.85
46	AR1260-A	785.919	854.083	E3	-8.7	112	0.00	9.42- 9.48
47	AR1260-B	504.288	554.879	E3	-10.0	112	0.00	9.54- 9.60

8.9.36

8

Continuing Calibration Summary

Job Number: JC93827

Sample: GXX6789-CC6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2439245.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

48	AR1260-C	480.716	529.825	E3	-10.2	113	0.00	9.98-10.04
49	AR1260-D	1.254	1.396	E6	-11.3	112	0.00	10.32-10.38
50	AR1260-E	1.180	1.285	E6	-8.9	111	0.00	10.87-10.93
51 S	Decachlorobiphenyl	8.460	9.459	E6	-11.8	114	0.00	12.56-12.62

(#) = Out of Range
XX2438958.D PCB6782.M

SPCC's out = 0 CCC's out = 0
Thu Aug 29 22:53:25 2019

Continuing Calibration Summary

Job Number: JC93827 **Sample:** GXX6789-CC6782
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2439267.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : R:\svoa-gc\completed...\xx2439267.d\ECD1A.CH Vial: 10
 Signal #2 : R:\svoa-gc\completed\201...6789\xx2439267.d\ECD2B.CH
 Acq On : 30 Aug 2019 1:50 am Operator: tianweir
 Sample : cc6782-500 Inst : HP G1530A
 Misc : op22362,gxx6789,15.0,,,10,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\PCB6782.M (ChemStation Integrator)
 Title :
 Last Update : Fri Aug 23 08:28:22 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 S	Tetrachloro-m-xylene	18.059	17.148 E6	5.0	96	0.00	3.30-	3.36
2	AR1221-A			NA				
3	AR1221-B			NA				
4	AR1221-C			NA				
5	AR1221-D			NA				
6	AR1221-E			NA				
7	AR1232-A			NA				
8	AR1232-B			NA				
9	AR1232-C			NA				
10	AR1232-D			NA				
11	AR1232-E			NA				
12	AR1242-A			NA				
13	AR1242-B			NA				
14	AR1242-C			NA				
15	AR1242-D			NA				
16	AR1242-E			NA				
17	AR1248-A			NA				
18	AR1248-B			NA				
19	AR1248-C			NA				
20	AR1248-D			NA				
21	AR1248-E			NA				
22	AR1248-F			NA				
23	AR1248-G			NA				
24	AR1254-A			NA				
25	AR1254-B			NA				
26	AR1254-C			NA				
27	AR1254-D			NA				
28	AR1254-E			NA				
29	AR1254-F			NA				
30	AR1254-G			NA				
31	AR1262-A			NA				
32	AR1262-B			NA				
33	AR1262-C			NA				
34	AR1262-D			NA				
35	AR1262-E			NA				
36	AR1268-A			NA				
37	AR1268-B			NA				
38	AR1268-C			NA				
39	AR1268-D			NA				
40	AR1268-E			NA				
41	AR1016-A	379.112	334.318 E3	11.8	88	0.00	3.70-	3.76

8.9.37
8

Continuing Calibration Summary

Job Number: JC93827

Sample: GXX6789-CC6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2439267.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42	AR1016-B	679.879	633.506	E3	6.8	94	0.00	4.14-	4.20
43	AR1016-C	1.555	1.372	E6	11.8	89	0.00	4.72-	4.78
44	AR1016-D	585.477	555.311	E3	5.2	96	0.00	4.89-	4.95
45	AR1016-E	595.729	557.720	E3	6.4	94	0.00	5.42-	5.49
46	AR1260-A	1.385	1.254	E6	9.5	92	0.00	7.86-	7.92
47	AR1260-B	715.219	646.345	E3	9.6	92	0.00	8.02-	8.08
48	AR1260-C	809.929	701.033	E3	13.4	90	0.00	8.36-	8.43
49	AR1260-D	1.900	1.679	E6	11.6	89	0.00	8.80-	8.86
50	AR1260-E	2.032	1.723	E6	15.2	88	0.00	9.20-	9.26
51 S	Decachlorobiphenyl	17.227	13.928	E6	19.2	82	0.00	10.76-	10.83

***** Signal #2 *****

1 S	Tetrachloro-m-xylene	9.636	10.078	E6	-4.6	106	0.00	4.02-	4.08
2	AR1221-A				-----NA-----				
3	AR1221-B				-----NA-----				
4	AR1221-C				-----NA-----				
5	AR1221-D				-----NA-----				
6	AR1221-E				-----NA-----				
7	AR1232-A				-----NA-----				
8	AR1232-B				-----NA-----				
9	AR1232-C				-----NA-----				
10	AR1232-D				-----NA-----				
11	AR1232-E				-----NA-----				
12	AR1242-A				-----NA-----				
13	AR1242-B				-----NA-----				
14	AR1242-C				-----NA-----				
15	AR1242-D				-----NA-----				
16	AR1242-E				-----NA-----				
17	AR1248-A				-----NA-----				
18	AR1248-B				-----NA-----				
19	AR1248-C				-----NA-----				
20	AR1248-D				-----NA-----				
21	AR1248-E				-----NA-----				
22	AR1248-F				-----NA-----				
23	AR1248-G				-----NA-----				
24	AR1254-A				-----NA-----				
25	AR1254-B				-----NA-----				
26	AR1254-C				-----NA-----				
27	AR1254-D				-----NA-----				
28	AR1254-E				-----NA-----				
29	AR1254-F				-----NA-----				
30	AR1254-G				-----NA-----				
31	AR1262-A				-----NA-----				
32	AR1262-B				-----NA-----				
33	AR1262-C				-----NA-----				
34	AR1262-D				-----NA-----				
35	AR1262-E				-----NA-----				
36	AR1268-A				-----NA-----				
37	AR1268-B				-----NA-----				
38	AR1268-C				-----NA-----				
39	AR1268-D				-----NA-----				
40	AR1268-E				-----NA-----				
41	AR1016-A	168.099	178.190	E3	-6.0	105	0.00	4.70-	4.76
42	AR1016-B	369.965	385.215	E3	-4.1	105	0.00	5.28-	5.34
43	AR1016-C	810.109	825.782	E3	-1.9	104	0.00	5.92-	5.98
44	AR1016-D	300.211	311.155	E3	-3.6	105	0.00	6.12-	6.18
45	AR1016-E	235.773	237.683	E3	-0.8	103	0.00	6.79-	6.85
46	AR1260-A	785.919	730.493	E3	7.1	95	0.00	9.42-	9.48
47	AR1260-B	504.288	476.416	E3	5.5	97	0.00	9.54-	9.60

8.9.37

8

Continuing Calibration Summary

Job Number: JC93827

Sample: GXX6789-CC6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2439267.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

48	AR1260-C	480.716	450.240	E3	6.3	96	0.00	9.98-10.04
49	AR1260-D	1.254	1.202	E6	4.1	96	0.00	10.33-10.39
50	AR1260-E	1.180	1.102	E6	6.6	95	0.00	10.88-10.94
51 S	Decachlorobiphenyl	8.460	8.123	E6	4.0	98	0.00	12.56-12.62

(#) = Out of Range
XX2438958.D PCB6782.M

SPCC's out = 0 CCC's out = 0
Fri Aug 30 09:21:35 2019

Continuing Calibration Summary

Job Number: JC93827 **Sample:** GXX6789-CC6782
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2439274.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6789\
 Data File : XX2439274.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30 Aug 2019 3:57 am
 Operator : tianweir
 Sample : cc6782-1000
 Misc : op22362,gxx6789,15.0,,,10,1
 ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Aug 30 09:24:00 2019
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6782.M
 Quant Title :
 QLast Update : Fri Aug 23 08:28:22 2019
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
 Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 S	Tetrachloro-m-xylene	18.059	17.276 E6	4.3	96	0.00
41	AR1016-A	379.112	352.556 E3	7.0	95	0.00
42	AR1016-B	679.879	627.837 E3	7.7	96	0.00
43	AR1016-C	1.555	1.419 E6	8.7	93	0.00
44	AR1016-D	585.477	553.876 E3	5.4	97	0.00
45	AR1016-E	595.729	561.878 E3	5.7	97	0.00
46	AR1260-A	1.385	1.337 E6	3.5	97	0.00
47	AR1260-B	715.219	688.196 E3	3.8	97	0.00
48	AR1260-C	809.929	770.352 E3	4.9	97	0.00
49	AR1260-D	1.900	1.856 E6	2.3	96	0.00
50	AR1260-E	2.032	1.904 E6	6.3	95	0.00
51 S	Decachlorobiphenyl	17.227	16.144 E6	6.3	96	0.00

Signal #2

1 S	Tetrachloro-m-xylene	9.636	10.273 E6	-6.6	107	0.00
41	AR1016-A	168.099	175.398 E3	-4.3	108	0.00
42	AR1016-B	369.965	386.231 E3	-4.4	108	0.00
43	AR1016-C	810.109	847.187 E3	-4.6	108	0.00
44	AR1016-D	300.211	316.414 E3	-5.4	109	0.00
45	AR1016-E	235.773	247.443 E3	-4.9	110	0.00
46	AR1260-A	785.919	839.557 E3	-6.8	111	0.00
47	AR1260-B	504.288	544.140 E3	-7.9	112	0.00
48	AR1260-C	480.716	516.296 E3	-7.4	112	0.00
49	AR1260-D	1.254	1.361 E6	-8.5	110	0.00
50	AR1260-E	1.180	1.224 E6	-3.7	108	0.00
51 S	Decachlorobiphenyl	8.460	8.724 E6	-3.1	110	0.00

Continuing Calibration Summary

Job Number: JC93827

Sample: GXX6789-CC6782

Account: NOREASCA NOREAS, Inc.

Lab FileID: XX2439274.D

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

PCB6782.M Fri Aug 30 09:24:26 2019

8.9.38

8

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: G1G4995	Method: SW846 8081B	Instrument ID: GC1G
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
G1G4995-DDT	1G154464.D	07/25/19 11:38	n/a	DDT/Endrin Breakdown Check
G1G4995-IC4995	1G154466.D	07/25/19 12:14	n/a	Initial cal 1
G1G4995-IC4995	1G154467.D	07/25/19 12:32	n/a	Initial cal 2
G1G4995-IC4995	1G154468.D	07/25/19 12:50	n/a	Initial cal 5
G1G4995-IC4995	1G154469.D	07/25/19 13:08	n/a	Initial cal 10
G1G4995-ICC4995	1G154470.D	07/25/19 13:26	n/a	Initial cal 25
G1G4995-IC4995	1G154471.D	07/25/19 13:44	n/a	Initial cal 50
G1G4995-IC4995	1G154472.D	07/25/19 14:03	n/a	Initial cal 75
G1G4995-IC4995	1G154473.D	07/25/19 14:21	n/a	Initial cal 100
G1G4995-IC4995	1G154474.D	07/25/19 14:39	n/a	Initial cal 500
G1G4995-IC4995	1G154475.D	07/25/19 14:57	n/a	Initial cal 500
G1G4995-ICV4995	1G154476.D	07/25/19 15:15	n/a	Initial cal verification 25
G1G4995-ICV4995	1G154477.D	07/25/19 15:33	n/a	Initial cal verification 500
G1G4995-ICV4995	1G154478.D	07/25/19 15:51	n/a	Initial cal verification 500
G1G4995-ICV4995	1G154479.D	07/25/19 16:09	n/a	Initial cal verification 50
G1G4995-ICV4995	1G154480.D	07/25/19 16:27	n/a	Initial cal verification 50

8.10.1
8

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: G1G5043	Method: SW846 8081B	Instrument ID: GC1G
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
G1G5043-DDT	1G155374.D	08/29/19 23:28	n/a	DDT/Endrin Breakdown Check
G1G5043-CC4995	1G155375.D	08/29/19 23:47	n/a	Continuing cal 50
OP22361-MB1	1G155377.D	08/30/19 00:33	OP22361	Method Blank
ZZZZZZ	1G155382.D	08/30/19 02:03	OP22361	(unrelated sample)
ZZZZZZ	1G155384.D	08/30/19 02:39	OP22361	(unrelated sample)
ZZZZZZ	1G155385.D	08/30/19 02:58	OP22361	(unrelated sample)
ZZZZZZ	1G155386.D	08/30/19 03:16	OP22361	(unrelated sample)
ZZZZZZ	1G155387.D	08/30/19 03:34	OP22361	(unrelated sample)
ZZZZZZ	1G155388.D	08/30/19 03:52	OP22361	(unrelated sample)
ZZZZZZ	1G155389.D	08/30/19 04:10	OP22361	(unrelated sample)
ZZZZZZ	1G155391.D	08/30/19 04:47	OP22361	(unrelated sample)
ZZZZZZ	1G155392.D	08/30/19 05:05	OP22361	(unrelated sample)
ZZZZZZ	1G155393.D	08/30/19 05:23	OP22361	(unrelated sample)

8.10.2
8

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: G1G5044	Method: SW846 8081B	Instrument ID: GC1G
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
G1G5044-DDT	1G155404.D	08/30/19 09:33	n/a	DDT/Endrin Breakdown Check
G1G5044-CC4995	1G155405.D	08/30/19 09:51	n/a	Continuing cal 50
ZZZZZZ	1G155409.D	08/30/19 11:07	OP22361	(unrelated sample)
ZZZZZZ	1G155411.D	08/30/19 11:44	OP22361	(unrelated sample)
ZZZZZZ	1G155412.D	08/30/19 12:02	OP22361	(unrelated sample)
ZZZZZZ	1G155413.D	08/30/19 12:31	OP22361	(unrelated sample)
ZZZZZZ	1G155414.D	08/30/19 12:49	OP22361	(unrelated sample)
ZZZZZZ	1G155415.D	08/30/19 13:07	OP22361	(unrelated sample)
G1G5044-CC4995	1G155416.D	08/30/19 14:56	n/a	Continuing cal 25
ZZZZZZ	1G155418.D	08/30/19 15:36	OP22361	(unrelated sample)
ZZZZZZ	1G155419.D	08/30/19 15:55	OP22361	(unrelated sample)
JC93548-1	1G155420.D	08/30/19 16:13	OP22361	(used for QC only; not part of job JC93827)
OP22361-MS	1G155421.D	08/30/19 16:31	OP22361	Matrix Spike
OP22361-MSD	1G155422.D	08/30/19 16:49	OP22361	Matrix Spike Duplicate

8.10.3
8

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: G6G2063	Method: EPA 608.3	Instrument ID: GC6G
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
G6G2063-DDT	6G66158.D	07/12/19 10:36	n/a	DDT/Endrin Breakdown Check
G6G2063-IC2063	6G66161.D	07/12/19 13:36	n/a	Initial cal 1
G6G2063-IC2063	6G66162.D	07/12/19 13:53	n/a	Initial cal 2
G6G2063-IC2063	6G66163.D	07/12/19 14:11	n/a	Initial cal 5
G6G2063-IC2063	6G66164.D	07/12/19 14:28	n/a	Initial cal 10
G6G2063-ICC2063	6G66165.D	07/12/19 14:46	n/a	Initial cal 25
G6G2063-IC2063	6G66166.D	07/12/19 15:03	n/a	Initial cal 50
G6G2063-IC2063	6G66167.D	07/12/19 15:23	n/a	Initial cal 75
G6G2063-IC2063	6G66168.D	07/12/19 15:40	n/a	Initial cal 100
G6G2063-IC2063	6G66169.D	07/12/19 15:58	n/a	Initial cal 500
G6G2063-IC2063	6G66170.D	07/12/19 16:15	n/a	Initial cal 500
G6G2063-ICV2063	6G66171.D	07/12/19 16:33	n/a	Initial cal verification 25
G6G2063-ICV2063	6G66172.D	07/12/19 16:50	n/a	Initial cal verification 500
G6G2063-ICV2063	6G66173.D	07/12/19 17:08	n/a	Initial cal verification 500
G6G2063-ICV2063	6G66174.D	07/12/19 17:25	n/a	Initial cal verification 50
G6G2063-ICV2063	6G66175.D	07/12/19 17:43	n/a	Initial cal verification 50

8.10.4
8

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: G6G2121	Method: SW846 8081B	Instrument ID: GC6G
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
G6G2121-DDT	6G67523.D	08/29/19 23:29	n/a	DDT/Endrin Breakdown Check
G6G2121-CC2063	6G67524.D	08/29/19 23:47	n/a	Continuing cal 25
G6G2121-CC2063	6G67525.D	08/30/19 00:11	n/a	Continuing cal 500
G6G2121-CC2063	6G67526.D	08/30/19 00:28	n/a	Continuing cal 500
JC93827-1	6G67533.D	08/30/19 02:44	OP22361	NWIRP-S1-WC-C-001
G6G2121-ECC2063	6G67535.D	08/30/19 04:13	n/a	Ending cal 50

8.10.5

8

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: G6G2122	Method: SW846 8081B	Instrument ID: GC6G
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
G6G2122-DDT	6G67537.D	08/30/19 08:57	n/a	DDT/Endrin Breakdown Check
G6G2122-CC2063	6G67538.D	08/30/19 09:14	n/a	Continuing cal 25
G6G2122-CC2063	6G67539.D	08/30/19 09:44	n/a	Continuing cal 500
G6G2122-CC2063	6G67540.D	08/30/19 10:01	n/a	Continuing cal 500
OP22361-MB1	6G67542.D	08/30/19 10:54	OP22361	Method Blank
OP22361-BS1	6G67543.D	08/30/19 11:11	OP22361	Blank Spike
JC93827-1	6G67547.D	08/30/19 12:21	OP22361	NWIRP-S1-WC-C-001
G6G2122-ECC2063	6G67548.D	08/30/19 13:08	n/a	Ending cal 50

8.10.6
8

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: GOA4909	Method: SW846 8151A	Instrument ID: GCOA
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GOA4909-IC4909	OA142073.D	08/29/19 15:53	n/a	Initial cal 50
GOA4909-IC4909	OA142074.D	08/29/19 16:22	n/a	Initial cal 100
GOA4909-IC4909	OA142075.D	08/29/19 16:50	n/a	Initial cal 200
GOA4909-ICC4909	OA142076.D	08/29/19 17:19	n/a	Initial cal 300
GOA4909-IC4909	OA142077.D	08/29/19 17:47	n/a	Initial cal 400
GOA4909-IC4909	OA142078.D	08/29/19 18:15	n/a	Initial cal 500
GOA4909-ICV4909	OA142079.D	08/29/19 18:44	n/a	Initial cal verification 300

8.10.7

8

Run Sequence Report

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: GOA4910	Method: SW846 8151A	Instrument ID: GCOA
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GOA4910-CC4909	OA142080.D	08/30/19 09:27	n/a	Continuing cal 200
OP22369-MB1	OA142082.D	08/30/19 10:24	OP22369	Method Blank
OP22369-BS1	OA142083.D	08/30/19 10:52	OP22369	Blank Spike
ZZZZZZ	OA142084.D	08/30/19 11:25	OP22407	(unrelated sample)
ZZZZZZ	OA142085.D	08/30/19 11:53	OP22407	(unrelated sample)
ZZZZZZ	OA142086.D	08/30/19 12:25	OP22407	(unrelated sample)
GOA4910-CC4909	OA142087.D	08/30/19 12:53	n/a	Continuing cal 300
JC93827-1	OA142089.D	08/30/19 13:50	OP22369	NWIRP-S1-WC-C-001
OP22369-MS	OA142090.D	08/30/19 14:19	OP22369	Matrix Spike
OP22369-MSD	OA142091.D	08/30/19 14:47	OP22369	Matrix Spike Duplicate
GOA4910-CC4909	OA142093.D	08/30/19 15:44	n/a	Continuing cal 200
OP22421-MB1	OA142095.D	08/30/19 16:41	OP22421	Method Blank
OP22421-BS1	OA142096.D	08/30/19 17:10	OP22421	Blank Spike
ZZZZZZ	OA142097.D	08/30/19 17:38	OP22421	(unrelated sample)
ZZZZZZ	OA142098.D	08/30/19 18:07	OP22421	(unrelated sample)
JC93897-1A	OA142099.D	08/30/19 18:35	OP22421	(used for QC only; not part of job JC93827)
OP22421-MS	OA142100.D	08/30/19 19:03	OP22421	Matrix Spike
OP22421-LS8	OA142100.D	08/30/19 19:03	OP22421	Leachate Spike
OP22421-MSD	OA142101.D	08/30/19 19:32	OP22421	Matrix Spike Duplicate
OP22421-LB16	OA142102.D	08/30/19 20:00	OP22421	Leachate Blank
GOA4910-CC4909	OA142103.D	08/30/19 20:29	n/a	Continuing cal 300
ZZZZZZ	OA142105.D	08/30/19 21:26	OP22421	(unrelated sample)
ZZZZZZ	OA142106.D	08/30/19 21:54	OP22421	(unrelated sample)
ZZZZZZ	OA142107.D	08/30/19 22:22	OP22421	(unrelated sample)
ZZZZZZ	OA142108.D	08/30/19 22:51	OP22421	(unrelated sample)
ZZZZZZ	OA142109.D	08/30/19 23:19	OP22421	(unrelated sample)
ZZZZZZ	OA142110.D	08/30/19 23:48	OP22421	(unrelated sample)
ZZZZZZ	OA142111.D	08/31/19 00:16	OP22421	(unrelated sample)
GOA4910-CC4909	OA142112.D	08/31/19 00:44	n/a	Continuing cal 200
ZZZZZZ	OA142114.D	08/31/19 01:41	OP22421	(unrelated sample)
ZZZZZZ	OA142115.D	08/31/19 02:10	OP22421	(unrelated sample)
ZZZZZZ	OA142116.D	08/31/19 02:38	OP22421	(unrelated sample)
ZZZZZZ	OA142117.D	08/31/19 03:06	OP22421	(unrelated sample)
GOA4910-CC4909	OA142118.D	08/31/19 03:34	n/a	Continuing cal 300

8.10.8
8

Run Sequence Report

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: GXX6782	Method: SW846 8082A	Instrument ID: GCXX
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GXX6782-IC6782	XX2438956.D	08/22/19 15:34	n/a	Initial cal 50
GXX6782-IC6782	XX2438957.D	08/22/19 15:53	n/a	Initial cal 250
GXX6782-IC6782	XX2438958.D	08/22/19 16:11	n/a	Initial cal 500
GXX6782-ICC6782	XX2438959.D	08/22/19 16:29	n/a	Initial cal 1000
GXX6782-IC6782	XX2438960.D	08/22/19 16:47	n/a	Initial cal 2000
GXX6782-IC6782	XX2438961.D	08/22/19 17:06	n/a	Initial cal 3000
GXX6782-IC6782	XX2438962.D	08/22/19 17:24	n/a	Initial cal 1000
GXX6782-IC6782	XX2438963.D	08/22/19 17:42	n/a	Initial cal 1000
GXX6782-IC6782	XX2438964.D	08/22/19 18:01	n/a	Initial cal 1000
GXX6782-IC6782	XX2438965.D	08/22/19 18:19	n/a	Initial cal 1000
GXX6782-ICV6782	XX2438966.D	08/22/19 18:37	n/a	Initial cal verification 1000
GXX6782-ICV6782	XX2438967.D	08/22/19 18:55	n/a	Initial cal verification 1000
GXX6782-ICV6782	XX2438968.D	08/22/19 19:14	n/a	Initial cal verification 1000
GXX6782-ICV6782	XX2438969.D	08/22/19 19:32	n/a	Initial cal verification 1000
GXX6782-ICV6782	XX2438970.D	08/22/19 19:50	n/a	Initial cal verification 1000

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Run Sequence Report

Job Number: JC93827
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Run ID: GXX6789	Method: SW846 8082A	Instrument ID: GCXX
------------------------	----------------------------	----------------------------

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GXX6789-CC6782	XX2439234.D	08/29/19 12:58	n/a	Continuing cal 1000
OP22362-MB1	XX2439236.D	08/29/19 16:24	OP22362	Method Blank
OP22362-BS1	XX2439237.D	08/29/19 16:43	OP22362	Blank Spike
JC93812-1	XX2439238.D	08/29/19 17:01	OP22362	(used for QC only; not part of job JC93827)
OP22362-MS	XX2439239.D	08/29/19 17:19	OP22362	Matrix Spike
OP22362-MSD	XX2439240.D	08/29/19 17:37	OP22362	Matrix Spike Duplicate
ZZZZZZ	XX2439241.D	08/29/19 17:56	OP22362	(unrelated sample)
ZZZZZZ	XX2439242.D	08/29/19 18:14	OP22362	(unrelated sample)
GXX6789-CC6782	XX2439245.D	08/29/19 19:09	n/a	Continuing cal 500
ZZZZZZ	XX2439247.D	08/29/19 19:45	OP22362	(unrelated sample)
ZZZZZZ	XX2439248.D	08/29/19 20:03	OP22362	(unrelated sample)
ZZZZZZ	XX2439249.D	08/29/19 20:22	OP22362	(unrelated sample)
ZZZZZZ	XX2439250.D	08/29/19 20:40	OP22362	(unrelated sample)
ZZZZZZ	XX2439251.D	08/29/19 20:58	OP22362	(unrelated sample)
ZZZZZZ	XX2439252.D	08/29/19 21:16	OP22362	(unrelated sample)
ZZZZZZ	XX2439253.D	08/29/19 21:34	OP22362	(unrelated sample)
GXX6789-CC6782	XX2439256.D	08/29/19 22:29	n/a	Continuing cal 1000
ZZZZZZ	XX2439260.D	08/29/19 23:42	OP22362	(unrelated sample)
ZZZZZZ	XX2439261.D	08/30/19 00:00	OP22362	(unrelated sample)
ZZZZZZ	XX2439262.D	08/30/19 00:19	OP22362	(unrelated sample)
ZZZZZZ	XX2439263.D	08/30/19 00:37	OP22362	(unrelated sample)
ZZZZZZ	XX2439264.D	08/30/19 00:55	OP22362	(unrelated sample)
GXX6789-CC6782	XX2439267.D	08/30/19 01:50	n/a	Continuing cal 500
JC93827-1	XX2439269.D	08/30/19 02:26	OP22362	NWIRP-S1-WC-C-001
ZZZZZZ	XX2439270.D	08/30/19 02:44	OP22362	(unrelated sample)
ZZZZZZ	XX2439271.D	08/30/19 03:02	OP22362	(unrelated sample)
GXX6789-CC6782	XX2439274.D	08/30/19 03:57	n/a	Continuing cal 1000
GXX6789-CC6782	XX2439276.D	08/30/19 09:36	n/a	Continuing cal 1000
ZZZZZZ	XX2439278.D	08/30/19 10:12	OP22362	(unrelated sample)
ZZZZZZ	XX2439279.D	08/30/19 10:30	OP22362	(unrelated sample)
GXX6789-CC6782	XX2439282.D	08/30/19 12:41	n/a	Continuing cal 500

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Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H7082919W1.CSV

Date Analyzed: 08/29/19

Methods: SW846 7470A

Analyst: LL

Run ID: MA47364

Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:26	MA47364-STD1	1		B=2.1235E-004, C=1.6125E-002, RHO=0.9998628
11:27	MA47364-STD2	1		STDB
11:29	MA47364-STD3	1		STDC
11:30	MA47364-STD4	1		STDD
11:32	MA47364-STD5	1		STDE
11:34	MA47364-STD6	1		STDF
11:38	MA47364-ICV1	1		
11:39	MA47364-ICB1	1		
11:41	MA47364-CCV1	1		
11:42	MA47364-CCB1	1		
11:44	MA47364-CRI1	1		
11:46	MA47364-CCV2	1		
11:48	MA47364-CCB2	1		
11:52	MP17073-MB1	1		
11:53	MP17073-B1	1		
11:54	MP17073-B2	1		
11:56	MP17073-S1	1		
11:58	MP17073-S2	1		
12:00	JC93989-6F	1		(sample used for QC only; not part of login JC93827)
12:02	ZZZZZZ	1		
12:03	ZZZZZZ	1		
12:05	ZZZZZZ	1		
12:06	MA47364-CCV3	1		
12:07	MA47364-CCB3	1		
12:09	ZZZZZZ	1		
12:11	MP17075-MB1	1		
12:12	MP17075-B1	1		
12:13	MP17075-S1	1		
12:15	MP17075-S2	1		
12:17	JC93827-1A	1		
----->	Last reportable sample/prep for job JC93827			
12:19	MP17077-MB1	1		
12:21	MA47364-CCV4	1		
12:22	MA47364-CCB4	1		
----->	Last reportable CCB for job JC93827			

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H7082919W1.CSV

Date Analyzed: 08/29/19

Methods: SW846 7470A

Analyst: LL

Run ID: MA47364

Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:24	MP17077-B1	1		
12:25	MP17077-S1	1		
12:27	MP17077-S2	1		
12:29	JC93735-5A	1		(sample used for QC only; not part of login JC93827)
12:31	ZZZZZZ	1		
12:32	ZZZZZZ	1		
12:34	MP17078-MB1	1		
12:35	MA47364-CCV5	1		
12:36	MA47364-CCB5	1		
12:38	MP17078-B1	1		
12:40	MP17078-S1	1		
12:42	MP17078-S2	1		
12:44	JC93797-1	1		(sample used for QC only; not part of login JC93827)
12:46	MP17079-MB1	1		
12:48	MA47364-CCV6	1		
12:49	MA47364-CCB6	1		
12:51	MP17079-B1	1		
12:53	MP17079-S1	1		
12:55	MP17079-S2	1		
12:56	JC93881-1	1		(sample used for QC only; not part of login JC93827)
12:58	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:06	MA47364-CCV7	1		
13:07	MA47364-CCB7	1		

Refer to raw data for calibration curve and standards.

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REPORTED ELEMENTS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H7082919W1.CSV

Date Analyzed: 08/29/19

Methods: SW846 7470A

Analyst: LL

Run ID: MA47364

Parameters: Hg

Time	Sample Description	Element:	H Dilution	g
11:38	MA47364-ICV1	1	X	
11:39	MA47364-ICB1	1	X	
11:41	MA47364-CCV1	1	X	
11:42	MA47364-CCB1	1	X	
11:44	MA47364-CRI1	1	X	
11:46	MA47364-CCV2	1	X	
11:48	MA47364-CCB2	1	X	
11:52	MP17073-MB1	1		
11:53	MP17073-B1	1		
11:54	MP17073-B2	1		
11:56	MP17073-S1	1		
11:58	MP17073-S2	1		
12:00	JC93989-6F	1		
12:02	ZZZZZZ	1		
12:03	ZZZZZZ	1		
12:05	ZZZZZZ	1		
12:06	MA47364-CCV3	1	X	
12:07	MA47364-CCB3	1	X	
12:09	ZZZZZZ	1		
12:11	MP17075-MB1	1	X	
12:12	MP17075-B1	1	X	
12:13	MP17075-S1	1	X	
12:15	MP17075-S2	1	X	
12:17	JC93827-1A	1	X	
12:19	MP17077-MB1	1	X	
12:21	MA47364-CCV4	1	X	
12:22	MA47364-CCB4	1	X	
12:24	MP17077-B1	1	X	
12:25	MP17077-S1	1	X	
12:27	MP17077-S2	1	X	
12:29	JC93735-5A	1	X (a)	
12:31	ZZZZZZ	1		
12:32	ZZZZZZ	1		
		Element:	H	
			g	

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REPORTED ELEMENTS SUMMARY

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H7082919W1.CSV Date Analyzed: 08/29/19 Methods: SW846 7470A
 Analyst: LL Run ID: MA47364
 Parameters: Hg

Time	Sample Description	Element:	H Dilution	g
12:34	MP17078-MB1	1	X	
12:35	MA47364-CCV5	1	X	
12:36	MA47364-CCB5	1	X	
12:38	MP17078-B1	1	X	
12:40	MP17078-S1	1	X	
12:42	MP17078-S2	1	X	
12:44	JC93797-1	1	X (a)	
12:46	MP17079-MB1	1	X	
12:48	MA47364-CCV6	1	X	
12:49	MA47364-CCB6	1	X	
12:51	MP17079-B1	1	X	
12:53	MP17079-S1	1	X	
12:55	MP17079-S2	1	X	
12:56	JC93881-1	1	X (a)	
12:58	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:06	MA47364-CCV7	1	X	
13:07	MA47364-CCB7	1	X	

(a) Sample used for QC only; not part of login JC93827.

Element: H
g

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BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H7082919W1.CSV Date Analyzed: 08/29/19 Methods: SW846 7470A
 QC Limits: result < RL Run ID: MA47364 Units: ug/l

Time:			11:39		11:42		11:48		12:07	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.024	-0.0508	<0.20	-0.0210	<0.20	-0.0257	<0.20	-0.0136	<0.20

(*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC93827
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H7082919W1.CSV Date Analyzed: 08/29/19 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA47364 Units: ug/l

Time:			12:22	
Sample ID:			CCB4	
Metal	RL	IDL	raw	final

Mercury 0.20 .024 -0.0340 <0.20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H7082919W1.CSV

Date Analyzed: 08/29/19

Methods: SW846 7470A

QC Limits: 90 to 110 % Recovery

Run ID: MA47364

Units: ug/l

	Time:		11:38		11:41		11:46		
Sample ID:	ICV	ICV1	ICV1	CCV	CCV1	CCV	CCV2	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.92	97.3	2.5	2.71	108.4	2.5	2.62	104.8

(*) Outside of QC limits

(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H7082919W1.CSV

Date Analyzed: 08/29/19

Methods: SW846 7470A

QC Limits: 90 to 110 % Recovery

Run ID: MA47364

Units: ug/l

	Time:						
	Sample ID:	CCV	12:06 CCV3	CCV	12:21 CCV4	CCV	CCV4
Metal	True	Results	% Rec	True	Results	% Rec	
Mercury	2.5	2.52	100.8	2.5	2.52	100.8	

(*) Outside of QC limits

(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H7082919W1.CSV

Date Analyzed: 08/29/19

Methods: SW846 7470A

QC Limits: 70 to 130 % Recovery

Run ID: MA47364

Units: ug/l

Time:			11:44	
Sample ID:	CRI	CRIA	CRI1	
Metal	True	True	Results	% Rec

Mercury 0.20 0.184 92.0

(*) Outside of QC limits
 (anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP

Date Analyzed: 08/29/19

Methods: EPA 200.7, SW846 6010D

Analyst: GT

Run ID: MA47366

Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:29	MA47366-STD1	1		STDA
11:34	MA47366-STD2	1		STDB
11:40	ZZZZZZ	1		
11:45	ZZZZZZ	1		
11:50	ZZZZZZ	1		
11:55	MA47366-ICV1	1		
12:00	MA47366-ICB1	1		
12:06	MA47366-CCV1	1		
12:10	MA47366-CCB1	1		
12:16	MA47366-CRID1	1		
12:21	MA47366-CRI1	1		
12:26	MA47366-ICSA1	1		
12:31	MA47366-ICSAB1	1		
12:36	MA47366-HSTD1	1		
12:42	MA47366-HSTD2	1		
12:48	ZZZZZZ	1		
12:53	ZZZZZZ	1		
12:58	ZZZZZZ	1		
13:03	MA47366-CCV2	1		
13:08	MA47366-CCB2	1		
13:13	MP17013-MB1	1		
13:18	MP17013-B1	1		
13:23	ZZZZZZ	1		
13:28	ZZZZZZ	1		
13:33	MA47366-CRID2	1		
13:38	MP17045-MB1	1		
13:43	MP17045-B1	1		
13:48	ZZZZZZ	1		
13:53	ZZZZZZ	1		
13:58	MA47366-CCV3	1		
14:04	MA47366-CCB3	1		
14:09	ZZZZZZ	1		
14:14	ZZZZZZ	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP

Date Analyzed: 08/29/19

Methods: EPA 200.7, SW846 6010D

Analyst: GT

Run ID: MA47366

Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:19	MP17060-MB1	5		
14:24	MP17060-B1	5		
14:29	MP17060-S1	5		
14:34	MP17060-S2	5		
14:39	JC93827-1A	5		
14:44	MP17060-SD1	25		
14:49	MP17060-PS1	5		
----->	Last reportable sample/prep for job JC93827			
14:54	MA47366-CCV4	1		
14:59	MA47366-CCB4	1		
----->	Last reportable CCB for job JC93827			
15:05	MP17054-MB1	1		
15:10	MP17054-B1	1		
15:14	MP17054-S1	1		
15:19	MP17054-S2	1		
15:24	JC93931-8	1		(sample used for QC only; not part of login JC93827)
15:29	MP17054-SD1	5		
15:34	MP17054-PS1	1		
15:40	ZZZZZZ	1		
15:44	ZZZZZZ	1		
15:49	MA47366-CCV5	1		
15:54	MA47366-CCB5	1		
15:59	ZZZZZZ	1		
16:04	ZZZZZZ	1		
16:09	ZZZZZZ	1		
16:14	ZZZZZZ	1		
16:19	ZZZZZZ	1		
16:24	ZZZZZZ	1		
16:29	ZZZZZZ	1		
16:34	ZZZZZZ	1		
16:39	ZZZZZZ	1		
16:44	ZZZZZZ	1		
16:49	MA47366-CCV6	1		
16:54	MA47366-CCB6	1		
16:59	ZZZZZZ	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP

Date Analyzed: 08/29/19

Methods: EPA 200.7, SW846 6010D

Analyst: GT

Run ID: MA47366

Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:04	ZZZZZZ	1		
17:09	ZZZZZZ	1		
17:14	ZZZZZZ	1		
17:19	ZZZZZZ	1		
17:24	ZZZZZZ	1		
17:30	ZZZZZZ	1		
17:35	ZZZZZZ	1		
17:39	ZZZZZZ	1		
17:44	ZZZZZZ	1		
17:49	MA47366-CCV7	1		
17:54	MA47366-CCB7	1		
17:59	ZZZZZZ	1		
18:04	ZZZZZZ	1		
18:09	MP17055-MB1	1		
18:14	MP17055-B1	1		
18:19	MP17055-S1	1		
18:24	MP17055-S2	1		
18:29	JC93931-22	1		(sample used for QC only; not part of login JC93827)
18:34	MP17055-SD1	5		
18:39	MP17055-PS1	1		
18:44	ZZZZZZ	1		
18:49	MA47366-CCV8	1		
18:54	MA47366-CCB8	1		
18:59	ZZZZZZ	1		
19:04	ZZZZZZ	1		
19:09	ZZZZZZ	1		
19:14	ZZZZZZ	1		
19:19	ZZZZZZ	1		
19:24	ZZZZZZ	1		
19:28	ZZZZZZ	1		
19:33	ZZZZZZ	1		
19:38	ZZZZZZ	1		
19:43	MA47366-CCV9	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP

Date Analyzed: 08/29/19

Methods: EPA 200.7, SW846 6010D

Analyst: GT

Run ID: MA47366

Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:48	MA47366-CCB9	1		
19:53	MP17056-MB1	1		
19:58	MP17056-B1	1		
20:03	MP17056-S1	1		
20:08	MP17056-S2	1		
20:13	JC93934-13	1		(sample used for QC only; not part of login JC93827)
20:18	MP17056-SD1	5		
20:23	MP17056-PS1	1		
20:28	ZZZZZZ	1		
20:33	ZZZZZZ	1		
20:38	ZZZZZZ	1		
20:43	MA47366-CCV10	1		
20:48	MA47366-CCB10	1		
20:53	ZZZZZZ	1		
20:58	ZZZZZZ	1		
21:03	ZZZZZZ	1		
21:08	ZZZZZZ	1		
21:13	ZZZZZZ	1		
21:18	ZZZZZZ	1		
21:23	ZZZZZZ	1		
21:28	ZZZZZZ	1		
21:33	ZZZZZZ	1		
21:38	ZZZZZZ	1		
21:43	MA47366-CCV11	1		
21:48	MA47366-CCB11	1		
21:53	ZZZZZZ	1		
21:58	ZZZZZZ	1		
22:03	ZZZZZZ	1		
22:08	ZZZZZZ	1		
22:13	ZZZZZZ	1		
22:17	ZZZZZZ	1		
22:22	ZZZZZZ	1		
22:27	ZZZZZZ	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP

Date Analyzed: 08/29/19

Methods: EPA 200.7, SW846 6010D

Analyst: GT

Run ID: MA47366

Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:32	MA47366-CCV12	1		
22:37	MA47366-CCB12	1		
22:42	MP17061-MB1	1		
22:47	MP17061-B1	1		
22:52	MP17061-S1	1		
22:58	MP17061-S2	1		
23:03	JC93934-33	1		(sample used for QC only; not part of login JC93827)
23:07	MP17061-SD1	5		
23:12	MP17061-PS1	1		empty
23:17	ZZZZZZ	1		
23:22	ZZZZZZ	1		
23:27	ZZZZZZ	1		
23:32	MA47366-CCV13	1		
23:37	MA47366-CCB13	1		
23:42	ZZZZZZ	1		
23:47	ZZZZZZ	1		
23:52	ZZZZZZ	1		
23:57	ZZZZZZ	1		
00:02	ZZZZZZ	1		
00:07	ZZZZZZ	1		
00:12	ZZZZZZ	1		
00:17	ZZZZZZ	1		
00:22	ZZZZZZ	1		
00:27	MA47366-CCV14	1		
00:32	MA47366-CCB14	1		
00:37	ZZZZZZ	1		
00:42	ZZZZZZ	1		
00:47	ZZZZZZ	1		
00:52	ZZZZZZ	1		
00:57	MA47366-CCV15	1		
01:02	MA47366-CCB15	1		
07:05	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

9.2
9

REPORTED ELEMENTS SUMMARY

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
 Analyst: GT Run ID: MA47366
 Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Element: Dilution	A s	B a	C d	C r	P b	S e	A g
11:40	ZZZZZZ	1							
11:45	ZZZZZZ	1							
11:50	ZZZZZZ	1							
11:55	MA47366-ICV1	1	X	X	X	X	X	X	X
12:00	MA47366-ICB1	1	X	X	X	X	X	X	X
12:06	MA47366-CCV1	1	X	X	X	X	X	X	X
12:10	MA47366-CCB1	1	X	X	X	X	X	X	X
12:16	MA47366-CRID1	1	X	X	X	X	X	X	X
12:21	MA47366-CRI1	1	X	X	X	X	X	X	X
12:26	MA47366-ICSA1	1	X	X	X	X	X	X	X
12:31	MA47366-ICSAB1	1	X	X	X	X	X	X	X
12:36	MA47366-HSTD1	1	X	X	X	X	X	X	X
12:42	MA47366-HSTD2	1	X	X	X	X	X	X	X
12:48	ZZZZZZ	1							
12:53	ZZZZZZ	1							
12:58	ZZZZZZ	1							
13:03	MA47366-CCV2	1	X	X	X	X	X	X	X
13:08	MA47366-CCB2	1	X	X	X	X	X	X	X
13:13	MP17013-MB1	1					X		
13:18	MP17013-B1	1					X		
13:23	ZZZZZZ	1							
13:28	ZZZZZZ	1							
13:33	MA47366-CRID2	1	X	X	X	X	X	X	X
13:38	MP17045-MB1	1					X		
13:43	MP17045-B1	1					X		
13:48	ZZZZZZ	1							
13:53	ZZZZZZ	1							
13:58	MA47366-CCV3	1	X	X	X	X	X	X	X
14:04	MA47366-CCB3	1	X	X	X	X	X	X	X
14:09	ZZZZZZ	1							
14:14	ZZZZZZ	1							
14:19	MP17060-MB1	5	X	X	X	X	X	X	X
14:24	MP17060-B1	5	X	X	X	X	X	X	X

Element: A B C P S A
 s a d r b e g

REPORTED ELEMENTS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP

Date Analyzed: 08/29/19

Methods: EPA 200.7, SW846 6010D

Analyst: GT

Run ID: MA47366

Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Element: Dilution	A s	B a	C d	C r	P b	S e	A g
14:29	MP17060-S1	5	X	X	X	X	X	X	X
14:34	MP17060-S2	5	X	X	X	X	X	X	X
14:39	JC93827-1A	5	X	X	X	X	X	X	X
14:44	MP17060-SD1	25	X	X	X	X	X	X	X
14:49	MP17060-PS1	5							
14:54	MA47366-CCV4	1	X	X	X	X	X	X	X
14:59	MA47366-CCB4	1	X	X	X	X	X	X	X
15:05	MP17054-MB1	1					X		
15:10	MP17054-B1	1					X		
15:14	MP17054-S1	1					X		
15:19	MP17054-S2	1					X		
15:24	JC93931-8	1					X	(a)	
15:29	MP17054-SD1	5					X		
15:34	MP17054-PS1	1					X		
15:40	ZZZZZZ	1							
15:44	ZZZZZZ	1							
15:49	MA47366-CCV5	1	X	X	X	X	X	X	X
15:54	MA47366-CCB5	1	X	X	X	X	X	X	X
15:59	ZZZZZZ	1							
16:04	ZZZZZZ	1							
16:09	ZZZZZZ	1							
16:14	ZZZZZZ	1							
16:19	ZZZZZZ	1							
16:24	ZZZZZZ	1							
16:29	ZZZZZZ	1							
16:34	ZZZZZZ	1							
16:39	ZZZZZZ	1							
16:44	ZZZZZZ	1							
16:49	MA47366-CCV6	1	X	X	X	X	X	X	X
16:54	MA47366-CCB6	1	X	X	X	X	X	X	X
16:59	ZZZZZZ	1							
17:04	ZZZZZZ	1							
17:09	ZZZZZZ	1							

Element: A B C P S A
s a d r b e g

9.2.1
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REPORTED ELEMENTS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP

Date Analyzed: 08/29/19

Methods: EPA 200.7, SW846 6010D

Analyst: GT

Run ID: MA47366

Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Element: Dilution	A	B	C	C	P	S	A
			s	a	d	r	b	e	g
17:14	ZZZZZZ	1							
17:19	ZZZZZZ	1							
17:24	ZZZZZZ	1							
17:30	ZZZZZZ	1							
17:35	ZZZZZZ	1							
17:39	ZZZZZZ	1							
17:44	ZZZZZZ	1							
17:49	MA47366-CCV7	1	X	X	X	X	X	X	X
17:54	MA47366-CCB7	1	X	X	X	X	X	X	X
17:59	ZZZZZZ	1							
18:04	ZZZZZZ	1							
18:09	MP17055-MB1	1					X		
18:14	MP17055-B1	1					X		
18:19	MP17055-S1	1					X		
18:24	MP17055-S2	1					X		
18:29	JC93931-22	1					X	(a)	
18:34	MP17055-SD1	5					X		
18:39	MP17055-PS1	1					X		
18:44	ZZZZZZ	1							
18:49	MA47366-CCV8	1	X	X	X	X	X	X	X
18:54	MA47366-CCB8	1	X	X	X	X	X	X	X
18:59	ZZZZZZ	1							
19:04	ZZZZZZ	1							
19:09	ZZZZZZ	1							
19:14	ZZZZZZ	1							
19:19	ZZZZZZ	1							
19:24	ZZZZZZ	1							
19:28	ZZZZZZ	1							
19:33	ZZZZZZ	1							
19:38	ZZZZZZ	1							
19:43	MA47366-CCV9	1	X	X	X	X	X	X	X
19:48	MA47366-CCB9	1	X	X	X	X	X	X	X
19:53	MP17056-MB1	1					X		

Element: A B C C P S A
s a d r b e g

9.2.1
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REPORTED ELEMENTS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP

Date Analyzed: 08/29/19

Methods: EPA 200.7, SW846 6010D

Analyst: GT

Run ID: MA47366

Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Element: Dilution	A	B	C	C	P	S	A
			s	a	d	r	b	e	g
19:58	MP17056-B1	1					X		
20:03	MP17056-S1	1					X		
20:08	MP17056-S2	1					X		
20:13	JC93934-13	1					X	(a)	
20:18	MP17056-SD1	5					X		
20:23	MP17056-PS1	1					X		
20:28	ZZZZZZ	1							
20:33	ZZZZZZ	1							
20:38	ZZZZZZ	1							
20:43	MA47366-CCV10	1	X	X	X	X	X	X	X
20:48	MA47366-CCB10	1	X	X	X	X	X	X	X
20:53	ZZZZZZ	1							
20:58	ZZZZZZ	1							
21:03	ZZZZZZ	1							
21:08	ZZZZZZ	1							
21:13	ZZZZZZ	1							
21:18	ZZZZZZ	1							
21:23	ZZZZZZ	1							
21:28	ZZZZZZ	1							
21:33	ZZZZZZ	1							
21:38	ZZZZZZ	1							
21:43	MA47366-CCV11	1	X	X	X	X	X	X	X
21:48	MA47366-CCB11	1	X	X	X	X	X	X	X
21:53	ZZZZZZ	1							
21:58	ZZZZZZ	1							
22:03	ZZZZZZ	1							
22:08	ZZZZZZ	1							
22:13	ZZZZZZ	1							
22:17	ZZZZZZ	1							
22:22	ZZZZZZ	1							
22:27	ZZZZZZ	1							
22:32	MA47366-CCV12	1	X	X	X	X	X	X	X
22:37	MA47366-CCB12	1	X	X	X	X	X	X	X

Element: A B C C P S A
s a d r b e g

9.2.1
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REPORTED ELEMENTS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP

Date Analyzed: 08/29/19

Methods: EPA 200.7, SW846 6010D

Analyst: GT

Run ID: MA47366

Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Element: Dilution	A	B	C	C	P	S	A
			s	a	d	r	b	e	g
22:42	MP17061-MB1	1					X		
22:47	MP17061-B1	1					X		
22:52	MP17061-S1	1					X		
22:58	MP17061-S2	1					X		
23:03	JC93934-33	1					X	(a)	
23:07	MP17061-SD1	5					X		
23:12	MP17061-PS1	1			empty				
23:17	ZZZZZZ	1							
23:22	ZZZZZZ	1							
23:27	ZZZZZZ	1							
23:32	MA47366-CCV13	1	X	X	X	X	X	X	X
23:37	MA47366-CCB13	1	X	X	X	X	X	X	X
23:42	ZZZZZZ	1							
23:47	ZZZZZZ	1							
23:52	ZZZZZZ	1							
23:57	ZZZZZZ	1							
00:02	ZZZZZZ	1							
00:07	ZZZZZZ	1							
00:12	ZZZZZZ	1							
00:17	ZZZZZZ	1							
00:22	ZZZZZZ	1							
00:27	MA47366-CCV14	1	X	X	X	X	X	X	X
00:32	MA47366-CCB14	1	X	X	X	X	X	X	X
00:37	ZZZZZZ	1							
00:42	ZZZZZZ	1							
00:47	ZZZZZZ	1							
00:52	ZZZZZZ	1							
00:57	MA47366-CCV15	1	X	X	X	X	X	X	X
01:02	MA47366-CCB15	1	X	X	X	X	X	X	X
07:05	ZZZZZZ	1							

(a) Sample used for QC only; not part of login JC93827.

Element: A B C C P S A
s a d r b e g

9.2.1
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INTERNAL STANDARD SUMMARY

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
 Analyst: GT Run ID: MA47366
 Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:29	MA47366-STD1	11754 R	246370 R	36846 R	15746 R
11:34	MA47366-STD2	11078	229550	36147	14059
11:40	ZZZZZZ	11329	234020	36686	14440
11:45	ZZZZZZ	11695	245610	37209	15651
11:50	ZZZZZZ	999999 !	409620 !	999999 !	999999 !
11:55	MA47366-ICV1	11302	232520	36043	14395
12:00	MA47366-ICB1	11568	243000	35949	15517
12:06	MA47366-CCV1	11359	231750	36560	14490
12:10	MA47366-CCB1	11697	242440	37065	15655
12:16	MA47366-CRID1	11625	243490	37468	15532
12:21	MA47366-CRI1	11535	242460	36997	15294
12:26	MA47366-ICSA1	10482	212450	35192	12896
12:31	MA47366-ICSAB1	10621	216930	35565	13090
12:36	MA47366-HSTD1	11405	240850	36896	15315
12:42	MA47366-HSTD2	10653	218530	35287	13090
12:48	ZZZZZZ	11616	243150	37089	15747
12:53	ZZZZZZ	11516	243840	36790	15657
12:58	ZZZZZZ	11789	246530	37114	15751
13:03	MA47366-CCV2	11335	234360	36005	14425
13:08	MA47366-CCB2	11649	240830	36707	15584
13:13	MP17013-MB1	11707	246880	37377	15658
13:18	MP17013-B1	11366	239160	36628	14613
13:23	ZZZZZZ	11806	248180	37449	15778
13:28	ZZZZZZ	11831	249770	37411	15792
13:33	MA47366-CRID2	11614	243240	36509	15489
13:38	MP17045-MB1	11725	246270	36884	15648
13:43	MP17045-B1	11464	237050	36760	14708
13:48	ZZZZZZ	11687	249630	37301	15605
13:53	ZZZZZZ	11636	246250	36884	15551
13:58	MA47366-CCV3	11257	233270	35798	14298
14:04	MA47366-CCB3	11580	243320	36418	15452
14:09	ZZZZZZ	11711	248080	37029	15599
14:14	ZZZZZZ	11622	245450	36664	15493

9.2.2
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INTERNAL STANDARD SUMMARY

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
 Analyst: GT Run ID: MA47366
 Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
14:19	MP17060-MB1	11043	225270	35713	13895
14:24	MP17060-B1	11009	226480	35970	13595
14:29	MP17060-S1	10707	219870	35052	13316
14:34	MP17060-S2	10779	222740	35611	13399
14:39	JC93827-1A	10719	220460	35360	13384
14:44	MP17060-SD1	11257	233580	35566	14545
14:49	MP17060-PS1	10798	224910	35300	13437
14:54	MA47366-CCV4	11126	228700	35459	14128
14:59	MA47366-CCB4	11546	243350	35873	15389
15:05	MP17054-MB1	11694	245450	36754	15588
15:10	MP17054-B1	11349	237710	36334	14578
15:14	MP17054-S1	11459	235860	36727	14322
15:19	MP17054-S2	11432	233520	36343	14241
15:24	JC93931-8	11783	242530	36817	15129
15:29	MP17054-SD1	11702	239840	36360	15374
15:34	MP17054-PS1	11379	234640	36404	14432
15:40	ZZZZZZ	11678	244800	37041	15078
15:44	ZZZZZZ	11532	239630	36367	14817
15:49	MA47366-CCV5	11079	227360	35042	14068
15:54	MA47366-CCB5	11524	240670	35814	15380
15:59	ZZZZZZ	11567	242750	36748	14893
16:04	ZZZZZZ	11571	239800	36229	14865
16:09	ZZZZZZ	11589	240840	36253	14901
16:14	ZZZZZZ	11708	241930	37027	14906
16:19	ZZZZZZ	11786	243120	37038	15119
16:24	ZZZZZZ	11778	244980	37032	15029
16:29	ZZZZZZ	11588	242270	36609	15302
16:34	ZZZZZZ	11533	239220	36537	14947
16:39	ZZZZZZ	11483	239430	36502	14912
16:44	ZZZZZZ	11461	236320	35945	14859
16:49	MA47366-CCV6	11001	227000	34840	14031
16:54	MA47366-CCB6	11446	240470	35608	15326
16:59	ZZZZZZ	11545	240130	35863	15382

9.2.2
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INTERNAL STANDARD SUMMARY

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
 Analyst: GT Run ID: MA47366
 Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:04	ZZZZZZ	11461	240370	35925	15264
17:09	ZZZZZZ	11507	244600	36165	15416
17:14	ZZZZZZ	11812	231030	36446	14142
17:19	ZZZZZZ	10667	221240	34168	13549
17:24	ZZZZZZ	11481	245680	35892	15308
17:30	ZZZZZZ	11494	236940	36497	14812
17:35	ZZZZZZ	11682	229950	35838	15209
17:39	ZZZZZZ	11546	240320	36420	14989
17:44	ZZZZZZ	11594	240000	36119	15011
17:49	MA47366-CCV7	11008	228770	34926	14020
17:54	MA47366-CCB7	11362	237230	35472	15182
17:59	ZZZZZZ	11654	244930	36820	15084
18:04	ZZZZZZ	11640	238870	36867	14968
18:09	MP17055-MB1	11529	242710	36570	15408
18:14	MP17055-B1	11141	230120	35054	14355
18:19	MP17055-S1	11241	232610	35776	14349
18:24	MP17055-S2	11338	234610	36369	14396
18:29	JC93931-22	11650	241940	36392	15091
18:34	MP17055-SD1	11453	239340	36364	15116
18:39	MP17055-PS1	11381	235460	36383	14500
18:44	ZZZZZZ	11627	241460	36805	14881
18:49	MA47366-CCV8	10983	226690	34799	14016
18:54	MA47366-CCB8	11473	241180	35788	15333
18:59	ZZZZZZ	11649	240260	36431	15119
19:04	ZZZZZZ	11638	243520	36684	15081
19:09	ZZZZZZ	11649	238760	36600	14783
19:14	ZZZZZZ	11643	242130	36892	14982
19:19	ZZZZZZ	11635	240490	36418	15084
19:24	ZZZZZZ	11631	240960	36708	14982
19:28	ZZZZZZ	11678	241310	36971	15030
19:33	ZZZZZZ	11626	236510	36756	15078
19:38	ZZZZZZ	11478	238760	36689	14969
19:43	MA47366-CCV9	10943	227290	34871	13994

9.2.2
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INTERNAL STANDARD SUMMARY

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
 File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
 Analyst: GT Run ID: MA47366
 Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
19:48	MA47366-CCB9	11519	239630	35742	15417
19:53	MP17056-MB1	11552	241960	35867	15484
19:58	MP17056-B1	11206	232750	35664	14465
20:03	MP17056-S1	11321	231920	35645	14374
20:08	MP17056-S2	11340	235260	36012	14381
20:13	JC93934-13	11583	238250	36194	14952
20:18	MP17056-SD1	11547	239810	35742	15234
20:23	MP17056-PS1	11363	231530	35969	14450
20:28	ZZZZZZ	11608	241260	36560	15024
20:33	ZZZZZZ	11684	237140	36397	15126
20:38	ZZZZZZ	No results reported for the elements associated with this internal standard.			
20:43	MA47366-CCV10	10935	227680	34674	13989
20:48	MA47366-CCB10	11343	234090	35147	15230
20:53	ZZZZZZ	11680	237300	36918	14873
20:58	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:03	ZZZZZZ	11652	237000	36119	14828
21:08	ZZZZZZ	11644	237640	36341	14791
21:13	ZZZZZZ	11882	241490	37254	14712
21:18	ZZZZZZ	11710	239980	36580	15114
21:23	ZZZZZZ	11523	237240	35897	14947
21:28	ZZZZZZ	11708	240160	36100	15151
21:33	ZZZZZZ	11523	237220	36119	14848
21:38	ZZZZZZ	11629	239080	36004	14962
21:43	MA47366-CCV11	11034	226620	34443	14099
21:48	MA47366-CCB11	11528	237450	35006	15432
21:53	ZZZZZZ	11535	240930	35728	15597
21:58	ZZZZZZ	11634	243570	36575	15750
22:03	ZZZZZZ	11651	240410	36382	15182
22:08	ZZZZZZ	11498	239970	36159	14925
22:13	ZZZZZZ	No results reported for the elements associated with this internal standard.			
22:17	ZZZZZZ	11607	235560	35670	15045
22:22	ZZZZZZ	No results reported for the elements associated with this internal standard.			
22:27	ZZZZZZ	No results reported for the elements associated with this internal standard.			

9.2.2
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INTERNAL STANDARD SUMMARY

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
 Analyst: GT Run ID: MA47366
 Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:32	MA47366-CCV12	11039	224470	34756	14134
22:37	MA47366-CCB12	11433	236280	35323	15362
22:42	MP17061-MB1	11480	239180	36021	15438
22:47	MP17061-B1	11201	229970	35551	14526
22:52	MP17061-S1	11286	232190	36042	14404
22:58	MP17061-S2	11213	227960	35678	14346
23:03	JC93934-33	11543	238290	36236	15045
23:07	MP17061-SD1	11526	240790	36121	15279
23:12	MP17061-PS1	No results reported for the elements associated with this internal standard.			
23:17	ZZZZZ	11566	238400	36364	15037
23:22	ZZZZZ	No results reported for the elements associated with this internal standard.			
23:27	ZZZZZ	11699	239400	36450	15198
23:32	MA47366-CCV13	11163	230780	35055	14317
23:37	MA47366-CCB13	11353	235460	36247	15293
23:42	ZZZZZ	11444	239140	35567	14940
23:47	ZZZZZ	11498	238640	35964	15121
23:52	ZZZZZ	11583	237810	36289	15138
23:57	ZZZZZ	11561	239640	36439	14979
00:02	ZZZZZ	11732	239090	36627	15234
00:07	ZZZZZ	11615	239570	36406	15153
00:12	ZZZZZ	11743	236040	36873	14926
00:17	ZZZZZ	No results reported for the elements associated with this internal standard.			
00:22	ZZZZZ	11504	235490	35934	15078
00:27	MA47366-CCV14	11047	229340	35065	14195
00:32	MA47366-CCB14	11477	238870	35639	15450
00:37	ZZZZZ	11572	236620	36720	15144
00:42	ZZZZZ	11628	238590	36710	15119
00:47	ZZZZZ	11649	239300	36417	15210
00:52	ZZZZZ	11679	243630	36777	15239
00:57	MA47366-CCV15	11118	230190	35244	14280
01:02	MA47366-CCB15	11559	242090	36215	15577
07:05	ZZZZZ	10417	219180	41022	13519

R = Reference for ISTD limits. ! = Outside limits.

9.2.2
9

INTERNAL STANDARD SUMMARY

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
 Analyst: GT Run ID: MA47366
 Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Sample					
Time	Description	Istd#1	Istd#2	Istd#3	Istd#4

LEGEND:

<u>Istd#</u>	<u>Parameter</u>	<u>Limits</u>
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
 QC Limits: result < 1/2 RL Run ID: MA47366 Units: ug/l

Metal	Time:			12:00		12:10		13:08		
	Sample ID:	RL	IDL	LOD	ICB1	final	CCB1	final	CCB2	final
Aluminum	200	14	100							
Antimony	6.0	1.4	5.0							
Arsenic	5.0	1.5	3.0	0.900	<5.0	0.300	<5.0	-0.100	<5.0	
Barium	200	.5	100	0.200	<200	-0.100	<200	-0.100	<200	
Beryllium	2.0	.1	1.0							
Bismuth	20	1.8	10							
Boron	200	.8	100							
Cadmium	3.0	.3	2.0	0.100	<3.0	0.200	<3.0	0.00	<3.0	
Calcium	5000	3.9	200							
Chromium	10	.3	5.0	0.00	<10	-0.100	<10	-0.100	<10	
Cobalt	50	.3	10							
Copper	10	.6	8.0							
Iron	100	2.6	50							
Lead	5.0	1.6	3.0	0.500	<5.0	0.700	<5.0	0.200	<5.0	
Lithium	50	2.1	20							
Magnesium	5000	16	500							
Manganese	15	.1	5.0							
Molybdenum	20	.4	8.0							
Nickel	10	.5	8.0							
Phosphorus	50	1.9	25							
Potassium	10000	79	500							
Selenium	10	3	8.0	2.20	<10	1.80	<10	0.100	<10	
Silicon	200	1.2	150							
Silver	10	.5	4.0	-0.200	<10	0.00	<10	-0.100	<10	
Sodium	10000	9.9	1000							
Strontium	10	.3	2.0							
Sulfur	100	3.5	50							
Thallium	10	1.3	5.0							
Tin	10	.7	8.0							
Titanium	10	.5	4.0							
Tungsten	100	1.7	50							
Vanadium	50	.5	4.0							
Zinc	20	.2	10							

9.2.3
 9

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
 QC Limits: result < 1/2 RL Run ID: MA47366 Units: ug/l

Time:				12:00			12:10			13:08
Sample ID:	RL	IDL	LOD	ICB1	final	CCB1	final	CCB2	final	
Metal				raw		raw		raw		

Zirconium 10 .3 5.0

(*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
 QC Limits: result < 1/2 RL Run ID: MA47366 Units: ug/l

Metal	RL	IDL	LOD	14:04 CCB3		14:59 CCB4	
				raw	final	raw	final
Aluminum	200	14	100				
Antimony	6.0	1.4	5.0				
Arsenic	5.0	1.5	3.0	0.00	<5.0	0.100	<5.0
Barium	200	.5	100	0.00	<200	0.400	<200
Beryllium	2.0	.1	1.0				
Bismuth	20	1.8	10				
Boron	200	.8	100				
Cadmium	3.0	.3	2.0	0.100	<3.0	0.100	<3.0
Calcium	5000	3.9	200				
Chromium	10	.3	5.0	-0.200	<10	0.00	<10
Cobalt	50	.3	10				
Copper	10	.6	8.0				
Iron	100	2.6	50				
Lead	5.0	1.6	3.0	1.00	<5.0	-0.200	<5.0
Lithium	50	2.1	20				
Magnesium	5000	16	500				
Manganese	15	.1	5.0				
Molybdenum	20	.4	8.0				
Nickel	10	.5	8.0				
Phosphorus	50	1.9	25				
Potassium	10000	79	500				
Selenium	10	3	8.0	0.900	<10	0.400	<10
Silicon	200	1.2	150				
Silver	10	.5	4.0	-0.700	<10	-0.800	<10
Sodium	10000	9.9	1000				
Strontium	10	.3	2.0				
Sulfur	100	3.5	50				
Thallium	10	1.3	5.0				
Tin	10	.7	8.0				
Titanium	10	.5	4.0				
Tungsten	100	1.7	50				
Vanadium	50	.5	4.0				
Zinc	20	.2	10				

9.2.3
 9

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
 QC Limits: result < 1/2 RL Run ID: MA47366 Units: ug/l

Time:				14:04			14:59
Sample ID:				CCB3			CCB4
Metal	RL	IDL	LOD	raw	final	raw	final

Zirconium 10 .3 5.0

(*) Outside of QC limits
 (anr) Analyte not requested

9.2.3
 9

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP
QC Limits: 95 to 105 % Recovery

Date Analyzed: 08/29/19
Run ID: MA47366

Methods: EPA 200.7, SW846 6010D
Units: ug/l

Metal	Time:	11:55	% Rec	12:06	% Rec	13:03	% Rec		
	Sample ID:	ICV		ICV1		CCV		CCV1	CCV2
	True	Results		True	Results		True	Results	
Aluminum									
Antimony									
Arsenic	2000	2080	104.0	2000	2040	102.0	2000	2050	102.5
Barium	2000	2040	102.0	2000	2040	102.0	2000	2070	103.5
Beryllium									
Bismuth									
Boron									
Cadmium	2000	1980	99.0	2000	2020	101.0	2000	2030	101.5
Calcium									
Chromium	2000	2010	100.5	2000	2080	104.0	2000	2050	102.5
Cobalt									
Copper									
Iron									
Lead	2000	1980	99.0	2000	2050	102.5	2000	2060	103.0
Lithium									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Phosphorus									
Potassium									
Selenium	2000	1980	99.0	2000	2030	101.5	2000	2040	102.0
Silicon									
Silver	250	244	97.6	250	257	102.8	250	255	102.0
Sodium									
Strontium									
Sulfur									
Thallium									
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc									

9.2.4
9

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA47366 Units: ug/l

	Time:									
	Sample ID:	ICV	11:55 ICV1	CCV	12:06 CCV1	CCV	13:03 CCV2	CCV	CCV2	
Metal		True	Results	% Rec	True	Results	% Rec	True	Results	% Rec

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested



9.2.4
9

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP
QC Limits: 95 to 105 % Recovery

Date Analyzed: 08/29/19
Run ID: MA47366

Methods: EPA 200.7, SW846 6010D
Units: ug/l

Metal	Time: 13:58		% Rec	Time: 14:54		% Rec
	Sample ID: CCV	CCV3		Sample ID: CCV	CCV4	
Aluminum						
Antimony						
Arsenic	2000	2060	103.0	2000	2080	104.0
Barium	2000	2070	103.5	2000	2110	105.5
Beryllium						
Bismuth						
Boron						
Cadmium	2000	2030	101.5	2000	2050	102.5
Calcium						
Chromium	2000	2060	103.0	2000	2100	105.0
Cobalt						
Copper						
Iron						
Lead	2000	2070	103.5	2000	2090	104.5
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium	2000	2040	102.0	2000	2080	104.0
Silicon						
Silver	250	256	102.4	250	261	104.4
Sodium						
Strontium						
Sulfur						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc						

9.2.4
9

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

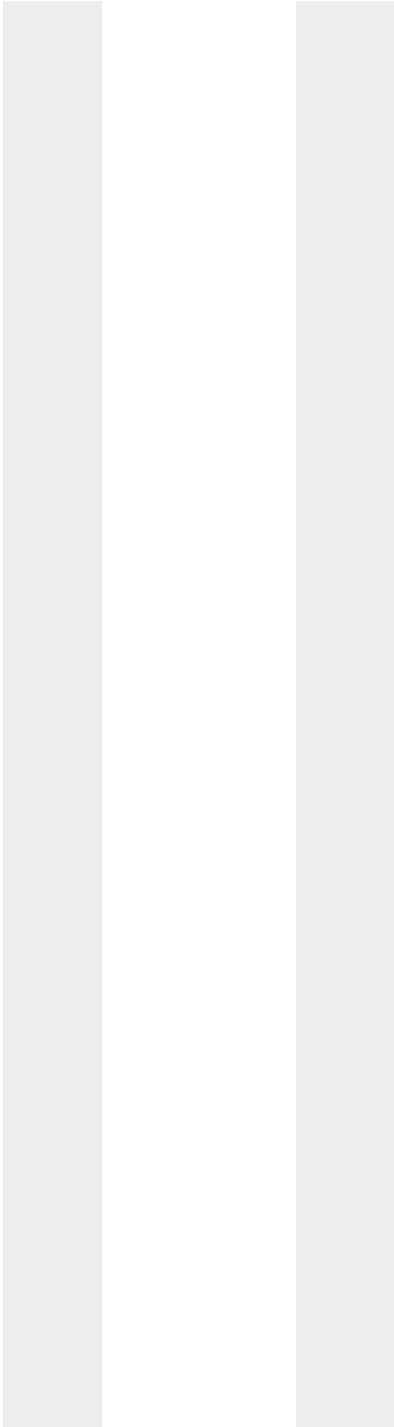
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA47366 Units: ug/l

	Time:	13:58		14:54	
Sample ID:	CCV	CCV3	CCV	CCV4	
Metal	True	Results	% Rec	True	Results % Rec

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested



HIGH STANDARD CHECK SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP
QC Limits: 90 to 110 % Recovery

Date Analyzed: 08/29/19
Run ID: MA47366

Methods: EPA 200.7, SW846 6010D
Units: ug/l

Metal	Time: 12:36			Time: 12:42		
	Sample ID: HSTD	HSTD1	Results % Rec	HSTD	HSTD2	Results % Rec
Aluminum						
Antimony						
Arsenic	8000	8040	100.5			
Barium	8000	8340	104.3			
Beryllium						
Bismuth						
Boron						
Cadmium	8000	8170	102.1			
Calcium						
Chromium	8000	8330	104.1			
Cobalt						
Copper						
Iron						
Lead	8000	8040	100.5			
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium	8000	8290	103.6			
Silicon						
Silver	625	618	98.9			
Sodium						
Strontium						
Sulfur						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc						

9.2.5
9

HIGH STANDARD CHECK SUMMARY

Login Number: JC93827
 Account: NOREASCA - NOREAS, Inc.
 Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
 QC Limits: 90 to 110 % Recovery Run ID: MA47366 Units: ug/l

Time:		12:36		12:42	
Sample ID:	HSTD	HSTD1	HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results % Rec

Zirconium

(*) Outside of QC limits
 (anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP Date Analyzed: 08/29/19 Methods: EPA 200.7, SW846 6010D
 QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA47366 Units: ug/l

Time:				12:16			12:21			13:33
Sample ID:	CRI	CRIA	CRID	CRID1	% Rec	CR1	% Rec	CRID2	% Rec	
Metal	True	True	True	Results		Results		Results		
Aluminum	200	500	100							
Antimony	6.0	20	3.0							
Arsenic	8.0	20	3.0	4.20	140.0*(a)	8.80	110.0	3.10	103.3	
Barium	200		4.0	3.90	97.5	203	101.5	4.00	100.0	
Beryllium	2.0		1.0							
Bismuth	20									
Boron	100		10							
Cadmium	3.0		1.0	1.00	100.0	3.20	106.7	1.00	100.0	
Calcium	5000	2000	1000							
Chromium	10		2.0	1.90	95.0	10.2	102.0	2.20	110.0	
Cobalt	50		3.0							
Copper	10		2.0							
Iron	100	500								
Lead	3.0	20	2.5			2.90	96.7			
Lithium	50									
Magnesium	5000	2000	100							
Manganese	15		3.0							
Molybdenum	20									
Nickel	10		4.0							
Phosphorus	50									
Potassium	5000		2000							
Selenium	10	20	5.0			10.5	105.0	5.10	102.0	
Silicon	200									
Silver	5.0		2.0			4.70	94.0			
Sodium	5000		1000							
Strontium	10									
Sulfur	50									
Thallium	10		2.0							
Tin	10									
Titanium	10									
Tungsten	50									
Vanadium	50		2.0							
Zinc	20		10							

9.2.6
9

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP

Date Analyzed: 08/29/19

Methods: EPA 200.7, SW846 6010D

QC Limits: CRI 80-120% CRIA 80-120%

Run ID: MA47366

Units: ug/l

Time:				12:16			12:21			13:33
Sample ID:	CRI	CRIA	CRID	CRID1		CRI1		CRID2		
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec	

Zirconium 10

(*) Outside of QC limits

(anr) Analyte not requested

(a) No AQ samples reported for this element in the area bracketed by this QC.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP
QC Limits: 80 to 120 % Recovery

Date Analyzed: 08/29/19
Run ID: MA47366

Methods: EPA 200.7, SW846 6010D
Units: ug/l

Metal	Time:		12:26		12:31	
	Sample ID:	ICSA	ICSAB	ICSAL	ICSAB1	ICSAB1
	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	520000	104.0	496000	99.2
Antimony		1000	4.40*		1050	105.0
Arsenic		1000	-0.100		1060	106.0
Barium		500	0.300		500	100.0
Beryllium		500	0.00		494	98.8
Bismuth		500	-4.50		495	99.0
Boron		500	-0.900		477	95.4
Cadmium		1000	0.500		986	98.6
Calcium	400000	400000	395000	98.8	373000	93.3
Chromium		500	0.800		477	95.4
Cobalt		500	-1.60		482	96.4
Copper		500	4.40		502	100.4
Iron	200000	200000	192000	96.0	188000	94.0
Lead		1000	0.300		907	90.7
Lithium		500	-7.70		518	103.6
Magnesium	500000	500000	509000	101.8	497000	99.4
Manganese		500	2.00		502	100.4
Molybdenum		500	2.40		495	99.0
Nickel		1000	0.400		954	95.4
Phosphorus		500	-8.40		539	107.8
Potassium			88.8		139	
Selenium		1000	1.60		1070	107.0
Silicon		500	5.00		507	101.4
Silver		1000	-0.200		1000	100.0
Sodium			145		121	
Strontium		500	-2.00		503	100.6
Sulfur		500	9.60		520	104.0
Thallium		1000	1.10		1000	100.0
Tin		500	-1.10		477	95.4
Titanium		500	-1.30		512	102.4
Tungsten		500	4.10		476	95.2
Vanadium		500	-2.90		482	96.4
Zinc		1000	2.30		927	92.7

9.2.7
9

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
 Part 1 - ICSA and ICSAB Standards

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SC082919M1L.ICP

Date Analyzed: 08/29/19

Methods: EPA 200.7, SW846 6010D

QC Limits: 80 to 120 % Recovery

Run ID: MA47366

Units: ug/l

Time:		12:26		12:31		
Sample ID:	ICSA	ICSAB	ICSAL	ICSAB1	ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec

Zirconium		500	9.10*		551	110.2
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(*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17060
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date: 08/28/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	1.0	.072	.23		
Antimony	0.50	.007	.024		
Arsenic	0.50	.0075	.014	0.0038	<0.50
Barium	1.0	.0025	.067	0.0032	<1.0
Beryllium	0.010	.0005	.0025		
Bismuth	0.10	.009	.02		
Boron	1.0	.004	.31		
Cadmium	0.020	.0015	.005	0.00010	<0.020
Calcium	25	.02	.5		
Chromium	0.050	.0015	.01	-0.00060	<0.050
Cobalt	0.25	.0015	.013		
Copper	0.050	.003	.03		
Iron	0.50	.013	.16		
Lead	0.50	.008	.009	0.0045	<0.50
Lithium	0.25	.011	.037		
Magnesium	25	.082	.7		
Manganese	0.075	.0005	.007		
Molybdenum	0.10	.002	.018		
Nickel	0.050	.0025	.0085		
Phosphorus	0.25	.0095	.089		
Potassium	50	.4	1		
Selenium	0.50	.015	.025	0.0018	<0.50
Silicon	1.0	.006	.51		
Silver	0.050	.0025	.0095	-0.0036	<0.050
Strontium	0.050	.0015	.005		
Sulfur	0.50	.018	.23		
Thallium	0.50	.0065	.009		
Tin	0.050	.0035	.019		
Titanium	0.050	.0025	.013		
Tungsten	0.50	.0085	.2		
Vanadium	0.25	.0025	.009		
Zinc	0.10	.001	.035		
Zirconium	0.050	.0015	.021		

9.3.1
9

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17060
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date: 08/28/19

Metal	RL	IDL	MDL	MB raw	final
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Associated samples MP17060: JC93827-1A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17060
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date: 08/28/19

Metal	JC93827-1A Original MS		SpikeLot MPSPK2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	0.0	2.1	2.0	105.0	75-125
Barium	0.055	2.0	2.0	97.3	75-125
Beryllium					
Bismuth					
Boron					
Cadmium	0.0	2.0	2.0	100.0	75-125
Calcium					
Chromium	0.12	2.1	2.0	99.0	75-125
Cobalt					
Copper					
Iron					
Lead	0.0	2.0	2.0	100.0	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium	0.0	2.1	2.0	105.0	75-125
Silicon					
Silver	0.0	0.25	0.25	100.0	75-125
Strontium					
Sulfur					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc					
Zirconium					

9.3.2
9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17060

Methods: SW846 6010D

Matrix Type: LEACHATE

Units: mg/l

Prep Date:

08/28/19

Metal	JC93827-1A Original MS	Spikelet MPSPK2	% Rec	QC Limits
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Associated samples MP17060: JC93827-1A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17060
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date: 08/28/19

Metal	JC93827-1A Original MSD		Spike/lot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	0.0	2.1	2.0	105.0	0.0	20
Barium	0.055	2.0	2.0	97.3	0.0	20
Beryllium						
Bismuth						
Boron						
Cadmium	0.0	2.0	2.0	100.0	0.0	20
Calcium						
Chromium	0.12	2.1	2.0	99.0	0.0	20
Cobalt						
Copper						
Iron						
Lead	0.0	2.0	2.0	100.0	0.0	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium	0.0	2.1	2.0	105.0	0.0	20
Silicon						
Silver	0.0	0.25	0.25	100.0	0.0	20
Strontium						
Sulfur						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc						
Zirconium						

9.3.2
9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17060

Methods: SW846 6010D

Matrix Type: LEACHATE

Units: mg/l

Prep Date:

08/28/19

Metal	JC93827-1A Original MSD	SpikeLot MPSPK2	% Rec	MSD RPD	QC Limit
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Associated samples MP17060: JC93827-1A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17060
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date: 08/28/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	2.1	2.0	105.0	80-120
Barium	2.0	2.0	100.0	80-120
Beryllium				
Bismuth				
Boron				
Cadmium	2.0	2.0	100.0	80-120
Calcium				
Chromium	2.0	2.0	100.0	80-120
Cobalt				
Copper				
Iron				
Lead	2.1	2.0	105.0	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	2.1	2.0	105.0	80-120
Silicon				
Silver	0.25	0.25	100.0	80-120
Strontium				
Sulfur				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc				
Zirconium				

9.3.3
9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17060
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date: 08/28/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
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Associated samples MP17060: JC93827-1A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17060
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: ug/l

Prep Date: 08/28/19

Metal	JC93827-1A Original SDL 5:25 %DIF		QC Limits
Aluminum			
Antimony			
Arsenic	0.00	0.00	NC 0-10
Barium	55.1	60.4	9.6 0-10
Beryllium			
Bismuth			
Boron			
Cadmium	0.00	0.00	NC 0-10
Calcium			
Chromium	117	109	7.0 0-10
Cobalt			
Copper			
Iron			
Lead	0.00	0.00	NC 0-10
Lithium			
Magnesium			
Manganese			
Molybdenum			
Nickel			
Phosphorus			
Potassium			
Selenium	0.00	0.00	NC 0-10
Silicon			
Silver	0.00	0.00	NC 0-10
Sodium			
Strontium			
Sulfur			
Thallium			
Tin			
Titanium			
Tungsten			
Vanadium			
Zinc			

9.3.4
9

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17060
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: ug/l

Prep Date: 08/28/19

Metal	JC93827-1A Original SDL 5:25 %DIF	QC Limits
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Zirconium

Associated samples MP17060: JC93827-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17075
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 08/29/19

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.00020	.000024	.000095	0.000029	<0.00020

Associated samples MP17075: JC93827-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17075

Methods: SW846 7470A

Matrix Type: LEACHATE

Units: mg/l

Prep Date: 08/29/19

Metal	JC93827-1A Original MS	SpikeLot HGPW3	% Rec	QC Limits
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Mercury	0.000043	0.0022	0.0020	107.9	75-125
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Associated samples MP17075: JC93827-1A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17075

Methods: SW846 7470A

Matrix Type: LEACHATE

Units: mg/l

Prep Date:

08/29/19

Metal	JC93827-1A Original MSD	SpikeLot HGPW3	% Rec	MSD RPD	QC Limit
-------	----------------------------	-------------------	-------	------------	-------------

Mercury	0.000043	0.0022	0.0020	107.9	0.0	20
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Associated samples MP17075: JC93827-1A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP17075
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 08/29/19

Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits
-------	---------------	-------------------	-------	--------------

Mercury 0.0022 0.0020 110.0 80-120

Associated samples MP17075: JC93827-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Instrument Detection Limits

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Instrument ID: LEEMANHG7	Effective Date: 08/01/19
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Analyte	IDL ug/l
Mercury	.0238

The above applies to the following instrument runs:
MA47364

Instrument Detection Limits

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Instrument ID: SSTRACE3	Effective Date: 02/18/19
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Analyte	IDL ug/l
Aluminum	14.3
Antimony	1.4
Arsenic	1.5
Barium	.5
Beryllium	.1
Bismuth	1.8
Boron	.8
Cadmium	.3
Calcium	3.9
Chromium	.3
Cobalt	.3
Copper	.6
Iron	2.6
Lead	1.6
Lithium	2.1
Magnesium	16.3
Manganese	.1
Molybdenum	.4
Nickel	.5
Phosphorus	1.9
Potassium	79
Selenium	3
Silicon	1.2
Silver	.5
Sodium	9.9
Sulfur	3.5
Strontium	.3
Thallium	1.3
Tin	.7
Titanium	.5
Tungsten	1.7
Vanadium	.5
Yttrium	5
Zinc	.2
Zirconium	.3

The above applies to the following instrument runs:
MA47366

9.5
6

Instrument Linear Ranges

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Instrument ID: LEEMANHG7	Effective Date: 03/10/17
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Analyte	Linear Range ug/l
Mercury	5

The above applies to the following instrument runs:
MA47364

Instrument Linear Ranges

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Instrument ID: SSTRACE3

Effective Date: 08/22/19

Analyte	Linear Range ug/l
Aluminum	300000
Antimony	8000
Arsenic	8000
Barium	8000
Beryllium	8000
Bismuth	8000
Boron	8000
Cadmium	8000
Calcium	200000
Cerium	8000
Chromium	8000
Cobalt	8000
Copper	8000
Iron	200000
Lead	8000
Lithium	8000
Magnesium	300000
Manganese	8000
Molybdenum	8000
Nickel	8000
Palladium	8000
Phosphorus	8000
Potassium	200000
Selenium	8000
Silicon	25000
Silver	625
Sodium	200000
Sulfur	100000
Strontium	8000
Thallium	8000
Tin	8000
Titanium	8000
Tungsten	8000
Vanadium	8000
Zinc	8000
Zirconium	8000

The above applies to the following instrument runs:
MA47366

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC
- Percent Solids Raw Data Summary

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Cyanide Reactivity	GP23352/GN99390	10	0.0	mg/kg	100	5.20	5.2	.25-27%
Sulfide Reactivity	GP23354/GN99393	100	0.0	mg/kg	480	310	64.6	42-107%

Associated Samples:

Batch GP23352: JC93827-1A

Batch GP23354: JC93827-1A

(*) Outside of QC limits

10.1
10

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Corrosivity as pH	GN99343	JC93827-1A	su	11.49	11.41	0.7	0-5%
Cyanide Reactivity	GP23352/GN99390	JC93897-1A	mg/kg	0.0	0.0	0.0	0-20%
Ignitability (Flashpoint)	GN99301	JC93441-11	Deg. F	>200	>200	0.0	0-10%
Solids, Percent	GN99220	JC93505-6	%	93.9	94.6	0.7	0-5%
Sulfide Reactivity	GP23354/GN99393	JC93897-1A	mg/kg	0.0	0.0	0.0	0-20%

Associated Samples:

Batch GN99220: JC93827-1

Batch GN99301: JC93827-1A

Batch GN99343: JC93827-1A

Batch GP23352: JC93827-1A

Batch GP23354: JC93827-1A

(*) Outside of QC limits

10.2
10

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Sulfide Reactivity	GP23354/GN99393	JC93897-1A	mg/kg	0.0	498	202	40.5	20-82%

Associated Samples:

Batch GP23354: JC93827-1A

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

10.3
10

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: E083019W1.CN

Date Analyzed: 08/30/19

Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846 CHAP

Analyst: KI

Run ID: GN99390

Parameters: Cyanide Reactivity

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:11	GN99390-STD1	1		STDA
09:12	GN99390-STD2	1		STDB
09:14	GN99390-STD3	1		STDC
09:15	GN99390-STD4	1		STDD
09:16	GN99390-STD5	1		STDE
09:18	GN99390-STD6	1		STDF
09:19	GN99390-STD7	1		STDG
09:21	GN99390-ICV1	1		
09:22	GN99390-ICB1	1		
09:23	GN99390-CCV1	1		
09:25	GN99390-CCB1	1		
09:26	GP23352-MB1	1		
09:27	GP23352-B1	1		
09:29	GP23352-D1	1		
09:30	ZZZZZZ	1		
09:31	ZZZZZZ	1		
09:33	ZZZZZZ	1		
09:34	ZZZZZZ	1		
09:35	JC93827-1A	1		
09:37	JC93897-1A	1		(sample used for QC only; not part of login JC93827)
09:38	ZZZZZZ	1		
09:40	GN99390-CCV2	1		
09:41	GN99390-CCB2	1		
09:42	ZZZZZZ	1		
09:44	ZZZZZZ	1		
09:45	ZZZZZZ	1		
09:46	ZZZZZZ	1		
09:48	ZZZZZZ	1		
09:49	ZZZZZZ	1		
09:50	ZZZZZZ	1		
09:52	ZZZZZZ	1		
09:53	ZZZZZZ	1		
09:54	ZZZZZZ	1		

10.4
10

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: E083019W1.CN

Date Analyzed: 08/30/19

Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846 CHA

Analyst: KI

Run ID: GN99390

Parameters: Cyanide Reactivity

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:56	GN99390-CCV3	1		
09:57	GN99390-CCB3	1		
09:59	ZZZZZZ	1		
10:00	ZZZZZZ	1		
10:01	ZZZZZZ	1		
10:03	GP23350-MB1	1		
10:04	GP23350-B1	1		
10:05	GP23350-S1	1		
10:07	GP23350-D1	1		
10:08	ZZZZZZ	1		
10:09	JC93970-11	1		(sample used for QC only; not part of login JC93827)
10:11	ZZZZZZ	1		
10:12	GN99390-CCV4	1		
10:14	GN99390-CCB4	1		
10:15	GP23355-MB1	1		
10:16	GP23355-B1	1		
10:18	GP23355-S1	1		
10:19	GP23355-S2	1		
10:20	GP23355-D1	1		
10:22	JC93923-1	1		(sample used for QC only; not part of login JC93827)
10:23	JC93923-2	1		(sample used for QC only; not part of login JC93827)
10:24	ZZZZZZ	1		
10:26	ZZZZZZ	1		
10:27	ZZZZZZ	1		
10:29	GN99390-CCV5	1		
10:30	GN99390-CCB5	1		
10:31	ZZZZZZ	1		
10:33	ZZZZZZ	1		
10:34	ZZZZZZ	1		
10:35	ZZZZZZ	1		
10:37	ZZZZZZ	1		
10:38	ZZZZZZ	1		
10:39	ZZZZZZ	1		

10.4
10

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: E083019W1.CN

Date Analyzed: 08/30/19

Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846 CHA

Analyst: KI

Run ID: GN99390

Parameters: Cyanide Reactivity

Time	Sample Description	Dilution Factor	PS Recov	Comments
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10:41 ZZZZZZ 1

10:42 ZZZZZZ 1

10:45 GN99390-CCV6 1

10:47 GN99390-CCB6 1

Refer to raw data for calibration curve and standards.

10.4
10

Instrument QC Summary
Inorganics Analyses

Login Number: JC93827

Account: NOREASCA - NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: E083019W1.CN

Date Analyzed: 08/30/19

Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846 CHAP

Run ID: GN99390

Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN99390-ICV1	Cyanide	0.319	0.010	0.0041	.3	106.3	90-110
GN99390-ICB1	Cyanide	-0.00761	0.010	0.0041			
GN99390-CCV1	Cyanide	0.387	0.010	0.0041	.4	96.8	90-110
GN99390-CCB1	Cyanide	-0.00888	0.010	0.0041			
GN99390-CCV2	Cyanide	0.400	0.010	0.0041	.4	100.0	90-110
GN99390-CCB2	Cyanide	-0.00822	0.010	0.0041			
GN99390-CCV3	Cyanide	0.400	0.010	0.0041	.4	100.0	90-110
GN99390-CCB3	Cyanide	-0.00812	0.010	0.0041			
GN99390-CCV4	Cyanide	0.401	0.010	0.0041	.4	100.3	90-110
GN99390-CCB4	Cyanide	-0.00899	0.010	0.0041			
GN99390-CCV5	Cyanide	0.402	0.010	0.0041	.4	100.5	90-110
GN99390-CCB5	Cyanide	-0.00691	0.010	0.0041			
GN99390-CCV6	Cyanide	0.391	0.010	0.0041	.4	97.8	90-110
GN99390-CCB6	Cyanide	-0.00873	0.010	0.0041			

(!) Outside of QC limits

10.4
10

Percent Solids Raw Data Summary

Job Number: JC93827

Account: NOREASCA NOREAS, Inc.

Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: JC93827-1 **Analyzed:** 27-AUG-19 by BG
ClientID: NWIRP-S1-WC-C-001

Method: SM2540 G 18TH ED MOD

Wet Weight (Total)	32.67	g
Tare Weight	23.24	g
Dry Weight (Total)	32.17	g
Solids, Percent	94.7	%

10.5
10