Pelton, Jason M (DEC)

From: Smeal, Monica <monica.smeal@aptim.com>
Sent: Friday, July 19, 2019 9:24 AM
To: Murray, Brian S CIV USN NAVFAC MIDLANT NOR (USA); Pelton, Jason M (DEC); Hesler, Donald (DEC); Tancreti, Leo P CIV NAVFAC MIDLANT, PWD New London; Shukis, Christopher R CIV NAVFAC MIDLANT, PWD New London
Cc: McCutcheon, Sean; Montgomery, Seth; Collins, Timothy (CFS)
Subject: N62470.16.D.9004.N4008518F6147 NWIRP Bethpage Site 1 Submittal SD-04-003 - Off-Site Common Backfill Source
Attachments: N62470.16.D.9004.F6147 Submittal SD-04-003.pdf; 9004.F6147 Submittal SD-04-003 Enclosures.pdf

Brian,
Please find attached Submittal SD-04-003. On June 14, 2019, APTIM collected clean common backfill samples from the stockpile at the off-site source located at Country Pointe at Plainview, 1425 Old Country Road, Plainview NY 11803.

The analytical data for this common backfill off-site source are enclosed.

Please review and approve this data for continued use of this off-site source as backfill throughout Site 1.

Thank you,

MONICA L. SMEAL
Project Manager

APTIM | Diversified Services

O 757 640 6943
M 757 390 6043
E monica.smeal@aptim.com

APTIM

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Norfolk, VA 23510

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From: Murray, Brian S CIV USN NAVFAC MIDLANT NOR (USA)
To: Smeal, Monica
Cc: Deane, William; Reisch, Timothy A CIV USN (USA); Dave Brayack (Tetra Tech)
Subject: FW: Common backfill sampling
Date: Wednesday, June 5, 2019 8:37:00 AM
Attachments: emergcontsamplingext[1].pdf

Monica
Please review and provide me a plan for sampling for 1,4-dioxane and PFAS. Please compare our PFAS analyte list for the samples we have analyzed recently and see if it matches the NYSDEC list.

Second email from Jason to follow.

Tim/Dave - for your information and tracking of NYSDEC soil fill requirements.

Thanks.

Brian Murray PG, PMP
Sr. Restoration Project Manager
NAVFAC MIDLANT
(757) 341-0491

-----Original Message-----
From: Pelton, Jason M (DEC) <jason.pelton@dec.ny.gov>
Sent: Tuesday, June 04, 2019 12:52 PM
To: Murray, Brian S CIV USN NAVFAC MIDLANT NOR (USA) <brian.s.murray@navy.mil>
Cc: Hesler, Donald (DEC) <donald.hesler@dec.ny.gov>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>
Subject: [Non-DoD Source] RE: Common backfill sampling

Brian:

Thanks for providing the update on the continued use of common backfill originating from Country Pointe at Plainview, 1425 Old Country Road, Plainview NY 11803 for use at Site 1 along with the proposed sampling frequency for the continued use of this backfill source. Material from this stockpile was already sampled by the Navy, approved by the Department for use as backfill, and subsequently used as common backfill in the Phase I excavation area. Based on the analytical results already reviewed and the uniform nature of the backfill source material, the Department approves of the reduced sampling frequency combined with the weekly inspections for use of the remaining 45,000 cubic yards of source material.

For the emerging contaminant sampling, please recognize that the Department recently issued guidance on the sampling and analysis of emerging contaminants (see attached PDF).

Thanks,
Jason

-----Original Message-----
From: Murray, Brian S CIV USN NAVFAC MIDLANT NOR (USA) <brian.s.murray@navy.mil>
Sent: Monday, June 03, 2019 4:04 PM
To: Pelton, Jason M (DEC) <jason.pelton@dec.ny.gov>
Cc: Hesler, Donald (DEC) <donald.hesler@dec.ny.gov>
Subject: RE: Common backfill sampling

Jason,

APTIM has confirmed that there is approximately 70,000 cyds of clean common backfill stockpiled at the off-site source located at Country Pointe at Plainview, 1425 Old Country Road, Plainview NY 11803. This is the same stockpile that was sampled by APTIM on March 13, 2019 and approved for use by NYSDEC. The stockpile has been unchanged since APTIM collected samples in March and the development project has come to completion. Therefore, no additional soils have been or will be added to the stockpile at Country Pointe at Plainview.

APTIM is working with the vendor to isolate the required Site 1 volume of 45,000 cyds. Once isolated, APTIM will conduct weekly inspections of the stockpile to ensure it is undisturbed by activities other than those associated with Site 1. APTIM proposes continuing to sample the stockpile as it is depleted at a rate of two VOC and one composite per 2,500 cubic yards.

Please let me know if you concur with this sampling approach for the stockpiled soils.

Thanks.

Brian Murray PG, PMP
Sr. Restoration Project Manager
NAVFAC MIDLANT
(757) 341-0491

-----Original Message-----
From: Pelton, Jason M (DEC) <jason.pelton@dec.ny.gov>
Sent: Thursday, May 09, 2019 4:33 PM
To: Murray, Brian S CIV USN NAVFAC MIDLANT NOR (USA) <brian.s.murray@navy.mil>
Cc: Hesler, Donald (DEC) <donald.hesler@dec.ny.gov>
Subject: [Non-DoD Source] Common backfill sampling

Brian

I confirmed with Steve Karpinski about reducing the source material sampling frequency. Based on this and as long as Monica confirms that the remaining 3,000 cubic yards of stockpiled soil has not been added to, I am fine with relying on the existing analytical data for use of the remainder of this stockpile for common backfill

We can discuss the origin of future backfill and possible sampling during the next call if that is ok?

Thanks
Jason

Sent from my iPhone

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	Client ID	Collected	Time
FA65214-1	Solids, Percent		SM19 2540G	89.8		%			1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluorobutanoic acid	375-22-4	EPA 537M QSM5.1 B-15	**0.389**	**J**	**ug/kg**	**1.1**	**0.55**	**1**	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluoropentanoic acid	2706-90-3	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluorohexanoic acid	307-24-4	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluoroheptanoic acid	375-85-9	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluorooctanoic acid	335-67-1	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluorononanoic acid	375-95-1	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluorodecanoic acid	335-76-2	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluoroundecanoic acid	2058-94-8	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluorododecanoic acid	307-55-1	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluorotridecanoic acid	72629-94-8	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluorotetradecanoic acid	376-06-7	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluorobutanesulfonic acid	375-73-5	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluoropentanesulfonic acid	2706-91-4	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluorohexanesulfonic acid	355-46-4	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluoroheptanesulfonic acid	375-92-8	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluorooctanesulfonic acid	1763-23-1	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluorononanesulfonic acid	68259-12-1	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	Perfluorodecanesulfonic acid	335-77-3	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	PFOSA	754-91-6	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	MeFOSAA	2355-31-9	EPA 537M QSM5.1 B-15	1.1	U	ug/kg	2.7	1.1	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	EtFOSAA	2991-50-6	EPA 537M QSM5.1 B-15	1.1	U	ug/kg	2.7	1.1	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	4:2 Fluorotelomer sulfonate	757124-72-4	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	6:2 Fluorotelomer sulfonate	27619-97-2	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	8:2 Fluorotelomer sulfonate	39108-34-4	EPA 537M QSM5.1 B-15	0.55	U	ug/kg	1.1	0.55	1	NWIRP-S1-WC-CF-039	6/14/2019	12:10
FA65214-1	*13C4-PFBA*		*EPA 537M QSM5.1 B-15*	*91.0*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C5-PFPeA*		*EPA 537M QSM5.1 B-15*	*92.0*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C5-PFHxA*		*EPA 537M QSM5.1 B-15*	*93.0*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C4-PFHpA*		*EPA 537M QSM5.1 B-15*	*99.0*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C8-PFOA*		*EPA 537M QSM5.1 B-15*	*101*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C9-PFNA*		*EPA 537M QSM5.1 B-15*	*104*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C6-PFDA*		*EPA 537M QSM5.1 B-15*	*117*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C7-PFUnDA*		*EPA 537M QSM5.1 B-15*	*124*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C2-PFDoDA*		*EPA 537M QSM5.1 B-15*	*121*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C2-PFTeDA*		*EPA 537M QSM5.1 B-15*	*105*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C3-PFBS*		*EPA 537M QSM5.1 B-15*	*93.0*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C3-PFHxS*		*EPA 537M QSM5.1 B-15*	*97.0*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C8-PFOS*		*EPA 537M QSM5.1 B-15*	*102*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C8-FOSA*		*EPA 537M QSM5.1 B-15*	*104*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*d3-MeFOSAA*		*EPA 537M QSM5.1 B-15*	*108*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C2-4:2FTS*		*EPA 537M QSM5.1 B-15*	*94.0*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C2-6:2FTS*		*EPA 537M QSM5.1 B-15*	*95.0*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-1	*13C2-8:2FTS*		*EPA 537M QSM5.1 B-15*	*113*		*%*			*1*	*NWIRP-S1-WC-CF-039*	*6/14/2019*	*12:10*
FA65214-2	Solids, Percent		SM19 2540G	90.0		%			1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluorobutanoic acid	375-22-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluoropentanoic acid	2706-90-3	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluorohexanoic acid	307-24-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluoroheptanoic acid	375-85-9	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluorooctanoic acid	335-67-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluorononanoic acid	375-95-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluorodecanoic acid	335-76-2	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluoroundecanoic acid	2058-94-8	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluorododecanoic acid	307-55-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluorotridecanoic acid	72629-94-8	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluorotetradecanoic acid	376-06-7	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluorobutanesulfonic acid	375-73-5	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluoropentanesulfonic acid	2706-91-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluorohexanesulfonic acid	355-46-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluoroheptanesulfonic acid	375-92-8	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluorooctanesulfonic acid	1763-23-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluorononanesulfonic acid	68259-12-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	Perfluorodecanesulfonic acid	335-77-3	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	PFOSA	754-91-6	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	MeFOSAA	2355-31-9	EPA 537M QSM5.1 B-15	1.1	U	ug/kg	2.8	1.1	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	EtFOSAA	2991-50-6	EPA 537M QSM5.1 B-15	1.1	U	ug/kg	2.8	1.1	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	4:2 Fluorotelomer sulfonate	757124-72-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	6:2 Fluorotelomer sulfonate	27619-97-2	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	8:2 Fluorotelomer sulfonate	39108-34-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-040	6/14/2019	12:19
FA65214-2	*13C4-PFBA*		*EPA 537M QSM5.1 B-15*	*92.0*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C5-PFPeA*		*EPA 537M QSM5.1 B-15*	*92.0*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C5-PFHxA*		*EPA 537M QSM5.1 B-15*	*94.0*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C4-PFHpA*		*EPA 537M QSM5.1 B-15*	*100*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C8-PFOA*		*EPA 537M QSM5.1 B-15*	*103*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C9-PFNA*		*EPA 537M QSM5.1 B-15*	*107*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C6-PFDA*		*EPA 537M QSM5.1 B-15*	*119*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C7-PFUnDA*		*EPA 537M QSM5.1 B-15*	*128*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*

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	Client ID	Collected	Time
FA65214-2	*13C2-PFDoDA*		*EPA 537M QSM5.1 B-15*	*130*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C2-PFTeDA*		*EPA 537M QSM5.1 B-15*	*117*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C3-PFBS*		*EPA 537M QSM5.1 B-15*	*94.0*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C3-PFHxS*		*EPA 537M QSM5.1 B-15*	*98.0*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C8-PFOS*		*EPA 537M QSM5.1 B-15*	*101*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C8-FOSA*		*EPA 537M QSM5.1 B-15*	*109*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*d3-MeFOSAA*		*EPA 537M QSM5.1 B-15*	*111*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C2-4:2FTS*		*EPA 537M QSM5.1 B-15*	*93.0*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C2-6:2FTS*		*EPA 537M QSM5.1 B-15*	*97.0*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-2	*13C2-8:2FTS*		*EPA 537M QSM5.1 B-15*	*112*		*%*			*1*	*NWIRP-S1-WC-CF-040*	*6/14/2019*	*12:19*
FA65214-3	Solids, Percent		SM19 2540G	91.1		%			1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluorobutanoic acid	375-22-4	EPA 537M QSM5.1 B-15	**0.392**	**J**	**ug/kg**	**1.1**	**0.56**	**1**	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluoropentanoic acid	2706-90-3	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluorohexanoic acid	307-24-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluoroheptanoic acid	375-85-9	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluorooctanoic acid	335-67-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluorononanoic acid	375-95-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluorodecanoic acid	335-76-2	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluoroundecanoic acid	2058-94-8	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluorododecanoic acid	307-55-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluorotridecanoic acid	72629-94-8	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluorotetradecanoic acid	376-06-7	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluorobutanesulfonic acid	375-73-5	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluoropentanesulfonic acid	2706-91-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluorohexanesulfonic acid	355-46-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluoroheptanesulfonic acid	375-92-8	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluorooctanesulfonic acid	1763-23-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluorononanesulfonic acid	68259-12-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	Perfluorodecanesulfonic acid	335-77-3	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	PFOSA	754-91-6	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	MeFOSAA	2355-31-9	EPA 537M QSM5.1 B-15	1.1	U	ug/kg	2.8	1.1	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	EtFOSAA	2991-50-6	EPA 537M QSM5.1 B-15	1.1	U	ug/kg	2.8	1.1	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	4:2 Fluorotelomer sulfonate	757124-72-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	6:2 Fluorotelomer sulfonate	27619-97-2	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	8:2 Fluorotelomer sulfonate	39108-34-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-041	6/14/2019	12:24
FA65214-3	*13C4-PFBA*		*EPA 537M QSM5.1 B-15*	*86.0*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C5-PFPeA*		*EPA 537M QSM5.1 B-15*	*86.0*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C5-PFHxA*		*EPA 537M QSM5.1 B-15*	*88.0*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C4-PFHpA*		*EPA 537M QSM5.1 B-15*	*93.0*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C8-PFOA*		*EPA 537M QSM5.1 B-15*	*97.0*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C9-PFNA*		*EPA 537M QSM5.1 B-15*	*101*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C6-PFDA*		*EPA 537M QSM5.1 B-15*	*114*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C7-PFUnDA*		*EPA 537M QSM5.1 B-15*	*120*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C2-PFDoDA*		*EPA 537M QSM5.1 B-15*	*119*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C2-PFTeDA*		*EPA 537M QSM5.1 B-15*	*103*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C3-PFBS*		*EPA 537M QSM5.1 B-15*	*88.0*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C3-PFHxS*		*EPA 537M QSM5.1 B-15*	*92.0*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C8-PFOS*		*EPA 537M QSM5.1 B-15*	*96.0*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C8-FOSA*		*EPA 537M QSM5.1 B-15*	*100*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*d3-MeFOSAA*		*EPA 537M QSM5.1 B-15*	*102*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C2-4:2FTS*		*EPA 537M QSM5.1 B-15*	*88.0*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C2-6:2FTS*		*EPA 537M QSM5.1 B-15*	*91.0*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-3	*13C2-8:2FTS*		*EPA 537M QSM5.1 B-15*	*107*		*%*			*1*	*NWIRP-S1-WC-CF-041*	*6/14/2019*	*12:24*
FA65214-4	Solids, Percent		SM19 2540G	89.6		%			1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluorobutanoic acid	375-22-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluoropentanoic acid	2706-90-3	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluorohexanoic acid	307-24-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluoroheptanoic acid	375-85-9	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluorooctanoic acid	335-67-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluorononanoic acid	375-95-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluorodecanoic acid	335-76-2	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluoroundecanoic acid	2058-94-8	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluorododecanoic acid	307-55-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluorotridecanoic acid	72629-94-8	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluorotetradecanoic acid	376-06-7	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluorobutanesulfonic acid	375-73-5	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluoropentanesulfonic acid	2706-91-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluorohexanesulfonic acid	355-46-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluoroheptanesulfonic acid	375-92-8	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluorooctanesulfonic acid	1763-23-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluorononanesulfonic acid	68259-12-1	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	Perfluorodecanesulfonic acid	335-77-3	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	PFOSA	754-91-6	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	MeFOSAA	2355-31-9	EPA 537M QSM5.1 B-15	1.1	U	ug/kg	2.8	1.1	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	EtFOSAA	2991-50-6	EPA 537M QSM5.1 B-15	1.1	U	ug/kg	2.8	1.1	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	4:2 Fluorotelomer sulfonate	757124-72-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30

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	Client ID	Collected	Time
FA65214-4	6:2 Fluorotelomer sulfonate	27619-97-2	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	8:2 Fluorotelomer sulfonate	39108-34-4	EPA 537M QSM5.1 B-15	0.56	U	ug/kg	1.1	0.56	1	NWIRP-S1-WC-CF-042	6/14/2019	12:30
FA65214-4	*13C4-PFBA*		*EPA 537M QSM5.1 B-15*	*82.0*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C5-PFPeA*		*EPA 537M QSM5.1 B-15*	*82.0*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C5-PFHxA*		*EPA 537M QSM5.1 B-15*	*84.0*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C4-PFHpA*		*EPA 537M QSM5.1 B-15*	*89.0*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C8-PFOA*		*EPA 537M QSM5.1 B-15*	*93.0*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C9-PFNA*		*EPA 537M QSM5.1 B-15*	*95.0*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C6-PFDA*		*EPA 537M QSM5.1 B-15*	*109*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C7-PFUnDA*		*EPA 537M QSM5.1 B-15*	*116*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C2-PFDoDA*		*EPA 537M QSM5.1 B-15*	*111*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C2-PFTeDA*		*EPA 537M QSM5.1 B-15*	*98.0*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C3-PFBS*		*EPA 537M QSM5.1 B-15*	*85.0*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C3-PFHxS*		*EPA 537M QSM5.1 B-15*	*88.0*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C8-PFOS*		*EPA 537M QSM5.1 B-15*	*91.0*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C8-FOSA*		*EPA 537M QSM5.1 B-15*	*97.0*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*d3-MeFOSAA*		*EPA 537M QSM5.1 B-15*	*102*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C2-4:2FTS*		*EPA 537M QSM5.1 B-15*	*85.0*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C2-6:2FTS*		*EPA 537M QSM5.1 B-15*	*87.0*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*
FA65214-4	*13C2-8:2FTS*		*EPA 537M QSM5.1 B-15*	*104*		*%*			*1*	*NWIRP-S1-WC-CF-042*	*6/14/2019*	*12:30*

Laboratory Qualifiers:

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

µg/kg = microgram/kilogram = ppb
% = percent
LOD = limit of detection
LOQ = limit of quantitation
(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	Client ID	Collected
FA65214-1	Perfluorobutanoic acid	375-22-4	EPA 537M QSM5.1 B-15	**0.389**	**J**	**ug/kg**	**1.1**	**0.55**	**1**	NWIRP-S1-WC-CF-039	6/14/2019
FA65214-3	Perfluorobutanoic acid	375-22-4	EPA 537M QSM5.1 B-15	**0.392**	**J**	**ug/kg**	**1.1**	**0.56**	**1**	NWIRP-S1-WC-CF-041	6/14/2019

Laboratory Qualifiers:
J = Estimated value.

µg/kg = microgram/kilogram = ppb
LOD = limit of detection
LOQ = limit of quantitation


Time
12:10
12:24

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

e-Hardcopy 2.0
Automated Report

Technical Report for

NOREAS,Inc.

ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

APTIM 007 RAC WO #12

SGS Job Number: FA65214

Sampling Date: 06/14/19

Report to:

APTIM

natasha.sullivan@aptim.com

ATTN: Natasha Sullivan

Total number of pages in report: **48**

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.

Caitlin Brice, M.S.
General Manager

Client Service contact: Heather Wandrey 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV

Sections: 1 2 3 4 5 6 7

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Sample Summary

NOREAS, Inc.

Job No: FA65214

ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY
Project No: APTIM 007 RAC WO #12

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA65214-1	06/14/19	12:10	SM	06/15/19	SO	Soil	NWIRP-S1-WC-CF-039
FA65214-2	06/14/19	12:19	SM	06/15/19	SO	Soil	NWIRP-S1-WC-CF-040
FA65214-3	06/14/19	12:24	SM	06/15/19	SO	Soil	NWIRP-S1-WC-CF-041
FA65214-4	06/14/19	12:30	SM	06/15/19	SO	Soil	NWIRP-S1-WC-CF-042

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

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: NOREAS,Inc. **Job No:** FA65214

Site: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY **Report Date:** 6/21/2019 4:26:22 PM

4 Samples were collected on 06/14/2019 and were received at SGS North America Inc - Orlando on 06/15/2019 properly preserved, at 1.3 Deg. C and intact. These Samples received an SGS Orlando job number of FA65214. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Semi-volatiles By Method EPA 537M QSM5.1 B-15

Matrix: SO **Batch ID:** OP75510

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) FA65214-1MS, FA65214-1MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

General Chemistry By Method SM19 2540G

Matrix: SO **Batch ID:** GN82280

Sample(s) FA65214-4DUP were used as the QC samples for Solids, Percent.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Jenna Kravitz, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA65214
Account: NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY
Collected: 06/14/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA65214-1	**NWIRP-S1-WC-CF-039**					
Perfluorobutanoic acid		0.389 J	1.1	0.55	ug/kg	EPA 537M QSM5.1 B-15
FA65214-2	**NWIRP-S1-WC-CF-040**					
No hits reported in this sample.						
FA65214-3	**NWIRP-S1-WC-CF-041**					
Perfluorobutanoic acid		0.392 J	1.1	0.56	ug/kg	EPA 537M QSM5.1 B-15
FA65214-4	**NWIRP-S1-WC-CF-042**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-039
Lab Sample ID: FA65214-1 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/15/19
Method: EPA 537M QSM5.1 B-15 IN HOUSE **Percent Solids:** 89.8
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Q30995.D	1	06/19/19 19:51	NG	06/18/19 13:00	OP75510	S2Q497
Run #2							

	Initial Weight	Final Volume
Run #1	2.04 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	0.389	1.1	0.55	0.27	ug/kg	J
2706-90-3	Perfluoropentanoic acid	0.55 U	1.1	0.55	0.22	ug/kg	
307-24-4	Perfluorohexanoic acid	0.55 U	1.1	0.55	0.22	ug/kg	
375-85-9	Perfluoroheptanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
335-67-1	Perfluorooctanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
375-95-1	Perfluorononanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
335-76-2	Perfluorodecanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
2058-94-8	Perfluoroundecanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
307-55-1	Perfluorododecanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
72629-94-8	Perfluorotridecanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
376-06-7	Perfluorotetradecanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
2706-91-4	Perfluoropentanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
68259-12-1	Perfluorononanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
PERFLUOROOCTANESULFONAMIDES							
754-91-6	PFOSA	0.55 U	1.1	0.55	0.27	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	1.1 U	2.7	1.1	0.55	ug/kg	
2991-50-6	EtFOSAA	1.1 U	2.7	1.1	0.55	ug/kg	
FLUOROTELOMER SULFONATES							
757124-72-4	4:2 Fluorotelomer sulfonate	0.55 U	1.1	0.55	0.27	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	0.55 U	1.1	0.55	0.27	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-CF-039		
Lab Sample ID:	FA65214-1	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/15/19
Method:	EPA 537M QSM5.1 B-15 IN HOUSE	**Percent Solids:**	89.8
Project:	ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
39108-34-4	8:2 Fluorotelomer sulfonate	0.55 U	1.1	0.55	0.27	ug/kg	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	91%		50-150%
	13C5-PFPeA	92%		50-150%
	13C5-PFHxA	93%		50-150%
	13C4-PFHpA	99%		50-150%
	13C8-PFOA	101%		50-150%
	13C9-PFNA	104%		50-150%
	13C6-PFDA	117%		50-150%
	13C7-PFUnDA	124%		50-150%
	13C2-PFDoDA	121%		50-150%
	13C2-PFTeDA	105%		50-150%
	13C3-PFBS	93%		50-150%
	13C3-PFHxS	97%		50-150%
	13C8-PFOS	102%		50-150%
	13C8-FOSA	104%		50-150%
	d3-MeFOSAA	108%		50-150%
	13C2-4:2FTS	94%		50-150%
	13C2-6:2FTS	95%		50-150%
	13C2-8:2FTS	113%		50-150%

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Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-040
Lab Sample ID: FA65214-2 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/15/19
Method: EPA 537M QSM5.1 B-15 IN HOUSE **Percent Solids:** 90.0
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Q30998.D	1	06/19/19 20:36	NG	06/18/19 13:00	OP75510	S2Q497
Run #2							

	Initial Weight	Final Volume
Run #1	1.97 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2706-90-3	Perfluoropentanoic acid	0.56 U	1.1	0.56	0.23	ug/kg	
307-24-4	Perfluorohexanoic acid	0.56 U	1.1	0.56	0.23	ug/kg	
375-85-9	Perfluoroheptanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-67-1	Perfluorooctanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
375-95-1	Perfluorononanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-76-2	Perfluorodecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2058-94-8	Perfluoroundecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
307-55-1	Perfluorododecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
72629-94-8	Perfluorotridecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
376-06-7	Perfluorotetradecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2706-91-4	Perfluoropentanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
68259-12-1	Perfluorononanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDES							
754-91-6	PFOSA	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	1.1 U	2.8	1.1	0.56	ug/kg	
2991-50-6	EtFOSAA	1.1 U	2.8	1.1	0.56	ug/kg	
FLUOROTELOMER SULFONATES							
757124-72-4	4:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	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-CF-040
Lab Sample ID: FA65214-2 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/15/19
Method: EPA 537M QSM5.1 B-15 IN HOUSE **Percent Solids:** 90.0
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
39108-34-4	8:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	92%		50-150%
	13C5-PFPeA	92%		50-150%
	13C5-PFHxA	94%		50-150%
	13C4-PFHpA	100%		50-150%
	13C8-PFOA	103%		50-150%
	13C9-PFNA	107%		50-150%
	13C6-PFDA	119%		50-150%
	13C7-PFUnDA	128%		50-150%
	13C2-PFDoDA	130%		50-150%
	13C2-PFTeDA	117%		50-150%
	13C3-PFBS	94%		50-150%
	13C3-PFHxS	98%		50-150%
	13C8-PFOS	101%		50-150%
	13C8-FOSA	109%		50-150%
	d3-MeFOSAA	111%		50-150%
	13C2-4:2FTS	93%		50-150%
	13C2-6:2FTS	97%		50-150%
	13C2-8:2FTS	112%		50-150%

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-CF-041
Lab Sample ID: FA65214-3 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/15/19
Method: EPA 537M QSM5.1 B-15 IN HOUSE **Percent Solids:** 91.1
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Q30999.D	1	06/19/19 20:50	NG	06/18/19 13:00	OP75510	S2Q497
Run #2							

	Initial Weight	Final Volume
Run #1	1.95 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	0.392	1.1	0.56	0.28	ug/kg	J
2706-90-3	Perfluoropentanoic acid	0.56 U	1.1	0.56	0.23	ug/kg	
307-24-4	Perfluorohexanoic acid	0.56 U	1.1	0.56	0.23	ug/kg	
375-85-9	Perfluoroheptanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-67-1	Perfluorooctanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
375-95-1	Perfluorononanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-76-2	Perfluorodecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2058-94-8	Perfluoroundecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
307-55-1	Perfluorododecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
72629-94-8	Perfluorotridecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
376-06-7	Perfluorotetradecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2706-91-4	Perfluoropentanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
68259-12-1	Perfluorononanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDES							
754-91-6	PFOSA	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	1.1 U	2.8	1.1	0.56	ug/kg	
2991-50-6	EtFOSAA	1.1 U	2.8	1.1	0.56	ug/kg	
FLUOROTELOMER SULFONATES							
757124-72-4	4:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	

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E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NWIRP-S1-WC-CF-041		
Lab Sample ID:	FA65214-3	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/15/19
Method:	EPA 537M QSM5.1 B-15 IN HOUSE	**Percent Solids:**	91.1
Project:	ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
39108-34-4	8:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	86%		50-150%
	13C5-PFPeA	86%		50-150%
	13C5-PFHxA	88%		50-150%
	13C4-PFHpA	93%		50-150%
	13C8-PFOA	97%		50-150%
	13C9-PFNA	101%		50-150%
	13C6-PFDA	114%		50-150%
	13C7-PFUnDA	120%		50-150%
	13C2-PFDoDA	119%		50-150%
	13C2-PFTeDA	103%		50-150%
	13C3-PFBS	88%		50-150%
	13C3-PFHxS	92%		50-150%
	13C8-PFOS	96%		50-150%
	13C8-FOSA	100%		50-150%
	d3-MeFOSAA	102%		50-150%
	13C2-4:2FTS	88%		50-150%
	13C2-6:2FTS	91%		50-150%
	13C2-8:2FTS	107%		50-150%

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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-CF-042
Lab Sample ID: FA65214-4 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/15/19
Method: EPA 537M QSM5.1 B-15 IN HOUSE **Percent Solids:** 89.6
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Q31000.D	1	06/19/19 21:05	NG	06/18/19 13:00	OP75510	S2Q497
Run #2							

	Initial Weight	Final Volume
Run #1	2.01 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2706-90-3	Perfluoropentanoic acid	0.56 U	1.1	0.56	0.22	ug/kg	
307-24-4	Perfluorohexanoic acid	0.56 U	1.1	0.56	0.22	ug/kg	
375-85-9	Perfluoroheptanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-67-1	Perfluorooctanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
375-95-1	Perfluorononanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-76-2	Perfluorodecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2058-94-8	Perfluoroundecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
307-55-1	Perfluorododecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
72629-94-8	Perfluorotridecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
376-06-7	Perfluorotetradecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2706-91-4	Perfluoropentanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
68259-12-1	Perfluorononanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDES							
754-91-6	PFOSA	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	1.1 U	2.8	1.1	0.56	ug/kg	
2991-50-6	EtFOSAA	1.1 U	2.8	1.1	0.56	ug/kg	
FLUOROTELOMER SULFONATES							
757124-72-4	4:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	

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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-CF-042		
Lab Sample ID:	FA65214-4	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/15/19
Method:	EPA 537M QSM5.1 B-15 IN HOUSE	**Percent Solids:**	89.6
Project:	ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
39108-34-4	8:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	82%		50-150%
	13C5-PFPeA	82%		50-150%
	13C5-PFHxA	84%		50-150%
	13C4-PFHpA	89%		50-150%
	13C8-PFOA	93%		50-150%
	13C9-PFNA	95%		50-150%
	13C6-PFDA	109%		50-150%
	13C7-PFUnDA	116%		50-150%
	13C2-PFDoDA	111%		50-150%
	13C2-PFTeDA	98%		50-150%
	13C3-PFBS	85%		50-150%
	13C3-PFHxS	88%		50-150%
	13C8-PFOS	91%		50-150%
	13C8-FOSA	97%		50-150%
	d3-MeFOSAA	102%		50-150%
	13C2-4:2FTS	85%		50-150%
	13C2-6:2FTS	87%		50-150%
	13C2-8:2FTS	104%		50-150%

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5 Limits

FA65214

CHAIN-OF-CUSTODY RECORD

COC Number: 501164-20190614
Subcontract Services Agreement : TBD

NCREAS Environmental Science Engineering & Construction

APTIM

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

Lab Destination:
SGS Accutest - Orlando

Lab Receiving Address:
4405 Vineland Rd. Suite C-15 Orlando, FL, 32811 (407) 425-6700

Project Name:
Site 1 – Former Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage, New York

Sample Location:
Fill Material Samples

T.O.	Project Number:	APTIM Contact:	APTIM Contact Number:
F6147	501164	Natasha Kelley Sullivan	(410)529-7598

Client Rep:
NAVY

Deputy Project Manager:
Monica L. Smeal E.I.T.

Item No.	Sample Number	Date	Time	Matrix: Water	Matrix: Soil	Sample Description	Number of Containers	Analysis Desired: PFOAs LCQSM537DODFL
1	NWIRP-S1-WC-CF-039	06/14/19	1210		X	Soil - Common Backfill	1 x 4 oz Poly WM, None	X
2	NWIRP-S1-WC-CF-040	06/14/19	1219		X	Soil - Common Backfill	1 x 4 oz Poly WM, None	X
3	NWIRP-S1-WC-CF-041	06/14/19	1224		X	Soil - Common Backfill	1 x 4 oz Poly WM, None	X
4	NWIRP-S1-WC-CF-042	06/14/19	1230		X	Soil - Common Backfill	1 x 4 oz Poly WM, None	X

Turnaround Time Required :
☐ 14 Day TAT

Sampled By:
McCutcheon, Sean, APTIM

COMMENTS:

Laboratory Report No.:

Transfer Number	Transfers Relinquished By	Date	Time	Transfers Accepted By	Date	Time
1	*Sampler's Signature*	*Date*	*Time*	*Laboratory Sample Custody Si*	*Date*	*Time*
2		6/14/19	1645		6/15/19	900
3						
4						

Report Format: *Full Report*
Deliverables: EDD Excel+NIRIS
Fax results to Natasha Sullivan (410) 529-7599

1.3

FA65214: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA65214 **Client:** APTIM **Project:** SITE 1 -FORMER DRUM MARSHALLING

Date / Time Received: 6/15/2019 9:00:00 AM **Delivery Method:** FX **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** 0.4; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (0.9);

Cooler Temps (Corrected) °C: Cooler 1: (1.3);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: PETERH Date: 6/15/2019 9:00:00 AM Reviewer: _____ Date: _____

FA65214: Chain of Custody
Page 2 of 2

QC Evaluation: DOD QSM5 Limits

Job Number: FA65214
Account: NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY
Collected: 06/14/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

No Exceptions found.

* Sample used for QC is not from job FA65214

MS Semi-volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Injection Standard Area Summaries
- Isotope Dilution Standard Recovery Summaries
- Initial and Continuing Calibration Summaries

Instrument Blank

Job Number: FA65214
Account: NOREASCA NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S2Q497-IBLK	2Q30953.D	1	06/19/19	NG	n/a	n/a	S2Q497

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

FA65214-1, FA65214-2, FA65214-3, FA65214-4

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	1.0	0.25	ug/kg	
2706-90-3	Perfluoropentanoic acid	ND	1.0	0.20	ug/kg	
307-24-4	Perfluorohexanoic acid	ND	1.0	0.20	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	1.0	0.25	ug/kg	
335-67-1	Perfluorooctanoic acid	ND	1.0	0.25	ug/kg	
375-95-1	Perfluorononanoic acid	ND	1.0	0.25	ug/kg	
335-76-2	Perfluorodecanoic acid	ND	1.0	0.25	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	1.0	0.25	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	1.0	0.25	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	1.0	0.25	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	1.0	0.25	ug/kg	
375-73-5	Perfluorobutanesulfonic acid	ND	1.0	0.25	ug/kg	
2706-91-4	Perfluoropentanesulfonic acid	ND	1.0	0.25	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	1.0	0.25	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	1.0	0.25	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	ND	1.0	0.25	ug/kg	
68259-12-1	Perfluorononanesulfonic acid	ND	1.0	0.25	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	ND	1.0	0.25	ug/kg	
754-91-6	PFOSA	ND	1.0	0.25	ug/kg	
2355-31-9	MeFOSAA	ND	2.5	0.50	ug/kg	
2991-50-6	EtFOSAA	ND	2.5	0.50	ug/kg	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	95%	50-150%
	13C5-PFPeA	92%	50-150%
	13C5-PFHxA	94%	50-150%
	13C4-PFHpA	96%	50-150%
	13C8-PFOA	102%	50-150%
	13C9-PFNA	99%	50-150%
	13C6-PFDA	102%	50-150%
	13C7-PFUnDA	105%	50-150%

Instrument Blank

Job Number: FA65214
Account: NOREASCA NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S2Q497-IBLK	2Q30953.D	1	06/19/19	NG	n/a	n/a	S2Q497

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

FA65214-1, FA65214-2, FA65214-3, FA65214-4

CAS No.	ID Standard Recoveries		Limits
	13C2-PFDoDA	101%	50-150%
	13C2-PFTeDA	84%	50-150%
	13C3-PFBS	97%	50-150%
	13C3-PFHxS	98%	50-150%
	13C8-PFOS	98%	50-150%
	13C8-FOSA	108%	50-150%
	d3-MeFOSAA	100%	50-150%
	13C2-4:2FTS	96%	50-150%
	13C2-6:2FTS	95%	50-150%
	13C2-8:2FTS	93%	50-150%

Method Blank Summary

Job Number: FA65214
Account: NOREASCA NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP75510-MB	2Q30993.D	1	06/19/19	NG	06/18/19	OP75510	S2Q497

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.1 B-15

FA65214-1, FA65214-2, FA65214-3, FA65214-4

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	1.0	0.25	ug/kg	
2706-90-3	Perfluoropentanoic acid	ND	1.0	0.20	ug/kg	
307-24-4	Perfluorohexanoic acid	ND	1.0	0.20	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	1.0	0.25	ug/kg	
335-67-1	Perfluorooctanoic acid	ND	1.0	0.25	ug/kg	
375-95-1	Perfluorononanoic acid	ND	1.0	0.25	ug/kg	
335-76-2	Perfluorodecanoic acid	ND	1.0	0.25	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	1.0	0.25	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	1.0	0.25	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	1.0	0.25	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	1.0	0.25	ug/kg	
375-73-5	Perfluorobutanesulfonic acid	ND	1.0	0.25	ug/kg	
2706-91-4	Perfluoropentanesulfonic acid	ND	1.0	0.25	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	1.0	0.25	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	1.0	0.25	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	ND	1.0	0.25	ug/kg	
68259-12-1	Perfluorononanesulfonic acid	ND	1.0	0.25	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	ND	1.0	0.25	ug/kg	
754-91-6	PFOSA	ND	1.0	0.25	ug/kg	
2355-31-9	MeFOSAA	ND	2.5	0.50	ug/kg	
2991-50-6	EtFOSAA	ND	2.5	0.50	ug/kg	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	91%	50-150%
	13C5-PFPeA	91%	50-150%
	13C5-PFHxA	92%	50-150%
	13C4-PFHpA	98%	50-150%
	13C8-PFOA	101%	50-150%
	13C9-PFNA	100%	50-150%
	13C6-PFDA	110%	50-150%
	13C7-PFUnDA	110%	50-150%

Method Blank Summary

Job Number: FA65214
Account: NOREASCA NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP75510-MB	2Q30993.D	1	06/19/19	NG	06/18/19	OP75510	S2Q497

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.1 B-15

FA65214-1, FA65214-2, FA65214-3, FA65214-4

CAS No.	ID Standard Recoveries		Limits
	13C2-PFDoDA	105%	50-150%
	13C2-PFTeDA	84%	50-150%
	13C3-PFBS	92%	50-150%
	13C3-PFHxS	96%	50-150%
	13C8-PFOS	98%	50-150%
	13C8-FOSA	107%	50-150%
	d3-MeFOSAA	105%	50-150%
	13C2-4:2FTS	94%	50-150%
	13C2-6:2FTS	94%	50-150%
	13C2-8:2FTS	99%	50-150%

Blank Spike Summary

Job Number: FA65214
Account: NOREASCA NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP75510-BS	2Q30992.D	1	06/19/19	NG	06/18/19	OP75510	S2Q497

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.1 B-15

FA65214-1, FA65214-2, FA65214-3, FA65214-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
375-22-4	Perfluorobutanoic acid	10	10.0	100	60-134
2706-90-3	Perfluoropentanoic acid	10	10.2	102	62-134
307-24-4	Perfluorohexanoic acid	10	10.0	100	63-130
375-85-9	Perfluoroheptanoic acid	10	10.3	103	63-122
335-67-1	Perfluorooctanoic acid	10	10.3	103	71-128
375-95-1	Perfluorononanoic acid	10	9.80	98	66-124
335-76-2	Perfluorodecanoic acid	10	10.1	101	68-127
2058-94-8	Perfluoroundecanoic acid	10	10.2	102	61-137
307-55-1	Perfluorododecanoic acid	10	10.0	100	71-126
72629-94-8	Perfluorotridecanoic acid	10	11.5	115	60-137
376-06-7	Perfluorotetradecanoic acid	10	10.7	107	61-131
375-73-5	Perfluorobutanesulfonic acid	10	9.83	98	70-135
2706-91-4	Perfluoropentanesulfonic acid	10	10.3	103	70-130
355-46-4	Perfluorohexanesulfonic acid	10	10.2	102	72-129
375-92-8	Perfluoroheptanesulfonic acid	10	10.5	105	62-129
1763-23-1	Perfluorooctanesulfonic acid	10	9.94	99	69-125
68259-12-1	Perfluorononanesulfonic acid	10	10.5	105	70-130
335-77-3	Perfluorodecanesulfonic acid	10	10.6	106	63-141
754-91-6	PFOSA	10	10.1	101	65-140
2355-31-9	MeFOSAA	10	10.4	104	71-124
2991-50-6	EtFOSAA	10	10.3	103	63-129
757124-72-4	4:2 Fluorotelomer sulfonate	10	10.3	103	70-130
27619-97-2	6:2 Fluorotelomer sulfonate	10	10.2	102	76-131
39108-34-4	8:2 Fluorotelomer sulfonate	10	10.5	105	60-138

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	95%	50-150%
	13C5-PFPeA	95%	50-150%
	13C5-PFHxA	95%	50-150%
	13C4-PFHpA	99%	50-150%
	13C8-PFOA	100%	50-150%
	13C9-PFNA	103%	50-150%
	13C6-PFDA	107%	50-150%
	13C7-PFUnDA	110%	50-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA65214
Account: NOREASCA NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP75510-BS	2Q30992.D	1	06/19/19	NG	06/18/19	OP75510	S2Q497

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.1 B-15

FA65214-1, FA65214-2, FA65214-3, FA65214-4

CAS No.	ID Standard Recoveries	BSP	Limits
	13C2-PFDoDA	107%	50-150%
	13C2-PFTeDA	84%	50-150%
	13C3-PFBS	94%	50-150%
	13C3-PFHxS	97%	50-150%
	13C8-PFOS	100%	50-150%
	13C8-FOSA	108%	50-150%
	d3-MeFOSAA	109%	50-150%
	13C2-4:2FTS	103%	50-150%
	13C2-6:2FTS	102%	50-150%
	13C2-8:2FTS	107%	50-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA65214
Account: NOREASCA NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP75510-MS	2Q30996.D	1	06/19/19	NG	06/18/19	OP75510	S2Q497
OP75510-MSD	2Q30997.D	1	06/19/19	NG	06/18/19	OP75510	S2Q497
FA65214-1	2Q30995.D	1	06/19/19	NG	06/18/19	OP75510	S2Q497

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.1 B-15

FA65214-1, FA65214-2, FA65214-3, FA65214-4

CAS No.	Compound	FA65214-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
375-22-4	Perfluorobutanoic acid	0.389	J	11	10.8	94	11.4	10.0	85	8	60-134/30
2706-90-3	Perfluoropentanoic acid	1.1 U		11	11.2	102	11.4	10.4	92	7	62-134/30
307-24-4	Perfluorohexanoic acid	1.1 U		11	10.9	99	11.4	10.1	89	8	63-130/30
375-85-9	Perfluoroheptanoic acid	1.1 U		11	11.2	102	11.4	10.3	91	8	63-122/30
335-67-1	Perfluorooctanoic acid	1.1 U		11	11.5	104	11.4	10.6	93	8	71-128/30
375-95-1	Perfluorononanoic acid	1.1 U		11	11.0	100	11.4	10.2	90	8	66-124/30
335-76-2	Perfluorodecanoic acid	1.1 U		11	10.9	99	11.4	10.2	90	7	68-127/30
2058-94-8	Perfluoroundecanoic acid	1.1 U		11	11.1	101	11.4	10.4	92	7	61-137/30
307-55-1	Perfluorododecanoic acid	1.1 U		11	11.2	102	11.4	10.4	92	7	71-126/30
72629-94-8	Perfluorotridecanoic acid	1.1 U		11	12.4	112	11.4	11.4	100	8	60-137/30
376-06-7	Perfluorotetradecanoic acid	1.1 U		11	11.6	105	11.4	10.8	95	7	61-131/30
375-73-5	Perfluorobutanesulfonic acid	1.1 U		11	10.7	97	11.4	9.96	88	7	70-135/30
2706-91-4	Perfluoropentanesulfonic acid	1.1 U		11	11.3	102	11.4	10.4	92	8	70-130/30
355-46-4	Perfluorohexanesulfonic acid	1.1 U		11	10.9	99	11.4	10.3	91	6	72-129/30
375-92-8	Perfluoroheptanesulfonic acid	1.1 U		11	11.4	103	11.4	10.8	95	5	62-129/30
1763-23-1	Perfluorooctanesulfonic acid	1.1 U		11	11.0	100	11.4	10.3	91	7	69-125/30
68259-12-1	Perfluorononanesulfonic acid	1.1 U		11	11.4	103	11.4	11.0	97	4	70-130/30
335-77-3	Perfluorodecanesulfonic acid	1.1 U		11	12.2	111	11.4	11.1	98	9	63-141/30
754-91-6	PFOSA	1.1 U		11	11.1	101	11.4	10.1	89	9	65-140/30
2355-31-9	MeFOSAA	2.7 U		11	10.9	99	11.4	10.0	88	9	71-124/30
2991-50-6	EtFOSAA	2.7 U		11	11.8	107	11.4	10.6	93	11	63-129/30
757124-72-4	4:2 Fluorotelomer sulfonate	1.1 U		11	11.5	104	11.4	10.5	92	9	70-130/30
27619-97-2	6:2 Fluorotelomer sulfonate	1.1 U		11	11.1	101	11.4	10.8	95	3	76-131/30
39108-34-4	8:2 Fluorotelomer sulfonate	1.1 U		11	11.6	105	11.4	10.7	94	8	60-138/30

CAS No.	ID Standard Recoveries	MS	MSD	FA65214-1	Limits
	13C4-PFBA	97%	103%	91%	50-150%
	13C5-PFPeA	97%	103%	92%	50-150%
	13C5-PFHxA	98%	104%	93%	50-150%
	13C4-PFHpA	103%	109%	99%	50-150%
	13C8-PFOA	102%	110%	101%	50-150%
	13C9-PFNA	106%	113%	104%	50-150%
	13C6-PFDA	117%	125%	117%	50-150%
	13C7-PFUnDA	124%	133%	124%	50-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA65214
Account: NOREASCA NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP75510-MS	2Q30996.D	1	06/19/19	NG	06/18/19	OP75510	S2Q497
OP75510-MSD	2Q30997.D	1	06/19/19	NG	06/18/19	OP75510	S2Q497
FA65214-1	2Q30995.D	1	06/19/19	NG	06/18/19	OP75510	S2Q497

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.1 B-15

FA65214-1, FA65214-2, FA65214-3, FA65214-4

CAS No.	ID Standard Recoveries	MS	MSD	FA65214-1	Limits
	13C2-PFDoDA	129%	138%	121%	50-150%
	13C2-PFTeDA	113%	119%	105%	50-150%
	13C3-PFBS	98%	104%	93%	50-150%
	13C3-PFHxS	102%	108%	97%	50-150%
	13C8-PFOS	103%	109%	102%	50-150%
	13C8-FOSA	107%	117%	104%	50-150%
	d3-MeFOSAA	112%	125%	108%	50-150%
	13C2-4:2FTS	104%	111%	94%	50-150%
	13C2-6:2FTS	103%	110%	95%	50-150%
	13C2-8:2FTS	123%	131%	113%	50-150%

* = Outside of Control Limits.

Injection Standard Area Summary

Job Number: FA65214
Account: NOREASCA NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Check Std:	S2Q497-CC490	**Injection Date:**	06/19/19
Lab File ID:	2Q30990.D	**Injection Time:**	18:37
Instrument ID:	GCMS2Q	**Method:**	EPA 537M QSM5.1 B-15

	IS 1 AREA	RT	IS 2 AREA	RT
Initial Cal [a]	250818	6.51	56907	7.04
Check Std [b]	223608	6.61	51058	7.15
Upper Limit [c]	376227	7.61	85361	8.15
Lower Limit [d]	125409	5.61	28454	6.15

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT
OP75510-BS	253703	6.61	55840	7.14
OP75510-MB	240353	6.62	51285	7.15
ZZZZZZ	258144	6.61	55555	7.15
FA65214-1	248694	6.62	54380	7.16
OP75510-MS	248979	6.61	56348	7.15
OP75510-MSD	251053	6.61	55819	7.15
FA65214-2	250005	6.61	54039	7.15
FA65214-3	241565	6.62	52513	7.15
FA65214-4	241797	6.64	53098	7.16

IS 1 = 13C2-PFOA
IS 2 = 13C4-PFOS

(a) Initial Cal is: S2Q490-ICC490 2Q30542.D 06/10/19 16:36
(b) Check Std Limit = -50 to + 50% of initial cal area.
(c) Upper Limit = + 50% of initial standard area; Retention time + 1 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.

Isotope Dilution Standard Recovery Summary

Job Number: FA65214
Account: NOREASCA NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Method: EPA 537M QSM5.1 B-15 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6	S7	S8
FA65214-1	2Q30995.D	91	92	93	99	101	104	117	124
FA65214-2	2Q30998.D	92	92	94	100	103	107	119	128
FA65214-3	2Q30999.D	86	86	88	93	97	101	114	120
FA65214-4	2Q31000.D	82	82	84	89	93	95	109	116
OP75510-BS	2Q30992.D	95	95	95	99	100	103	107	110
OP75510-MB	2Q30993.D	91	91	92	98	101	100	110	110
OP75510-MS	2Q30996.D	97	97	98	103	102	106	117	124
OP75510-MSD	2Q30997.D	103	103	104	109	110	113	125	133

Isotope Dilution Standards	Recovery Limits
S1 = 13C4-PFBA	50-150%
S2 = 13C5-PFPeA	50-150%
S3 = 13C5-PFHxA	50-150%
S4 = 13C4-PFHpA	50-150%
S5 = 13C8-PFOA	50-150%
S6 = 13C9-PFNA	50-150%
S7 = 13C6-PFDA	50-150%
S8 = 13C7-PFUnDA	50-150%

Isotope Dilution Standard Recovery Summary

Job Number: FA65214
Account: NOREASCA NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Method: EPA 537M QSM5.1 B-15 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S9	S10	S11	S12	S13	S14	S15	S16
FA65214-1	2Q30995.D	121	105	93	97	102	104	108	94
FA65214-2	2Q30998.D	130	117	94	98	101	109	111	93
FA65214-3	2Q30999.D	119	103	88	92	96	100	102	88
FA65214-4	2Q31000.D	111	98	85	88	91	97	102	85
OP75510-BS	2Q30992.D	107	84	94	97	100	108	109	103
OP75510-MB	2Q30993.D	105	84	92	96	98	107	105	94
OP75510-MS	2Q30996.D	129	113	98	102	103	107	112	104
OP75510-MSD	2Q30997.D	138	119	104	108	109	117	125	111

Isotope Dilution Standards	Recovery Limits
S9 = 13C2-PFDoDA	50-150%
S10 = 13C2-PFTeDA	50-150%
S11 = 13C3-PFBS	50-150%
S12 = 13C3-PFHxS	50-150%
S13 = 13C8-PFOS	50-150%
S14 = 13C8-FOSA	50-150%
S15 = d3-MeFOSAA	50-150%
S16 = 13C2-4:2FTS	50-150%

Isotope Dilution Standard Recovery Summary

Job Number: FA65214
Account: NOREASCA NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Method: EPA 537M QSM5.1 B-15 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S17	S18
FA65214-1	2Q30995.D	95	113
FA65214-2	2Q30998.D	97	112
FA65214-3	2Q30999.D	91	107
FA65214-4	2Q31000.D	87	104
OP75510-BS	2Q30992.D	102	107
OP75510-MB	2Q30993.D	94	99
OP75510-MS	2Q30996.D	103	123
OP75510-MSD	2Q30997.D	110	131

Isotope Dilution Standards	Recovery Limits
S17 = 13C2-6:2FTS	50-150%
S18 = 13C2-8:2FTS	50-150%

Initial Calibration Summary

Job Number: FA65214 **Sample:** S2Q490-ICC490
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 2Q30542.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Initial Calibration Report

Method Path	D:\MassHunter\damethods
Method File	ID_061019_S2Q490.quantmethod.xml
Batch Name	D:\MassHunter\Data\ID_061019_S2Q490\QuantResults\s2q490.batch.bin
Last Calib Update	6/11/2019 7:38:32 AM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\ID_061019_S2Q490\2Q30537.d	6/10/2019 3:22:29 PM	6/11/2019 7:38:32 AM
2	D:\MassHunter\Data\ID_061019_S2Q490\2Q30538.d	6/10/2019 3:37:17 PM	6/11/2019 7:38:32 AM
3	D:\MassHunter\Data\ID_061019_S2Q490\2Q30539.d	6/10/2019 3:52:06 PM	6/11/2019 7:38:32 AM
4	D:\MassHunter\Data\ID_061019_S2Q490\2Q30540.d	6/10/2019 4:06:55 PM	6/11/2019 7:38:32 AM
5	D:\MassHunter\Data\ID_061019_S2Q490\2Q30541.d	6/10/2019 4:21:43 PM	6/11/2019 7:38:32 AM
6	D:\MassHunter\Data\ID_061019_S2Q490\2Q30542.d	6/10/2019 4:36:32 PM	6/11/2019 7:38:32 AM
7	D:\MassHunter\Data\ID_061019_S2Q490\2Q30543.d	6/10/2019 4:51:21 PM	6/11/2019 7:38:32 AM
8	D:\MassHunter\Data\ID_061019_S2Q490\2Q30544.d	6/10/2019 5:06:12 PM	6/11/2019 7:38:32 AM

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
S 13C4-PFBA	Linear	7513	8570	7939	9148	8688	9507	9171	10665	8900	10.926
S 13C5-PFPeA	Linear	5471	6220	5768	6640	6274	6884	6588	7594	6430	10.279
S 13C3-PFBS	Linear	1151	1302	1225	1387	1320	1432	1370	1542	1341	9.051
S 13C2-4:2FTS	Linear	2682	3063	2820	3319	3174	3628	3720		3201	12.097
S 13C5-PFHxA	Linear	7795	8873	8284	9491	8980	9704	9317	10640	9135	9.581
S 13C3-HFPO-DA	Linear	1799	1932	1755	1983	1840	1934	1785	1857	1860	4.375
S 13C4-PFHpA	Linear	8517	9658	8985	10239	9717	10541	9931	11093	9835	8.383
S 13C3-PFHxS	Linear	912.9	1045	974.1	1109	1040	1138	1053	1157	1054	7.802
S 13C2-6:2FTS	Linear	2038	2323	2164	2492	2355	2605	2647		2375	9.437
S 13C8-PFOA	Linear	7565	8508	7898	8981	8394	9015	8364	8967	8461	6.268
S 13C8-PFOS	Linear	1330	1519	1403	1595	1523	1616	1486	1613	1511	6.790
S 13C9-PFNA	Linear	6132	6950	6459	7345	6879	7334	6867	7517	6936	6.775
S 13C8-FOSA	Linear	4132	4643	4303	4872	4554	4816	4298	4305	4490	6.030
S 13C6-PFDA	Linear	9530	10947	10054	11510	10806	11449	10456	11038	10724	6.348
S 13C2-8:2FTS	Linear	1326	1539	1414	1592	1539	1723	1768		1557	10.079
S d3-MeFOSAA	Linear	1072	1277	1148	1318	1266	1372	1333	1459	1281	9.588
S 13C7-PFUnDA	Linear	10875	12317	11490	13086	12296	12813	11991	12891	12220	6.157
S 13C2-PFDoDA	Linear	10651	12133	11158	12750	11919	11582	12133	13191	11940	6.861
S 13C2-PFTeDA	Linear	7314	8148	8346	8626	8180	6282	7800	8501	7900	9.803
						ISTD					
I 13C2-PFOA											
S M2-PFOA	Linear	1.0008	1.0014	1.0010	1.0010	1.0012	1.0001	1.0013	1.0008	1.0010	0.042
						ISTD					
I 13C4-PFOS											
S M4-PFOS	Linear	1.0001	1.0014	1.0009	1.0007	1.0005	1.0009	1.0011	1.0010	1.0008	0.038
						ISTD					
I M4-PFBA											
T PFBA	Linear	0.2010	0.1677	0.1836	0.1629	0.1600	0.1786	0.1730	0.1777	0.1756	7.435
						ISTD					
I M5-PFPeA											
T PFPeA	Linear	0.9626	0.8359	0.8521	0.7791	0.7635	0.8757	0.8446	0.8708	0.8480	7.253

Generated at 7:39 AM on 6/11/2019

Initial Calibration Summary

Job Number: FA65214 **Sample:** S2Q490-ICC490
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 2Q30542.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I M5-PFHxA						ISTD					
T PFHxA	Linear	0.3551	0.2758	0.3081	0.2748	0.2660	0.3036	0.2941	0.3022	0.2975	9.410
I M4-PFHpA						ISTD					
T PFHpA	Linear	0.9754	0.8258	0.8877	0.8013	0.7846	0.8804	0.8630	0.8924	0.8638	7.020
I M8-PFOA						ISTD					
T ADONA	Linear	1.3136	1.1438	1.2451	1.1990	1.1522	1.3633	1.3156	1.4976	1.2788	9.315
T PFOA	Linear	0.6541	0.5581	0.5883	0.5201	0.5156	0.5854	0.5641	0.5812	0.5709	7.664
I M9-PFNA						ISTD					
T PFNA	Linear	0.6355	0.5185	0.5640	0.4983	0.4944	0.5620	0.5522	0.5665	0.5489	8.343
I M6-PFDA						ISTD					
T 9Cl-PF3ONS	Linear	0.1031	0.1015	0.0996	0.1038	0.0925	0.1138	0.1062	0.1196	0.1050	7.990
T PFDA	Linear	0.3557	0.3148	0.3269	0.2984	0.2869	0.3330	0.3195	0.3297	0.3206	6.646
I M7-PFUnDA						ISTD					
T PFUnDA	Linear	0.4262	0.3623	0.3811	0.3462	0.3417	0.3959	0.3840	0.3998	0.3797	7.531
I M2-PFDoDA						ISTD					
T 11Cl-PF3OUdS	Linear	0.3228	0.2863	0.3238	0.3132	0.2901	0.3843	0.3170	0.3348	0.3215	9.437
T PFDoDA	Linear	0.4981	0.4291	0.4532	0.4135	0.4041	0.4593	0.4398	0.4567	0.4442	6.683
I M2-PFTeDA						ISTD					
T PFTrDA	Linear	0.8471	0.7352	0.7304	0.6888	0.6891	0.9760	0.7803	0.8158	0.7828	12.326
T PFTeDA	Quadratic	0.9622	0.7549	0.7465	0.6761	0.6551	0.7486	0.7200	0.7430	0.7508	12.379
I M8-FOSA						ISTD					
T FOSA	Linear	0.5494	0.4751	0.5129	0.4697	0.4498	0.5052	0.4989	0.5024	0.4954	6.161
I M3-PFBS						ISTD					
T PFBS	Linear	1.5351	1.3600	1.3779	1.3094	1.2568	1.4267	1.3668	1.4296	1.3828	6.074
T PFPeS	Linear	0.9494	0.8573	0.8633	0.7861	0.7655	0.8772	0.8260	0.8444	0.8461	6.710
I M3-PFHxS						ISTD					
T PFHxS	Linear	1.6900	1.3016	1.4646	1.2803	1.2361	1.4085	1.3962	1.4382	1.4019	10.113
T PFHpS	Linear	1.2904	1.0735	1.1707	1.0695	1.0324	1.1358	1.1062	1.0768	1.1194	7.264
I M8-PFOS						ISTD					
T PFOS	Linear	1.0944	0.8654	0.9402	0.8659	0.8302	0.9260	0.9331	0.9784	0.9292	8.888
T PFNS	Linear	0.6646	0.6331	0.6313	0.5738	0.5576	0.6379	0.6174	0.6012	0.6146	5.759
T PFDS	Linear	0.3801	0.3334	0.3601	0.3391	0.3311	0.3452	0.3554	0.3441	0.3485	4.647
I M2-4:2FTS						ISTD					
T 4:2FTS	Avg RF	0.6648	0.5854	0.6174	0.5397	0.5277	0.5820	0.5270	0.4756	0.5650	10.555
I M2-6:2FTS						ISTD					

Generated at 7:39 AM on 6/11/2019

Initial Calibration Summary

Job Number: FA65214 **Sample:** S2Q490-ICC490
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 2Q30542.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
T 6:2FTS	Avg RF	0.6339	0.5011	0.5576	0.4855	0.4710	0.5296	0.4650	0.4296	0.5092	12.575
I M2-8:2FTS					----------	ISTD	----------				
T 8:2FTS	Avg RF	0.6862	0.5172	0.5151	0.5183	0.4763	0.5318	0.4757	0.4301	0.5188	14.525
I M3-MeFOSAA					----------	ISTD	----------				
T MeFOSAA	Linear	0.6290	0.4742	0.5617	0.5081	0.4938	0.5427	0.5072	0.5494	0.5333	9.157
T EtFOSAA	Linear	0.5193	0.4055	0.4320	0.3934	0.4037	0.4432	0.4298	0.4609	0.4360	9.279
I M3-HFPO-DA					----------	ISTD	----------				
T HFPO-DA	Linear	0.9838	0.8755	0.9360	0.7973	0.8482	0.8927	0.9135	0.8962	0.8929	6.277

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Generated at 7:39 AM on 6/11/2019

Initial Calibration Summary

Job Number: FA65214 **Sample:** S2Q490-ICC490
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 2Q30542.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Initial Calibration Report

Compounds with Curve fitting not using Avg Response Factor:

Compound	Curve Fit	Curve Fit Formula	Curve Fit R2
S 13C4-PFBA	Linear	y = 8900.167956 * x	0.000000
T PFBA	Linear	y = 0.176651 * x	0.999710
S 13C5-PFPeA	Linear	y = 6429.867988 * x	0.000000
T PFPeA	Linear	y = 0.864875 * x	0.999594
S 13C3-PFBS	Linear	y = 1341.059466 * x	0.000000
T PFBS	Linear	y = 1.415915 * x	0.999382
S 13C2-4:2FTS	Linear	y = 3200.925355 * x	0.000000
S 13C5-PFHxA	Linear	y = 9135.497856 * x	0.000000
T PFHxA	Linear	y = 0.300334 * x	0.999653
T PFPeS	Linear	y = 0.841163 * x	0.999696
T HFPO-DA	Linear	y = 0.898895 * x	0.999836
S 13C3-HFPO-DA	Linear	y = 1860.455423 * x	0.000000
S 13C4-PFHpA	Linear	y = 9835.111139 * x	0.000000
T PFHpA	Linear	y = 0.885387 * x	0.999567
S 13C3-PFHxS	Linear	y = 1053.695185 * x	0.000000
T PFHxS	Linear	y = 1.427385 * x	0.999550
T ADONA	Linear	y = 1.455227 * x	0.995710
S 13C2-6:2FTS	Linear	y = 2374.902688 * x	0.000000
S 13C8-PFOA	Linear	y = 8461.450326 * x	0.000000
S M2-PFOA	Linear	y = 1.000958 * x	0.000000
T PFOA	Linear	y = 0.577427 * x	0.999627
T PFHpS	Linear	y = 1.083888 * x	0.999687
S 13C8-PFOS	Linear	y = 1510.793654 * x	0.000000
S M4-PFOS	Linear	y = 1.000800 * x	0.000000
T PFOS	Linear	y = 0.966712 * x	0.999146
S 13C9-PFNA	Linear	y = 6935.529842 * x	0.000000
T PFNA	Linear	y = 0.562905 * x	0.999640
S 13C8-FOSA	Linear	y = 4490.268893 * x	0.000000
T FOSA	Linear	y = 0.501330 * x	0.999851
T 9Cl-PF3ONS	Linear	y = 0.116587 * x	0.996473
T PFNS	Linear	y = 0.605030 * x	0.999611
S 13C6-PFDA	Linear	y = 10723.865960 * x	0.000000
T PFDA	Linear	y = 0.327452 * x	0.999560
S 13C2-8:2FTS	Linear	y = 1557.232464 * x	0.000000
S d3-MeFOSAA	Linear	y = 1280.598716 * x	0.000000
T MeFOSAA	Linear	y = 0.540611 * x	0.998503
T EtFOSAA	Linear	y = 0.453785 * x	0.998706
T PFDS	Linear	y = 0.346217 * x	0.999730
S 13C7-PFUnDA	Linear	y = 12219.956528 * x	0.000000
T PFUnDA	Linear	y = 0.396121 * x	0.999367
T 11Cl-PF3OUdS	Linear	y = 0.332508 * x	0.997986
S 13C2-PFDoDA	Linear	y = 11939.816240 * x	0.000000
T PFDoDA	Linear	y = 0.453021 * x	0.999513

Initial Calibration Summary

Job Number: FA65214 **Sample:** S2Q490-ICC490
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 2Q30542.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Initial Calibration Report

T PFTrDA	Linear	y = 0.812657 * x	0.997306
S 13C2-PFTeDA	Linear	y = 7899.546894 * x	0.000000
T PFTeDA	Quadratic	y = 0.007253 * x ^ 2 + 0.706414 * x	0.999810

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Verification

Job Number: FA65214 **Sample:** S2Q490-ICV490
Account: NOREASCA NOREAS,Inc. **Lab FileID:** 2Q30546.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

Continuing Calibration Report

Batch: D:\MassHunter\Data\ID_061019_S2Q490\s2q490.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\ID_061019_S2Q490\2Q30537.d
2:D:\MassHunter\Data\ID_061019_S2Q490\2Q30538.d
3:D:\MassHunter\Data\ID_061019_S2Q490\2Q30539.d
4:D:\MassHunter\Data\ID_061019_S2Q490\2Q30540.d
5:D:\MassHunter\Data\ID_061019_S2Q490\2Q30541.d
6:D:\MassHunter\Data\ID_061019_S2Q490\2Q30542.d
7:D:\MassHunter\Data\ID_061019_S2Q490\2Q30543.d
8:D:\MassHunter\Data\ID_061019_S2Q490\2Q30544.d

Data File: 2Q30546
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	21.617	8.1	108.1
13C2-6:2FTS	20.000	22.121	10.6	110.6
13C2-8:2FTS	20.000	21.991	10.0	110.0
13C2-PFDoDA	20.000	22.714	13.6	113.6
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	21.979	9.9	109.9
13C3-PFBS	20.000	22.365	11.8	111.8
13C3-PFHxS	20.000	22.552	12.8	112.8
13C4-PFBA	20.000	21.876	9.4	109.4
13C4-PFHpA	20.000	22.329	11.6	111.6
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	22.095	10.5	110.5
13C5-PFPeA	20.000	21.909	9.5	109.5
13C6-PFDA	20.000	23.195	16.0	116.0
13C7-PFUnDA	20.000	22.908	14.5	114.5
13C8-FOSA	20.000	23.631	18.2	118.2
13C8-PFOA	20.000	22.634	13.2	113.2
13C8-PFOS	20.000	21.934	9.7	109.7
13C9-PFNA	20.000	22.255	11.3	111.3
4:2FTS	20.000	0.000	# -100.0	0.0
6:2FTS	20.000	0.000	# -100.0	0.0
8:2FTS	20.000	0.000	# -100.0	0.0
d3-MeFOSAA	20.000	21.735	8.7	108.7
M2-PFOA	20.000	20.004	0.0	100.0
EtFOSAA	20.000	15.795	-21.0	79.0
FOSA	20.000	0.000	# -100.0	0.0
MeFOSAA	20.000	17.057	-14.7	85.3
PFBA	20.000	0.000	# -100.0	0.0
PFBS	20.000	0.000	# -100.0	0.0
PFDA	20.000	0.000	# -100.0	0.0
PFDoDA	20.000	0.000	# -100.0	0.0
PFDS	20.000	0.000	# -100.0	0.0
PFHpA	20.000	0.000	# -100.0	0.0
PFHpS	20.000	0.000	# -100.0	0.0
PFHxA	20.000	0.000	# -100.0	0.0
PFHxS	20.000	0.000	# -100.0	0.0
PFNA	20.000	0.000	# -100.0	0.0

Initial Calibration Verification

Job Number: FA65214 **Sample:** S2Q490-ICV490
Account: NOREASCA NOREAS,Inc. **Lab FileID:** 2Q30546.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

PFNS	20.000	0.000	# -100.0	0.0
PFOA	20.000	17.519	-12.4	87.6
PFOS	20.000	14.435	-27.8	72.2
PFPeA	20.000	0.000	# -100.0	0.0
PFPeS	20.000	0.000	# -100.0	0.0
PFTeDA	20.000	0.000	# -100.0	0.0
PFTrDA	20.000	0.000	# -100.0	0.0
PFUnDA	20.000	0.000	# -100.0	0.0
M4-PFOS	20.000	20.007	0.0	100.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	0.000	# -100.0	0.0
13C3-HFPO-DA	100.000	111.974	12.0	112.0
9Cl-PF3ONS	20.000	0.000	# -100.0	0.0
ADONA	20.000	0.000	# -100.0	0.0
HFPO-DA	100.000	0.000	# -100.0	0.0
M3-HFPO-DA	---	--ISTD--		

CC Criteria: +/- 30%

Initial Calibration Verification

Job Number: FA65214 **Sample:** S2Q490-ICV490
Account: NOREASCA NOREAS,Inc. **Lab FileID:** 2Q30547.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

Continuing Calibration Report

Batch: D:\MassHunter\Data\ID_061019_S2Q490\s2q490.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\ID_061019_S2Q490\2Q30537.d
2:D:\MassHunter\Data\ID_061019_S2Q490\2Q30538.d
3:D:\MassHunter\Data\ID_061019_S2Q490\2Q30539.d
4:D:\MassHunter\Data\ID_061019_S2Q490\2Q30540.d
5:D:\MassHunter\Data\ID_061019_S2Q490\2Q30541.d
6:D:\MassHunter\Data\ID_061019_S2Q490\2Q30542.d
7:D:\MassHunter\Data\ID_061019_S2Q490\2Q30543.d
8:D:\MassHunter\Data\ID_061019_S2Q490\2Q30544.d

Data File: 2Q30547
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	21.985	9.9	109.9
13C2-6:2FTS	20.000	21.995	10.0	110.0
13C2-8:2FTS	20.000	21.822	9.1	109.1
13C2-PFDoDA	20.000	21.269	6.3	106.3
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	20.475	2.4	102.4
13C3-PFBS	20.000	21.362	6.8	106.8
13C3-PFHxS	20.000	21.721	8.6	108.6
13C4-PFBA	20.000	21.008	5.0	105.0
13C4-PFHpA	20.000	21.131	5.7	105.7
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	21.174	5.9	105.9
13C5-PFPeA	20.000	21.006	5.0	105.0
13C6-PFDA	20.000	21.525	7.6	107.6
13C7-PFUnDA	20.000	21.388	6.9	106.9
13C8-FOSA	20.000	21.340	6.7	106.7
13C8-PFOA	20.000	21.253	6.3	106.3
13C8-PFOS	20.000	21.287	6.4	106.4
13C9-PFNA	20.000	21.267	6.3	106.3
4:2FTS	20.000	17.668	-11.7	88.3
6:2FTS	20.000	17.355	-13.2	86.8
8:2FTS	20.000	17.982	-10.1	89.9
d3-MeFOSAA	20.000	21.230	6.2	106.2
M2-PFOA	20.000	20.053	0.3	100.3
EtFOSAA	20.000	17.676	-11.6	88.4
FOSA	20.000	18.730	-6.3	93.7
MeFOSAA	20.000	18.399	-8.0	92.0
PFBA	20.000	18.304	-8.5	91.5
PFBS	20.000	16.160	-19.2	80.8
PFDA	20.000	17.177	-14.1	85.9
PFDoDA	20.000	19.105	-4.5	95.5
PFDS	20.000	18.452	-7.7	92.3
PFHpA	20.000	18.804	-6.0	94.0
PFHpS	20.000	17.649	-11.8	88.2
PFHxA	20.000	16.810	-15.9	84.1
PFHxS	20.000	15.523	-22.4	77.6
PFNA	20.000	16.705	-16.5	83.5

Initial Calibration Verification

Job Number: FA65214 **Sample:** S2Q490-ICV490
Account: NOREASCA NOREAS,Inc. **Lab FileID:** 2Q30547.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

PFNS	20.000	18.076	-9.6	90.4
PFOA	20.000	18.502	-7.5	92.5
PFOS	20.000	17.619	-11.9	88.1
PFPeA	20.000	18.162	-9.2	90.8
PFPeS	20.000	16.872	-15.6	84.4
PFTeDA	20.000	18.142	-9.3	90.7
PFTrDA	20.000	20.117	0.6	100.6
PFUnDA	20.000	18.937	-5.3	94.7
M4-PFOS	20.000	20.012	0.1	100.1
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	0.000	# -100.0	0.0
13C3-HFPO-DA	100.000	110.679	10.7	110.7
9Cl-PF3ONS	20.000	0.000	# -100.0	0.0
ADONA	20.000	0.000	# -100.0	0.0
HFPO-DA	100.000	0.000	# -100.0	0.0
M3-HFPO-DA	---	--ISTD--		

CC Criteria: +/- 30%

Initial Calibration Verification

Job Number: FA65214 **Sample:** S2Q490-ICV490
Account: NOREASCA NOREAS,Inc. **Lab FileID:** 2Q30548.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

Continuing Calibration Report

Batch: D:\MassHunter\Data\ID_061019_S2Q490\s2q490.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\ID_061019_S2Q490\2Q30537.d
2:D:\MassHunter\Data\ID_061019_S2Q490\2Q30538.d
3:D:\MassHunter\Data\ID_061019_S2Q490\2Q30539.d
4:D:\MassHunter\Data\ID_061019_S2Q490\2Q30540.d
5:D:\MassHunter\Data\ID_061019_S2Q490\2Q30541.d
6:D:\MassHunter\Data\ID_061019_S2Q490\2Q30542.d
7:D:\MassHunter\Data\ID_061019_S2Q490\2Q30543.d
8:D:\MassHunter\Data\ID_061019_S2Q490\2Q30544.d

Data File: 2Q30548
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	0.000	# -100.0	0.0
13C2-6:2FTS	20.000	0.000	# -100.0	0.0
13C2-8:2FTS	20.000	0.000	# -100.0	0.0
13C2-PFDoDA	20.000	0.000	# -100.0	0.0
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	0.000	# -100.0	0.0
13C3-PFBS	20.000	0.000	# -100.0	0.0
13C3-PFHxS	20.000	0.000	# -100.0	0.0
13C4-PFBA	20.000	0.000	# -100.0	0.0
13C4-PFHpA	20.000	0.000	# -100.0	0.0
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	0.000	# -100.0	0.0
13C5-PFPeA	20.000	0.000	# -100.0	0.0
13C6-PFDA	20.000	0.000	# -100.0	0.0
13C7-PFUnDA	20.000	0.000	# -100.0	0.0
13C8-FOSA	20.000	0.000	# -100.0	0.0
13C8-PFOA	20.000	0.000	# -100.0	0.0
13C8-PFOS	20.000	0.000	# -100.0	0.0
13C9-PFNA	20.000	0.000	# -100.0	0.0
4:2FTS	20.000	0.000	# -100.0	0.0
6:2FTS	20.000	0.000	# -100.0	0.0
8:2FTS	20.000	0.000	# -100.0	0.0
d3-MeFOSAA	20.000	0.000	# -100.0	0.0
M2-PFOA	20.000	0.000	# -100.0	0.0
EtFOSAA	20.000	0.000	# -100.0	0.0
FOSA	20.000	0.000	# -100.0	0.0
MeFOSAA	20.000	0.000	# -100.0	0.0
PFBA	20.000	0.000	# -100.0	0.0
PFBS	20.000	0.000	# -100.0	0.0
PFDA	20.000	0.000	# -100.0	0.0
PFDoDA	20.000	0.000	# -100.0	0.0
PFDS	20.000	0.000	# -100.0	0.0
PFHpA	20.000	0.000	# -100.0	0.0
PFHpS	20.000	0.000	# -100.0	0.0
PFHxA	20.000	0.000	# -100.0	0.0
PFHxS	20.000	0.000	# -100.0	0.0
PFNA	20.000	0.000	# -100.0	0.0

Initial Calibration Verification

Job Number: FA65214 **Sample:** S2Q490-ICV490
Account: NOREASCA NOREAS,Inc. **Lab FileID:** 2Q30548.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

PFNS	20.000	0.000	# -100.0	0.0
PFOA	20.000	0.000	# -100.0	0.0
PFOS	20.000	0.000	# -100.0	0.0
PFPeA	20.000	0.000	# -100.0	0.0
PFPeS	20.000	0.000	# -100.0	0.0
PFTeDA	20.000	0.000	# -100.0	0.0
PFTrDA	20.000	0.000	# -100.0	0.0
PFUnDA	20.000	0.000	# -100.0	0.0
M4-PFOS	20.000	0.000	# -100.0	0.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	0.000	# -100.0	0.0
13C3-HFPO-DA	100.000	101.734	1.7	101.7
9Cl-PF3ONS	20.000	0.000	# -100.0	0.0
ADONA	20.000	0.000	# -100.0	0.0
HFPO-DA	20.000	23.290	16.5	116.5
M3-HFPO-DA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FA65214 **Sample:** S2Q497-CC490
Account: NOREASCA NOREAS,Inc. **Lab FileID:** 2Q30990.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

Continuing Calibration Report

Batch: D:\MassHunter\Data\ID_061919_S2Q497\s2q497.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\ID_061019_S2Q490\2Q30537.d
2:D:\MassHunter\Data\ID_061019_S2Q490\2Q30538.d
3:D:\MassHunter\Data\ID_061019_S2Q490\2Q30539.d
4:D:\MassHunter\Data\ID_061019_S2Q490\2Q30540.d
5:D:\MassHunter\Data\ID_061019_S2Q490\2Q30541.d
6:D:\MassHunter\Data\ID_061019_S2Q490\2Q30542.d
7:D:\MassHunter\Data\ID_061019_S2Q490\2Q30543.d
8:D:\MassHunter\Data\ID_061019_S2Q490\2Q30544.d

Data File: 2Q30990
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	21.378	6.9	106.9
13C2-6:2FTS	20.000	20.935	4.7	104.7
13C2-8:2FTS	20.000	22.107	10.5	110.5
13C2-PFDoDA	20.000	22.328	11.6	111.6
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	18.659	-6.7	93.3
13C3-PFBS	20.000	20.144	0.7	100.7
13C3-PFHxS	20.000	20.280	1.4	101.4
13C4-PFBA	20.000	20.315	1.6	101.6
13C4-PFHpA	20.000	20.297	1.5	101.5
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	20.122	0.6	100.6
13C5-PFPeA	20.000	20.138	0.7	100.7
13C6-PFDA	20.000	21.986	9.9	109.9
13C7-PFUnDA	20.000	22.897	14.5	114.5
13C8-FOSA	20.000	22.179	10.9	110.9
13C8-PFOA	20.000	21.099	5.5	105.5
13C8-PFOS	20.000	21.142	5.7	105.7
13C9-PFNA	20.000	21.379	6.9	106.9
4:2FTS	20.000	20.393	2.0	102.0
6:2FTS	20.000	20.019	0.1	100.1
8:2FTS	20.000	19.834	-0.8	99.2
d3-MeFOSAA	20.000	22.606	13.0	113.0
M2-PFOA	20.000	19.984	-0.1	99.9
EtFOSAA	20.000	20.278	1.4	101.4
FOSA	20.000	19.651	-1.7	98.3
MeFOSAA	20.000	19.346	-3.3	96.7
PFBA	20.000	18.526	-7.4	92.6
PFBS	20.000	18.790	-6.1	93.9
PFDA	20.000	19.294	-3.5	96.5
PFDoDA	20.000	19.508	-2.5	97.5
PFDS	20.000	20.202	1.0	101.0
PFHpA	20.000	19.544	-2.3	97.7
PFHpS	20.000	20.381	1.9	101.9
PFHxA	20.000	19.484	-2.6	97.4
PFHxS	20.000	19.361	-3.2	96.8
PFNA	20.000	19.221	-3.9	96.1

Continuing Calibration Summary

Job Number: FA65214 **Sample:** S2Q497-CC490
Account: NOREASCA NOREAS,Inc. **Lab FileID:** 2Q30990.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

PFNS	20.000	19.607	-2.0	98.0
PFOA	20.000	19.574	-2.1	97.9
PFOS	20.000	19.010	-5.0	95.0
PFPeA	20.000	19.392	-3.0	97.0
PFPeS	20.000	19.399	-3.0	97.0
PFTeDA	20.000	20.587	2.9	102.9
PFTrDA	20.000	22.233	11.2	111.2
PFUnDA	20.000	19.308	-3.5	96.5
M4-PFOS	20.000	19.984	-0.1	99.9
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	18.437	-7.8	92.2
13C3-HFPO-DA	100.000	94.463	-5.5	94.5
9Cl-PF3ONS	20.000	17.094	-14.5	85.5
ADONA	20.000	16.740	-16.3	83.7
HFPO-DA	100.000	104.322	4.3	104.3
M3-HFPO-DA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FA65214 **Sample:** S2Q497-CC490
Account: NOREASCA NOREAS,Inc. **Lab FileID:** 2Q31001.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

Continuing Calibration Report

Batch: D:\MassHunter\Data\ID_061919_S2Q497\s2q497.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\ID_061019_S2Q490\2Q30537.d
2:D:\MassHunter\Data\ID_061019_S2Q490\2Q30538.d
3:D:\MassHunter\Data\ID_061019_S2Q490\2Q30539.d
4:D:\MassHunter\Data\ID_061019_S2Q490\2Q30540.d
5:D:\MassHunter\Data\ID_061019_S2Q490\2Q30541.d
6:D:\MassHunter\Data\ID_061019_S2Q490\2Q30542.d
7:D:\MassHunter\Data\ID_061019_S2Q490\2Q30543.d
8:D:\MassHunter\Data\ID_061019_S2Q490\2Q30544.d

Data File: 2Q31001
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	21.212	6.1	106.1
13C2-6:2FTS	20.000	20.551	2.8	102.8
13C2-8:2FTS	20.000	21.580	7.9	107.9
13C2-PFDoDA	20.000	21.829	9.1	109.1
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	19.131	-4.3	95.7
13C3-PFBS	20.000	20.066	0.3	100.3
13C3-PFHxS	20.000	20.084	0.4	100.4
13C4-PFBA	20.000	19.929	-0.4	99.6
13C4-PFHpA	20.000	19.954	-0.2	99.8
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	19.616	-1.9	98.1
13C5-PFPeA	20.000	19.540	-2.3	97.7
13C6-PFDA	20.000	21.957	9.8	109.8
13C7-PFUnDA	20.000	22.542	12.7	112.7
13C8-FOSA	20.000	22.192	11.0	111.0
13C8-PFOA	20.000	20.456	2.3	102.3
13C8-PFOS	20.000	20.722	3.6	103.6
13C9-PFNA	20.000	21.231	6.2	106.2
4:2FTS	20.000	20.310	1.6	101.6
6:2FTS	20.000	19.834	-0.8	99.2
8:2FTS	20.000	20.585	2.9	102.9
d3-MeFOSAA	20.000	22.266	11.3	111.3
M2-PFOA	20.000	19.989	-0.1	99.9
EtFOSAA	20.000	19.953	-0.2	99.8
FOSA	20.000	19.331	-3.3	96.7
MeFOSAA	20.000	19.080	-4.6	95.4
PFBA	20.000	18.412	-7.9	92.1
PFBS	20.000	18.964	-5.2	94.8
PFDA	20.000	19.348	-3.3	96.7
PFDoDA	20.000	19.684	-1.6	98.4
PFDS	20.000	19.828	-0.9	99.1
PFHpA	20.000	19.761	-1.2	98.8
PFHpS	20.000	20.732	3.7	103.7
PFHxA	20.000	18.845	-5.8	94.2
PFHxS	20.000	19.386	-3.1	96.9
PFNA	20.000	18.656	-6.7	93.3

Continuing Calibration Summary

Job Number: FA65214 **Sample:** S2Q497-CC490
Account: NOREASCA NOREAS,Inc. **Lab FileID:** 2Q31001.D
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

PFNS	20.000	20.044	0.2	100.2
PFOA	20.000	20.099	0.5	100.5
PFOS	20.000	19.497	-2.5	97.5
PFPeA	20.000	19.783	-1.1	98.9
PFPeS	20.000	19.637	-1.8	98.2
PFTeDA	20.000	20.594	3.0	103.0
PFTrDA	20.000	22.200	11.0	111.0
PFUnDA	20.000	19.674	-1.6	98.4
M4-PFOS	20.000	19.953	-0.2	99.8
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	18.837	-5.8	94.2
13C3-HFPO-DA	100.000	95.829	-4.2	95.8
9Cl-PF3ONS	20.000	16.662	-16.7	83.3
ADONA	20.000	16.975	-15.1	84.9
HFPO-DA	100.000	102.695	2.7	102.7
M3-HFPO-DA	---	--ISTD--		

CC Criteria: +/- 30%

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

Percent Solids Raw Data Summary

Job Number: FA65214
Account: NOREASCA NOREAS, Inc.
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY

Sample: FA65214-1 **Analyzed:** 19-JUN-19 by CS **Method:** SM19 2540G
ClientID: NWIRP-S1-WC-CF-039

Wet Weight (Total)	15.63	g
Tare Weight	2.55	g
Dry Weight (Total)	14.29	g
Solids, Percent	89.8	%

Sample: FA65214-2 **Analyzed:** 19-JUN-19 by CS **Method:** SM19 2540G
ClientID: NWIRP-S1-WC-CF-040

Wet Weight (Total)	14.78	g
Tare Weight	2.55	g
Dry Weight (Total)	13.56	g
Solids, Percent	90	%

Sample: FA65214-3 **Analyzed:** 19-JUN-19 by CS **Method:** SM19 2540G
ClientID: NWIRP-S1-WC-CF-041

Wet Weight (Total)	16.6	g
Tare Weight	2.58	g
Dry Weight (Total)	15.35	g
Solids, Percent	91.1	%

Sample: FA65214-4 **Analyzed:** 19-JUN-19 by CS **Method:** SM19 2540G
ClientID: NWIRP-S1-WC-CF-042

Wet Weight (Total)	14.19	g
Tare Weight	2.54	g
Dry Weight (Total)	12.98	g
Solids, Percent	89.6	%

Sample Summary

NOREAS, Inc.

Job No: FA65214

ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage, NY
Project No: APTIM 007 RAC WO #12

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA65214-1	06/14/19	12:10	SM	06/15/19	SO	Soil	NWIRP-S1-WC-CF-039
FA65214-2	06/14/19	12:19	SM	06/15/19	SO	Soil	NWIRP-S1-WC-CF-040
FA65214-3	06/14/19	12:24	SM	06/15/19	SO	Soil	NWIRP-S1-WC-CF-041
FA65214-4	06/14/19	12:30	SM	06/15/19	SO	Soil	NWIRP-S1-WC-CF-042

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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-039
Lab Sample ID: FA65214-1 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/15/19
Method: EPA 537M QSM5.1 B-15 IN HOUSE **Percent Solids:** 89.8
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Q30995.D	1	06/19/19 19:51	NG	06/18/19 13:00	OP75510	S2Q497
Run #2							

	Initial Weight	Final Volume
Run #1	2.04 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	0.389	1.1	0.55	0.27	ug/kg	J
2706-90-3	Perfluoropentanoic acid	0.55 U	1.1	0.55	0.22	ug/kg	
307-24-4	Perfluorohexanoic acid	0.55 U	1.1	0.55	0.22	ug/kg	
375-85-9	Perfluoroheptanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
335-67-1	Perfluorooctanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
375-95-1	Perfluorononanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
335-76-2	Perfluorodecanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
2058-94-8	Perfluoroundecanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
307-55-1	Perfluorododecanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
72629-94-8	Perfluorotridecanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
376-06-7	Perfluorotetradecanoic acid	0.55 U	1.1	0.55	0.27	ug/kg	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
2706-91-4	Perfluoropentanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
68259-12-1	Perfluorononanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	0.55 U	1.1	0.55	0.27	ug/kg	
PERFLUOROOCTANESULFONAMIDES							
754-91-6	PFOSA	0.55 U	1.1	0.55	0.27	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	1.1 U	2.7	1.1	0.55	ug/kg	
2991-50-6	EtFOSAA	1.1 U	2.7	1.1	0.55	ug/kg	
FLUOROTELOMER SULFONATES							
757124-72-4	4:2 Fluorotelomer sulfonate	0.55 U	1.1	0.55	0.27	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	0.55 U	1.1	0.55	0.27	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-CF-039		
Lab Sample ID:	FA65214-1	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/15/19
Method:	EPA 537M QSM5.1 B-15 IN HOUSE	**Percent Solids:**	89.8
Project:	ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
39108-34-4	8:2 Fluorotelomer sulfonate	0.55 U	1.1	0.55	0.27	ug/kg	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	91%		50-150%
	13C5-PFPeA	92%		50-150%
	13C5-PFHxA	93%		50-150%
	13C4-PFHpA	99%		50-150%
	13C8-PFOA	101%		50-150%
	13C9-PFNA	104%		50-150%
	13C6-PFDA	117%		50-150%
	13C7-PFUnDA	124%		50-150%
	13C2-PFDoDA	121%		50-150%
	13C2-PFTeDA	105%		50-150%
	13C3-PFBS	93%		50-150%
	13C3-PFHxS	97%		50-150%
	13C8-PFOS	102%		50-150%
	13C8-FOSA	104%		50-150%
	d3-MeFOSAA	108%		50-150%
	13C2-4:2FTS	94%		50-150%
	13C2-6:2FTS	95%		50-150%
	13C2-8:2FTS	113%		50-150%

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-CF-040
Lab Sample ID: FA65214-2 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/15/19
Method: EPA 537M QSM5.1 B-15 IN HOUSE **Percent Solids:** 90.0
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Q30998.D	1	06/19/19 20:36	NG	06/18/19 13:00	OP75510	S2Q497
Run #2							

	Initial Weight	Final Volume
Run #1	1.97 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2706-90-3	Perfluoropentanoic acid	0.56 U	1.1	0.56	0.23	ug/kg	
307-24-4	Perfluorohexanoic acid	0.56 U	1.1	0.56	0.23	ug/kg	
375-85-9	Perfluoroheptanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-67-1	Perfluorooctanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
375-95-1	Perfluorononanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-76-2	Perfluorodecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2058-94-8	Perfluoroundecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
307-55-1	Perfluorododecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
72629-94-8	Perfluorotridecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
376-06-7	Perfluorotetradecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2706-91-4	Perfluoropentanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
68259-12-1	Perfluorononanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDES							
754-91-6	PFOSA	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	1.1 U	2.8	1.1	0.56	ug/kg	
2991-50-6	EtFOSAA	1.1 U	2.8	1.1	0.56	ug/kg	
FLUOROTELOMER SULFONATES							
757124-72-4	4:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	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-CF-040		
Lab Sample ID:	FA65214-2	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/15/19
Method:	EPA 537M QSM5.1 B-15 IN HOUSE	**Percent Solids:**	90.0
Project:	ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
39108-34-4	8:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	92%		50-150%
	13C5-PFPeA	92%		50-150%
	13C5-PFHxA	94%		50-150%
	13C4-PFHpA	100%		50-150%
	13C8-PFOA	103%		50-150%
	13C9-PFNA	107%		50-150%
	13C6-PFDA	119%		50-150%
	13C7-PFUnDA	128%		50-150%
	13C2-PFDoDA	130%		50-150%
	13C2-PFTeDA	117%		50-150%
	13C3-PFBS	94%		50-150%
	13C3-PFHxS	98%		50-150%
	13C8-PFOS	101%		50-150%
	13C8-FOSA	109%		50-150%
	d3-MeFOSAA	111%		50-150%
	13C2-4:2FTS	93%		50-150%
	13C2-6:2FTS	97%		50-150%
	13C2-8:2FTS	112%		50-150%

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-CF-041
Lab Sample ID: FA65214-3 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/15/19
Method: EPA 537M QSM5.1 B-15 IN HOUSE **Percent Solids:** 91.1
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Q30999.D	1	06/19/19 20:50	NG	06/18/19 13:00	OP75510	S2Q497
Run #2							

	Initial Weight	Final Volume
Run #1	1.95 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	0.392	1.1	0.56	0.28	ug/kg	J
2706-90-3	Perfluoropentanoic acid	0.56 U	1.1	0.56	0.23	ug/kg	
307-24-4	Perfluorohexanoic acid	0.56 U	1.1	0.56	0.23	ug/kg	
375-85-9	Perfluoroheptanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-67-1	Perfluorooctanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
375-95-1	Perfluorononanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-76-2	Perfluorodecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2058-94-8	Perfluoroundecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
307-55-1	Perfluorododecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
72629-94-8	Perfluorotridecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
376-06-7	Perfluorotetradecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2706-91-4	Perfluoropentanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
68259-12-1	Perfluorononanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDES							
754-91-6	PFOSA	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	1.1 U	2.8	1.1	0.56	ug/kg	
2991-50-6	EtFOSAA	1.1 U	2.8	1.1	0.56	ug/kg	
FLUOROTELOMER SULFONATES							
757124-72-4	4:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	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-CF-041		
Lab Sample ID:	FA65214-3	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/15/19
Method:	EPA 537M QSM5.1 B-15 IN HOUSE	**Percent Solids:**	91.1
Project:	ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
39108-34-4	8:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	86%		50-150%
	13C5-PFPeA	86%		50-150%
	13C5-PFHxA	88%		50-150%
	13C4-PFHpA	93%		50-150%
	13C8-PFOA	97%		50-150%
	13C9-PFNA	101%		50-150%
	13C6-PFDA	114%		50-150%
	13C7-PFUnDA	120%		50-150%
	13C2-PFDoDA	119%		50-150%
	13C2-PFTeDA	103%		50-150%
	13C3-PFBS	88%		50-150%
	13C3-PFHxS	92%		50-150%
	13C8-PFOS	96%		50-150%
	13C8-FOSA	100%		50-150%
	d3-MeFOSAA	102%		50-150%
	13C2-4:2FTS	88%		50-150%
	13C2-6:2FTS	91%		50-150%
	13C2-8:2FTS	107%		50-150%

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-CF-042
Lab Sample ID: FA65214-4 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/15/19
Method: EPA 537M QSM5.1 B-15 IN HOUSE **Percent Solids:** 89.6
Project: ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Q31000.D	1	06/19/19 21:05	NG	06/18/19 13:00	OP75510	S2Q497
Run #2							

	Initial Weight	Final Volume
Run #1	2.01 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2706-90-3	Perfluoropentanoic acid	0.56 U	1.1	0.56	0.22	ug/kg	
307-24-4	Perfluorohexanoic acid	0.56 U	1.1	0.56	0.22	ug/kg	
375-85-9	Perfluoroheptanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-67-1	Perfluorooctanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
375-95-1	Perfluorononanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-76-2	Perfluorodecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2058-94-8	Perfluoroundecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
307-55-1	Perfluorododecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
72629-94-8	Perfluorotridecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
376-06-7	Perfluorotetradecanoic acid	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
2706-91-4	Perfluoropentanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
68259-12-1	Perfluorononanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDES							
754-91-6	PFOSA	0.56 U	1.1	0.56	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	1.1 U	2.8	1.1	0.56	ug/kg	
2991-50-6	EtFOSAA	1.1 U	2.8	1.1	0.56	ug/kg	
FLUOROTELOMER SULFONATES							
757124-72-4	4:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	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-CF-042		
Lab Sample ID:	FA65214-4	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/15/19
Method:	EPA 537M QSM5.1 B-15 IN HOUSE	**Percent Solids:**	89.6
Project:	ITVAVAB: Former Drum Marshalling Area NWIRP Bethpage,NY		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
39108-34-4	8:2 Fluorotelomer sulfonate	0.56 U	1.1	0.56	0.28	ug/kg	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	82%		50-150%
	13C5-PFPeA	82%		50-150%
	13C5-PFHxA	84%		50-150%
	13C4-PFHpA	89%		50-150%
	13C8-PFOA	93%		50-150%
	13C9-PFNA	95%		50-150%
	13C6-PFDA	109%		50-150%
	13C7-PFUnDA	116%		50-150%
	13C2-PFDoDA	111%		50-150%
	13C2-PFTeDA	98%		50-150%
	13C3-PFBS	85%		50-150%
	13C3-PFHxS	88%		50-150%
	13C8-PFOS	91%		50-150%
	13C8-FOSA	97%		50-150%
	d3-MeFOSAA	102%		50-150%
	13C2-4:2FTS	85%		50-150%
	13C2-6:2FTS	87%		50-150%
	13C2-8:2FTS	104%		50-150%

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

FA65214

CHAIN-OF-CUSTODY RECORD

COC Number: 501164-20190614
Subcontract Services Agreement : TBD

NCREAS Environmental Science Engineering & Construction

APTIM

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

Lab Destination:
SGS Accutest - Orlando

Lab Receiving Address:
4405 Vineland Rd. Suite C-15 Orlando, FL, 32811 (407) 425-6700

Project Name:
Site 1 – Former Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage, New York

Sample Location:
Fill Material Samples

T.O.	Project Number:	APTIM Contact:	APTIM Contact Number:
F6147	501164	Natasha Kelley Sullivan	(410)529-7598

Client Rep:
NAVY

Deputy Project Manager:
Monica L. Smeal E.I.T.

Item No.	Sample Number	Date	Time	Matrix: Water	Matrix: Soil	Sample Description	Number of Containers	Analysis Desired: PFOAs LCQSM537DODFL
1	NWIRP-S1-WC-CF-039	06/14/19	1210		X	Soil - Common Backfill	1 x 4 oz Poly WM, None	X
2	NWIRP-S1-WC-CF-040	06/14/19	1219		X	Soil - Common Backfill	1 x 4 oz Poly WM, None	X
3	NWIRP-S1-WC-CF-041	06/14/19	1224		X	Soil - Common Backfill	1 x 4 oz Poly WM, None	X
4	NWIRP-S1-WC-CF-042	06/14/19	1230		X	Soil - Common Backfill	1 x 4 oz Poly WM, None	X

Turnaround Time Required :
❑ 14 Day TAT

Sampled By:
McCutcheon, Sean, APTIM

COMMENTS:

Laboratory Report No.:

Transfer Number	Transfers Relinquished By	Date	Time	Transfers Accepted By	Date	Time
1	*Sampler's Signature*	*Date*	*Time*	*Laboratory Sample Custody Si*	*Date*	*Time*
2		6/14/19	1645		6/15/19	900
3						
4						

Report Format: *Full Report*
Deliverables: EDD Excel+NIRIS
Fax results to Natasha Sullivan (410) 529-7599

1.3

SGS Sample Receipt Summary

Job Number: FA65214 **Client:** APTIM **Project:** SITE 1 -FORMER DRUM MARSHALLING

Date / Time Received: 6/15/2019 9:00:00 AM **Delivery Method:** FX **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** 0.4; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (0.9);

Cooler Temps (Corrected) °C: Cooler 1: (1.3);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: PETERH Date: 6/15/2019 9:00:00 AM Reviewer: _____ Date: _____

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	Fill Material Criteria[1]	Client ID	Collected	Time
JC89914-1	Solids, Percent		SM2540 G 18TH ED MOD	90.3		%			1	----	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	Acetone	67-64-1	SW846 8260C	5.9	U	ug/kg	7.9	5.9	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	Benzene	71-43-2	SW846 8260C	0.36	U	ug/kg	0.40	0.36	1	2,900	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	2-Butanone (MEK)	78-93-3	SW846 8260C	5.9	U	ug/kg	7.9	5.9	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	n-Butylbenzene	104-51-8	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	sec-Butylbenzene	135-98-8	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	tert-Butylbenzene	98-06-6	SW846 8260C	0.79	U	ug/kg	1.6	0.79	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	Carbon tetrachloride	56-23-5	SW846 8260C	0.79	U	ug/kg	1.6	0.79	1	1,400	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	Chlorobenzene	108-90-7	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	Chloroform	67-66-3	SW846 8260C	0.79	U	ug/kg	1.6	0.79	1	10,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	1,2-Dichlorobenzene	95-50-1	SW846 8260C	0.59	U	ug/kg	0.79	0.59	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	1,3-Dichlorobenzene	541-73-1	SW846 8260C	0.59	U	ug/kg	0.79	0.59	1	17,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	1,4-Dichlorobenzene	106-46-7	SW846 8260C	0.59	U	ug/kg	0.79	0.59	1	9,800	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	1,1-Dichloroethane	75-34-3	SW846 8260C	0.59	U	ug/kg	0.79	0.59	1	19,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	1,2-Dichloroethane	107-06-2	SW846 8260C	0.59	U	ug/kg	0.79	0.59	1	2,300	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	1,1-Dichloroethene	75-35-4	SW846 8260C	0.59	U	ug/kg	0.79	0.59	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	cis-1,2-Dichloroethene	156-59-2	SW846 8260C	0.71	U	ug/kg	0.79	0.71	1	59,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	trans-1,2-Dichloroethene	156-60-5	SW846 8260C	0.59	U	ug/kg	0.79	0.59	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	1,4-Dioxane	123-91-1	SW846 8260C	79	U	ug/kg	99	79	1	9,800	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	Ethylbenzene	100-41-4	SW846 8260C	0.59	U	ug/kg	0.79	0.59	1	30,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	Methyl Tert Butyl Ether	1634-04-4	SW846 8260C	0.40	U	ug/kg	0.79	0.40	1	62,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	Methylene chloride	75-09-2	SW846 8260C	2.4	U	ug/kg	4.0	2.4	1	51,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	n-Propylbenzene	103-65-1	SW846 8260C	0.79	U	ug/kg	1.6	0.79	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	Tetrachloroethene	127-18-4	SW846 8260C	0.79	U	ug/kg	1.6	0.79	1	5,500	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	Toluene	108-88-3	SW846 8260C	0.59	U	ug/kg	0.79	0.59	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	1,1,1-Trichloroethane	71-55-6	SW846 8260C	0.79	U	ug/kg	1.6	0.79	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	Trichloroethene	79-01-6	SW846 8260C	0.63	U	ug/kg	0.79	0.63	1	10,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	1,2,4-Trimethylbenzene	95-63-6	SW846 8260C	0.79	U	ug/kg	1.6	0.79	1	47,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	1,3,5-Trimethylbenzene	108-67-8	SW846 8260C	0.79	U	ug/kg	1.6	0.79	1	47,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	Vinyl chloride	75-01-4	SW846 8260C	0.79	U	ug/kg	1.6	0.79	1	210	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	m,p-Xylene		SW846 8260C	0.75	U	ug/kg	0.79	0.75	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	o-Xylene	95-47-6	SW846 8260C	0.59	U	ug/kg	0.79	0.59	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	Xylene (total)	1330-20-7	SW846 8260C	0.59	U	ug/kg	0.79	0.59	1	100,000	NWIRP-S1-WC-CF-027	6/14/2019	11:00
JC89914-1	*Dibromofluoromethane*	*1868-53-7*	*SW846 8260C*	*107*		*%*			*1*	----	*NWIRP-S1-WC-CF-027*	*6/14/2019*	*11:00*
JC89914-1	*1,2-Dichloroethane-D4*	*17060-07-0*	*SW846 8260C*	*112*		*%*			*1*	----	*NWIRP-S1-WC-CF-027*	*6/14/2019*	*11:00*
JC89914-1	*Toluene-D8*	*2037-26-5*	*SW846 8260C*	*103*		*%*			*1*	----	*NWIRP-S1-WC-CF-027*	*6/14/2019*	*11:00*
JC89914-1	*4-Bromofluorobenzene*	*460-00-4*	*SW846 8260C*	*99.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-027*	*6/14/2019*	*11:00*
JC89914-2	Solids, Percent		SM2540 G 18TH ED MOD	91.0		%			1	----	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	Acetone	67-64-1	SW846 8260C	6.1	U	ug/kg	8.1	6.1	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	Benzene	71-43-2	SW846 8260C	0.37	U	ug/kg	0.40	0.37	1	2,900	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	2-Butanone (MEK)	78-93-3	SW846 8260C	6.1	U	ug/kg	8.1	6.1	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	n-Butylbenzene	104-51-8	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	sec-Butylbenzene	135-98-8	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	tert-Butylbenzene	98-06-6	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	Carbon tetrachloride	56-23-5	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	1,400	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	Chlorobenzene	108-90-7	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	Chloroform	67-66-3	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	10,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	1,2-Dichlorobenzene	95-50-1	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	1,3-Dichlorobenzene	541-73-1	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	17,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	1,4-Dichlorobenzene	106-46-7	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	9,800	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	1,1-Dichloroethane	75-34-3	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	19,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	1,2-Dichloroethane	107-06-2	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	2,300	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	1,1-Dichloroethene	75-35-4	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	cis-1,2-Dichloroethene	156-59-2	SW846 8260C	0.73	U	ug/kg	0.81	0.73	1	59,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	trans-1,2-Dichloroethene	156-60-5	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	1,4-Dioxane	123-91-1	SW846 8260C	81	U	ug/kg	100	81	1	9,800	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	Ethylbenzene	100-41-4	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	30,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	Methyl Tert Butyl Ether	1634-04-4	SW846 8260C	0.40	U	ug/kg	0.81	0.40	1	62,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	Methylene chloride	75-09-2	SW846 8260C	2.4	U	ug/kg	4.0	2.4	1	51,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	n-Propylbenzene	103-65-1	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	Tetrachloroethene	127-18-4	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	5,500	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	Toluene	108-88-3	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	1,1,1-Trichloroethane	71-55-6	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	Trichloroethene	79-01-6	SW846 8260C	0.65	U	ug/kg	0.81	0.65	1	10,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	1,2,4-Trimethylbenzene	95-63-6	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	47,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	1,3,5-Trimethylbenzene	108-67-8	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	47,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	Vinyl chloride	75-01-4	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	210	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	m,p-Xylene		SW846 8260C	0.77	U	ug/kg	0.81	0.77	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	o-Xylene	95-47-6	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	Xylene (total)	1330-20-7	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	100,000	NWIRP-S1-WC-CF-028	6/14/2019	11:05
JC89914-2	*Dibromofluoromethane*	*1868-53-7*	*SW846 8260C*	*105*		*%*			*1*	----	*NWIRP-S1-WC-CF-028*	*6/14/2019*	*11:05*
JC89914-2	*1,2-Dichloroethane-D4*	*17060-07-0*	*SW846 8260C*	*112*		*%*			*1*	----	*NWIRP-S1-WC-CF-028*	*6/14/2019*	*11:05*
JC89914-2	*Toluene-D8*	*2037-26-5*	*SW846 8260C*	*102*		*%*			*1*	----	*NWIRP-S1-WC-CF-028*	*6/14/2019*	*11:05*
JC89914-2	*4-Bromofluorobenzene*	*460-00-4*	*SW846 8260C*	*100*		*%*			*1*	----	*NWIRP-S1-WC-CF-028*	*6/14/2019*	*11:05*
JC89914-3	Solids, Percent		SM2540 G 18TH ED MOD	90.4		%			1	----	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	Acetone	67-64-1	SW846 8260C	**8.1**	**J**	**ug/kg**	**9.1**	**6.8**	**1**	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	Benzene	71-43-2	SW846 8260C	0.41	U	ug/kg	0.45	0.41	1	2,900	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	2-Butanone (MEK)	78-93-3	SW846 8260C	6.8	U	ug/kg	9.1	6.8	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10

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	Fill Material Criteria[1]	Client ID	Collected	Time
JC89914-3	n-Butylbenzene	104-51-8	SW846 8260C	1.4	U	ug/kg	1.8	1.4	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	sec-Butylbenzene	135-98-8	SW846 8260C	1.4	U	ug/kg	1.8	1.4	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	tert-Butylbenzene	98-06-6	SW846 8260C	0.91	U	ug/kg	1.8	0.91	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	Carbon tetrachloride	56-23-5	SW846 8260C	0.91	U	ug/kg	1.8	0.91	1	1,400	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	Chlorobenzene	108-90-7	SW846 8260C	1.4	U	ug/kg	1.8	1.4	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	Chloroform	67-66-3	SW846 8260C	0.91	U	ug/kg	1.8	0.91	1	10,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	1,2-Dichlorobenzene	95-50-1	SW846 8260C	0.68	U	ug/kg	0.91	0.68	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	1,3-Dichlorobenzene	541-73-1	SW846 8260C	0.68	U	ug/kg	0.91	0.68	1	17,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	1,4-Dichlorobenzene	106-46-7	SW846 8260C	0.68	U	ug/kg	0.91	0.68	1	9,800	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	1,1-Dichloroethane	75-34-3	SW846 8260C	0.68	U	ug/kg	0.91	0.68	1	19,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	1,2-Dichloroethane	107-06-2	SW846 8260C	0.68	U	ug/kg	0.91	0.68	1	2,300	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	1,1-Dichloroethene	75-35-4	SW846 8260C	0.68	U	ug/kg	0.91	0.68	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	cis-1,2-Dichloroethene	156-59-2	SW846 8260C	0.82	U	ug/kg	0.91	0.82	1	59,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	trans-1,2-Dichloroethene	156-60-5	SW846 8260C	0.68	U	ug/kg	0.91	0.68	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	1,4-Dioxane	123-91-1	SW846 8260C	91	U	ug/kg	110	91	1	9,800	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	Ethylbenzene	100-41-4	SW846 8260C	0.68	U	ug/kg	0.91	0.68	1	30,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	Methyl Tert Butyl Ether	1634-04-4	SW846 8260C	0.45	U	ug/kg	0.91	0.45	1	62,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	Methylene chloride	75-09-2	SW846 8260C	2.7	U	ug/kg	4.5	2.7	1	51,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	n-Propylbenzene	103-65-1	SW846 8260C	0.91	U	ug/kg	1.8	0.91	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	Tetrachloroethene	127-18-4	SW846 8260C	0.91	U	ug/kg	1.8	0.91	1	5,500	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	Toluene	108-88-3	SW846 8260C	0.68	U	ug/kg	0.91	0.68	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	1,1,1-Trichloroethane	71-55-6	SW846 8260C	0.91	U	ug/kg	1.8	0.91	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	Trichloroethene	79-01-6	SW846 8260C	0.73	U	ug/kg	0.91	0.73	1	10,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	1,2,4-Trimethylbenzene	95-63-6	SW846 8260C	0.91	U	ug/kg	1.8	0.91	1	47,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	1,3,5-Trimethylbenzene	108-67-8	SW846 8260C	0.91	U	ug/kg	1.8	0.91	1	47,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	Vinyl chloride	75-01-4	SW846 8260C	0.91	U	ug/kg	1.8	0.91	1	210	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	m,p-Xylene		SW846 8260C	0.86	U	ug/kg	0.91	0.86	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	o-Xylene	95-47-6	SW846 8260C	0.68	U	ug/kg	0.91	0.68	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	Xylene (total)	1330-20-7	SW846 8260C	0.68	U	ug/kg	0.91	0.68	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-3	*Dibromofluoromethane*	*1868-53-7*	*SW846 8260C*	*104*		*%*			*1*	----	*NWIRP-S1-WC-CF-029*	*6/14/2019*	*11:10*
JC89914-3	*1,2-Dichloroethane-D4*	*17060-07-0*	*SW846 8260C*	*111*		*%*			*1*	----	*NWIRP-S1-WC-CF-029*	*6/14/2019*	*11:10*
JC89914-3	*Toluene-D8*	*2037-26-5*	*SW846 8260C*	*103*		*%*			*1*	----	*NWIRP-S1-WC-CF-029*	*6/14/2019*	*11:10*
JC89914-3	*4-Bromofluorobenzene*	*460-00-4*	*SW846 8260C*	*97.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-029*	*6/14/2019*	*11:10*
JC89914-4	Solids, Percent		SM2540 G 18TH ED MOD	89.2		%			1	----	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	Acetone	67-64-1	SW846 8260C	6.2	U	ug/kg	8.2	6.2	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	Benzene	71-43-2	SW846 8260C	0.38	U	ug/kg	0.41	0.38	1	2,900	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	2-Butanone (MEK)	78-93-3	SW846 8260C	6.2	U	ug/kg	8.2	6.2	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	n-Butylbenzene	104-51-8	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	sec-Butylbenzene	135-98-8	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	tert-Butylbenzene	98-06-6	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	Carbon tetrachloride	56-23-5	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	1,400	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	Chlorobenzene	108-90-7	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	Chloroform	67-66-3	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	10,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	1,2-Dichlorobenzene	95-50-1	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	1,3-Dichlorobenzene	541-73-1	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	17,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	1,4-Dichlorobenzene	106-46-7	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	9,800	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	1,1-Dichloroethane	75-34-3	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	19,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	1,2-Dichloroethane	107-06-2	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	2,300	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	1,1-Dichloroethene	75-35-4	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	cis-1,2-Dichloroethene	156-59-2	SW846 8260C	0.74	U	ug/kg	0.82	0.74	1	59,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	trans-1,2-Dichloroethene	156-60-5	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	1,4-Dioxane	123-91-1	SW846 8260C	82	U	ug/kg	100	82	1	9,800	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	Ethylbenzene	100-41-4	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	30,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	Methyl Tert Butyl Ether	1634-04-4	SW846 8260C	0.41	U	ug/kg	0.82	0.41	1	62,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	Methylene chloride	75-09-2	SW846 8260C	2.5	U	ug/kg	4.1	2.5	1	51,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	n-Propylbenzene	103-65-1	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	Tetrachloroethene	127-18-4	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	5,500	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	Toluene	108-88-3	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	1,1,1-Trichloroethane	71-55-6	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	Trichloroethene	79-01-6	SW846 8260C	0.66	U	ug/kg	0.82	0.66	1	10,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	1,2,4-Trimethylbenzene	95-63-6	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	47,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	1,3,5-Trimethylbenzene	108-67-8	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	47,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	Vinyl chloride	75-01-4	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	210	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	m,p-Xylene		SW846 8260C	0.78	U	ug/kg	0.82	0.78	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	o-Xylene	95-47-6	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	Xylene (total)	1330-20-7	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	100,000	NWIRP-S1-WC-CF-030	6/14/2019	11:15
JC89914-4	*Dibromofluoromethane*	*1868-53-7*	*SW846 8260C*	*105*		*%*			*1*	----	*NWIRP-S1-WC-CF-030*	*6/14/2019*	*11:15*
JC89914-4	*1,2-Dichloroethane-D4*	*17060-07-0*	*SW846 8260C*	*112*		*%*			*1*	----	*NWIRP-S1-WC-CF-030*	*6/14/2019*	*11:15*
JC89914-4	*Toluene-D8*	*2037-26-5*	*SW846 8260C*	*106*		*%*			*1*	----	*NWIRP-S1-WC-CF-030*	*6/14/2019*	*11:15*
JC89914-4	*4-Bromofluorobenzene*	*460-00-4*	*SW846 8260C*	*101*		*%*			*1*	----	*NWIRP-S1-WC-CF-030*	*6/14/2019*	*11:15*
JC89914-5	Solids, Percent		SM2540 G 18TH ED MOD	90.0		%			1	----	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	Acetone	67-64-1	SW846 8260C	6.2	U	ug/kg	8.3	6.2	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	Benzene	71-43-2	SW846 8260C	0.38	U	ug/kg	0.41	0.38	1	2,900	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	2-Butanone (MEK)	78-93-3	SW846 8260C	6.2	U	ug/kg	8.3	6.2	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	n-Butylbenzene	104-51-8	SW846 8260C	1.2	U	ug/kg	1.7	1.2	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	sec-Butylbenzene	135-98-8	SW846 8260C	1.2	U	ug/kg	1.7	1.2	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	tert-Butylbenzene	98-06-6	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20

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	Fill Material Criteria[1]	Client ID	Collected	Time
JC89914-5	Carbon tetrachloride	56-23-5	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	1,400	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	Chlorobenzene	108-90-7	SW846 8260C	1.2	U	ug/kg	1.7	1.2	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	Chloroform	67-66-3	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	10,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	1,2-Dichlorobenzene	95-50-1	SW846 8260C	0.62	U	ug/kg	0.83	0.62	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	1,3-Dichlorobenzene	541-73-1	SW846 8260C	0.62	U	ug/kg	0.83	0.62	1	17,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	1,4-Dichlorobenzene	106-46-7	SW846 8260C	0.62	U	ug/kg	0.83	0.62	1	9,800	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	1,1-Dichloroethane	75-34-3	SW846 8260C	0.62	U	ug/kg	0.83	0.62	1	19,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	1,2-Dichloroethane	107-06-2	SW846 8260C	0.62	U	ug/kg	0.83	0.62	1	2,300	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	1,1-Dichloroethene	75-35-4	SW846 8260C	0.62	U	ug/kg	0.83	0.62	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	cis-1,2-Dichloroethene	156-59-2	SW846 8260C	0.75	U	ug/kg	0.83	0.75	1	59,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	trans-1,2-Dichloroethene	156-60-5	SW846 8260C	0.62	U	ug/kg	0.83	0.62	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	1,4-Dioxane	123-91-1	SW846 8260C	83	U	ug/kg	100	83	1	9,800	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	Ethylbenzene	100-41-4	SW846 8260C	0.62	U	ug/kg	0.83	0.62	1	30,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	Methyl Tert Butyl Ether	1634-04-4	SW846 8260C	0.41	U	ug/kg	0.83	0.41	1	62,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	Methylene chloride	75-09-2	SW846 8260C	2.5	U	ug/kg	4.1	2.5	1	51,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	n-Propylbenzene	103-65-1	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	Tetrachloroethene	127-18-4	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	5,500	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	Toluene	108-88-3	SW846 8260C	0.62	U	ug/kg	0.83	0.62	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	1,1,1-Trichloroethane	71-55-6	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	Trichloroethene	79-01-6	SW846 8260C	0.66	U	ug/kg	0.83	0.66	1	10,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	1,2,4-Trimethylbenzene	95-63-6	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	47,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	1,3,5-Trimethylbenzene	108-67-8	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	47,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	Vinyl chloride	75-01-4	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	210	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	m,p-Xylene		SW846 8260C	0.79	U	ug/kg	0.83	0.79	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	o-Xylene	95-47-6	SW846 8260C	0.62	U	ug/kg	0.83	0.62	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	Xylene (total)	1330-20-7	SW846 8260C	0.62	U	ug/kg	0.83	0.62	1	100,000	NWIRP-S1-WC-CF-031	6/14/2019	11:20
JC89914-5	*Dibromofluoromethane*	*1868-53-7*	*SW846 8260C*	*106*		*%*			*1*	----	*NWIRP-S1-WC-CF-031*	*6/14/2019*	*11:20*
JC89914-5	*1,2-Dichloroethane-D4*	*17060-07-0*	*SW846 8260C*	*113*		*%*			*1*	----	*NWIRP-S1-WC-CF-031*	*6/14/2019*	*11:20*
JC89914-5	*Toluene-D8*	*2037-26-5*	*SW846 8260C*	*103*		*%*			*1*	----	*NWIRP-S1-WC-CF-031*	*6/14/2019*	*11:20*
JC89914-5	*4-Bromofluorobenzene*	*460-00-4*	*SW846 8260C*	*96.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-031*	*6/14/2019*	*11:20*
JC89914-6	Solids, Percent		SM2540 G 18TH ED MOD	89.5		%			1	----	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	Acetone	67-64-1	SW846 8260C	6.2	U	ug/kg	8.2	6.2	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	Benzene	71-43-2	SW846 8260C	0.38	U	ug/kg	0.41	0.38	1	2,900	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	2-Butanone (MEK)	78-93-3	SW846 8260C	6.2	U	ug/kg	8.2	6.2	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	n-Butylbenzene	104-51-8	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	sec-Butylbenzene	135-98-8	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	tert-Butylbenzene	98-06-6	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	Carbon tetrachloride	56-23-5	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	1,400	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	Chlorobenzene	108-90-7	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	Chloroform	67-66-3	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	10,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	1,2-Dichlorobenzene	95-50-1	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	1,3-Dichlorobenzene	541-73-1	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	17,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	1,4-Dichlorobenzene	106-46-7	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	9,800	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	1,1-Dichloroethane	75-34-3	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	19,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	1,2-Dichloroethane	107-06-2	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	2,300	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	1,1-Dichloroethene	75-35-4	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	cis-1,2-Dichloroethene	156-59-2	SW846 8260C	0.74	U	ug/kg	0.82	0.74	1	59,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	trans-1,2-Dichloroethene	156-60-5	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	1,4-Dioxane	123-91-1	SW846 8260C	82	U	ug/kg	100	82	1	9,800	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	Ethylbenzene	100-41-4	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	30,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	Methyl Tert Butyl Ether	1634-04-4	SW846 8260C	0.41	U	ug/kg	0.82	0.41	1	62,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	Methylene chloride	75-09-2	SW846 8260C	2.5	U	ug/kg	4.1	2.5	1	51,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	n-Propylbenzene	103-65-1	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	Tetrachloroethene	127-18-4	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	5,500	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	Toluene	108-88-3	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	1,1,1-Trichloroethane	71-55-6	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	Trichloroethene	79-01-6	SW846 8260C	0.66	U	ug/kg	0.82	0.66	1	10,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	1,2,4-Trimethylbenzene	95-63-6	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	47,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	1,3,5-Trimethylbenzene	108-67-8	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	47,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	Vinyl chloride	75-01-4	SW846 8260C	0.82	U	ug/kg	1.6	0.82	1	210	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	m,p-Xylene		SW846 8260C	0.78	U	ug/kg	0.82	0.78	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	o-Xylene	95-47-6	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	Xylene (total)	1330-20-7	SW846 8260C	0.62	U	ug/kg	0.82	0.62	1	100,000	NWIRP-S1-WC-CF-032	6/14/2019	11:21
JC89914-6	*Dibromofluoromethane*	*1868-53-7*	*SW846 8260C*	*104*		*%*			*1*	----	*NWIRP-S1-WC-CF-032*	*6/14/2019*	*11:21*
JC89914-6	*1,2-Dichloroethane-D4*	*17060-07-0*	*SW846 8260C*	*111*		*%*			*1*	----	*NWIRP-S1-WC-CF-032*	*6/14/2019*	*11:21*
JC89914-6	*Toluene-D8*	*2037-26-5*	*SW846 8260C*	*104*		*%*			*1*	----	*NWIRP-S1-WC-CF-032*	*6/14/2019*	*11:21*
JC89914-6	*4-Bromofluorobenzene*	*460-00-4*	*SW846 8260C*	*97.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-032*	*6/14/2019*	*11:21*
JC89914-7	Solids, Percent		SM2540 G 18TH ED MOD	91.0		%			1	----	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	Acetone	67-64-1	SW846 8260C	6.1	U	ug/kg	8.1	6.1	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	Benzene	71-43-2	SW846 8260C	0.37	U	ug/kg	0.40	0.37	1	2,900	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	2-Butanone (MEK)	78-93-3	SW846 8260C	6.1	U	ug/kg	8.1	6.1	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	n-Butylbenzene	104-51-8	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	sec-Butylbenzene	135-98-8	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	tert-Butylbenzene	98-06-6	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	Carbon tetrachloride	56-23-5	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	1,400	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	Chlorobenzene	108-90-7	SW846 8260C	1.2	U	ug/kg	1.6	1.2	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	Chloroform	67-66-3	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	10,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24

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	Fill Material Criteria[1]	Client ID	Collected	Time
JC89914-7	1,2-Dichlorobenzene	95-50-1	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	1,3-Dichlorobenzene	541-73-1	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	17,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	1,4-Dichlorobenzene	106-46-7	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	9,800	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	1,1-Dichloroethane	75-34-3	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	19,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	1,2-Dichloroethane	107-06-2	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	2,300	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	1,1-Dichloroethene	75-35-4	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	cis-1,2-Dichloroethene	156-59-2	SW846 8260C	0.73	U	ug/kg	0.81	0.73	1	59,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	trans-1,2-Dichloroethene	156-60-5	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	1,4-Dioxane	123-91-1	SW846 8260C	81	U	ug/kg	100	81	1	9,800	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	Ethylbenzene	100-41-4	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	30,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	Methyl Tert Butyl Ether	1634-04-4	SW846 8260C	0.40	U	ug/kg	0.81	0.40	1	62,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	Methylene chloride	75-09-2	SW846 8260C	2.4	U	ug/kg	4.0	2.4	1	51,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	n-Propylbenzene	103-65-1	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	Tetrachloroethene	127-18-4	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	5,500	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	Toluene	108-88-3	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	1,1,1-Trichloroethane	71-55-6	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	Trichloroethene	79-01-6	SW846 8260C	0.65	U	ug/kg	0.81	0.65	1	10,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	1,2,4-Trimethylbenzene	95-63-6	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	47,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	1,3,5-Trimethylbenzene	108-67-8	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	47,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	Vinyl chloride	75-01-4	SW846 8260C	0.81	U	ug/kg	1.6	0.81	1	210	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	m,p-Xylene		SW846 8260C	0.77	U	ug/kg	0.81	0.77	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	o-Xylene	95-47-6	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	Xylene (total)	1330-20-7	SW846 8260C	0.61	U	ug/kg	0.81	0.61	1	100,000	NWIRP-S1-WC-CF-033	6/14/2019	11:24
JC89914-7	*Dibromofluoromethane*	*1868-53-7*	*SW846 8260C*	*104*		*%*			*1*	----	*NWIRP-S1-WC-CF-033*	*6/14/2019*	*11:24*
JC89914-7	*1,2-Dichloroethane-D4*	*17060-07-0*	*SW846 8260C*	*113*		*%*			*1*	----	*NWIRP-S1-WC-CF-033*	*6/14/2019*	*11:24*
JC89914-7	*Toluene-D8*	*2037-26-5*	*SW846 8260C*	*103*		*%*			*1*	----	*NWIRP-S1-WC-CF-033*	*6/14/2019*	*11:24*
JC89914-7	*4-Bromofluorobenzene*	*460-00-4*	*SW846 8260C*	*100*		*%*			*1*	----	*NWIRP-S1-WC-CF-033*	*6/14/2019*	*11:24*
JC89914-8	Solids, Percent		SM2540 G 18TH ED MOD	89.4		%			1	----	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	Acetone	67-64-1	SW846 8260C	**8.1**	**J**	**ug/kg**	**8.3**	**6.3**	**1**	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	Benzene	71-43-2	SW846 8260C	0.38	U	ug/kg	0.42	0.38	1	2,900	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	2-Butanone (MEK)	78-93-3	SW846 8260C	6.3	U	ug/kg	8.3	6.3	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	n-Butylbenzene	104-51-8	SW846 8260C	1.3	U	ug/kg	1.7	1.3	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	sec-Butylbenzene	135-98-8	SW846 8260C	1.3	U	ug/kg	1.7	1.3	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	tert-Butylbenzene	98-06-6	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	Carbon tetrachloride	56-23-5	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	1,400	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	Chlorobenzene	108-90-7	SW846 8260C	1.3	U	ug/kg	1.7	1.3	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	Chloroform	67-66-3	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	10,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	1,2-Dichlorobenzene	95-50-1	SW846 8260C	0.63	U	ug/kg	0.83	0.63	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	1,3-Dichlorobenzene	541-73-1	SW846 8260C	0.63	U	ug/kg	0.83	0.63	1	17,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	1,4-Dichlorobenzene	106-46-7	SW846 8260C	0.63	U	ug/kg	0.83	0.63	1	9,800	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	1,1-Dichloroethane	75-34-3	SW846 8260C	0.63	U	ug/kg	0.83	0.63	1	19,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	1,2-Dichloroethane	107-06-2	SW846 8260C	0.63	U	ug/kg	0.83	0.63	1	2,300	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	1,1-Dichloroethene	75-35-4	SW846 8260C	0.63	U	ug/kg	0.83	0.63	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	cis-1,2-Dichloroethene	156-59-2	SW846 8260C	0.75	U	ug/kg	0.83	0.75	1	59,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	trans-1,2-Dichloroethene	156-60-5	SW846 8260C	0.63	U	ug/kg	0.83	0.63	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	1,4-Dioxane	123-91-1	SW846 8260C	83	U	ug/kg	100	83	1	9,800	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	Ethylbenzene	100-41-4	SW846 8260C	0.63	U	ug/kg	0.83	0.63	1	30,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	Methyl Tert Butyl Ether	1634-04-4	SW846 8260C	0.42	U	ug/kg	0.83	0.42	1	62,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	Methylene chloride	75-09-2	SW846 8260C	2.5	U	ug/kg	4.2	2.5	1	51,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	n-Propylbenzene	103-65-1	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	Tetrachloroethene	127-18-4	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	5,500	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	Toluene	108-88-3	SW846 8260C	0.63	U	ug/kg	0.83	0.63	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	1,1,1-Trichloroethane	71-55-6	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	Trichloroethene	79-01-6	SW846 8260C	0.67	U	ug/kg	0.83	0.67	1	10,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	1,2,4-Trimethylbenzene	95-63-6	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	47,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	1,3,5-Trimethylbenzene	108-67-8	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	47,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	Vinyl chloride	75-01-4	SW846 8260C	0.83	U	ug/kg	1.7	0.83	1	210	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	m,p-Xylene		SW846 8260C	0.79	U	ug/kg	0.83	0.79	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	o-Xylene	95-47-6	SW846 8260C	0.63	U	ug/kg	0.83	0.63	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	Xylene (total)	1330-20-7	SW846 8260C	0.63	U	ug/kg	0.83	0.63	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-8	*Dibromofluoromethane*	*1868-53-7*	*SW846 8260C*	*105*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:30*
JC89914-8	*1,2-Dichloroethane-D4*	*17060-07-0*	*SW846 8260C*	*114*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:30*
JC89914-8	*Toluene-D8*	*2037-26-5*	*SW846 8260C*	*103*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:30*
JC89914-8	*4-Bromofluorobenzene*	*460-00-4*	*SW846 8260C*	*95.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:30*
JC89914-9	Aldrin	309-00-2	SW846 8081B	0.67	U	ug/kg	0.70	0.67	1	19	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	alpha-BHC	319-84-6	SW846 8081B	0.67	U	ug/kg	0.70	0.67	1	97	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	2,4,5-TP (Silvex)	93-72-1	SW846 8151A	3.4	U	ug/kg	3.5	3.4	1	58,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	beta-BHC	319-85-7	SW846 8081B	0.67	U	ug/kg	0.70	0.67	1	72	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	delta-BHC	319-86-8	SW846 8081B	0.69	U	ug/kg	0.70	0.69	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	gamma-BHC (Lindane)	58-89-9	SW846 8081B	0.63	U	ug/kg	0.70	0.63	1	280	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	alpha-Chlordane	5103-71-9	SW846 8081B	**3.0**		**ug/kg**	**0.70**	**0.67**	**1**	910	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Dieldrin	60-57-1	SW846 8081B	**0.87**		**ug/kg**	**0.70**	**0.53**	**1**	39	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	4,4'-DDD	72-54-8	SW846 8081B	0.67	U	ug/kg	0.70	0.67	1	2,600	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	4,4'-DDE	72-55-9	SW846 8081B	**0.73**		**ug/kg**	**0.70**	**0.67**	**1**	1,800	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	4,4'-DDT	50-29-3	SW846 8081B	**1.2**		**ug/kg**	**0.70**	**0.67**	**1**	1,700	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Endrin	72-20-8	SW846 8081B	0.63	U	ug/kg	0.70	0.63	1	2,200	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Endosulfan sulfate	1031-07-8	SW846 8081B	0.63	U	ug/kg	0.70	0.63	1	4,800	NWIRP-S1-WC-CF-035	6/14/2019	11:33

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	Fill Material Criteria[1]	Client ID	Collected	Time
JC89914-9	Endosulfan-I	959-98-8	SW846 8081B	0.53	U	ug/kg	0.70	0.53	1	4,800	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Endosulfan-II	33213-65-9	SW846 8081B	0.53	U	ug/kg	0.70	0.53	1	4,800	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Heptachlor	76-44-8	SW846 8081B	0.63	U	ug/kg	0.70	0.63	1	420	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Aroclor 1016	12674-11-2	SW846 8082A	28	U	ug/kg	35	28	1	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Aroclor 1221	11104-28-2	SW846 8082A	28	U	ug/kg	35	28	1	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Aroclor 1232	11141-16-5	SW846 8082A	28	U	ug/kg	35	28	1	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Aroclor 1242	53469-21-9	SW846 8082A	28	U	ug/kg	35	28	1	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Aroclor 1248	12672-29-6	SW846 8082A	33	U	ug/kg	35	33	1	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Aroclor 1254	11097-69-1	SW846 8082A	28	U	ug/kg	35	28	1	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Aroclor 1260	11096-82-5	SW846 8082A	28	U	ug/kg	35	28	1	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	*2,4-DCAA*	*19719-28-9*	*SW846 8151A*	*49.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*2,4-DCAA*	*19719-28-9*	*SW846 8151A*	*52.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8081B*	*72.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8082A*	*83.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8082A*	*89.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8081B*	*72.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8082A*	*94.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8081B*	*104*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8082A*	*82.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8081B*	*68.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	pH		SW846 9045D	**6.23**		**su**			**1**	----	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Cyanide	57-12-5	SW846 9012B/LACHAT	0.18	U	mg/kg	0.24	0.18	1	27	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Chromium, Hexavalent	18540-29-9	SW846 3060A/7196A	**0.48**		**mg/kg**	**0.44**	**0.39**	**1**	22.0	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Redox Potential Vs H2		ASTM D1498-76M	**403**		**mv**			**1**	----	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Chromium, Trivalent		SW846 6010/7196A M	**13.1**		**mg/kg**	**1.5**	**0.95**	**1**	36.0	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Solids, Percent		SM2540 G 18TH ED MOD	90.5		%			1	----	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Arsenic	7440-38-2	SW846 6010D	**4.8**		**mg/kg**	**2.3**	**0.56**	**1**	16.0	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Barium	7440-39-3	SW846 6010D	**28.0**		**mg/kg**	**23.0**	**11.0**	**1**	350	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Beryllium	7440-41-7	SW846 6010D	**0.38**		**mg/kg**	**0.23**	**0.11**	**1**	14.0	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Cadmium	7440-43-9	SW846 6010D	0.23	U	mg/kg	0.56	0.23	1	2.5	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Chromium	7440-47-3	SW846 6010D	**13.6**		**mg/kg**	**1.1**	**0.56**	**1**	58	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Copper	7440-50-8	SW846 6010D	**10.5**		**mg/kg**	**2.8**	**1.1**	**1**	270	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Lead	7439-92-1	SW846 6010D	**28.9**		**mg/kg**	**2.3**	**0.56**	**1**	400	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Manganese	7439-96-5	SW846 6010D	**134**		**mg/kg**	**1.7**	**1.1**	**1**	2,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Mercury	7439-97-6	SW846 7471B	**0.029**	**J**	**mg/kg**	**0.034**	**0.026**	**1**	0.81	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Nickel	7440-02-0	SW846 6010D	**7.9**		**mg/kg**	**4.5**	**0.45**	**1**	140	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Selenium	7782-49-2	SW846 6010D	0.90	U	mg/kg	2.3	0.90	1	36.0	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Silver	7440-22-4	SW846 6010D	**0.26**	**J**	**mg/kg**	**0.56**	**0.45**	**1**	36.0	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Zinc	7440-66-6	SW846 6010D	**29.1**		**mg/kg**	**5.6**	**4.5**	**1**	2,200	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	2-Methylphenol	95-48-7	SW846 8270D	37	U	ug/kg	73	37	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	3&4-Methylphenol		SW846 8270D	37	U	ug/kg	73	37	1	34,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Pentachlorophenol	87-86-5	SW846 8270D	91	U	ug/kg	150	91	1	2,400	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Phenol	108-95-2	SW846 8270D	37	U	ug/kg	73	37	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Acenaphthene	83-32-9	SW846 8270D	18	U	ug/kg	37	18	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Acenaphthylene	208-96-8	SW846 8270D	27	U	ug/kg	37	27	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Anthracene	120-12-7	SW846 8270D	**34.1**	**J**	**ug/kg**	**37**	**27**	**1**	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Benzo(a)anthracene	56-55-3	SW846 8270D	**225**		**ug/kg**	**37**	**18**	**1**	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Benzo(a)pyrene	50-32-8	SW846 8270D	**210**		**ug/kg**	**37**	**18**	**1**	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Benzo(b)fluoranthene	205-99-2	SW846 8270D	**263**		**ug/kg**	**37**	**18**	**1**	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Benzo(g,h,i)perylene	191-24-2	SW846 8270D	**148**		**ug/kg**	**37**	**27**	**1**	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Benzo(k)fluoranthene	207-08-9	SW846 8270D	**87.5**		**ug/kg**	**37**	**18**	**1**	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Chrysene	218-01-9	SW846 8270D	**213**		**ug/kg**	**37**	**18**	**1**	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Dibenzo(a,h)anthracene	53-70-3	SW846 8270D	**42**		**ug/kg**	**37**	**18**	**1**	330	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Dibenzofuran	132-64-9	SW846 8270D	18	U	ug/kg	73	18	1	14,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Fluoranthene	206-44-0	SW846 8270D	**261**		**ug/kg**	**37**	**18**	**1**	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Fluorene	86-73-7	SW846 8270D	27	U	ug/kg	37	27	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Hexachlorobenzene	118-74-1	SW846 8270D	18	U	ug/kg	73	18	1	330	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Indeno(1,2,3-cd)pyrene	193-39-5	SW846 8270D	**141**		**ug/kg**	**37**	**18**	**1**	500	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Naphthalene	91-20-3	SW846 8270D	18	U	ug/kg	37	18	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Phenanthrene	85-01-8	SW846 8270D	**85.4**		**ug/kg**	**37**	**18**	**1**	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Pyrene	129-00-0	SW846 8270D	**313**		**ug/kg**	**37**	**18**	**1**	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	*2-Fluorophenol*	*367-12-4*	*SW846 8270D*	*56.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*Phenol-d5*	*4165-62-2*	*SW846 8270D*	*58.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*2,4,6-Tribromophenol*	*118-79-6*	*SW846 8270D*	*75.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*Nitrobenzene-d5*	*4165-60-0*	*SW846 8270D*	*64.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*2-Fluorobiphenyl*	*321-60-8*	*SW846 8270D*	*61.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*Terphenyl-d14*	*1718-51-0*	*SW846 8270D*	*85.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	1,4-Dioxane	123-91-1	SW846 8270D BY SIM	0.050	U	ug/kg	0.10	0.050	1	9,800	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	*Nitrobenzene-d5*	*4165-60-0*	*SW846 8270D BY SIM*	*69.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*2-Fluorobiphenyl*	*321-60-8*	*SW846 8270D BY SIM*	*61.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-9	*Terphenyl-d14*	*1718-51-0*	*SW846 8270D BY SIM*	*81.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-035*	*6/14/2019*	*11:33*
JC89914-10	Aldrin	309-00-2	SW846 8081B	0.64	U	ug/kg	0.68	0.64	1	19	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	alpha-BHC	319-84-6	SW846 8081B	0.64	U	ug/kg	0.68	0.64	1	97	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	2,4,5-TP (Silvex)	93-72-1	SW846 8151A	3.2	U	ug/kg	3.3	3.2	1	58,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	beta-BHC	319-85-7	SW846 8081B	0.64	U	ug/kg	0.68	0.64	1	72	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	delta-BHC	319-86-8	SW846 8081B	0.66	U	ug/kg	0.68	0.66	1	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	gamma-BHC (Lindane)	58-89-9	SW846 8081B	0.61	U	ug/kg	0.68	0.61	1	280	NWIRP-S1-WC-CF-036	6/14/2019	11:38

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	Fill Material Criteria[1]	Client ID	Collected	Time
JC89914-10	alpha-Chlordane	5103-71-9	SW846 8081B	**4.9**		**ug/kg**	**0.68**	**0.64**	**1**	910	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Dieldrin	60-57-1	SW846 8081B	**1.8**		**ug/kg**	**0.68**	**0.51**	**1**	39	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	4,4'-DDD	72-54-8	SW846 8081B	**5.3**		**ug/kg**	**0.68**	**0.64**	**1**	2,600	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	4,4'-DDE	72-55-9	SW846 8081B	**3.4**		**ug/kg**	**0.68**	**0.64**	**1**	1,800	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	4,4'-DDT	50-29-3	SW846 8081B	**9.0**		**ug/kg**	**0.68**	**0.64**	**1**	1,700	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Endrin	72-20-8	SW846 8081B	0.61	U	ug/kg	0.68	0.61	1	2,200	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Endosulfan sulfate	1031-07-8	SW846 8081B	0.61	U	ug/kg	0.68	0.61	1	4,800	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Endosulfan-I	959-98-8	SW846 8081B	0.51	U	ug/kg	0.68	0.51	1	4,800	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Endosulfan-II	33213-65-9	SW846 8081B	0.51	U	ug/kg	0.68	0.51	1	4,800	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Heptachlor	76-44-8	SW846 8081B	**0.80**		**ug/kg**	**0.68**	**0.61**	**1**	420	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Aroclor 1016	12674-11-2	SW846 8082A	27	U	ug/kg	34	27	1	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Aroclor 1221	11104-28-2	SW846 8082A	27	U	ug/kg	34	27	1	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Aroclor 1232	11141-16-5	SW846 8082A	27	U	ug/kg	34	27	1	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Aroclor 1242	53469-21-9	SW846 8082A	27	U	ug/kg	34	27	1	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Aroclor 1248	12672-29-6	SW846 8082A	32	U	ug/kg	34	32	1	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Aroclor 1254	11097-69-1	SW846 8082A	27	U	ug/kg	34	27	1	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Aroclor 1260	11096-82-5	SW846 8082A	27	U	ug/kg	34	27	1	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8082A*	*84.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8082A*	*78.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*2,4-DCAA*	*19719-28-9*	*SW846 8151A*	*28.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*2,4-DCAA*	*19719-28-9*	*SW846 8151A*	*26.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8081B*	*67.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8081B*	*68.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8082A*	*89.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8082A*	*79.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8081B*	*59.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8081B*	*109*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	pH		SW846 9045D	**6.82**		**su**			**1**	----	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Chromium, Trivalent		SW846 6010/7196A M	**8.1**		**mg/kg**	**1.5**	**0.94**	**1**	36.0	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Redox Potential Vs H2		ASTM D1498-76M	**391**		**mv**			**1**	----	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Chromium, Hexavalent	18540-29-9	SW846 3060A/7196A	**0.43**		**mg/kg**	**0.43**	**0.38**	**1**	22.0	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Cyanide	57-12-5	SW846 9012B/LACHAT	0.19	U	mg/kg	0.25	0.19	1	27	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Solids, Percent		SM2540 G 18TH ED MOD	92.0		%			1	----	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Arsenic	7440-38-2	SW846 6010D	**3.1**		**mg/kg**	**2.2**	**0.56**	**1**	16.0	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Barium	7440-39-3	SW846 6010D	**15.4**	**J**	**mg/kg**	**22.0**	**11.0**	**1**	350	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Beryllium	7440-41-7	SW846 6010D	**0.22**		**mg/kg**	**0.22**	**0.11**	**1**	14.0	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Cadmium	7440-43-9	SW846 6010D	0.22	U	mg/kg	0.56	0.22	1	2.5	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Chromium	7440-47-3	SW846 6010D	**8.5**		**mg/kg**	**1.1**	**0.56**	**1**	58	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Copper	7440-50-8	SW846 6010D	**5.2**		**mg/kg**	**2.8**	**1.1**	**1**	270	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Lead	7439-92-1	SW846 6010D	**10.3**		**mg/kg**	**2.2**	**0.56**	**1**	400	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Manganese	7439-96-5	SW846 6010D	**74.4**		**mg/kg**	**1.7**	**1.1**	**1**	2,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Mercury	7439-97-6	SW846 7471B	**0.048**		**mg/kg**	**0.031**	**0.023**	**1**	0.81	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Nickel	7440-02-0	SW846 6010D	**4.6**		**mg/kg**	**4.5**	**0.45**	**1**	140	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Selenium	7782-49-2	SW846 6010D	0.90	U	mg/kg	2.2	0.90	1	36.0	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Silver	7440-22-4	SW846 6010D	0.45	U	mg/kg	0.56	0.45	1	36.0	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Zinc	7440-66-6	SW846 6010D	**13**		**mg/kg**	**5.6**	**4.5**	**1**	2,200	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	2-Methylphenol	95-48-7	SW846 8270D	36	U	ug/kg	72	36	1	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	3&4-Methylphenol		SW846 8270D	36	U	ug/kg	72	36	1	34,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Pentachlorophenol	87-86-5	SW846 8270D	90	U	ug/kg	140	90	1	2,400	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Phenol	108-95-2	SW846 8270D	36	U	ug/kg	72	36	1	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Acenaphthene	83-32-9	SW846 8270D	**42.9**		**ug/kg**	**36**	**18**	**1**	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Acenaphthylene	208-96-8	SW846 8270D	27	U	ug/kg	36	27	1	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Anthracene	120-12-7	SW846 8270D	**97.1**		**ug/kg**	**36**	**27**	**1**	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Benzo(a)anthracene	56-55-3	SW846 8270D	**359**		**ug/kg**	**36**	**18**	**1**	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Benzo(a)pyrene	50-32-8	SW846 8270D	**306**		**ug/kg**	**36**	**18**	**1**	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Benzo(b)fluoranthene	205-99-2	SW846 8270D	**381**		**ug/kg**	**36**	**18**	**1**	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Benzo(g,h,i)perylene	191-24-2	SW846 8270D	**221**		**ug/kg**	**36**	**27**	**1**	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Benzo(k)fluoranthene	207-08-9	SW846 8270D	**130**		**ug/kg**	**36**	**18**	**1**	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Chrysene	218-01-9	SW846 8270D	**339**		**ug/kg**	**36**	**18**	**1**	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Dibenzo(a,h)anthracene	53-70-3	SW846 8270D	**55.9**		**ug/kg**	**36**	**18**	**1**	330	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Dibenzofuran	132-64-9	SW846 8270D	**21.9**	**J**	**ug/kg**	**72**	**18**	**1**	14,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Fluoranthene	206-44-0	SW846 8270D	**592**		**ug/kg**	**36**	**18**	**1**	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Fluorene	86-73-7	SW846 8270D	**36.7**		**ug/kg**	**36**	**27**	**1**	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Hexachlorobenzene	118-74-1	SW846 8270D	18	U	ug/kg	72	18	1	330	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Indeno(1,2,3-cd)pyrene	193-39-5	SW846 8270D	**212**		**ug/kg**	**36**	**18**	**1**	500	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Naphthalene	91-20-3	SW846 8270D	**20.4**	**J**	**ug/kg**	**36**	**18**	**1**	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Phenanthrene	85-01-8	SW846 8270D	**333**		**ug/kg**	**36**	**18**	**1**	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Pyrene	129-00-0	SW846 8270D	**642**		**ug/kg**	**36**	**18**	**1**	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	*2-Fluorophenol*	*367-12-4*	*SW846 8270D*	*56.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*Phenol-d5*	*4165-62-2*	*SW846 8270D*	*58.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*2,4,6-Tribromophenol*	*118-79-6*	*SW846 8270D*	*73.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*Nitrobenzene-d5*	*4165-60-0*	*SW846 8270D*	*62.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*2-Fluorobiphenyl*	*321-60-8*	*SW846 8270D*	*59.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*Terphenyl-d14*	*1718-51-0*	*SW846 8270D*	*93.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	1,4-Dioxane	123-91-1	SW846 8270D BY SIM	0.050	U	ug/kg	0.10	0.050	1	9,800	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	*Nitrobenzene-d5*	*4165-60-0*	*SW846 8270D BY SIM*	*74.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-10	*2-Fluorobiphenyl*	*321-60-8*	*SW846 8270D BY SIM*	*64.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*

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	Fill Material Criteria[1]	Client ID	Collected	Time
JC89914-10	*Terphenyl-d14*	*1718-51-0*	*SW846 8270D BY SIM*	*82.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-036*	*6/14/2019*	*11:38*
JC89914-11	Aldrin	309-00-2	SW846 8081B	0.68	U	ug/kg	0.72	0.68	1	19	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	2,4,5-TP (Silvex)	93-72-1	SW846 8151A	3.4	U	ug/kg	3.6	3.4	1	58,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	alpha-BHC	319-84-6	SW846 8081B	0.68	U	ug/kg	0.72	0.68	1	97	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	beta-BHC	319-85-7	SW846 8081B	0.68	U	ug/kg	0.72	0.68	1	72	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	delta-BHC	319-86-8	SW846 8081B	0.71	U	ug/kg	0.72	0.71	1	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	gamma-BHC (Lindane)	58-89-9	SW846 8081B	0.65	U	ug/kg	0.72	0.65	1	280	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	alpha-Chlordane	5103-71-9	SW846 8081B	**5.0**		**ug/kg**	**0.72**	**0.68**	**1**	910	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Dieldrin	60-57-1	SW846 8081B	**2.0**		**ug/kg**	**0.72**	**0.54**	**1**	39	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	4,4'-DDD	72-54-8	SW846 8081B	**7.3**		**ug/kg**	**0.72**	**0.68**	**1**	2,600	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	4,4'-DDE	72-55-9	SW846 8081B	**2.6**		**ug/kg**	**0.72**	**0.68**	**1**	1,800	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	4,4'-DDT	50-29-3	SW846 8081B	**7.5**		**ug/kg**	**0.72**	**0.68**	**1**	1,700	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Endrin	72-20-8	SW846 8081B	0.65	U	ug/kg	0.72	0.65	1	2,200	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Endosulfan sulfate	1031-07-8	SW846 8081B	0.65	U	ug/kg	0.72	0.65	1	4,800	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Endosulfan-I	959-98-8	SW846 8081B	0.54	U	ug/kg	0.72	0.54	1	4,800	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Endosulfan-II	33213-65-9	SW846 8081B	0.54	U	ug/kg	0.72	0.54	1	4,800	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Heptachlor	76-44-8	SW846 8081B	**0.76**		**ug/kg**	**0.72**	**0.65**	**1**	420	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Aroclor 1016	12674-11-2	SW846 8082A	29	U	ug/kg	36	29	1	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Aroclor 1221	11104-28-2	SW846 8082A	29	U	ug/kg	36	29	1	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Aroclor 1232	11141-16-5	SW846 8082A	29	U	ug/kg	36	29	1	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Aroclor 1242	53469-21-9	SW846 8082A	29	U	ug/kg	36	29	1	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Aroclor 1248	12672-29-6	SW846 8082A	34	U	ug/kg	36	34	1	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Aroclor 1254	11097-69-1	SW846 8082A	29	U	ug/kg	36	29	1	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Aroclor 1260	11096-82-5	SW846 8082A	29	U	ug/kg	36	29	1	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8082A*	*70.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*2,4-DCAA*	*19719-28-9*	*SW846 8151A*	*47.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*2,4-DCAA*	*19719-28-9*	*SW846 8151A*	*42.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8081B*	*59.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8082A*	*74.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8081B*	*59.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8082A*	*79.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8082A*	*71.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8081B*	*105*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8081B*	*52.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	Chromium, Trivalent		SW846 6010/7196A M	**18.5**		**mg/kg**	**1.7**	**0.98**	**1**	36.0	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Redox Potential Vs H2		ASTM D1498-76M	**378**		**mv**			**1**	----	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	pH		SW846 9045D	**7.16**		**su**			**1**	----	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Cyanide	57-12-5	SW846 9012B/LACHAT	0.19	U	mg/kg	0.25	0.19	1	27	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Chromium, Hexavalent	18540-29-9	SW846 3060A/7196A	**0.61**		**mg/kg**	**0.46**	**0.40**	**1**	22.0	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Solids, Percent		SM2540 G 18TH ED MOD	86.8		%			1	----	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Arsenic	7440-38-2	SW846 6010D	**5.7**		**mg/kg**	**2.3**	**0.58**	**1**	16.0	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Barium	7440-39-3	SW846 6010D	**32.9**		**mg/kg**	**23.0**	**12.0**	**1**	350	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Beryllium	7440-41-7	SW846 6010D	**0.51**		**mg/kg**	**0.23**	**0.12**	**1**	14.0	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Cadmium	7440-43-9	SW846 6010D	0.23	U	mg/kg	0.58	0.23	1	2.5	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Chromium	7440-47-3	SW846 6010D	**19.1**		**mg/kg**	**1.2**	**0.58**	**1**	58	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Copper	7440-50-8	SW846 6010D	**10.7**		**mg/kg**	**2.9**	**1.2**	**1**	270	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Lead	7439-92-1	SW846 6010D	**16.3**		**mg/kg**	**2.3**	**0.58**	**1**	400	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Manganese	7439-96-5	SW846 6010D	**176**		**mg/kg**	**1.7**	**1.2**	**1**	2,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Mercury	7439-97-6	SW846 7471B	**0.047**		**mg/kg**	**0.031**	**0.023**	**1**	0.81	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Nickel	7440-02-0	SW846 6010D	**10.7**		**mg/kg**	**4.7**	**0.47**	**1**	140	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Selenium	7782-49-2	SW846 6010D	0.93	U	mg/kg	2.3	0.93	1	36.0	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Silver	7440-22-4	SW846 6010D	0.47	U	mg/kg	0.58	0.47	1	36.0	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Zinc	7440-66-6	SW846 6010D	**27.0**		**mg/kg**	**5.8**	**4.7**	**1**	2,200	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	2-Methylphenol	95-48-7	SW846 8270D	38	U	ug/kg	77	38	1	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	3&4-Methylphenol		SW846 8270D	38	U	ug/kg	77	38	1	34,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Pentachlorophenol	87-86-5	SW846 8270D	96	U	ug/kg	150	96	1	2,400	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Phenol	108-95-2	SW846 8270D	38	U	ug/kg	77	38	1	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Acenaphthene	83-32-9	SW846 8270D	**31.9**	**J**	**ug/kg**	**38**	**19**	**1**	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Acenaphthylene	208-96-8	SW846 8270D	29	U	ug/kg	38	29	1	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Anthracene	120-12-7	SW846 8270D	**104**		**ug/kg**	**38**	**29**	**1**	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Benzo(a)anthracene	56-55-3	SW846 8270D	**432**		**ug/kg**	**38**	**19**	**1**	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Benzo(a)pyrene	50-32-8	SW846 8270D	**413**		**ug/kg**	**38**	**19**	**1**	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Benzo(b)fluoranthene	205-99-2	SW846 8270D	**486**		**ug/kg**	**38**	**19**	**1**	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Benzo(g,h,i)perylene	191-24-2	SW846 8270D	**291**		**ug/kg**	**38**	**29**	**1**	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Benzo(k)fluoranthene	207-08-9	SW846 8270D	**177**		**ug/kg**	**38**	**19**	**1**	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Chrysene	218-01-9	SW846 8270D	**394**		**ug/kg**	**38**	**19**	**1**	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Dibenzo(a,h)anthracene	53-70-3	SW846 8270D	**82.4**		**ug/kg**	**38**	**19**	**1**	330	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Dibenzofuran	132-64-9	SW846 8270D	19	U	ug/kg	77	19	1	14,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Fluoranthene	206-44-0	SW846 8270D	**657**		**ug/kg**	**38**	**19**	**1**	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Fluorene	86-73-7	SW846 8270D	**30.7**	**J**	**ug/kg**	**38**	**29**	**1**	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Hexachlorobenzene	118-74-1	SW846 8270D	19	U	ug/kg	77	19	1	330	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Indeno(1,2,3-cd)pyrene	193-39-5	SW846 8270D	**291**		**ug/kg**	**38**	**19**	**1**	500	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Naphthalene	91-20-3	SW846 8270D	19	U	ug/kg	38	19	1	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Phenanthrene	85-01-8	SW846 8270D	**325**		**ug/kg**	**38**	**19**	**1**	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Pyrene	129-00-0	SW846 8270D	**767**		**ug/kg**	**38**	**19**	**1**	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	*2-Fluorophenol*	*367-12-4*	*SW846 8270D*	*56.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*Phenol-d5*	*4165-62-2*	*SW846 8270D*	*59.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*

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	Fill Material Criteria[1]	Client ID	Collected	Time
JC89914-11	*2,4,6-Tribromophenol*	*118-79-6*	*SW846 8270D*	*75.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*Nitrobenzene-d5*	*4165-60-0*	*SW846 8270D*	*63.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*2-Fluorobiphenyl*	*321-60-8*	*SW846 8270D*	*59.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*Terphenyl-d14*	*1718-51-0*	*SW846 8270D*	*95.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	1,4-Dioxane	123-91-1	SW846 8270D BY SIM	0.050	U	ug/kg	0.10	0.050	1	9,800	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	*Nitrobenzene-d5*	*4165-60-0*	*SW846 8270D BY SIM*	*74.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*2-Fluorobiphenyl*	*321-60-8*	*SW846 8270D BY SIM*	*66.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-11	*Terphenyl-d14*	*1718-51-0*	*SW846 8270D BY SIM*	*83.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-037*	*6/14/2019*	*11:43*
JC89914-12	Aldrin	309-00-2	SW846 8081B	0.65	U	ug/kg	0.69	0.65	1	19	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	2,4,5-TP (Silvex)	93-72-1	SW846 8151A	3.5	U	ug/kg	3.6	3.5	1	58,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	alpha-BHC	319-84-6	SW846 8081B	0.65	U	ug/kg	0.69	0.65	1	97	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	beta-BHC	319-85-7	SW846 8081B	0.65	U	ug/kg	0.69	0.65	1	72	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	delta-BHC	319-86-8	SW846 8081B	0.67	U	ug/kg	0.69	0.67	1	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	gamma-BHC (Lindane)	58-89-9	SW846 8081B	0.62	U	ug/kg	0.69	0.62	1	280	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	alpha-Chlordane	5103-71-9	SW846 8081B	**2.8**		**ug/kg**	**0.69**	**0.65**	**1**	910	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Dieldrin	60-57-1	SW846 8081B	**0.68**	**J**	**ug/kg**	**0.69**	**0.52**	**1**	39	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	4,4'-DDD	72-54-8	SW846 8081B	0.65	U	ug/kg	0.69	0.65	1	2,600	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	4,4'-DDE	72-55-9	SW846 8081B	0.65	U	ug/kg	0.69	0.65	1	1,800	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	4,4'-DDT	50-29-3	SW846 8081B	**1.3**		**ug/kg**	**0.69**	**0.65**	**1**	1,700	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Endrin	72-20-8	SW846 8081B	0.62	U	ug/kg	0.69	0.62	1	2,200	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Endosulfan sulfate	1031-07-8	SW846 8081B	0.62	U	ug/kg	0.69	0.62	1	4,800	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Endosulfan-I	959-98-8	SW846 8081B	0.52	U	ug/kg	0.69	0.52	1	4,800	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Endosulfan-II	33213-65-9	SW846 8081B	0.52	U	ug/kg	0.69	0.52	1	4,800	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Heptachlor	76-44-8	SW846 8081B	0.62	U	ug/kg	0.69	0.62	1	420	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Aroclor 1016	12674-11-2	SW846 8082A	27	U	ug/kg	34	27	1	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Aroclor 1221	11104-28-2	SW846 8082A	27	U	ug/kg	34	27	1	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Aroclor 1232	11141-16-5	SW846 8082A	27	U	ug/kg	34	27	1	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Aroclor 1242	53469-21-9	SW846 8082A	27	U	ug/kg	34	27	1	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Aroclor 1248	12672-29-6	SW846 8082A	32	U	ug/kg	34	32	1	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Aroclor 1254	11097-69-1	SW846 8082A	27	U	ug/kg	34	27	1	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Aroclor 1260	11096-82-5	SW846 8082A	27	U	ug/kg	34	27	1	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8082A*	*83.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8082A*	*79.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8081B*	*72.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*2,4-DCAA*	*19719-28-9*	*SW846 8151A*	*38.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*2,4-DCAA*	*19719-28-9*	*SW846 8151A*	*38.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*Tetrachloro-m-xylene*	*877-09-8*	*SW846 8081B*	*72.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8082A*	*81.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8082A*	*72.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8081B*	*94.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*Decachlorobiphenyl*	*2051-24-3*	*SW846 8081B*	*67.0*		*%*			*1*		*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	Chromium, Hexavalent	18540-29-9	SW846 3060A/7196A	**0.88**		**mg/kg**	**0.45**	**0.39**	**1**	22.0	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Cyanide	57-12-5	SW846 9012B/LACHAT	0.19	U	mg/kg	0.26	0.19	1	27	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	pH		SW846 9045D	**6.79**		**su**			**1**	----	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Redox Potential Vs H2		ASTM D1498-76M	**374**		**mv**			**1**	----	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Chromium, Trivalent		SW846 6010/7196A M	**13.3**		**mg/kg**	**1.6**	**0.95**	**1**	36.0	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Solids, Percent		SM2540 G 18TH ED MOD	89.8		%			1	----	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Arsenic	7440-38-2	SW846 6010D	**4.4**		**mg/kg**	**2.2**	**0.56**	**1**	16.0	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Barium	7440-39-3	SW846 6010D	**27.2**		**mg/kg**	**22.0**	**11.0**	**1**	350	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Beryllium	7440-41-7	SW846 6010D	**0.38**		**mg/kg**	**0.22**	**0.11**	**1**	14.0	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Cadmium	7440-43-9	SW846 6010D	0.22	U	mg/kg	0.56	0.22	1	2.5	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Chromium	7440-47-3	SW846 6010D	**14.2**		**mg/kg**	**1.1**	**0.56**	**1**	58	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Copper	7440-50-8	SW846 6010D	**10.9**		**mg/kg**	**2.8**	**1.1**	**1**	270	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Lead	7439-92-1	SW846 6010D	**28.7**		**mg/kg**	**2.2**	**0.56**	**1**	400	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Manganese	7439-96-5	SW846 6010D	**131**		**mg/kg**	**1.7**	**1.1**	**1**	2,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Mercury	7439-97-6	SW846 7471B	**0.029**	**J**	**mg/kg**	**0.035**	**0.026**	**1**	0.81	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Nickel	7440-02-0	SW846 6010D	**7.9**		**mg/kg**	**4.5**	**0.45**	**1**	140	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Selenium	7782-49-2	SW846 6010D	0.89	U	mg/kg	2.2	0.89	1	36.0	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Silver	7440-22-4	SW846 6010D	0.45	U	mg/kg	0.56	0.45	1	36.0	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Zinc	7440-66-6	SW846 6010D	**27.7**		**mg/kg**	**5.6**	**4.5**	**1**	2,200	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	2-Methylphenol	95-48-7	SW846 8270D	36	U	ug/kg	73	36	1	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	3&4-Methylphenol		SW846 8270D	36	U	ug/kg	73	36	1	34,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Pentachlorophenol	87-86-5	SW846 8270D	91	U	ug/kg	150	91	1	2,400	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Phenol	108-95-2	SW846 8270D	36	U	ug/kg	73	36	1	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Acenaphthene	83-32-9	SW846 8270D	18	U	ug/kg	36	18	1	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Acenaphthylene	208-96-8	SW846 8270D	27	U	ug/kg	36	27	1	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Anthracene	120-12-7	SW846 8270D	27	U	ug/kg	36	27	1	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Benzo(a)anthracene	56-55-3	SW846 8270D	**137**		**ug/kg**	**36**	**18**	**1**	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Benzo(a)pyrene	50-32-8	SW846 8270D	**122**		**ug/kg**	**36**	**18**	**1**	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Benzo(b)fluoranthene	205-99-2	SW846 8270D	**150**		**ug/kg**	**36**	**18**	**1**	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Benzo(g,h,i)perylene	191-24-2	SW846 8270D	**82.8**		**ug/kg**	**36**	**27**	**1**	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Benzo(k)fluoranthene	207-08-9	SW846 8270D	**58.1**		**ug/kg**	**36**	**18**	**1**	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Chrysene	218-01-9	SW846 8270D	**126**		**ug/kg**	**36**	**18**	**1**	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Dibenzo(a,h)anthracene	53-70-3	SW846 8270D	**25.9**	**J**	**ug/kg**	**36**	**18**	**1**	330	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Dibenzofuran	132-64-9	SW846 8270D	18	U	ug/kg	73	18	1	14,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Fluoranthene	206-44-0	SW846 8270D	**184**		**ug/kg**	**36**	**18**	**1**	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Fluorene	86-73-7	SW846 8270D	27	U	ug/kg	36	27	1	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50

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	Fill Material Criteria[1]	Client ID	Collected	Time
JC89914-12	Hexachlorobenzene	118-74-1	SW846 8270D	18	U	ug/kg	73	18	1	330	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Indeno(1,2,3-cd)pyrene	193-39-5	SW846 8270D	**83.3**		**ug/kg**	**36**	**18**	**1**	500	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Naphthalene	91-20-3	SW846 8270D	18	U	ug/kg	36	18	1	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Phenanthrene	85-01-8	SW846 8270D	**55.1**		**ug/kg**	**36**	**18**	**1**	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Pyrene	129-00-0	SW846 8270D	**224**		**ug/kg**	**36**	**18**	**1**	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	*2-Fluorophenol*	*367-12-4*	*SW846 8270D*	*64.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*Phenol-d5*	*4165-62-2*	*SW846 8270D*	*66.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*2,4,6-Tribromophenol*	*118-79-6*	*SW846 8270D*	*73.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*Nitrobenzene-d5*	*4165-60-0*	*SW846 8270D*	*69.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*2-Fluorobiphenyl*	*321-60-8*	*SW846 8270D*	*63.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*Terphenyl-d14*	*1718-51-0*	*SW846 8270D*	*95.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	1,4-Dioxane	123-91-1	SW846 8270D BY SIM	0.050	U	ug/kg	0.10	0.050	1	9,800	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	*Nitrobenzene-d5*	*4165-60-0*	*SW846 8270D BY SIM*	*60.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*2-Fluorobiphenyl*	*321-60-8*	*SW846 8270D BY SIM*	*52.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*
JC89914-12	*Terphenyl-d14*	*1718-51-0*	*SW846 8270D BY SIM*	*66.0*		*%*			*1*	----	*NWIRP-S1-WC-CF-038*	*6/14/2019*	*11:50*

Red, Shaded, Italicized results exceeding Project Remediation Goals.
Found 0 results exceeding regulatory limits.
***** Indicates result outside regulatory limits.***

[1]Fill material criteria are based on 6 NYCCR Part 375, Table 375-6.8(b): Restricted Use Soil Cleanup Objectives, Protection of Public Health, Residential. Following the receipt of the analytical results, the project team will review the data to ensure that the analytical results meet the fill material criteria.
Draft Final Sampling and Analysis Plan/Quality Assurance Plan Site 1 – Former Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage, New York, February 2019.

Laboratory Qualifiers:
J = Estimated value.
U = Not detected; the analyte was analyzed for, but not detected above the associated detection limit.

% = percent
(s) *= surrogates*
LOD = limit of detection
LOQ = limit of quantitation
µg/kg = microgram/kilogram = ppb
mg/kg = milligrams/kilogram

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	Fill Material Criteria[1]	Client ID	Collected	Time
JC89914-3	Acetone	67-64-1	SW846 8260C	8.1	J	ug/kg	9.1	6.8	1	100,000	NWIRP-S1-WC-CF-029	6/14/2019	11:10
JC89914-8	Acetone	67-64-1	SW846 8260C	8.1	J	ug/kg	8.3	6.3	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:30
JC89914-9	alpha-Chlordane	5103-71-9	SW846 8081B	3.0		ug/kg	0.70	0.67	1	910	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Dieldrin	60-57-1	SW846 8081B	0.87		ug/kg	0.70	0.53	1	39	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	4,4'-DDE	72-55-9	SW846 8081B	0.73		ug/kg	0.70	0.67	1	1,800	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	4,4'-DDT	50-29-3	SW846 8081B	1.2		ug/kg	0.70	0.67	1	1,700	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	pH		SW846 9045D	6.23		su			1	----	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Chromium, Hexavalent	18540-29-9	SW846 3060A/7196A	0.48		mg/kg	0.44	0.39	1	22.0	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Redox Potential Vs H2		ASTM D1498-76M	403		mv			1	----	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Chromium, Trivalent		SW846 6010/7196A M	13.1		mg/kg	1.5	0.95	1	36.0	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Arsenic	7440-38-2	SW846 6010D	4.8		mg/kg	2.3	0.56	1	16.0	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Barium	7440-39-3	SW846 6010D	28.0		mg/kg	23.0	11.0	1	350	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Beryllium	7440-41-7	SW846 6010D	0.38		mg/kg	0.23	0.11	1	14.0	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Chromium	7440-47-3	SW846 6010D	13.6		mg/kg	1.1	0.56	1	58	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Copper	7440-50-8	SW846 6010D	10.5		mg/kg	2.8	1.1	1	270	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Lead	7439-92-1	SW846 6010D	28.9		mg/kg	2.3	0.56	1	400	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Manganese	7439-96-5	SW846 6010D	134		mg/kg	1.7	1.1	1	2,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Mercury	7439-97-6	SW846 7471B	0.029	J	mg/kg	0.034	0.026	1	0.81	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Nickel	7440-02-0	SW846 6010D	7.9		mg/kg	4.5	0.45	1	140	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Silver	7440-22-4	SW846 6010D	0.26	J	mg/kg	0.56	0.45	1	36.0	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Zinc	7440-66-6	SW846 6010D	29.1		mg/kg	5.6	4.5	1	2,200	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Anthracene	120-12-7	SW846 8270D	34.1	J	ug/kg	37	27	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Benzo(a)anthracene	56-55-3	SW846 8270D	225		ug/kg	37	18	1	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Benzo(a)pyrene	50-32-8	SW846 8270D	210		ug/kg	37	18	1	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Benzo(b)fluoranthene	205-99-2	SW846 8270D	263		ug/kg	37	18	1	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Benzo(g,h,i)perylene	191-24-2	SW846 8270D	148		ug/kg	37	27	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Benzo(k)fluoranthene	207-08-9	SW846 8270D	87.5		ug/kg	37	18	1	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Chrysene	218-01-9	SW846 8270D	213		ug/kg	37	18	1	1,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Dibenzo(a,h)anthracene	53-70-3	SW846 8270D	42		ug/kg	37	18	1	330	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Fluoranthene	206-44-0	SW846 8270D	261		ug/kg	37	18	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Indeno(1,2,3-cd)pyrene	193-39-5	SW846 8270D	141		ug/kg	37	18	1	500	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Phenanthrene	85-01-8	SW846 8270D	85.4		ug/kg	37	18	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-9	Pyrene	129-00-0	SW846 8270D	313		ug/kg	37	18	1	100,000	NWIRP-S1-WC-CF-035	6/14/2019	11:33
JC89914-10	alpha-Chlordane	5103-71-9	SW846 8081B	4.9		ug/kg	0.68	0.64	1	910	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Dieldrin	60-57-1	SW846 8081B	1.8		ug/kg	0.68	0.51	1	39	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	4,4'-DDD	72-54-8	SW846 8081B	5.3		ug/kg	0.68	0.64	1	2,600	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	4,4'-DDE	72-55-9	SW846 8081B	3.4		ug/kg	0.68	0.64	1	1,800	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	4,4'-DDT	50-29-3	SW846 8081B	9.0		ug/kg	0.68	0.64	1	1,700	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Heptachlor	76-44-8	SW846 8081B	0.80		ug/kg	0.68	0.61	1	420	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	pH		SW846 9045D	6.82		su			1	----	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Chromium, Trivalent		SW846 6010/7196A M	8.1		mg/kg	1.5	0.94	1	36.0	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Redox Potential Vs H2		ASTM D1498-76M	391		mv			1	----	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Chromium, Hexavalent	18540-29-9	SW846 3060A/7196A	0.43		mg/kg	0.43	0.38	1	22.0	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Arsenic	7440-38-2	SW846 6010D	3.1		mg/kg	2.2	0.56	1	16.0	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Barium	7440-39-3	SW846 6010D	15.4	J	mg/kg	22.0	11.0	1	350	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Beryllium	7440-41-7	SW846 6010D	0.22		mg/kg	0.22	0.11	1	14.0	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Chromium	7440-47-3	SW846 6010D	8.5		mg/kg	1.1	0.56	1	58	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Copper	7440-50-8	SW846 6010D	5.2		mg/kg	2.8	1.1	1	270	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Lead	7439-92-1	SW846 6010D	10.3		mg/kg	2.2	0.56	1	400	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Manganese	7439-96-5	SW846 6010D	74.4		mg/kg	1.7	1.1	1	2,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Mercury	7439-97-6	SW846 7471B	0.048		mg/kg	0.031	0.023	1	0.81	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Nickel	7440-02-0	SW846 6010D	4.6		mg/kg	4.5	0.45	1	140	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Zinc	7440-66-6	SW846 6010D	13		mg/kg	5.6	4.5	1	2,200	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Acenaphthene	83-32-9	SW846 8270D	42.9		ug/kg	36	18	1	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Anthracene	120-12-7	SW846 8270D	97.1		ug/kg	36	27	1	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Benzo(a)anthracene	56-55-3	SW846 8270D	359		ug/kg	36	18	1	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Benzo(a)pyrene	50-32-8	SW846 8270D	306		ug/kg	36	18	1	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Benzo(b)fluoranthene	205-99-2	SW846 8270D	381		ug/kg	36	18	1	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Benzo(g,h,i)perylene	191-24-2	SW846 8270D	221		ug/kg	36	27	1	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Benzo(k)fluoranthene	207-08-9	SW846 8270D	130		ug/kg	36	18	1	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Chrysene	218-01-9	SW846 8270D	339		ug/kg	36	18	1	1,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Dibenzo(a,h)anthracene	53-70-3	SW846 8270D	55.9		ug/kg	36	18	1	330	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Dibenzofuran	132-64-9	SW846 8270D	21.9	J	ug/kg	72	18	1	14,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Fluoranthene	206-44-0	SW846 8270D	592		ug/kg	36	18	1	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Fluorene	86-73-7	SW846 8270D	36.7		ug/kg	36	27	1	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Indeno(1,2,3-cd)pyrene	193-39-5	SW846 8270D	212		ug/kg	36	18	1	500	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Naphthalene	91-20-3	SW846 8270D	20.4	J	ug/kg	36	18	1	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Phenanthrene	85-01-8	SW846 8270D	333		ug/kg	36	18	1	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-10	Pyrene	129-00-0	SW846 8270D	642		ug/kg	36	18	1	100,000	NWIRP-S1-WC-CF-036	6/14/2019	11:38
JC89914-11	alpha-Chlordane	5103-71-9	SW846 8081B	5.0		ug/kg	0.72	0.68	1	910	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Dieldrin	60-57-1	SW846 8081B	2.0		ug/kg	0.72	0.54	1	39	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	4,4'-DDD	72-54-8	SW846 8081B	7.3		ug/kg	0.72	0.68	1	2,600	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	4,4'-DDE	72-55-9	SW846 8081B	2.6		ug/kg	0.72	0.68	1	1,800	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	4,4'-DDT	50-29-3	SW846 8081B	7.5		ug/kg	0.72	0.68	1	1,700	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Heptachlor	76-44-8	SW846 8081B	0.76		ug/kg	0.72	0.65	1	420	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Chromium, Trivalent		SW846 6010/7196A M	18.5		mg/kg	1.7	0.98	1	36.0	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Redox Potential Vs H2		ASTM D1498-76M	378		mv			1	----	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	pH		SW846 9045D	7.16		su			1	----	NWIRP-S1-WC-CF-037	6/14/2019	11:43

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	Fill Material Criteria[1]	Client ID	Collected	Time
JC89914-11	Chromium, Hexavalent	18540-29-9	SW846 3060A/7196A	0.61		mg/kg	0.46	0.40	1	22.0	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Arsenic	7440-38-2	SW846 6010D	5.7		mg/kg	2.3	0.58	1	16.0	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Barium	7440-39-3	SW846 6010D	32.9		mg/kg	23.0	12.0	1	350	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Beryllium	7440-41-7	SW846 6010D	0.51		mg/kg	0.23	0.12	1	14.0	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Chromium	7440-47-3	SW846 6010D	19.1		mg/kg	1.2	0.58	1	58	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Copper	7440-50-8	SW846 6010D	10.7		mg/kg	2.9	1.2	1	270	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Lead	7439-92-1	SW846 6010D	16.3		mg/kg	2.3	0.58	1	400	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Manganese	7439-96-5	SW846 6010D	176		mg/kg	1.7	1.2	1	2,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Mercury	7439-97-6	SW846 7471B	0.047		mg/kg	0.031	0.023	1	0.81	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Nickel	7440-02-0	SW846 6010D	10.7		mg/kg	4.7	0.47	1	140	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Zinc	7440-66-6	SW846 6010D	27.0		mg/kg	5.8	4.7	1	2,200	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Acenaphthene	83-32-9	SW846 8270D	31.9	J	ug/kg	38	19	1	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Anthracene	120-12-7	SW846 8270D	104		ug/kg	38	29	1	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Benzo(a)anthracene	56-55-3	SW846 8270D	432		ug/kg	38	19	1	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Benzo(a)pyrene	50-32-8	SW846 8270D	413		ug/kg	38	19	1	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Benzo(b)fluoranthene	205-99-2	SW846 8270D	486		ug/kg	38	19	1	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Benzo(g,h,i)perylene	191-24-2	SW846 8270D	291		ug/kg	38	29	1	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Benzo(k)fluoranthene	207-08-9	SW846 8270D	177		ug/kg	38	19	1	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Chrysene	218-01-9	SW846 8270D	394		ug/kg	38	19	1	1,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Dibenzo(a,h)anthracene	53-70-3	SW846 8270D	82.4		ug/kg	38	19	1	330	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Fluoranthene	206-44-0	SW846 8270D	657		ug/kg	38	19	1	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Fluorene	86-73-7	SW846 8270D	30.7	J	ug/kg	38	29	1	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Indeno(1,2,3-cd)pyrene	193-39-5	SW846 8270D	291		ug/kg	38	19	1	500	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Phenanthrene	85-01-8	SW846 8270D	325		ug/kg	38	19	1	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-11	Pyrene	129-00-0	SW846 8270D	767		ug/kg	38	19	1	100,000	NWIRP-S1-WC-CF-037	6/14/2019	11:43
JC89914-12	alpha-Chlordane	5103-71-9	SW846 8081B	2.8		ug/kg	0.69	0.65	1	910	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Dieldrin	60-57-1	SW846 8081B	0.68	J	ug/kg	0.69	0.52	1	39	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	4,4'-DDT	50-29-3	SW846 8081B	1.3		ug/kg	0.69	0.65	1	1,700	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Chromium, Hexavalent	18540-29-9	SW846 3060A/7196A	0.88		mg/kg	0.45	0.39	1	22.0	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	pH		SW846 9045D	6.79		su			1	----	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Redox Potential Vs H2		ASTM D1498-76M	374		mv			1	----	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Chromium, Trivalent		SW846 6010/7196A M	13.3		mg/kg	1.6	0.95	1	36.0	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Arsenic	7440-38-2	SW846 6010D	4.4		mg/kg	2.2	0.56	1	16.0	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Barium	7440-39-3	SW846 6010D	27.2		mg/kg	22.0	11.0	1	350	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Beryllium	7440-41-7	SW846 6010D	0.38		mg/kg	0.22	0.11	1	14.0	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Chromium	7440-47-3	SW846 6010D	14.2		mg/kg	1.1	0.56	1	58	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Copper	7440-50-8	SW846 6010D	10.9		mg/kg	2.8	1.1	1	270	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Lead	7439-92-1	SW846 6010D	28.7		mg/kg	2.2	0.56	1	400	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Manganese	7439-96-5	SW846 6010D	131		mg/kg	1.7	1.1	1	2,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Mercury	7439-97-6	SW846 7471B	0.029	J	mg/kg	0.035	0.026	1	0.81	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Nickel	7440-02-0	SW846 6010D	7.9		mg/kg	4.5	0.45	1	140	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Zinc	7440-66-6	SW846 6010D	27.7		mg/kg	5.6	4.5	1	2,200	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Benzo(a)anthracene	56-55-3	SW846 8270D	137		ug/kg	36	18	1	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Benzo(a)pyrene	50-32-8	SW846 8270D	122		ug/kg	36	18	1	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Benzo(b)fluoranthene	205-99-2	SW846 8270D	150		ug/kg	36	18	1	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Benzo(g,h,i)perylene	191-24-2	SW846 8270D	82.8		ug/kg	36	27	1	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Benzo(k)fluoranthene	207-08-9	SW846 8270D	58.1		ug/kg	36	18	1	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Chrysene	218-01-9	SW846 8270D	126		ug/kg	36	18	1	1,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Dibenzo(a,h)anthracene	53-70-3	SW846 8270D	25.9	J	ug/kg	36	18	1	330	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Fluoranthene	206-44-0	SW846 8270D	184		ug/kg	36	18	1	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Indeno(1,2,3-cd)pyrene	193-39-5	SW846 8270D	83.3		ug/kg	36	18	1	500	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Phenanthrene	85-01-8	SW846 8270D	55.1		ug/kg	36	18	1	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50
JC89914-12	Pyrene	129-00-0	SW846 8270D	224		ug/kg	36	18	1	100,000	NWIRP-S1-WC-CF-038	6/14/2019	11:50

Red, Shaded, Italicized results exceeding Project Remediation Goals.
Found 0 results exceeding regulatory limits.
***** Indicates result outside regulatory limits.***

[1]Fill material criteria are based on 6 NYCCR Part 375, Table 375-6.8(b): Restricted Use Soil Cleanup Objectives, Protection of Public Health, Residential. Following the receipt of the analytical results, the project team will review the data to ensure that the analytical results meet the fill material criteria.
Draft Final Sampling and Analysis Plan/Quality Assurance Plan Site 1 – Former Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage, New York, February 2019.

Laboratory Qualifiers:
J = Estimated value.

LOD = limit of detection
LOQ = limit of quantitation
µg/kg = microgram/kilogram = ppb
mg/kg = milligrams/kilogram

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: JC89914

Sampling Date: 06/14/19

Report to:

APTIM

Natasha.Kelleysullivan@cbifederalservices.com

ATTN: Natasha Sullivan

Total number of pages in report: 377

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.

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)

July 11, 2019

Mr. Hamlet Hamparsumian
NOREAS-CB & I JV (NCBI)
16361 Scientific Way
Irvine, CA 92618

RE: SGS – Dayton, Job # JC89914 – Reissues

Dear Mr. Hamparsumian:

The final report for SGS job number JC89914 has been edited to reflect corrections to the final results. These edits have been incorporated into the revised report which is attached.

Specifically, the B8270DODSIM14DIOX has been retreived and reported for JC89914-9 thru -12 to meet client's requirement. The attached revised report incorporates these revisions.

SGS apologizes for this occurrence and for any inconvenience this situation may have caused. Please contact me if I can be of further assistance in this matter.

Sincerely,

Report Department

SGS North America Inc.

CONTINUOUS SERVICE IMPROVEMENT!

Our goal is to continuously improve our service to you. Please share your ideas about how we can serve you better at EHS.US.CustomerCare@sgs.com. Your feedback is appreciated!

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Sample Summary

NOREAS, Inc.

Job No: JC89914

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC89914-1	06/14/19	11:00	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-027
JC89914-2	06/14/19	11:05	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-028
JC89914-3	06/14/19	11:10	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-029
JC89914-4	06/14/19	11:15	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-030
JC89914-5	06/14/19	11:20	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-031
JC89914-6	06/14/19	11:21	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-032
JC89914-7	06/14/19	11:24	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-033
JC89914-8	06/14/19	11:30	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-034
JC89914-9	06/14/19	11:33	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-035
JC89914-10	06/14/19	11:38	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-036
JC89914-11	06/14/19	11:43	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-037
JC89914-12	06/14/19	11:50	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-038

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	NOREAS, Inc.	**Job No**	JC89914
Site:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reser	**Report Date**	7/10/2019 12:37:39 P

On 06/14/2019, 12 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.5 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC89914 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.

Please refer to certification exceptions summary for additional certification information.

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:** V1C7250

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC89881-1MS, JC89881-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

MS Semi-volatiles By Method SW846 8270D

Matrix: SO **Batch ID:** OP21103

- All samples were extracted within the recommended method holding time.
- Sample(s) JC89914-9MS, JC89914-9MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

MS Semi-volatiles By Method SW846 8270D BY SIM

Matrix: SO **Batch ID:** OP21387

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC89914-11MSA, JC89914-11MSDA were used as the QC samples indicated.
- JC89914-11: Sample extracted outside the holding time.
- JC89914-12: Sample extracted outside the holding time.
- JC89914-9: Sample extracted outside the holding time.
- JC89914-10: Sample extracted outside the holding time.

GC/LC Semi-volatiles By Method SW846 8081B

Matrix: SO **Batch ID:** OP21102

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC89886-10MS, JC89886-10MSD were used as the QC samples indicated.
- JC89914-9 for 4,4'-DDE: More than 40 % RPD for detected concentrations between the two GC columns.
- JC89914-11 for 4,4'-DDE: More than 40 % RPD for detected concentrations between the two GC columns.
- JC89914-9 for alpha-Chlordane: More than 40 % RPD for detected concentrations between the two GC columns.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: SO **Batch ID:** OP21101

- All samples were extracted within the recommended method holding time.
- Sample(s) JC89886-5MS, JC89886-5MSD, OP21101-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:** OP21084

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC89945-1MS, JC89945-1MSD were used as the QC samples indicated.

Metals Analysis By Method SW846 6010D

Matrix: SO **Batch ID:** MP15743

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC89739-5MS, JC89739-5MSD, JC89739-5PS, JC89739-5SDL were used as the QC samples for metals.

Metals Analysis By Method SW846 7471B

Matrix: SO **Batch ID:** MP15749

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC89914-9MS, JC89914-9MSD were used as the QC samples for metals.

General Chemistry By Method ASTM D1498-76M

Matrix: SO **Batch ID:** GN96664

- Sample(s) JC89475-1DUP were used as the QC samples for Redox Potential Vs H2.

General Chemistry By Method SM2540 G 18TH ED MOD

Matrix: SO **Batch ID:** GN96628

- Sample(s) JC89881-2DUP were used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN96630

- Sample(s) JC89580-1DUP were used as the QC samples for Solids, Percent.

General Chemistry By Method SW846 3060A/7196A

Matrix: SO **Batch ID:** GP21943

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC89914-9DUP, JC89914-9MS were used as the QC samples for Chromium, Hexavalent.
- GP21943-S1 for Chromium, Hexavalent: Good recovery on soluble XCR matrix spike. Good recovery (97.4%) on the post-spike.
- GP21943-S2 for Chromium, Hexavalent: Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.

General Chemistry By Method SW846 6010/7196A M

Matrix: SO	Batch ID: R179197

- The data for SW846 6010/7196A M meets quality control requirements.
- JC89914-9 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Matrix: SO	Batch ID: R179198

- The data for SW846 6010/7196A M meets quality control requirements.
- JC89914-10 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Matrix: SO	Batch ID: R179199

- The data for SW846 6010/7196A M meets quality control requirements.
- JC89914-11 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Matrix: SO	Batch ID: R179200

- The data for SW846 6010/7196A M meets quality control requirements.
- JC89914-12 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

General Chemistry By Method SW846 9012B/LACHAT

Matrix: SO	Batch ID: GP21932

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC90028-6DUP, JC90028-6MS were used as the QC samples for Cyanide.

General Chemistry By Method SW846 9045D

Matrix: SO	Batch ID: GN96665

- Sample(s) JC89475-1DUP were used as the QC samples for pH.

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

Summary of Hits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
JC89914-1	**NWIRP-S1-WC-CF-027**					
No hits reported in this sample.						
JC89914-2	**NWIRP-S1-WC-CF-028**					
No hits reported in this sample.						
JC89914-3	**NWIRP-S1-WC-CF-029**					
Acetone		8.1 J	9.1	6.8	ug/kg	SW846 8260C
JC89914-4	**NWIRP-S1-WC-CF-030**					
No hits reported in this sample.						
JC89914-5	**NWIRP-S1-WC-CF-031**					
No hits reported in this sample.						
JC89914-6	**NWIRP-S1-WC-CF-032**					
No hits reported in this sample.						
JC89914-7	**NWIRP-S1-WC-CF-033**					
No hits reported in this sample.						
JC89914-8	**NWIRP-S1-WC-CF-034**					
Acetone		8.1 J	8.3	6.3	ug/kg	SW846 8260C
JC89914-9	**NWIRP-S1-WC-CF-035**					
Anthracene		34.1 J	37	27	ug/kg	SW846 8270D
Benzo(a)anthracene		225	37	18	ug/kg	SW846 8270D
Benzo(a)pyrene		210	37	18	ug/kg	SW846 8270D
Benzo(b)fluoranthene		263	37	18	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		148	37	27	ug/kg	SW846 8270D
Benzo(k)fluoranthene		87.5	37	18	ug/kg	SW846 8270D
Chrysene		213	37	18	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		42.0	37	18	ug/kg	SW846 8270D
Fluoranthene		261	37	18	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		141	37	18	ug/kg	SW846 8270D
Phenanthrene		85.4	37	18	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

Lab Sample ID / Client Sample ID / Analyte	Result/ Qual	LOQ	LOD	Units	Method
Pyrene	313	37	18	ug/kg	SW846 8270D
alpha-Chlordane [a]	3.0	0.70	0.67	ug/kg	SW846 8081B
Dieldrin	0.87	0.70	0.53	ug/kg	SW846 8081B
4,4'-DDE [a]	0.73	0.70	0.67	ug/kg	SW846 8081B
4,4'-DDT	1.2	0.70	0.67	ug/kg	SW846 8081B
Arsenic	4.8	2.3	0.56	mg/kg	SW846 6010D
Barium	28.0	23	11	mg/kg	SW846 6010D
Beryllium	0.38	0.23	0.11	mg/kg	SW846 6010D
Chromium	13.6	1.1	0.56	mg/kg	SW846 6010D
Copper	10.5	2.8	1.1	mg/kg	SW846 6010D
Lead	28.9	2.3	0.56	mg/kg	SW846 6010D
Manganese	134	1.7	1.1	mg/kg	SW846 6010D
Mercury	0.029 J	0.034	0.026	mg/kg	SW846 7471B
Nickel	7.9	4.5	0.45	mg/kg	SW846 6010D
Silver	0.26 J	0.56	0.45	mg/kg	SW846 6010D
Zinc	29.1	5.6	4.5	mg/kg	SW846 6010D
Chromium, Hexavalent	0.48	0.44	0.39	mg/kg	SW846 3060A/7196A
Chromium, Trivalent [b]	13.1	1.5	0.95	mg/kg	SW846 6010/7196A M
Redox Potential Vs H2	403		[c]	mv	ASTM D1498-76M
pH	6.23		[c]	su	SW846 9045D
JC89914-10 NWIRP-S1-WC-CF-036					
Acenaphthene	42.9	36	18	ug/kg	SW846 8270D
Anthracene	97.1	36	27	ug/kg	SW846 8270D
Benzo(a)anthracene	359	36	18	ug/kg	SW846 8270D
Benzo(a)pyrene	306	36	18	ug/kg	SW846 8270D
Benzo(b)fluoranthene	381	36	18	ug/kg	SW846 8270D
Benzo(g,h,i)perylene	221	36	27	ug/kg	SW846 8270D
Benzo(k)fluoranthene	130	36	18	ug/kg	SW846 8270D
Chrysene	339	36	18	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene	55.9	36	18	ug/kg	SW846 8270D
Dibenzofuran	21.9 J	72	18	ug/kg	SW846 8270D
Fluoranthene	592	36	18	ug/kg	SW846 8270D
Fluorene	36.7	36	27	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	212	36	18	ug/kg	SW846 8270D
Naphthalene	20.4 J	36	18	ug/kg	SW846 8270D
Phenanthrene	333	36	18	ug/kg	SW846 8270D
Pyrene	642	36	18	ug/kg	SW846 8270D
alpha-Chlordane	4.9	0.68	0.64	ug/kg	SW846 8081B
Dieldrin	1.8	0.68	0.51	ug/kg	SW846 8081B
4,4'-DDD	5.3	0.68	0.64	ug/kg	SW846 8081B
4,4'-DDE	3.4	0.68	0.64	ug/kg	SW846 8081B
4,4'-DDT	9.0	0.68	0.64	ug/kg	SW846 8081B
Heptachlor	0.80	0.68	0.61	ug/kg	SW846 8081B

Summary of Hits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
Arsenic		3.1	2.2	0.56	mg/kg	SW846 6010D
Barium		15.4 J	22	11	mg/kg	SW846 6010D
Beryllium		0.22	0.22	0.11	mg/kg	SW846 6010D
Chromium		8.5	1.1	0.56	mg/kg	SW846 6010D
Copper		5.2	2.8	1.1	mg/kg	SW846 6010D
Lead		10.3	2.2	0.56	mg/kg	SW846 6010D
Manganese		74.4	1.7	1.1	mg/kg	SW846 6010D
Mercury		0.048	0.031	0.023	mg/kg	SW846 7471B
Nickel		4.6	4.5	0.45	mg/kg	SW846 6010D
Zinc		13.0	5.6	4.5	mg/kg	SW846 6010D
Chromium, Hexavalent		0.43	0.43	0.38	mg/kg	SW846 3060A/7196A
Chromium, Trivalent [b]		8.1	1.5	0.94	mg/kg	SW846 6010/7196A M
Redox Potential Vs H2		391		[c]	mv	ASTM D1498-76M
pH		6.82		[c]	su	SW846 9045D
JC89914-11	**NWIRP-S1-WC-CF-037**					
Acenaphthene		31.9 J	38	19	ug/kg	SW846 8270D
Anthracene		104	38	29	ug/kg	SW846 8270D
Benzo(a)anthracene		432	38	19	ug/kg	SW846 8270D
Benzo(a)pyrene		413	38	19	ug/kg	SW846 8270D
Benzo(b)fluoranthene		486	38	19	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		291	38	29	ug/kg	SW846 8270D
Benzo(k)fluoranthene		177	38	19	ug/kg	SW846 8270D
Chrysene		394	38	19	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		82.4	38	19	ug/kg	SW846 8270D
Fluoranthene		657	38	19	ug/kg	SW846 8270D
Fluorene		30.7 J	38	29	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		291	38	19	ug/kg	SW846 8270D
Phenanthrene		325	38	19	ug/kg	SW846 8270D
Pyrene		767	38	19	ug/kg	SW846 8270D
alpha-Chlordane		5.0	0.72	0.68	ug/kg	SW846 8081B
Dieldrin		2.0	0.72	0.54	ug/kg	SW846 8081B
4,4'-DDD		7.3	0.72	0.68	ug/kg	SW846 8081B
4,4'-DDE [a]		2.6	0.72	0.68	ug/kg	SW846 8081B
4,4'-DDT		7.5	0.72	0.68	ug/kg	SW846 8081B
Heptachlor		0.76	0.72	0.65	ug/kg	SW846 8081B
Arsenic		5.7	2.3	0.58	mg/kg	SW846 6010D
Barium		32.9	23	12	mg/kg	SW846 6010D
Beryllium		0.51	0.23	0.12	mg/kg	SW846 6010D
Chromium		19.1	1.2	0.58	mg/kg	SW846 6010D
Copper		10.7	2.9	1.2	mg/kg	SW846 6010D
Lead		16.3	2.3	0.58	mg/kg	SW846 6010D
Manganese		176	1.7	1.2	mg/kg	SW846 6010D
Mercury		0.047	0.031	0.023	mg/kg	SW846 7471B

Summary of Hits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

Lab Sample ID / Client Sample ID / Analyte	Result/ Qual	LOQ	LOD	Units	Method
Nickel	10.7	4.7	0.47	mg/kg	SW846 6010D
Zinc	27.0	5.8	4.7	mg/kg	SW846 6010D
Chromium, Hexavalent	0.61	0.46	0.40	mg/kg	SW846 3060A/7196A
Chromium, Trivalent [b]	18.5	1.7	0.98	mg/kg	SW846 6010/7196A M
Redox Potential Vs H2	378		[c]	mv	ASTM D1498-76M
pH	7.16		[c]	su	SW846 9045D
JC89914-12 NWIRP-S1-WC-CF-038					
Benzo(a)anthracene	137	36	18	ug/kg	SW846 8270D
Benzo(a)pyrene	122	36	18	ug/kg	SW846 8270D
Benzo(b)fluoranthene	150	36	18	ug/kg	SW846 8270D
Benzo(g,h,i)perylene	82.8	36	27	ug/kg	SW846 8270D
Benzo(k)fluoranthene	58.1	36	18	ug/kg	SW846 8270D
Chrysene	126	36	18	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene	25.9 J	36	18	ug/kg	SW846 8270D
Fluoranthene	184	36	18	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	83.3	36	18	ug/kg	SW846 8270D
Phenanthrene	55.1	36	18	ug/kg	SW846 8270D
Pyrene	224	36	18	ug/kg	SW846 8270D
alpha-Chlordane	2.8	0.69	0.65	ug/kg	SW846 8081B
Dieldrin	0.68 J	0.69	0.52	ug/kg	SW846 8081B
4,4'-DDT	1.3	0.69	0.65	ug/kg	SW846 8081B
Arsenic	4.4	2.2	0.56	mg/kg	SW846 6010D
Barium	27.2	22	11	mg/kg	SW846 6010D
Beryllium	0.38	0.22	0.11	mg/kg	SW846 6010D
Chromium	14.2	1.1	0.56	mg/kg	SW846 6010D
Copper	10.9	2.8	1.1	mg/kg	SW846 6010D
Lead	28.7	2.2	0.56	mg/kg	SW846 6010D
Manganese	131	1.7	1.1	mg/kg	SW846 6010D
Mercury	0.029 J	0.035	0.026	mg/kg	SW846 7471B
Nickel	7.9	4.5	0.45	mg/kg	SW846 6010D
Zinc	27.7	5.6	4.5	mg/kg	SW846 6010D
Chromium, Hexavalent	0.88	0.45	0.39	mg/kg	SW846 3060A/7196A
Chromium, Trivalent [b]	13.3	1.6	0.95	mg/kg	SW846 6010/7196A M
Redox Potential Vs H2	374		[c]	mv	ASTM D1498-76M
pH	6.79		[c]	su	SW846 9045D

(a) More than 40 % RPD for detected concentrations between the two GC columns.
(b) Calculated as: (Chromium) - (Chromium, Hexavalent)
(c) Value reported is laboratory DL (MDL).

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-027
Lab Sample ID: JC89914-1 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 90.3
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	1C165384.D	1	06/19/19 11:12	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	7.0 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	5.9 U	7.9	5.9	3.2	ug/kg	
71-43-2	Benzene	0.36 U	0.40	0.36	0.36	ug/kg	
78-93-3	2-Butanone (MEK)	5.9 U	7.9	5.9	3.0	ug/kg	
104-51-8	n-Butylbenzene	1.2 U	1.6	1.2	0.32	ug/kg	
135-98-8	sec-Butylbenzene	1.2 U	1.6	1.2	0.34	ug/kg	
98-06-6	tert-Butylbenzene	0.79 U	1.6	0.79	0.40	ug/kg	
56-23-5	Carbon tetrachloride	0.79 U	1.6	0.79	0.49	ug/kg	
108-90-7	Chlorobenzene	1.2 U	1.6	1.2	0.36	ug/kg	
67-66-3	Chloroform	0.79 U	1.6	0.79	0.39	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.59 U	0.79	0.59	0.43	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.59 U	0.79	0.59	0.39	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.59 U	0.79	0.59	0.39	ug/kg	
75-34-3	1,1-Dichloroethane	0.59 U	0.79	0.59	0.39	ug/kg	
107-06-2	1,2-Dichloroethane	0.59 U	0.79	0.59	0.37	ug/kg	
75-35-4	1,1-Dichloroethene	0.59 U	0.79	0.59	0.52	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.71 U	0.79	0.71	0.66	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.59 U	0.79	0.59	0.48	ug/kg	
123-91-1	1,4-Dioxane	79 U	99	79	29	ug/kg	
100-41-4	Ethylbenzene	0.59 U	0.79	0.59	0.44	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.40 U	0.79	0.40	0.37	ug/kg	
75-09-2	Methylene chloride	2.4 U	4.0	2.4	0.79	ug/kg	
103-65-1	n-Propylbenzene	0.79 U	1.6	0.79	0.37	ug/kg	
127-18-4	Tetrachloroethene	0.79 U	1.6	0.79	0.46	ug/kg	
108-88-3	Toluene	0.59 U	0.79	0.59	0.42	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.79 U	1.6	0.79	0.38	ug/kg	
79-01-6	Trichloroethene	0.63 U	0.79	0.63	0.60	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.79 U	1.6	0.79	0.50	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.79 U	1.6	0.79	0.34	ug/kg	
75-01-4	Vinyl chloride	0.79 U	1.6	0.79	0.38	ug/kg	
	m,p-Xylene	0.75 U	0.79	0.75	0.71	ug/kg	
95-47-6	o-Xylene	0.59 U	0.79	0.59	0.46	ug/kg	
1330-20-7	Xylene (total)	0.59 U	0.79	0.59	0.46	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-CF-027		
Lab Sample ID:	JC89914-1	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	90.3
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		75-127%
17060-07-0	1,2-Dichloroethane-D4	112%		75-130%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	99%		79-127%

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-CF-028
Lab Sample ID: JC89914-2 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 91.0
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	1C165385.D	1	06/19/19 11:39	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.8 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	6.1 U	8.1	6.1	3.2	ug/kg	
71-43-2	Benzene	0.37 U	0.40	0.37	0.37	ug/kg	
78-93-3	2-Butanone (MEK)	6.1 U	8.1	6.1	3.0	ug/kg	
104-51-8	n-Butylbenzene	1.2 U	1.6	1.2	0.33	ug/kg	
135-98-8	sec-Butylbenzene	1.2 U	1.6	1.2	0.35	ug/kg	
98-06-6	tert-Butylbenzene	0.81 U	1.6	0.81	0.40	ug/kg	
56-23-5	Carbon tetrachloride	0.81 U	1.6	0.81	0.50	ug/kg	
108-90-7	Chlorobenzene	1.2 U	1.6	1.2	0.37	ug/kg	
67-66-3	Chloroform	0.81 U	1.6	0.81	0.40	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.61 U	0.81	0.61	0.44	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.61 U	0.81	0.61	0.40	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.61 U	0.81	0.61	0.40	ug/kg	
75-34-3	1,1-Dichloroethane	0.61 U	0.81	0.61	0.40	ug/kg	
107-06-2	1,2-Dichloroethane	0.61 U	0.81	0.61	0.38	ug/kg	
75-35-4	1,1-Dichloroethene	0.61 U	0.81	0.61	0.53	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.73 U	0.81	0.73	0.68	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.61 U	0.81	0.61	0.49	ug/kg	
123-91-1	1,4-Dioxane	81 U	100	81	29	ug/kg	
100-41-4	Ethylbenzene	0.61 U	0.81	0.61	0.45	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.40 U	0.81	0.40	0.38	ug/kg	
75-09-2	Methylene chloride	2.4 U	4.0	2.4	0.80	ug/kg	
103-65-1	n-Propylbenzene	0.81 U	1.6	0.81	0.38	ug/kg	
127-18-4	Tetrachloroethene	0.81 U	1.6	0.81	0.47	ug/kg	
108-88-3	Toluene	0.61 U	0.81	0.61	0.42	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.81 U	1.6	0.81	0.39	ug/kg	
79-01-6	Trichloroethene	0.65 U	0.81	0.65	0.62	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.81 U	1.6	0.81	0.51	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.81 U	1.6	0.81	0.35	ug/kg	
75-01-4	Vinyl chloride	0.81 U	1.6	0.81	0.39	ug/kg	
	m,p-Xylene	0.77 U	0.81	0.77	0.72	ug/kg	
95-47-6	o-Xylene	0.61 U	0.81	0.61	0.47	ug/kg	
1330-20-7	Xylene (total)	0.61 U	0.81	0.61	0.47	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-CF-028		
Lab Sample ID:	JC89914-2	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	91.0
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		75-127%
17060-07-0	1,2-Dichloroethane-D4	112%		75-130%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	100%		79-127%

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-CF-029
Lab Sample ID: JC89914-3 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 90.4
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	1C165386.D	1	06/19/19 12:05	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.1 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	8.1	9.1	6.8	3.6	ug/kg	J
71-43-2	Benzene	0.41 U	0.45	0.41	0.41	ug/kg	
78-93-3	2-Butanone (MEK)	6.8 U	9.1	6.8	3.4	ug/kg	
104-51-8	n-Butylbenzene	1.4 U	1.8	1.4	0.37	ug/kg	
135-98-8	sec-Butylbenzene	1.4 U	1.8	1.4	0.39	ug/kg	
98-06-6	tert-Butylbenzene	0.91 U	1.8	0.91	0.45	ug/kg	
56-23-5	Carbon tetrachloride	0.91 U	1.8	0.91	0.56	ug/kg	
108-90-7	Chlorobenzene	1.4 U	1.8	1.4	0.42	ug/kg	
67-66-3	Chloroform	0.91 U	1.8	0.91	0.44	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.68 U	0.91	0.68	0.50	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.68 U	0.91	0.68	0.45	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.68 U	0.91	0.68	0.45	ug/kg	
75-34-3	1,1-Dichloroethane	0.68 U	0.91	0.68	0.45	ug/kg	
107-06-2	1,2-Dichloroethane	0.68 U	0.91	0.68	0.43	ug/kg	
75-35-4	1,1-Dichloroethene	0.68 U	0.91	0.68	0.59	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.82 U	0.91	0.82	0.76	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.68 U	0.91	0.68	0.55	ug/kg	
123-91-1	1,4-Dioxane	91 U	110	91	33	ug/kg	
100-41-4	Ethylbenzene	0.68 U	0.91	0.68	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.45 U	0.91	0.45	0.43	ug/kg	
75-09-2	Methylene chloride	2.7 U	4.5	2.7	0.90	ug/kg	
103-65-1	n-Propylbenzene	0.91 U	1.8	0.91	0.43	ug/kg	
127-18-4	Tetrachloroethene	0.91 U	1.8	0.91	0.53	ug/kg	
108-88-3	Toluene	0.68 U	0.91	0.68	0.48	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.91 U	1.8	0.91	0.44	ug/kg	
79-01-6	Trichloroethene	0.73 U	0.91	0.73	0.69	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.91 U	1.8	0.91	0.58	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.91 U	1.8	0.91	0.39	ug/kg	
75-01-4	Vinyl chloride	0.91 U	1.8	0.91	0.44	ug/kg	
	m,p-Xylene	0.86 U	0.91	0.86	0.81	ug/kg	
95-47-6	o-Xylene	0.68 U	0.91	0.68	0.53	ug/kg	
1330-20-7	Xylene (total)	0.68 U	0.91	0.68	0.53	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-CF-029		
Lab Sample ID:	JC89914-3	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	90.4
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		75-127%
17060-07-0	1,2-Dichloroethane-D4	111%		75-130%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	97%		79-127%

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-CF-030
Lab Sample ID: JC89914-4 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 89.2
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	1C165387.D	1	06/19/19 12:32	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.8 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	6.2 U	8.2	6.2	3.3	ug/kg	
71-43-2	Benzene	0.38 U	0.41	0.38	0.38	ug/kg	
78-93-3	2-Butanone (MEK)	6.2 U	8.2	6.2	3.1	ug/kg	
104-51-8	n-Butylbenzene	1.2 U	1.6	1.2	0.34	ug/kg	
135-98-8	sec-Butylbenzene	1.2 U	1.6	1.2	0.35	ug/kg	
98-06-6	tert-Butylbenzene	0.82 U	1.6	0.82	0.41	ug/kg	
56-23-5	Carbon tetrachloride	0.82 U	1.6	0.82	0.51	ug/kg	
108-90-7	Chlorobenzene	1.2 U	1.6	1.2	0.38	ug/kg	
67-66-3	Chloroform	0.82 U	1.6	0.82	0.40	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.62 U	0.82	0.62	0.45	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.62 U	0.82	0.62	0.41	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.62 U	0.82	0.62	0.41	ug/kg	
75-34-3	1,1-Dichloroethane	0.62 U	0.82	0.62	0.41	ug/kg	
107-06-2	1,2-Dichloroethane	0.62 U	0.82	0.62	0.39	ug/kg	
75-35-4	1,1-Dichloroethene	0.62 U	0.82	0.62	0.54	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.74 U	0.82	0.74	0.69	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.62 U	0.82	0.62	0.50	ug/kg	
123-91-1	1,4-Dioxane	82 U	100	82	30	ug/kg	
100-41-4	Ethylbenzene	0.62 U	0.82	0.62	0.46	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.41 U	0.82	0.41	0.39	ug/kg	
75-09-2	Methylene chloride	2.5 U	4.1	2.5	0.82	ug/kg	
103-65-1	n-Propylbenzene	0.82 U	1.6	0.82	0.39	ug/kg	
127-18-4	Tetrachloroethene	0.82 U	1.6	0.82	0.48	ug/kg	
108-88-3	Toluene	0.62 U	0.82	0.62	0.43	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.82 U	1.6	0.82	0.40	ug/kg	
79-01-6	Trichloroethene	0.66 U	0.82	0.66	0.63	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.82 U	1.6	0.82	0.52	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.82 U	1.6	0.82	0.36	ug/kg	
75-01-4	Vinyl chloride	0.82 U	1.6	0.82	0.40	ug/kg	
	m,p-Xylene	0.78 U	0.82	0.78	0.74	ug/kg	
95-47-6	o-Xylene	0.62 U	0.82	0.62	0.48	ug/kg	
1330-20-7	Xylene (total)	0.62 U	0.82	0.62	0.48	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-CF-030		
Lab Sample ID:	JC89914-4	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	89.2
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		75-127%
17060-07-0	1,2-Dichloroethane-D4	112%		75-130%
2037-26-5	Toluene-D8	106%		80-120%
460-00-4	4-Bromofluorobenzene	101%		79-127%

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-CF-031
Lab Sample ID: JC89914-5 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 90.0
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	1C165388.D	1	06/19/19 12:58	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.7 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	6.2 U	8.3	6.2	3.3	ug/kg	
71-43-2	Benzene	0.38 U	0.41	0.38	0.38	ug/kg	
78-93-3	2-Butanone (MEK)	6.2 U	8.3	6.2	3.1	ug/kg	
104-51-8	n-Butylbenzene	1.2 U	1.7	1.2	0.34	ug/kg	
135-98-8	sec-Butylbenzene	1.2 U	1.7	1.2	0.35	ug/kg	
98-06-6	tert-Butylbenzene	0.83 U	1.7	0.83	0.41	ug/kg	
56-23-5	Carbon tetrachloride	0.83 U	1.7	0.83	0.51	ug/kg	
108-90-7	Chlorobenzene	1.2 U	1.7	1.2	0.38	ug/kg	
67-66-3	Chloroform	0.83 U	1.7	0.83	0.41	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.62 U	0.83	0.62	0.45	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.62 U	0.83	0.62	0.41	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.62 U	0.83	0.62	0.41	ug/kg	
75-34-3	1,1-Dichloroethane	0.62 U	0.83	0.62	0.41	ug/kg	
107-06-2	1,2-Dichloroethane	0.62 U	0.83	0.62	0.39	ug/kg	
75-35-4	1,1-Dichloroethene	0.62 U	0.83	0.62	0.54	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.75 U	0.83	0.75	0.70	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.62 U	0.83	0.62	0.51	ug/kg	
123-91-1	1,4-Dioxane	83 U	100	83	30	ug/kg	
100-41-4	Ethylbenzene	0.62 U	0.83	0.62	0.46	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.41 U	0.83	0.41	0.39	ug/kg	
75-09-2	Methylene chloride	2.5 U	4.1	2.5	0.82	ug/kg	
103-65-1	n-Propylbenzene	0.83 U	1.7	0.83	0.39	ug/kg	
127-18-4	Tetrachloroethene	0.83 U	1.7	0.83	0.48	ug/kg	
108-88-3	Toluene	0.62 U	0.83	0.62	0.44	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.83 U	1.7	0.83	0.40	ug/kg	
79-01-6	Trichloroethene	0.66 U	0.83	0.66	0.63	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.83 U	1.7	0.83	0.53	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.83 U	1.7	0.83	0.36	ug/kg	
75-01-4	Vinyl chloride	0.83 U	1.7	0.83	0.40	ug/kg	
	m,p-Xylene	0.79 U	0.83	0.79	0.74	ug/kg	
95-47-6	o-Xylene	0.62 U	0.83	0.62	0.48	ug/kg	
1330-20-7	Xylene (total)	0.62 U	0.83	0.62	0.48	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-CF-031		
Lab Sample ID:	JC89914-5	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	90.0
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		75-127%
17060-07-0	1,2-Dichloroethane-D4	113%		75-130%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	96%		79-127%

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-CF-032
Lab Sample ID: JC89914-6 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 89.5
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	1C165389.D	1	06/19/19 13:25	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.8 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	6.2 U	8.2	6.2	3.3	ug/kg	
71-43-2	Benzene	0.38 U	0.41	0.38	0.37	ug/kg	
78-93-3	2-Butanone (MEK)	6.2 U	8.2	6.2	3.1	ug/kg	
104-51-8	n-Butylbenzene	1.2 U	1.6	1.2	0.33	ug/kg	
135-98-8	sec-Butylbenzene	1.2 U	1.6	1.2	0.35	ug/kg	
98-06-6	tert-Butylbenzene	0.82 U	1.6	0.82	0.41	ug/kg	
56-23-5	Carbon tetrachloride	0.82 U	1.6	0.82	0.51	ug/kg	
108-90-7	Chlorobenzene	1.2 U	1.6	1.2	0.38	ug/kg	
67-66-3	Chloroform	0.82 U	1.6	0.82	0.40	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.62 U	0.82	0.62	0.45	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.62 U	0.82	0.62	0.41	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.62 U	0.82	0.62	0.41	ug/kg	
75-34-3	1,1-Dichloroethane	0.62 U	0.82	0.62	0.41	ug/kg	
107-06-2	1,2-Dichloroethane	0.62 U	0.82	0.62	0.39	ug/kg	
75-35-4	1,1-Dichloroethene	0.62 U	0.82	0.62	0.54	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.74 U	0.82	0.74	0.69	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.62 U	0.82	0.62	0.50	ug/kg	
123-91-1	1,4-Dioxane	82 U	100	82	30	ug/kg	
100-41-4	Ethylbenzene	0.62 U	0.82	0.62	0.45	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.41 U	0.82	0.41	0.39	ug/kg	
75-09-2	Methylene chloride	2.5 U	4.1	2.5	0.82	ug/kg	
103-65-1	n-Propylbenzene	0.82 U	1.6	0.82	0.39	ug/kg	
127-18-4	Tetrachloroethene	0.82 U	1.6	0.82	0.48	ug/kg	
108-88-3	Toluene	0.62 U	0.82	0.62	0.43	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.82 U	1.6	0.82	0.40	ug/kg	
79-01-6	Trichloroethene	0.66 U	0.82	0.66	0.63	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.82 U	1.6	0.82	0.52	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.82 U	1.6	0.82	0.35	ug/kg	
75-01-4	Vinyl chloride	0.82 U	1.6	0.82	0.40	ug/kg	
	m,p-Xylene	0.78 U	0.82	0.78	0.74	ug/kg	
95-47-6	o-Xylene	0.62 U	0.82	0.62	0.48	ug/kg	
1330-20-7	Xylene (total)	0.62 U	0.82	0.62	0.48	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-CF-032		
Lab Sample ID:	JC89914-6	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	89.5
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		75-127%
17060-07-0	1,2-Dichloroethane-D4	111%		75-130%
2037-26-5	Toluene-D8	104%		80-120%
460-00-4	4-Bromofluorobenzene	97%		79-127%

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-CF-033
Lab Sample ID: JC89914-7 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 91.0
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	1C165390.D	1	06/19/19 13:52	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.8 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	6.1 U	8.1	6.1	3.2	ug/kg	
71-43-2	Benzene	0.37 U	0.40	0.37	0.37	ug/kg	
78-93-3	2-Butanone (MEK)	6.1 U	8.1	6.1	3.0	ug/kg	
104-51-8	n-Butylbenzene	1.2 U	1.6	1.2	0.33	ug/kg	
135-98-8	sec-Butylbenzene	1.2 U	1.6	1.2	0.35	ug/kg	
98-06-6	tert-Butylbenzene	0.81 U	1.6	0.81	0.40	ug/kg	
56-23-5	Carbon tetrachloride	0.81 U	1.6	0.81	0.50	ug/kg	
108-90-7	Chlorobenzene	1.2 U	1.6	1.2	0.37	ug/kg	
67-66-3	Chloroform	0.81 U	1.6	0.81	0.40	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.61 U	0.81	0.61	0.44	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.61 U	0.81	0.61	0.40	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.61 U	0.81	0.61	0.40	ug/kg	
75-34-3	1,1-Dichloroethane	0.61 U	0.81	0.61	0.40	ug/kg	
107-06-2	1,2-Dichloroethane	0.61 U	0.81	0.61	0.38	ug/kg	
75-35-4	1,1-Dichloroethene	0.61 U	0.81	0.61	0.53	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.73 U	0.81	0.73	0.68	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.61 U	0.81	0.61	0.49	ug/kg	
123-91-1	1,4-Dioxane	81 U	100	81	29	ug/kg	
100-41-4	Ethylbenzene	0.61 U	0.81	0.61	0.45	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.40 U	0.81	0.40	0.38	ug/kg	
75-09-2	Methylene chloride	2.4 U	4.0	2.4	0.80	ug/kg	
103-65-1	n-Propylbenzene	0.81 U	1.6	0.81	0.38	ug/kg	
127-18-4	Tetrachloroethene	0.81 U	1.6	0.81	0.47	ug/kg	
108-88-3	Toluene	0.61 U	0.81	0.61	0.42	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.81 U	1.6	0.81	0.39	ug/kg	
79-01-6	Trichloroethene	0.65 U	0.81	0.65	0.62	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.81 U	1.6	0.81	0.51	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.81 U	1.6	0.81	0.35	ug/kg	
75-01-4	Vinyl chloride	0.81 U	1.6	0.81	0.39	ug/kg	
	m,p-Xylene	0.77 U	0.81	0.77	0.72	ug/kg	
95-47-6	o-Xylene	0.61 U	0.81	0.61	0.47	ug/kg	
1330-20-7	Xylene (total)	0.61 U	0.81	0.61	0.47	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-CF-033		
Lab Sample ID:	JC89914-7	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	91.0
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		75-127%
17060-07-0	1,2-Dichloroethane-D4	113%		75-130%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	100%		79-127%

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-CF-034
Lab Sample ID: JC89914-8 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 89.4
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	1C165391.D	1	06/19/19 14:18	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.7 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	8.1	8.3	6.3	3.3	ug/kg	J
71-43-2	Benzene	0.38 U	0.42	0.38	0.38	ug/kg	
78-93-3	2-Butanone (MEK)	6.3 U	8.3	6.3	3.1	ug/kg	
104-51-8	n-Butylbenzene	1.3 U	1.7	1.3	0.34	ug/kg	
135-98-8	sec-Butylbenzene	1.3 U	1.7	1.3	0.36	ug/kg	
98-06-6	tert-Butylbenzene	0.83 U	1.7	0.83	0.42	ug/kg	
56-23-5	Carbon tetrachloride	0.83 U	1.7	0.83	0.52	ug/kg	
108-90-7	Chlorobenzene	1.3 U	1.7	1.3	0.38	ug/kg	
67-66-3	Chloroform	0.83 U	1.7	0.83	0.41	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.63 U	0.83	0.63	0.46	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.63 U	0.83	0.63	0.41	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.63 U	0.83	0.63	0.41	ug/kg	
75-34-3	1,1-Dichloroethane	0.63 U	0.83	0.63	0.41	ug/kg	
107-06-2	1,2-Dichloroethane	0.63 U	0.83	0.63	0.39	ug/kg	
75-35-4	1,1-Dichloroethene	0.63 U	0.83	0.63	0.55	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.75 U	0.83	0.75	0.70	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.63 U	0.83	0.63	0.51	ug/kg	
123-91-1	1,4-Dioxane	83 U	100	83	30	ug/kg	
100-41-4	Ethylbenzene	0.63 U	0.83	0.63	0.46	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.42 U	0.83	0.42	0.39	ug/kg	
75-09-2	Methylene chloride	2.5 U	4.2	2.5	0.83	ug/kg	
103-65-1	n-Propylbenzene	0.83 U	1.7	0.83	0.39	ug/kg	
127-18-4	Tetrachloroethene	0.83 U	1.7	0.83	0.48	ug/kg	
108-88-3	Toluene	0.63 U	0.83	0.63	0.44	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.83 U	1.7	0.83	0.40	ug/kg	
79-01-6	Trichloroethene	0.67 U	0.83	0.67	0.64	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.83 U	1.7	0.83	0.53	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.83 U	1.7	0.83	0.36	ug/kg	
75-01-4	Vinyl chloride	0.83 U	1.7	0.83	0.40	ug/kg	
	m,p-Xylene	0.79 U	0.83	0.79	0.75	ug/kg	
95-47-6	o-Xylene	0.63 U	0.83	0.63	0.49	ug/kg	
1330-20-7	Xylene (total)	0.63 U	0.83	0.63	0.49	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-CF-034		
Lab Sample ID:	JC89914-8	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	89.4
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		75-127%
17060-07-0	1,2-Dichloroethane-D4	114%		75-130%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	95%		79-127%

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-CF-035
Lab Sample ID: JC89914-9 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D SW846 3546 **Percent Solids:** 90.5
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	Z138892.D	1	06/19/19 19:01	AR	06/19/19 09:00	OP21103	EZ6837
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
95-48-7	2-Methylphenol	37 U	73	37	23	ug/kg	
	3&4-Methylphenol	37 U	73	37	30	ug/kg	
87-86-5	Pentachlorophenol	91 U	150	91	34	ug/kg	
108-95-2	Phenol	37 U	73	37	19	ug/kg	
83-32-9	Acenaphthene	18 U	37	18	13	ug/kg	
208-96-8	Acenaphthylene	27 U	37	27	19	ug/kg	
120-12-7	Anthracene	34.1	37	27	22	ug/kg	J
56-55-3	Benzo(a)anthracene	225	37	18	10	ug/kg	
50-32-8	Benzo(a)pyrene	210	37	18	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	263	37	18	16	ug/kg	
191-24-2	Benzo(g,h,i)perylene	148	37	27	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	87.5	37	18	17	ug/kg	
218-01-9	Chrysene	213	37	18	12	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	42.0	37	18	16	ug/kg	
132-64-9	Dibenzofuran	18 U	73	18	15	ug/kg	
206-44-0	Fluoranthene	261	37	18	16	ug/kg	
86-73-7	Fluorene	27 U	37	27	17	ug/kg	
118-74-1	Hexachlorobenzene	18 U	73	18	9.3	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	141	37	18	17	ug/kg	
91-20-3	Naphthalene	18 U	37	18	10	ug/kg	
85-01-8	Phenanthrene	85.4	37	18	12	ug/kg	
129-00-0	Pyrene	313	37	18	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	56%		23-115%
4165-62-2	Phenol-d5	58%		27-114%
118-79-6	2,4,6-Tribromophenol	75%		19-152%
4165-60-0	Nitrobenzene-d5	64%		26-134%
321-60-8	2-Fluorobiphenyl	61%		39-124%
1718-51-0	Terphenyl-d14	85%		36-134%

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-CF-035
Lab Sample ID: JC89914-9 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D BY SIM SW846 3546 **Percent Solids:** 90.5
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]	3P77876.D	1	07/08/19 23:49	CS	07/05/19 16:30	OP21387	E3P3646
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
123-91-1	1,4-Dioxane	1.8 U	3.6	1.8	0.89	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		10-146%
321-60-8	2-Fluorobiphenyl	61%		46-115%
1718-51-0	Terphenyl-d14	81%		10-170%

(a) Sample extracted outside the holding time.

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-CF-035
Lab Sample ID: JC89914-9 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8151A SW846 3546 **Percent Solids:** 90.5
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	3G123416.D	1	06/18/19 17:19	VDT	06/18/19 09:30	OP21084	G3G4329
Run #2							

	Initial Weight	Final Volume
Run #1	15.6 g	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
93-72-1	2,4,5-TP (Silvex)	3.4 U	3.5	3.4	3.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	49%		10-159%
19719-28-9	2,4-DCAA	52%		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-CF-035
Lab Sample ID: JC89914-9 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8081B SW846 3546 **Percent Solids:** 90.5
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	1G153582.D	1	06/19/19 11:18	MH	06/19/19 05:45	OP21102	G1G4959
Run #2							

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

Pesticides, Soil Cleanup Objectives

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
309-00-2	Aldrin	0.67 U	0.70	0.67	0.58	ug/kg	
319-84-6	alpha-BHC	0.67 U	0.70	0.67	0.57	ug/kg	
319-85-7	beta-BHC	0.67 U	0.70	0.67	0.64	ug/kg	
319-86-8	delta-BHC	0.69 U	0.70	0.69	0.68	ug/kg	
58-89-9	gamma-BHC (Lindane)	0.63 U	0.70	0.63	0.52	ug/kg	
5103-71-9	alpha-Chlordane [a]	3.0	0.70	0.67	0.57	ug/kg	
60-57-1	Dieldrin	0.87	0.70	0.53	0.48	ug/kg	
72-54-8	4,4'-DDD	0.67 U	0.70	0.67	0.65	ug/kg	
72-55-9	4,4'-DDE [a]	0.73	0.70	0.67	0.62	ug/kg	
50-29-3	4,4'-DDT	1.2	0.70	0.67	0.62	ug/kg	
72-20-8	Endrin	0.63 U	0.70	0.63	0.55	ug/kg	
1031-07-8	Endosulfan sulfate	0.63 U	0.70	0.63	0.55	ug/kg	
959-98-8	Endosulfan-I	0.53 U	0.70	0.53	0.41	ug/kg	
33213-65-9	Endosulfan-II	0.53 U	0.70	0.53	0.44	ug/kg	
76-44-8	Heptachlor	0.63 U	0.70	0.63	0.61	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	72%		25-135%
877-09-8	Tetrachloro-m-xylene	72%		25-135%
2051-24-3	Decachlorobiphenyl	68%		10-156%
2051-24-3	Decachlorobiphenyl	104%		10-156%

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

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-CF-035
Lab Sample ID: JC89914-9 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8082A SW846 3546 **Percent Solids:** 90.5
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	XX2436690.D	1	06/20/19 14:00	CP	06/19/19 05:45	OP21101	GXX6722
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	28 U	35	28	16	ug/kg	
11104-28-2	Aroclor 1221	28 U	35	28	22	ug/kg	
11141-16-5	Aroclor 1232	28 U	35	28	22	ug/kg	
53469-21-9	Aroclor 1242	28 U	35	28	14	ug/kg	
12672-29-6	Aroclor 1248	33 U	35	33	31	ug/kg	
11097-69-1	Aroclor 1254	28 U	35	28	19	ug/kg	
11096-82-5	Aroclor 1260	28 U	35	28	15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	83%		31-146%
877-09-8	Tetrachloro-m-xylene	89%		31-146%
2051-24-3	Decachlorobiphenyl	82%		17-164%
2051-24-3	Decachlorobiphenyl	94%		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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-035
Lab Sample ID: JC89914-9 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Percent Solids: 90.5
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	4.8	2.3	0.56	0.32	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Barium	28.0	23	11	2.2	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.38	0.23	0.11	0.090	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Cadmium	0.23 U	0.56	0.23	0.079	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Chromium	13.6	1.1	0.56	0.42	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Copper	10.5	2.8	1.1	0.95	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Lead	28.9	2.3	0.56	0.46	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Manganese	134	1.7	1.1	0.46	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Mercury	0.029 J	0.034	0.026	0.015	mg/kg	1	06/18/19	06/18/19	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.9	4.5	0.45	0.39	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Selenium	0.90 U	2.3	0.90	0.73	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Silver	0.26 J	0.56	0.45	0.19	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Zinc	29.1	5.6	4.5	2.6	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA46938
(2) Instrument QC Batch: MA46951
(3) Prep QC Batch: MP15743
(4) Prep QC Batch: MP15749

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

Report of Analysis

Client Sample ID:	NWIRP-S1-WC-CF-035		
Lab Sample ID:	JC89914-9	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
		Percent Solids:	90.5
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
Chromium, Hexavalent	0.48	0.44	0.39	0.35	mg/kg	1	06/25/19 17:03	NV	SW846 3060A/7196A
Chromium, Trivalent [a]	13.1	1.5	0.95	0.77	mg/kg	1	06/25/19 17:03	NV	SW846 6010/7196A M
Cyanide	0.18 U	0.24	0.18	0.12	mg/kg	1	06/20/19 16:54	BM	SW846 9012B/LACHAT
Redox Potential Vs H2	403				mv	1	06/20/19 10:37	MS	ASTM D1498-76M
Solids, Percent	90.5				%	1	06/19/19 14:30	BG	SM2540 G 18TH ED MOD
pH	6.23				su	1	06/20/19 10:38	MS	SW846 9045D

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-036
Lab Sample ID: JC89914-10 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D SW846 3546 **Percent Solids:** 92.0
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	Z138890.D	1	06/19/19 18:07	AR	06/19/19 09:00	OP21103	EZ6837
Run #2							

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

ABN Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
95-48-7	2-Methylphenol	36 U	72	36	23	ug/kg	
	3&4-Methylphenol	36 U	72	36	30	ug/kg	
87-86-5	Pentachlorophenol	90 U	140	90	34	ug/kg	
108-95-2	Phenol	36 U	72	36	19	ug/kg	
83-32-9	Acenaphthene	42.9	36	18	12	ug/kg	
208-96-8	Acenaphthylene	27 U	36	27	18	ug/kg	
120-12-7	Anthracene	97.1	36	27	22	ug/kg	
56-55-3	Benzo(a)anthracene	359	36	18	10	ug/kg	
50-32-8	Benzo(a)pyrene	306	36	18	16	ug/kg	
205-99-2	Benzo(b)fluoranthene	381	36	18	16	ug/kg	
191-24-2	Benzo(g,h,i)perylene	221	36	27	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	130	36	18	17	ug/kg	
218-01-9	Chrysene	339	36	18	11	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	55.9	36	18	16	ug/kg	
132-64-9	Dibenzofuran	21.9	72	18	15	ug/kg	J
206-44-0	Fluoranthene	592	36	18	16	ug/kg	
86-73-7	Fluorene	36.7	36	27	17	ug/kg	
118-74-1	Hexachlorobenzene	18 U	72	18	9.1	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	212	36	18	17	ug/kg	
91-20-3	Naphthalene	20.4	36	18	10	ug/kg	J
85-01-8	Phenanthrene	333	36	18	12	ug/kg	
129-00-0	Pyrene	642	36	18	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	56%		23-115%
4165-62-2	Phenol-d5	58%		27-114%
118-79-6	2,4,6-Tribromophenol	73%		19-152%
4165-60-0	Nitrobenzene-d5	62%		26-134%
321-60-8	2-Fluorobiphenyl	59%		39-124%
1718-51-0	Terphenyl-d14	93%		36-134%

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-CF-036		
Lab Sample ID:	JC89914-10	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8270D BY SIM SW846 3546	**Percent Solids:**	92.0
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]	3P77877.D	1	07/09/19 00:10	CS	07/05/19 16:30	OP21387	E3P3646
Run #2							

	Initial Weight	Final Volume
Run #1	31.8 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
123-91-1	1,4-Dioxane	1.7 U	3.4	1.7	0.83	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		10-146%
321-60-8	2-Fluorobiphenyl	64%		46-115%
1718-51-0	Terphenyl-d14	82%		10-170%

(a) Sample extracted outside the holding time.

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-CF-036
Lab Sample ID: JC89914-10 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8151A SW846 3546 **Percent Solids:** 92.0
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	3G123417.D	1	06/18/19 17:47	VDT	06/18/19 09:30	OP21084	G3G4329
Run #2							

	Initial Weight	Final Volume
Run #1	16.3 g	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
93-72-1	2,4,5-TP (Silvex)	3.2 U	3.3	3.2	3.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	26%		10-159%
19719-28-9	2,4-DCAA	28%		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-CF-036
Lab Sample ID: JC89914-10 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8081B SW846 3546 **Percent Solids:** 92.0
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	1G153583.D	1	06/19/19 11:36	MH	06/19/19 05:45	OP21102	G1G4959
Run #2							

	Initial Weight	Final Volume
Run #1	16.1 g	10.0 ml
Run #2		

Pesticides, Soil Cleanup Objectives

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
309-00-2	Aldrin	0.64 U	0.68	0.64	0.56	ug/kg	
319-84-6	alpha-BHC	0.64 U	0.68	0.64	0.55	ug/kg	
319-85-7	beta-BHC	0.64 U	0.68	0.64	0.61	ug/kg	
319-86-8	delta-BHC	0.66 U	0.68	0.66	0.65	ug/kg	
58-89-9	gamma-BHC (Lindane)	0.61 U	0.68	0.61	0.50	ug/kg	
5103-71-9	alpha-Chlordane	4.9	0.68	0.64	0.54	ug/kg	
60-57-1	Dieldrin	1.8	0.68	0.51	0.46	ug/kg	
72-54-8	4,4'-DDD	5.3	0.68	0.64	0.62	ug/kg	
72-55-9	4,4'-DDE	3.4	0.68	0.64	0.59	ug/kg	
50-29-3	4,4'-DDT	9.0	0.68	0.64	0.60	ug/kg	
72-20-8	Endrin	0.61 U	0.68	0.61	0.52	ug/kg	
1031-07-8	Endosulfan sulfate	0.61 U	0.68	0.61	0.53	ug/kg	
959-98-8	Endosulfan-I	0.51 U	0.68	0.51	0.39	ug/kg	
33213-65-9	Endosulfan-II	0.51 U	0.68	0.51	0.42	ug/kg	
76-44-8	Heptachlor	0.80	0.68	0.61	0.58	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	67%		25-135%
877-09-8	Tetrachloro-m-xylene	68%		25-135%
2051-24-3	Decachlorobiphenyl	59%		10-156%
2051-24-3	Decachlorobiphenyl	109%		10-156%

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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-036
Lab Sample ID: JC89914-10 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8082A SW846 3546 **Percent Solids:** 92.0
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	XX2436691.D	1	06/20/19 14:18	CP	06/19/19 05:45	OP21101	GXX6722
Run #2							

	Initial Weight	Final Volume
Run #1	16.1 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	22	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	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	78%		31-146%
877-09-8	Tetrachloro-m-xylene	84%		31-146%
2051-24-3	Decachlorobiphenyl	79%		17-164%
2051-24-3	Decachlorobiphenyl	89%		17-164%

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-036
Lab Sample ID: JC89914-10 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Percent Solids: 92.0
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	3.1	2.2	0.56	0.31	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Barium	15.4 J	22	11	2.2	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.22	0.22	0.11	0.090	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Cadmium	0.22 U	0.56	0.22	0.078	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Chromium	8.5	1.1	0.56	0.41	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Copper	5.2	2.8	1.1	0.94	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Lead	10.3	2.2	0.56	0.46	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Manganese	74.4	1.7	1.1	0.46	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Mercury	0.048	0.031	0.023	0.013	mg/kg	1	06/18/19	06/18/19	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	4.6	4.5	0.45	0.39	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Selenium	0.90 U	2.2	0.90	0.73	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Silver	0.45 U	0.56	0.45	0.19	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Zinc	13.0	5.6	4.5	2.6	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA46938
(2) Instrument QC Batch: MA46951
(3) Prep QC Batch: MP15743
(4) Prep QC Batch: MP15749

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

Report of Analysis

Client Sample ID:	NWIRP-S1-WC-CF-036		
Lab Sample ID:	JC89914-10	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
		Percent Solids:	92.0
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
Chromium, Hexavalent	0.43	0.43	0.38	0.34	mg/kg	1	06/25/19 17:07	NV	SW846 3060A/7196A
Chromium, Trivalent [a]	8.1	1.5	0.94	0.75	mg/kg	1	06/25/19 17:07	NV	SW846 6010/7196A M
Cyanide	0.19 U	0.25	0.19	0.13	mg/kg	1	06/20/19 16:58	BM	SW846 9012B/LACHAT
Redox Potential Vs H2	391				mv	1	06/20/19 10:43	MS	ASTM D1498-76M
Solids, Percent	92				%	1	06/19/19 14:30	BG	SM2540 G 18TH ED MOD
pH	6.82				su	1	06/20/19 10:44	MS	SW846 9045D

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-037
Lab Sample ID: JC89914-11 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D SW846 3546 **Percent Solids:** 86.8
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	Z138891.D	1	06/19/19 18:34	AR	06/19/19 09:00	OP21103	EZ6837
Run #2							

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

ABN Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
95-48-7	2-Methylphenol	38 U	77	38	24	ug/kg	
	3&4-Methylphenol	38 U	77	38	31	ug/kg	
87-86-5	Pentachlorophenol	96 U	150	96	36	ug/kg	
108-95-2	Phenol	38 U	77	38	20	ug/kg	
83-32-9	Acenaphthene	31.9	38	19	13	ug/kg	J
208-96-8	Acenaphthylene	29 U	38	29	19	ug/kg	
120-12-7	Anthracene	104	38	29	23	ug/kg	
56-55-3	Benzo(a)anthracene	432	38	19	11	ug/kg	
50-32-8	Benzo(a)pyrene	413	38	19	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	486	38	19	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	291	38	29	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	177	38	19	18	ug/kg	
218-01-9	Chrysene	394	38	19	12	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	82.4	38	19	17	ug/kg	
132-64-9	Dibenzofuran	19 U	77	19	16	ug/kg	
206-44-0	Fluoranthene	657	38	19	17	ug/kg	
86-73-7	Fluorene	30.7	38	29	18	ug/kg	J
118-74-1	Hexachlorobenzene	19 U	77	19	9.7	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	291	38	19	18	ug/kg	
91-20-3	Naphthalene	19 U	38	19	11	ug/kg	
85-01-8	Phenanthrene	325	38	19	13	ug/kg	
129-00-0	Pyrene	767	38	19	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	56%		23-115%
4165-62-2	Phenol-d5	59%		27-114%
118-79-6	2,4,6-Tribromophenol	75%		19-152%
4165-60-0	Nitrobenzene-d5	63%		26-134%
321-60-8	2-Fluorobiphenyl	59%		39-124%
1718-51-0	Terphenyl-d14	95%		36-134%

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-CF-037
Lab Sample ID: JC89914-11 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D BY SIM SW846 3546 **Percent Solids:** 86.8
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]	3P77878.D	1	07/09/19 00:31	CS	07/05/19 16:30	OP21387	E3P3646
Run #2							

	Initial Weight	Final Volume
Run #1	31.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
123-91-1	1,4-Dioxane	1.8 U	3.7	1.8	0.90	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		10-146%
321-60-8	2-Fluorobiphenyl	66%		46-115%
1718-51-0	Terphenyl-d14	83%		10-170%

(a) Sample extracted outside the holding time.

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-CF-037
Lab Sample ID: JC89914-11 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8151A SW846 3546 **Percent Solids:** 86.8
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	3G123418.D	1	06/18/19 18:15	VDT	06/18/19 09:30	OP21084	G3G4329
Run #2							

	Initial Weight	Final Volume
Run #1	16.1 g	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
93-72-1	2,4,5-TP (Silvex)	3.4 U	3.6	3.4	3.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	47%		10-159%
19719-28-9	2,4-DCAA	42%		10-159%

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-037
Lab Sample ID: JC89914-11 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8081B SW846 3546 **Percent Solids:** 86.8
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	1G153584.D	1	06/19/19 11:55	MH	06/19/19 05:45	OP21102	G1G4959
Run #2							

	Initial Weight	Final Volume
Run #1	16.0 g	10.0 ml
Run #2		

Pesticides, Soil Cleanup Objectives

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
309-00-2	Aldrin	0.68 U	0.72	0.68	0.59	ug/kg	
319-84-6	alpha-BHC	0.68 U	0.72	0.68	0.59	ug/kg	
319-85-7	beta-BHC	0.68 U	0.72	0.68	0.65	ug/kg	
319-86-8	delta-BHC	0.71 U	0.72	0.71	0.69	ug/kg	
58-89-9	gamma-BHC (Lindane)	0.65 U	0.72	0.65	0.53	ug/kg	
5103-71-9	alpha-Chlordane	5.0	0.72	0.68	0.58	ug/kg	
60-57-1	Dieldrin	2.0	0.72	0.54	0.49	ug/kg	
72-54-8	4,4'-DDD	7.3	0.72	0.68	0.66	ug/kg	
72-55-9	4,4'-DDE [a]	2.6	0.72	0.68	0.63	ug/kg	
50-29-3	4,4'-DDT	7.5	0.72	0.68	0.64	ug/kg	
72-20-8	Endrin	0.65 U	0.72	0.65	0.56	ug/kg	
1031-07-8	Endosulfan sulfate	0.65 U	0.72	0.65	0.56	ug/kg	
959-98-8	Endosulfan-I	0.54 U	0.72	0.54	0.41	ug/kg	
33213-65-9	Endosulfan-II	0.54 U	0.72	0.54	0.45	ug/kg	
76-44-8	Heptachlor	0.76	0.72	0.65	0.62	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	59%		25-135%
877-09-8	Tetrachloro-m-xylene	59%		25-135%
2051-24-3	Decachlorobiphenyl	52%		10-156%
2051-24-3	Decachlorobiphenyl	105%		10-156%

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

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-CF-037
Lab Sample ID: JC89914-11 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8082A SW846 3546 **Percent Solids:** 86.8
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	XX2436692.D	1	06/20/19 14:36	CP	06/19/19 05:45	OP21101	GXX6722
Run #2							

	Initial Weight	Final Volume
Run #1	16.0 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
12674-11-2	Aroclor 1016	29 U	36	29	17	ug/kg	
11104-28-2	Aroclor 1221	29 U	36	29	22	ug/kg	
11141-16-5	Aroclor 1232	29 U	36	29	23	ug/kg	
53469-21-9	Aroclor 1242	29 U	36	29	15	ug/kg	
12672-29-6	Aroclor 1248	34 U	36	34	32	ug/kg	
11097-69-1	Aroclor 1254	29 U	36	29	19	ug/kg	
11096-82-5	Aroclor 1260	29 U	36	29	15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	70%		31-146%
877-09-8	Tetrachloro-m-xylene	74%		31-146%
2051-24-3	Decachlorobiphenyl	71%		17-164%
2051-24-3	Decachlorobiphenyl	79%		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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-037
Lab Sample ID: JC89914-11 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Percent Solids: 86.8
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	5.7	2.3	0.58	0.33	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Barium	32.9	23	12	2.2	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.51	0.23	0.12	0.093	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Cadmium	0.23 U	0.58	0.23	0.081	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Chromium	19.1	1.2	0.58	0.43	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Copper	10.7	2.9	1.2	0.98	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Lead	16.3	2.3	0.58	0.48	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Manganese	176	1.7	1.2	0.48	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Mercury	0.047	0.031	0.023	0.014	mg/kg	1	06/18/19	06/18/19	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	10.7	4.7	0.47	0.41	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Selenium	0.93 U	2.3	0.93	0.76	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Silver	0.47 U	0.58	0.47	0.20	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Zinc	27.0	5.8	4.7	2.7	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA46938
(2) Instrument QC Batch: MA46951
(3) Prep QC Batch: MP15743
(4) Prep QC Batch: MP15749

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

Report of Analysis

Client Sample ID:	NWIRP-S1-WC-CF-037		
Lab Sample ID:	JC89914-11	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
		Percent Solids:	86.8
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
Chromium, Hexavalent	0.61	0.46	0.40	0.37	mg/kg	1	06/25/19 17:07	NV	SW846 3060A/7196A
Chromium, Trivalent [a]	18.5	1.7	0.98	0.80	mg/kg	1	06/25/19 17:07	NV	SW846 6010/7196A M
Cyanide	0.19 U	0.25	0.19	0.12	mg/kg	1	06/20/19 17:00	BM	SW846 9012B/LACHAT
Redox Potential Vs H2	378				mv	1	06/20/19 10:50	MS	ASTM D1498-76M
Solids, Percent	86.8				%	1	06/19/19 14:30	BG	SM2540 G 18TH ED MOD
pH	7.16				su	1	06/20/19 10:52	MS	SW846 9045D

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-038
Lab Sample ID: JC89914-12 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D SW846 3546 **Percent Solids:** 89.8
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	Z138889.D	1	06/19/19 17:40	AR	06/19/19 09:00	OP21103	EZ6837
Run #2							

	Initial Weight	Final Volume
Run #1	30.6 g	1.0 ml
Run #2		

ABN Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
95-48-7	2-Methylphenol	36 U	73	36	23	ug/kg	
	3&4-Methylphenol	36 U	73	36	30	ug/kg	
87-86-5	Pentachlorophenol	91 U	150	91	34	ug/kg	
108-95-2	Phenol	36 U	73	36	19	ug/kg	
83-32-9	Acenaphthene	18 U	36	18	13	ug/kg	
208-96-8	Acenaphthylene	27 U	36	27	18	ug/kg	
120-12-7	Anthracene	27 U	36	27	22	ug/kg	
56-55-3	Benzo(a)anthracene	137	36	18	10	ug/kg	
50-32-8	Benzo(a)pyrene	122	36	18	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	150	36	18	16	ug/kg	
191-24-2	Benzo(g,h,i)perylene	82.8	36	27	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	58.1	36	18	17	ug/kg	
218-01-9	Chrysene	126	36	18	11	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	25.9	36	18	16	ug/kg	J
132-64-9	Dibenzofuran	18 U	73	18	15	ug/kg	
206-44-0	Fluoranthene	184	36	18	16	ug/kg	
86-73-7	Fluorene	27 U	36	27	17	ug/kg	
118-74-1	Hexachlorobenzene	18 U	73	18	9.2	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	36	18	17	ug/kg	
91-20-3	Naphthalene	18 U	36	18	10	ug/kg	
85-01-8	Phenanthrene	55.1	36	18	12	ug/kg	
129-00-0	Pyrene	224	36	18	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	64%		23-115%
4165-62-2	Phenol-d5	66%		27-114%
118-79-6	2,4,6-Tribromophenol	73%		19-152%
4165-60-0	Nitrobenzene-d5	69%		26-134%
321-60-8	2-Fluorobiphenyl	63%		39-124%
1718-51-0	Terphenyl-d14	95%		36-134%

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-CF-038
Lab Sample ID: JC89914-12 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D BY SIM SW846 3546 **Percent Solids:** 89.8
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]	3P77875.D	1	07/08/19 23:28	CS	07/05/19 16:30	OP21387	E3P3646
Run #2							

	Initial Weight	Final Volume
Run #1	30.8 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
123-91-1	1,4-Dioxane	1.8 U	3.6	1.8	0.88	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		10-146%
321-60-8	2-Fluorobiphenyl	52%		46-115%
1718-51-0	Terphenyl-d14	66%		10-170%

(a) Sample extracted outside the holding time.

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-CF-038
Lab Sample ID: JC89914-12 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8151A SW846 3546 **Percent Solids:** 89.8
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	3G123419.D	1	06/18/19 18:44	VDT	06/18/19 09:30	OP21084	G3G4329
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
93-72-1	2,4,5-TP (Silvex)	3.5 U	3.6	3.5	3.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	38%		10-159%
19719-28-9	2,4-DCAA	38%		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-CF-038
Lab Sample ID: JC89914-12 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8081B SW846 3546 **Percent Solids:** 89.8
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	1G153585.D	1	06/19/19 12:13	MH	06/19/19 05:45	OP21102	G1G4959
Run #2							

	Initial Weight	Final Volume
Run #1	16.2 g	10.0 ml
Run #2		

Pesticides, Soil Cleanup Objectives

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
309-00-2	Aldrin	0.65 U	0.69	0.65	0.57	ug/kg	
319-84-6	alpha-BHC	0.65 U	0.69	0.65	0.56	ug/kg	
319-85-7	beta-BHC	0.65 U	0.69	0.65	0.62	ug/kg	
319-86-8	delta-BHC	0.67 U	0.69	0.67	0.66	ug/kg	
58-89-9	gamma-BHC (Lindane)	0.62 U	0.69	0.62	0.51	ug/kg	
5103-71-9	alpha-Chlordane	2.8	0.69	0.65	0.55	ug/kg	
60-57-1	Dieldrin	0.68	0.69	0.52	0.47	ug/kg	J
72-54-8	4,4'-DDD	0.65 U	0.69	0.65	0.63	ug/kg	
72-55-9	4,4'-DDE	0.65 U	0.69	0.65	0.60	ug/kg	
50-29-3	4,4'-DDT	1.3	0.69	0.65	0.61	ug/kg	
72-20-8	Endrin	0.62 U	0.69	0.62	0.53	ug/kg	
1031-07-8	Endosulfan sulfate	0.62 U	0.69	0.62	0.54	ug/kg	
959-98-8	Endosulfan-I	0.52 U	0.69	0.52	0.40	ug/kg	
33213-65-9	Endosulfan-II	0.52 U	0.69	0.52	0.43	ug/kg	
76-44-8	Heptachlor	0.62 U	0.69	0.62	0.59	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	72%		25-135%
877-09-8	Tetrachloro-m-xylene	72%		25-135%
2051-24-3	Decachlorobiphenyl	67%		10-156%
2051-24-3	Decachlorobiphenyl	94%		10-156%

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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-CF-038
Lab Sample ID: JC89914-12 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8082A SW846 3546 **Percent Solids:** 89.8
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	XX2436693.D	1	06/20/19 14:55	CP	06/19/19 05:45	OP21101	GXX6722
Run #2							

	Initial Weight	Final Volume
Run #1	16.2 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	22	ug/kg	
53469-21-9	Aroclor 1242	27 U	34	27	14	ug/kg	
12672-29-6	Aroclor 1248	32 U	34	32	31	ug/kg	
11097-69-1	Aroclor 1254	27 U	34	27	18	ug/kg	
11096-82-5	Aroclor 1260	27 U	34	27	15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	79%		31-146%
877-09-8	Tetrachloro-m-xylene	83%		31-146%
2051-24-3	Decachlorobiphenyl	72%		17-164%
2051-24-3	Decachlorobiphenyl	81%		17-164%

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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-CF-038
Lab Sample ID: JC89914-12 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Percent Solids: 89.8
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	4.4	2.2	0.56	0.31	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Barium	27.2	22	11	2.1	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.38	0.22	0.11	0.089	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Cadmium	0.22 U	0.56	0.22	0.078	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Chromium	14.2	1.1	0.56	0.41	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Copper	10.9	2.8	1.1	0.94	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Lead	28.7	2.2	0.56	0.46	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Manganese	131	1.7	1.1	0.46	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Mercury	0.029 J	0.035	0.026	0.015	mg/kg	1	06/18/19	06/18/19	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.9	4.5	0.45	0.39	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Selenium	0.89 U	2.2	0.89	0.72	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Silver	0.45 U	0.56	0.45	0.19	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Zinc	27.7	5.6	4.5	2.6	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA46938
(2) Instrument QC Batch: MA46951
(3) Prep QC Batch: MP15743
(4) Prep QC Batch: MP15749

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

Report of Analysis

Client Sample ID:	NWIRP-S1-WC-CF-038		
Lab Sample ID:	JC89914-12	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
		Percent Solids:	89.8
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
Chromium, Hexavalent	0.88	0.45	0.39	0.35	mg/kg	1	06/25/19 17:07	NV	SW846 3060A/7196A
Chromium, Trivalent [a]	13.3	1.6	0.95	0.76	mg/kg	1	06/25/19 17:07	NV	SW846 6010/7196A M
Cyanide	0.19 U	0.26	0.19	0.13	mg/kg	1	06/20/19 17:01	BM	SW846 9012B/LACHAT
Redox Potential Vs H2	374				mv	1	06/20/19 10:54	MS	ASTM D1498-76M
Solids, Percent	89.8				%	1	06/19/19 14:30	BG	SM2540 G 18TH ED MOD
pH	6.79				su	1	06/20/19 10:54	MS	SW846 9045D

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

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

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

Parameter Certification Exceptions

Job Number: JC89914
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
Chromium, Trivalent		**SW846 6010/7196A M**	SO	SGS is not certified for this parameter.[a]
Redox Potential Vs H2		**ASTM D1498-76M**	SO	SGS is not certified for this parameter.[a]

(a) Lab cert for analyte not supported by NJDEP, OQA. Only methods/analytes required for reporting by the State of NJ can be certified in NJ. Use of this analyte for compliance must be verified through the appropriate regulatory office.

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.

50
SCL

JC89914

CHAIN-OF-CUSTODY RECORD

KD1-03619-104

COC Number: 501164-20190614
Subcontract Services Agreement: TBD

NCREAS

APTIM

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

Fill Material Samples

F6147 | 501164 | Natasha Kelley Sullivan | (410)529-7598

NAVY | Monica L. Smeal E.I.T.

Item No.	Sample Number	Date	Time	Matrix		Sample Description	Container	Volatiles SW-846 5035A/8260B	1,4-dioxane and SVOC SW-846 8270D	Total PCBs SW-846 8082A	Pesticides SW-846 8081B	Herbicides 8151A	Metals - ICP SW846 6010C/7471A	Cyanide SW-846 9012B	Cr6 and Cr3
1	NWIRP-S1-WC-CF-027	06/14/19	1100		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 60 ml glass jar, none	X							
2	NWIRP-S1-WC-CF-028	06/14/19	1105		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X							
3	NWIRP-S1-WC-CF-029	06/14/19	1110		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X							
4	NWIRP-S1-WC-CF-030	06/14/19	1115		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X							
5	NWIRP-S1-WC-CF-031	06/14/19	1120		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X							
6	NWIRP-S1-WC-CF-032	06/14/19	1121		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X							
7	NWIRP-S1-WC-CF-033	06/14/19	1124		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X							
8	NWIRP-S1-WC-CF-034	06/14/19	1130		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X							
9	NWIRP-S1-WC-CF-035	06/14/19	1133		X	Soil - Common Backfill	2 x 8 oz glass jar, none		X	X	X	X	X	X	X
10	NWIRP-S1-WC-CF-036	06/14/19	1138		X	Soil - Common Backfill	2 x 8 oz glass jar, none		X	X	X	X	X	X	X
11	NWIRP-S1-WC-CF-037	06/14/19	1143		X	Soil - Common Backfill	2 x 8 oz glass jar, none		X	X	X	X	X	X	X
12	NWIRP-S1-WC-CF-038	06/14/19	1150		X	Soil - Common Backfill	2 x 8 oz glass jar, none		X	X	X	X	X	X	X

Initial Assessment 3A/GRL
Label Verification________

P54
14A4
4969

**** See attached list for SPECIFIC COMPOUNDS**
(please run most appopriate method to meet the action level requirements .

Turnaround Time Required: ❑ **14 Day TAT**

Sampled By: McCutcheon, Sean, APTIM

COMMENTS | Laboratory Report No

	Transfers Relinquished By	Date	Time	Transfers Accepted By	Date	Time	
1	Sampler's Signature	Date	Time	Laboratory Sample Custody Si			
2	[signature]	6/14/19	1448	[signature]	6/14/19	1448	Report Format: Full Report
3	[signature]	6/14/19	1845		6/14/19	1845	Deliverables: EDD Excel+NIRIS
4							Fax results to Natasha Sullivan (410) 529-7599

Bottle # KD1-03619-103

3.4°C
3.5°C

JC89914: Chain of Custody
Page 1 of 2

5.2

5

SGS Sample Receipt Summary

Job Number: JC89914 **Client:** NOREAS-CB&I JV (NCBI) **Project:** BACKFILL - BETHPAGE, NY

Date / Time Received: 6/14/2019 6:45:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.4); Cooler 2: (3.5);

Cooler Temps (Corrected) °C: Cooler 1: (2.4); Cooler 2: (2.5);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	2		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 206717 pH 12+: 208717 Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

JC89914: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

NOREAS, Inc.

Job No: JC89914

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

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC89914-1	Collected: 14-JUN-19 11:00 By: NS			Received: 14-JUN-19	By: AS	
NWIRP-S1-WC-CF-027						
JC89914-1	SW846 8260C	19-JUN-19 11:12	PS			V8260SCO
JC89914-1	SM2540 G 18TH ED MOD	19-JUN-19 14:30	BG			SOL104
JC89914-2	Collected: 14-JUN-19 11:05 By: NS			Received: 14-JUN-19	By: AS	
NWIRP-S1-WC-CF-028						
JC89914-2	SW846 8260C	19-JUN-19 11:39	PS			V8260SCO
JC89914-2	SM2540 G 18TH ED MOD	19-JUN-19 14:30	BG			SOL104
JC89914-3	Collected: 14-JUN-19 11:10 By: NS			Received: 14-JUN-19	By: AS	
NWIRP-S1-WC-CF-029						
JC89914-3	SW846 8260C	19-JUN-19 12:05	PS			V8260SCO
JC89914-3	SM2540 G 18TH ED MOD	19-JUN-19 14:30	BG			SOL104
JC89914-4	Collected: 14-JUN-19 11:15 By: NS			Received: 14-JUN-19	By: AS	
NWIRP-S1-WC-CF-030						
JC89914-4	SW846 8260C	19-JUN-19 12:32	PS			V8260SCO
JC89914-4	SM2540 G 18TH ED MOD	19-JUN-19 14:30	BG			SOL104
JC89914-5	Collected: 14-JUN-19 11:20 By: NS			Received: 14-JUN-19	By: AS	
NWIRP-S1-WC-CF-031						
JC89914-5	SW846 8260C	19-JUN-19 12:58	PS			V8260SCO
JC89914-5	SM2540 G 18TH ED MOD	19-JUN-19 14:30	BG			SOL104
JC89914-6	Collected: 14-JUN-19 11:21 By: NS			Received: 14-JUN-19	By: AS	
NWIRP-S1-WC-CF-032						
JC89914-6	SW846 8260C	19-JUN-19 13:25	PS			V8260SCO
JC89914-6	SM2540 G 18TH ED MOD	19-JUN-19 14:30	BG			SOL104
JC89914-7	Collected: 14-JUN-19 11:24 By: NS			Received: 14-JUN-19	By: AS	
NWIRP-S1-WC-CF-033						
JC89914-7	SW846 8260C	19-JUN-19 13:52	PS			V8260SCO

Internal Sample Tracking Chronicle

NOREAS, Inc.

Job No: JC89914

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

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC89914-7	SM2540 G 18TH ED MOD	19-JUN-19 14:30	BG			SOL104
JC89914-8	Collected: 14-JUN-19 11:30 By: NS NWIRP-S1-WC-CF-034		Received: 14-JUN-19 By: AS			
JC89914-8	SW846 8260C	19-JUN-19 14:18	PS			V8260SCO
JC89914-8	SM2540 G 18TH ED MOD	19-JUN-19 14:30	BG			SOL104
JC89914-9	Collected: 14-JUN-19 11:33 By: NS NWIRP-S1-WC-CF-035		Received: 14-JUN-19 By: AS			
JC89914-9	SW846 7471B	18-JUN-19 13:01	EAL	18-JUN-19	EAL	HG
JC89914-9	SW846 8151A	18-JUN-19 17:19	VDT	18-JUN-19	NT	H8151245TP
JC89914-9	SW846 8081B	19-JUN-19 11:18	MH	19-JUN-19	NT	P8081SCO
JC89914-9	SM2540 G 18TH ED MOD	19-JUN-19 14:30	BG			SOL104
JC89914-9	SW846 6010D	19-JUN-19 18:50	GT	18-JUN-19	MR	AG,AS,BA,BE,CD,CR,CU,MN,NI,PB,SE,ZN
JC89914-9	SW846 8270D	19-JUN-19 19:01	AR	19-JUN-19	CC	AB8270SCO
JC89914-9	ASTM D1498-76M	20-JUN-19 10:37	MS			EH
JC89914-9	SW846 9045D	20-JUN-19 10:38	MS			PH
JC89914-9	SW846 8082A	20-JUN-19 14:00	CP	19-JUN-19	NT	P8082PCB
JC89914-9	SW846 9012B/LACHAT	20-JUN-19 16:54	BM	20-JUN-19	RC	CN
JC89914-9	SW846 6010/7196A M	25-JUN-19 17:03	NV			CR3
JC89914-9	SW846 3060A/7196A	25-JUN-19 17:03	NV	21-JUN-19	CD	XCRA
JC89914-9	SW846 8270D BY SIM	08-JUL-19 23:49	CS	05-JUL-19	LJ	B8270DODSIM14DIOX
JC89914-10	Collected: 14-JUN-19 11:38 By: NS NWIRP-S1-WC-CF-036		Received: 14-JUN-19 By: AS			
JC89914-10	SW846 7471B	18-JUN-19 13:03	EAL	18-JUN-19	EAL	HG
JC89914-10	SW846 8151A	18-JUN-19 17:47	VDT	18-JUN-19	NT	H8151245TP
JC89914-10	SW846 8081B	19-JUN-19 11:36	MH	19-JUN-19	NT	P8081SCO
JC89914-10	SM2540 G 18TH ED MOD	19-JUN-19 14:30	BG			SOL104
JC89914-10	SW846 8270D	19-JUN-19 18:07	AR	19-JUN-19	CC	AB8270SCO
JC89914-10	SW846 6010D	19-JUN-19 18:55	GT	18-JUN-19	MR	AG,AS,BA,BE,CD,CR,CU,MN,NI,PB,SE,ZN
JC89914-10	ASTM D1498-76M	20-JUN-19 10:43	MS			EH
JC89914-10	SW846 9045D	20-JUN-19 10:44	MS			PH
JC89914-10	SW846 8082A	20-JUN-19 14:18	CP	19-JUN-19	NT	P8082PCB
JC89914-10	SW846 9012B/LACHAT	20-JUN-19 16:58	BM	20-JUN-19	RC	CN

Internal Sample Tracking Chronicle

NOREAS, Inc.

Job No: JC89914

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

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC89914-10	SW846 6010/7196A M	25-JUN-19 17:07	NV			CR3
JC89914-10	SW846 3060A/7196A	25-JUN-19 17:07	NV	21-JUN-19	CD	XCRA
JC89914-10	SW846 8270D BY SIM	09-JUL-19 00:10	CS	05-JUL-19	LJ	B8270DODSIM14DIOX
JC89914-11	Collected: 14-JUN-19 11:43 By: NS		Received: 14-JUN-19 By: AS			
NWIRP-S1-WC-CF-037						
JC89914-11	SW846 7471B	18-JUN-19 13:04	EAL	18-JUN-19	EAL	HG
JC89914-11	SW846 8151A	18-JUN-19 18:15	VDT	18-JUN-19	NT	H8151245TP
JC89914-11	SW846 8081B	19-JUN-19 11:55	MH	19-JUN-19	NT	P8081SCO
JC89914-11	SM2540 G 18TH ED MOD	19-JUN-19 14:30	BG			SOL104
JC89914-11	SW846 8270D	19-JUN-19 18:34	AR	19-JUN-19	CC	AB8270SCO
JC89914-11	SW846 6010D	19-JUN-19 19:10	GT	18-JUN-19	MR	AG,AS,BA,BE,CD,CR,CU,MN,NI,PB,SE,ZN
JC89914-11	ASTM D1498-76M	20-JUN-19 10:50	MS			EH
JC89914-11	SW846 9045D	20-JUN-19 10:52	MS			PH
JC89914-11	SW846 8082A	20-JUN-19 14:36	CP	19-JUN-19	NT	P8082PCB
JC89914-11	SW846 9012B/LACHAT	20-JUN-19 17:00	BM	20-JUN-19	RC	CN
JC89914-11	SW846 6010/7196A M	25-JUN-19 17:07	NV			CR3
JC89914-11	SW846 3060A/7196A	25-JUN-19 17:07	NV	21-JUN-19	CD	XCRA
JC89914-11	SW846 8270D BY SIM	09-JUL-19 00:31	CS	05-JUL-19	LJ	B8270DODSIM14DIOX
JC89914-12	Collected: 14-JUN-19 11:50 By: NS		Received: 14-JUN-19 By: AS			
NWIRP-S1-WC-CF-038						
JC89914-12	SW846 7471B	18-JUN-19 13:06	EAL	18-JUN-19	EAL	HG
JC89914-12	SW846 8151A	18-JUN-19 18:44	VDT	18-JUN-19	NT	H8151245TP
JC89914-12	SW846 8081B	19-JUN-19 12:13	MH	19-JUN-19	NT	P8081SCO
JC89914-12	SM2540 G 18TH ED MOD	19-JUN-19 14:30	BG			SOL104
JC89914-12	SW846 8270D	19-JUN-19 17:40	AR	19-JUN-19	CC	AB8270SCO
JC89914-12	SW846 6010D	19-JUN-19 19:15	GT	18-JUN-19	MR	AG,AS,BA,BE,CD,CR,CU,MN,NI,PB,SE,ZN
JC89914-12	SW846 9045D	20-JUN-19 10:54	MS			PH
JC89914-12	ASTM D1498-76M	20-JUN-19 10:54	MS			EH
JC89914-12	SW846 8082A	20-JUN-19 14:55	CP	19-JUN-19	NT	P8082PCB
JC89914-12	SW846 9012B/LACHAT	20-JUN-19 17:01	BM	20-JUN-19	RC	CN
JC89914-12	SW846 6010/7196A M	25-JUN-19 17:07	NV			CR3
JC89914-12	SW846 3060A/7196A	25-JUN-19 17:07	NV	21-JUN-19	CD	XCRA
JC89914-12	SW846 8270D BY SIM	08-JUL-19 23:28	CS	05-JUL-19	LJ	B8270DODSIM14DIOX

SGS Internal Chain of Custody

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 06/14/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC89914-1.1	Sahara Feliciano	Secured Storage	06/14/19 21:32	Return to Storage
JC89914-1.1	Secured Storage	Benjamin Gaines	06/19/19 10:23	Retrieve from Storage
JC89914-1.1	Benjamin Gaines	Secured Staging Area	06/19/19 10:23	Return to Storage
JC89914-1.1	Secured Staging Area	Benjamin Gaines	06/19/19 10:25	Retrieve from Storage
JC89914-1.1	Benjamin Gaines	Secured Storage	06/19/19 14:24	Return to Storage
JC89914-1.2	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-1.3	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-1.3	Secured Storage	Prashant Shukla	06/19/19 09:56	Retrieve from Storage
JC89914-1.3	Prashant Shukla	GCMS1C	06/19/19 09:56	Load on Instrument
JC89914-1.3	GCMS1C	Prashant Shukla	06/19/19 18:10	Unload from Instrument
JC89914-1.3	Prashant Shukla		06/19/19 18:10	Depleted
JC89914-1.4	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-2.1	Sahara Feliciano	Secured Storage	06/14/19 21:32	Return to Storage
JC89914-2.1	Secured Storage	Benjamin Gaines	06/19/19 10:23	Retrieve from Storage
JC89914-2.1	Benjamin Gaines	Secured Staging Area	06/19/19 10:23	Return to Storage
JC89914-2.1	Secured Staging Area	Benjamin Gaines	06/19/19 10:25	Retrieve from Storage
JC89914-2.1	Benjamin Gaines	Secured Storage	06/19/19 14:24	Return to Storage
JC89914-2.2	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-2.3	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-2.3	Secured Storage	Prashant Shukla	06/19/19 09:56	Retrieve from Storage
JC89914-2.3	Prashant Shukla	GCMS1C	06/19/19 09:56	Load on Instrument
JC89914-2.3	GCMS1C	Prashant Shukla	06/19/19 18:10	Unload from Instrument
JC89914-2.3	Prashant Shukla		06/19/19 18:10	Depleted
JC89914-2.4	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-3.1	Sahara Feliciano	Secured Storage	06/14/19 21:32	Return to Storage
JC89914-3.1	Secured Storage	Benjamin Gaines	06/19/19 10:23	Retrieve from Storage
JC89914-3.1	Benjamin Gaines	Secured Staging Area	06/19/19 10:23	Return to Storage
JC89914-3.1	Secured Staging Area	Benjamin Gaines	06/19/19 10:25	Retrieve from Storage
JC89914-3.1	Benjamin Gaines	Secured Storage	06/19/19 14:24	Return to Storage
JC89914-3.2	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-3.3	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-3.3	Secured Storage	Prashant Shukla	06/19/19 09:56	Retrieve from Storage
JC89914-3.3	Prashant Shukla	GCMS1C	06/19/19 09:56	Load on Instrument
JC89914-3.3	GCMS1C	Prashant Shukla	06/19/19 18:10	Unload from Instrument

SGS Internal Chain of Custody

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 06/14/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC89914-3.3	Prashant Shukla		06/19/19 18:10	Depleted
JC89914-3.4	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-4.1	Sahara Feliciano	Secured Storage	06/14/19 21:32	Return to Storage
JC89914-4.1	Secured Storage	Benjamin Gaines	06/19/19 10:23	Retrieve from Storage
JC89914-4.1	Benjamin Gaines	Secured Staging Area	06/19/19 10:23	Return to Storage
JC89914-4.1	Secured Staging Area	Benjamin Gaines	06/19/19 10:25	Retrieve from Storage
JC89914-4.1	Benjamin Gaines	Secured Storage	06/19/19 14:24	Return to Storage
JC89914-4.2	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-4.3	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-4.3	Secured Storage	Prashant Shukla	06/19/19 09:56	Retrieve from Storage
JC89914-4.3	Prashant Shukla	GCMS1C	06/19/19 09:56	Load on Instrument
JC89914-4.3	GCMS1C	Prashant Shukla	06/19/19 18:10	Unload from Instrument
JC89914-4.3	Prashant Shukla		06/19/19 18:10	Depleted
JC89914-4.4	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-5.1	Sahara Feliciano	Secured Storage	06/14/19 21:32	Return to Storage
JC89914-5.1	Secured Storage	Benjamin Gaines	06/19/19 10:23	Retrieve from Storage
JC89914-5.1	Benjamin Gaines	Secured Staging Area	06/19/19 10:23	Return to Storage
JC89914-5.1	Secured Staging Area	Benjamin Gaines	06/19/19 10:25	Retrieve from Storage
JC89914-5.1	Benjamin Gaines	Secured Storage	06/19/19 14:24	Return to Storage
JC89914-5.2	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-5.3	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-5.3	Secured Storage	Prashant Shukla	06/19/19 09:56	Retrieve from Storage
JC89914-5.3	Prashant Shukla	GCMS1C	06/19/19 09:56	Load on Instrument
JC89914-5.3	GCMS1C	Prashant Shukla	06/19/19 18:10	Unload from Instrument
JC89914-5.3	Prashant Shukla		06/19/19 18:10	Depleted
JC89914-5.4	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-6.1	Sahara Feliciano	Secured Storage	06/14/19 21:32	Return to Storage
JC89914-6.1	Secured Storage	Benjamin Gaines	06/19/19 10:23	Retrieve from Storage
JC89914-6.1	Benjamin Gaines	Secured Staging Area	06/19/19 10:23	Return to Storage
JC89914-6.1	Secured Staging Area	Benjamin Gaines	06/19/19 10:25	Retrieve from Storage
JC89914-6.1	Benjamin Gaines	Secured Storage	06/19/19 14:24	Return to Storage
JC89914-6.2	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage

SGS Internal Chain of Custody

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 06/14/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC89914-6.3	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-6.3	Secured Storage	Prashant Shukla	06/19/19 09:56	Retrieve from Storage
JC89914-6.3	Prashant Shukla	GCMS1C	06/19/19 09:56	Load on Instrument
JC89914-6.3	GCMS1C	Prashant Shukla	06/19/19 18:10	Unload from Instrument
JC89914-6.3	Prashant Shukla		06/19/19 18:10	Depleted
JC89914-6.4	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-7.1	Sahara Feliciano	Secured Storage	06/14/19 21:32	Return to Storage
JC89914-7.1	Secured Storage	Benjamin Gaines	06/19/19 10:23	Retrieve from Storage
JC89914-7.1	Benjamin Gaines	Secured Staging Area	06/19/19 10:23	Return to Storage
JC89914-7.1	Secured Staging Area	Benjamin Gaines	06/19/19 10:25	Retrieve from Storage
JC89914-7.1	Benjamin Gaines	Secured Storage	06/19/19 14:24	Return to Storage
JC89914-7.2	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-7.3	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-7.3	Secured Storage	Prashant Shukla	06/19/19 09:56	Retrieve from Storage
JC89914-7.3	Prashant Shukla	GCMS1C	06/19/19 09:56	Load on Instrument
JC89914-7.3	GCMS1C	Prashant Shukla	06/19/19 18:10	Unload from Instrument
JC89914-7.3	Prashant Shukla		06/19/19 18:10	Depleted
JC89914-7.4	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-8.1	Sahara Feliciano	Secured Storage	06/14/19 21:32	Return to Storage
JC89914-8.1	Secured Storage	Benjamin Gaines	06/19/19 10:23	Retrieve from Storage
JC89914-8.1	Benjamin Gaines	Secured Staging Area	06/19/19 10:23	Return to Storage
JC89914-8.1	Secured Staging Area	Benjamin Gaines	06/19/19 10:25	Retrieve from Storage
JC89914-8.1	Benjamin Gaines	Secured Storage	06/19/19 14:24	Return to Storage
JC89914-8.2	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-8.3	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-8.3	Secured Storage	Prashant Shukla	06/19/19 09:56	Retrieve from Storage
JC89914-8.3	Prashant Shukla	GCMS1C	06/19/19 09:56	Load on Instrument
JC89914-8.3	GCMS1C	Prashant Shukla	06/19/19 18:10	Unload from Instrument
JC89914-8.3	Prashant Shukla		06/19/19 18:10	Depleted
JC89914-8.4	Andrew Siu	Secured Storage	06/14/19 22:26	Return to Storage
JC89914-9.1	Sahara Feliciano	Secured Storage	06/14/19 21:38	Return to Storage
JC89914-9.1	Secured Storage	Benjamin Gaines	06/17/19 17:02	Retrieve from Storage
JC89914-9.1	Benjamin Gaines	Secured Staging Area	06/17/19 17:02	Return to Storage
JC89914-9.1	Secured Staging Area	Natasha Torres	06/18/19 08:09	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 06/14/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC89914-9.1	Natasha Torres	Edouard Adrian Lee	06/18/19 09:45	Custody Transfer
JC89914-9.1	Edouard Adrian Lee	Secured Storage	06/18/19 13:59	Return to Storage
JC89914-9.1	Secured Storage	Todd Shoemaker	06/18/19 14:19	Retrieve from Storage
JC89914-9.1	Todd Shoemaker	Secured Staging Area	06/18/19 14:19	Return to Storage
JC89914-9.1	Secured Staging Area	Natasha Torres	06/18/19 14:43	Retrieve from Storage
JC89914-9.1	Natasha Torres	Sarah Halim	06/18/19 15:16	Custody Transfer
JC89914-9.1	Sarah Halim	Secured Storage	06/18/19 16:40	Return to Storage
JC89914-9.1	Secured Storage	Benjamin Gaines	06/18/19 17:21	Retrieve from Storage
JC89914-9.1	Benjamin Gaines	Secured Staging Area	06/18/19 17:22	Return to Storage
JC89914-9.1	Secured Staging Area	Natasha Torres	06/19/19 07:48	Retrieve from Storage
JC89914-9.1	Natasha Torres	Secured Storage	06/19/19 08:17	Return to Storage
JC89914-9.1	Secured Storage	Ruchitaben Chauhan	06/19/19 08:19	Retrieve from Storage
JC89914-9.1	Ruchitaben Chauhan	Tharun Murali	06/19/19 12:08	Custody Transfer
JC89914-9.1	Tharun Murali	Ruchitaben Chauhan	06/19/19 12:12	Custody Transfer
JC89914-9.1	Secured Storage	Benjamin Gaines	06/19/19 15:50	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC89914-9.1	Benjamin Gaines	Secured Staging Area	06/19/19 15:50	Return to Storage
JC89914-9.1	Secured Staging Area	Michelle Schmitz	06/20/19 09:25	Retrieve from Storage
JC89914-9.1	Michelle Schmitz	Secured Storage	06/20/19 11:02	Return to Storage
JC89914-9.1	Secured Storage	Sahara Feliciano	06/20/19 15:22	Retrieve from Storage
JC89914-9.1	Sahara Feliciano	Secured Staging Area	06/20/19 15:22	Return to Storage
JC89914-9.1	Secured Storage	Sahara Feliciano	06/20/19 15:23	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC89914-9.1	Sahara Feliciano	Secured Staging Area	06/20/19 15:23	Return to Storage
JC89914-9.1	Secured Staging Area	Courtney Dringus	06/21/19 10:25	Retrieve from Storage
JC89914-9.1	Courtney Dringus	Secured Storage	06/21/19 10:32	Return to Storage
JC89914-9.1.1	Natasha Torres	Organics Prep	06/18/19 08:09	Extract from JC89914-9.1
JC89914-9.1.1	Natasha Torres	Extract Storage	06/18/19 13:47	Return to Storage
JC89914-9.1.1	Organics Prep	Natasha Torres	06/18/19 13:47	Extract from JC89914-9.1
JC89914-9.1.1	Extract Storage	Vincent Drago	06/18/19 15:13	Retrieve from Storage
JC89914-9.1.1	Vincent Drago	GC3G	06/18/19 15:13	Load on Instrument
JC89914-9.1.1	GC3G	Vincent Drago	06/28/19 16:57	Unload from Instrument
JC89914-9.1.1	Vincent Drago	Extract Freezer	06/28/19 17:14	Return to Storage
JC89914-9.1.2	Natasha Torres	Organics Prep	06/18/19 14:47	Extract from JC89914-9.1
JC89914-9.1.2	Organics Prep	Natasha Torres	06/19/19 08:13	Extract from JC89914-9.1
JC89914-9.1.2	Natasha Torres	Extract Storage	06/19/19 08:13	Return to Storage
JC89914-9.1.2	Extract Storage	Tianwei Ruan	06/19/19 16:31	Retrieve from Storage
JC89914-9.1.2	Tianwei Ruan	GCXX	06/19/19 16:31	Load on Instrument
JC89914-9.1.2	GCXX	Tianwei Ruan	07/12/19 10:58	Unload from Instrument
JC89914-9.1.2	Tianwei Ruan	Extract Freezer	07/12/19 10:59	Return to Storage
JC89914-9.1.3	Natasha Torres	Organics Prep	06/18/19 14:48	Extract from JC89914-9.1

SGS Internal Chain of Custody

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 06/14/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC89914-9.1.3	Organics Prep	Natasha Torres	06/19/19 08:14	Extract from JC89914-9.1
JC89914-9.1.3	Natasha Torres	Extract Storage	06/19/19 08:14	Return to Storage
JC89914-9.1.3	Extract Storage	Mailisi Heshuote	06/19/19 10:28	Retrieve from Storage
JC89914-9.1.3	Mailisi Heshuote	GC1G	06/19/19 10:28	Load on Instrument
JC89914-9.1.4	Natasha Torres	Organics Prep	06/19/19 07:49	Extract from JC89914-9.1
JC89914-9.1.4	Organics Prep	Chatiyah Canaday	06/19/19 12:37	Extract from JC89914-9.1
JC89914-9.1.4	Chatiyah Canaday	Extract Storage	06/19/19 12:37	Return to Storage
JC89914-9.1.4	Extract Storage	Angela Rastelli	06/19/19 16:42	Retrieve from Storage
JC89914-9.1.4	Angela Rastelli	GCMSZ	06/19/19 16:42	Load on Instrument
JC89914-9.1.4	GCMSZ	Angela Rastelli	06/20/19 09:56	Unload from Instrument
JC89914-9.1.4	Angela Rastelli	Extract Freezer	06/20/19 09:56	Return to Storage
JC89914-9.1.5	Tharun Murali	TCLP	06/19/19 12:08	Leachate from JC89914-9.1
JC89914-9.1.5	TCLP	Tharun Murali	06/21/19 15:51	Leachate from JC89914-9.1
JC89914-9.1.5	Tharun Murali	Secured Storage	06/21/19 15:58	Return to Storage
JC89914-9.2	Sahara Feliciano	Secured Storage	06/14/19 21:38	Return to Storage
JC89914-9.2	Secured Storage	Dwayne Johnson	06/18/19 12:00	Retrieve from Storage
JC89914-9.2	Dwayne Johnson	Secured Staging Area	06/18/19 12:00	Return to Storage
JC89914-9.2	Secured Staging Area	Moustafa Ramadan	06/18/19 16:01	Retrieve from Storage
JC89914-9.2	Moustafa Ramadan	Secured Storage	06/18/19 17:27	Return to Storage
JC89914-9.2	Secured Storage	Benjamin Gaines	06/19/19 10:23	Retrieve from Storage
JC89914-9.2	Benjamin Gaines	Secured Staging Area	06/19/19 10:23	Return to Storage
JC89914-9.2	Secured Staging Area	Benjamin Gaines	06/19/19 10:25	Retrieve from Storage
JC89914-9.2	Benjamin Gaines	Secured Storage	06/19/19 14:24	Return to Storage
JC89914-9.2	Secured Storage	Benjamin Gaines	06/19/19 15:08	Retrieve from Storage
JC89914-9.2	Benjamin Gaines	Secured Staging Area	06/19/19 15:08	Return to Storage
JC89914-9.2	Secured Staging Area	Courtney Dringus	06/20/19 08:25	Retrieve from Storage
JC89914-9.2	Courtney Dringus	Secured Storage	06/20/19 12:57	Return to Storage
JC89914-9.2	Secured Storage	Sahara Feliciano	07/05/19 15:06	Retrieve from Storage
JC89914-9.2	Sahara Feliciano	Secured Staging Area	07/05/19 15:06	Return to Storage
JC89914-9.2	Secured Staging Area	Natasha Torres	07/05/19 15:13	Retrieve from Storage
JC89914-9.2	Natasha Torres	Secured Storage	07/05/19 15:37	Return to Storage
JC89914-9.2.1	Moustafa Ramadan	Metals Digestion	06/18/19 16:11	Digestate from JC89914-9.2
JC89914-9.2.1	Metals Digestion	Moustafa Ramadan	06/18/19 16:11	Digestate from JC89914-9.2
JC89914-9.2.1	Moustafa Ramadan	Metals Digestate Storage	06/18/19 16:11	Return to Storage
JC89914-9.2.1	Metals Digestate Storage	Gulcag Temizau	06/20/19 08:12	Retrieve from Storage
JC89914-9.2.1	Gulcag Temizau	Metals Digestate Storage	06/20/19 08:13	Return to Storage
JC89914-9.2.2	Natasha Torres	Organics Prep	07/05/19 15:13	Extract from JC89914-9.2
JC89914-9.2.2	Organics Prep	Luis Jimenez	07/05/19 20:43	Extract from JC89914-9.2
JC89914-9.2.2	Luis Jimenez	Extract Storage	07/05/19 20:43	Return to Storage

SGS Internal Chain of Custody

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 06/14/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC89914-9.2.2	Extract Storage	Christopher Sowa	07/08/19 22:46	Retrieve from Storage
JC89914-9.2.2	Christopher Sowa	GCMS3P	07/08/19 22:46	Load on Instrument
JC89914-9.2.2	GCMS3P	Henny Salim	07/09/19 08:26	Unload from Instrument
JC89914-9.2.2	Henny Salim	Extract Freezer	07/09/19 08:26	Return to Storage
JC89914-10.1	Sahara Feliciano	Secured Storage	06/14/19 21:38	Return to Storage
JC89914-10.1	Secured Storage	Benjamin Gaines	06/17/19 17:02	Retrieve from Storage
JC89914-10.1	Benjamin Gaines	Secured Staging Area	06/17/19 17:02	Return to Storage
JC89914-10.1	Secured Staging Area	Natasha Torres	06/18/19 08:09	Retrieve from Storage
JC89914-10.1	Natasha Torres	Edouard Adrian Lee	06/18/19 09:45	Custody Transfer
JC89914-10.1	Edouard Adrian Lee	Secured Storage	06/18/19 13:59	Return to Storage
JC89914-10.1	Secured Storage	Todd Shoemaker	06/18/19 14:19	Retrieve from Storage
JC89914-10.1	Todd Shoemaker	Secured Staging Area	06/18/19 14:19	Return to Storage
JC89914-10.1	Secured Staging Area	Natasha Torres	06/18/19 14:43	Retrieve from Storage
JC89914-10.1	Natasha Torres	Sarah Halim	06/18/19 15:16	Custody Transfer
JC89914-10.1	Sarah Halim	Secured Storage	06/18/19 16:40	Return to Storage
JC89914-10.1	Secured Storage	Benjamin Gaines	06/18/19 17:21	Retrieve from Storage
JC89914-10.1	Benjamin Gaines	Secured Staging Area	06/18/19 17:22	Return to Storage
JC89914-10.1	Secured Staging Area	Natasha Torres	06/19/19 07:48	Retrieve from Storage
JC89914-10.1	Natasha Torres	Secured Storage	06/19/19 08:17	Return to Storage
JC89914-10.1	Secured Storage	Ruchitaben Chauhan	06/19/19 08:19	Retrieve from Storage
JC89914-10.1	Ruchitaben Chauhan	Tharun Murali	06/19/19 12:08	Custody Transfer
JC89914-10.1	Tharun Murali	Ruchitaben Chauhan	06/19/19 12:12	Custody Transfer
JC89914-10.1	Secured Storage	Benjamin Gaines	06/19/19 15:50	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC89914-10.1	Benjamin Gaines	Secured Staging Area	06/19/19 15:50	Return to Storage
JC89914-10.1	Secured Staging Area	Michelle Schmitz	06/20/19 09:25	Retrieve from Storage
JC89914-10.1	Michelle Schmitz	Secured Storage	06/20/19 11:02	Return to Storage
JC89914-10.1	Secured Storage	Sahara Feliciano	06/20/19 15:22	Retrieve from Storage
JC89914-10.1	Sahara Feliciano	Secured Staging Area	06/20/19 15:22	Return to Storage
JC89914-10.1	Secured Storage	Sahara Feliciano	06/20/19 15:23	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC89914-10.1	Sahara Feliciano	Secured Staging Area	06/20/19 15:23	Return to Storage
JC89914-10.1	Secured Staging Area	Courtney Dringus	06/21/19 10:25	Retrieve from Storage
JC89914-10.1	Courtney Dringus	Secured Storage	06/21/19 10:32	Return to Storage
JC89914-10.1.1	Natasha Torres	Organics Prep	06/18/19 08:09	Extract from JC89914-10.1
JC89914-10.1.1	Natasha Torres	Extract Storage	06/18/19 13:47	Return to Storage
JC89914-10.1.1	Organics Prep	Natasha Torres	06/18/19 13:47	Extract from JC89914-10.1
JC89914-10.1.1	Extract Storage	Vincent Drago	06/18/19 15:13	Retrieve from Storage
JC89914-10.1.1	Vincent Drago	GC3G	06/18/19 15:13	Load on Instrument
JC89914-10.1.1	GC3G	Vincent Drago	06/28/19 16:57	Unload from Instrument
JC89914-10.1.1	Vincent Drago	Extract Freezer	06/28/19 17:14	Return to Storage

SGS Internal Chain of Custody

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 06/14/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC89914-10.1.2	Natasha Torres	Organics Prep	06/18/19 14:47	Extract from JC89914-10.1
JC89914-10.1.2	Organics Prep	Natasha Torres	06/19/19 08:13	Extract from JC89914-10.1
JC89914-10.1.2	Natasha Torres	Extract Storage	06/19/19 08:13	Return to Storage
JC89914-10.1.2	Extract Storage	Tianwei Ruan	06/19/19 16:31	Retrieve from Storage
JC89914-10.1.2	Tianwei Ruan	GCXX	06/19/19 16:31	Load on Instrument
JC89914-10.1.2	GCXX	Tianwei Ruan	07/12/19 10:58	Unload from Instrument
JC89914-10.1.2	Tianwei Ruan	Extract Freezer	07/12/19 10:59	Return to Storage
JC89914-10.1.3	Natasha Torres	Organics Prep	06/18/19 14:48	Extract from JC89914-10.1
JC89914-10.1.3	Organics Prep	Natasha Torres	06/19/19 08:14	Extract from JC89914-10.1
JC89914-10.1.3	Natasha Torres	Extract Storage	06/19/19 08:14	Return to Storage
JC89914-10.1.3	Extract Storage	Mailisi Heshuote	06/19/19 10:28	Retrieve from Storage
JC89914-10.1.3	Mailisi Heshuote	GC1G	06/19/19 10:28	Load on Instrument
JC89914-10.1.4	Natasha Torres	Organics Prep	06/19/19 07:49	Extract from JC89914-10.1
JC89914-10.1.4	Organics Prep	Chatiyah Canaday	06/19/19 12:37	Extract from JC89914-10.1
JC89914-10.1.4	Chatiyah Canaday	Extract Storage	06/19/19 12:37	Return to Storage
JC89914-10.1.4	Extract Storage	Angela Rastelli	06/19/19 16:42	Retrieve from Storage
JC89914-10.1.4	Angela Rastelli	GCMSZ	06/19/19 16:42	Load on Instrument
JC89914-10.1.4	GCMSZ	Angela Rastelli	06/20/19 09:56	Unload from Instrument
JC89914-10.1.4	Angela Rastelli	Extract Freezer	06/20/19 09:56	Return to Storage
JC89914-10.1.5	Tharun Murali	TCLP	06/19/19 12:08	Leachate from JC89914-10.1
JC89914-10.1.5	TCLP	Tharun Murali	06/21/19 15:51	Leachate from JC89914-10.1
JC89914-10.1.5	Tharun Murali	Secured Storage	06/21/19 15:58	Return to Storage
JC89914-10.2	Sahara Feliciano	Secured Storage	06/14/19 21:38	Return to Storage
JC89914-10.2	Secured Storage	Dwayne Johnson	06/18/19 12:00	Retrieve from Storage
JC89914-10.2	Dwayne Johnson	Secured Staging Area	06/18/19 12:00	Return to Storage
JC89914-10.2	Secured Staging Area	Moustafa Ramadan	06/18/19 16:01	Retrieve from Storage
JC89914-10.2	Moustafa Ramadan	Secured Storage	06/18/19 17:27	Return to Storage
JC89914-10.2	Secured Storage	Benjamin Gaines	06/19/19 10:23	Retrieve from Storage
JC89914-10.2	Benjamin Gaines	Secured Staging Area	06/19/19 10:23	Return to Storage
JC89914-10.2	Secured Staging Area	Benjamin Gaines	06/19/19 10:25	Retrieve from Storage
JC89914-10.2	Benjamin Gaines	Secured Storage	06/19/19 14:24	Return to Storage
JC89914-10.2	Secured Storage	Benjamin Gaines	06/19/19 15:08	Retrieve from Storage
JC89914-10.2	Benjamin Gaines	Secured Staging Area	06/19/19 15:08	Return to Storage
JC89914-10.2	Secured Staging Area	Courtney Dringus	06/20/19 08:25	Retrieve from Storage
JC89914-10.2	Courtney Dringus	Secured Storage	06/20/19 12:57	Return to Storage
JC89914-10.2	Secured Storage	Sahara Feliciano	07/05/19 15:06	Retrieve from Storage
JC89914-10.2	Sahara Feliciano	Secured Staging Area	07/05/19 15:06	Return to Storage
JC89914-10.2	Secured Staging Area	Natasha Torres	07/05/19 15:13	Retrieve from Storage
JC89914-10.2	Natasha Torres	Secured Storage	07/05/19 15:37	Return to Storage

SGS Internal Chain of Custody

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 06/14/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC89914-10.2.1	Moustafa Ramadan	Metals Digestion	06/18/19 16:11	Digestate from JC89914-10.2
JC89914-10.2.1	Metals Digestion	Moustafa Ramadan	06/18/19 16:11	Digestate from JC89914-10.2
JC89914-10.2.1	Moustafa Ramadan	Metals Digestate Storage	06/18/19 16:11	Return to Storage
JC89914-10.2.1	Metals Digestate Storage	Gulcag Temizau	06/20/19 08:12	Retrieve from Storage
JC89914-10.2.1	Gulcag Temizau	Metals Digestate Storage	06/20/19 08:13	Return to Storage
JC89914-10.2.2	Natasha Torres	Organics Prep	07/05/19 15:13	Extract from JC89914-10.2
JC89914-10.2.2	Organics Prep	Luis Jimenez	07/05/19 20:43	Extract from JC89914-10.2
JC89914-10.2.2	Luis Jimenez	Extract Storage	07/05/19 20:43	Return to Storage
JC89914-10.2.2	Extract Storage	Christopher Sowa	07/08/19 22:46	Retrieve from Storage
JC89914-10.2.2	Christopher Sowa	GCMS3P	07/08/19 22:46	Load on Instrument
JC89914-10.2.2	GCMS3P	Henny Salim	07/09/19 08:26	Unload from Instrument
JC89914-10.2.2	Henny Salim	Extract Freezer	07/09/19 08:26	Return to Storage
JC89914-11.1	Sahara Feliciano	Secured Storage	06/14/19 21:38	Return to Storage
JC89914-11.1	Secured Storage	Benjamin Gaines	06/17/19 17:02	Retrieve from Storage
JC89914-11.1	Benjamin Gaines	Secured Staging Area	06/17/19 17:02	Return to Storage
JC89914-11.1	Secured Staging Area	Natasha Torres	06/18/19 08:09	Retrieve from Storage
JC89914-11.1	Natasha Torres	Edouard Adrian Lee	06/18/19 09:45	Custody Transfer
JC89914-11.1	Edouard Adrian Lee	Secured Storage	06/18/19 13:59	Return to Storage
JC89914-11.1	Secured Storage	Todd Shoemaker	06/18/19 14:19	Retrieve from Storage
JC89914-11.1	Todd Shoemaker	Secured Staging Area	06/18/19 14:19	Return to Storage
JC89914-11.1	Secured Staging Area	Natasha Torres	06/18/19 14:43	Retrieve from Storage
JC89914-11.1	Natasha Torres	Sarah Halim	06/18/19 15:16	Custody Transfer
JC89914-11.1	Sarah Halim	Secured Storage	06/18/19 16:40	Return to Storage
JC89914-11.1	Secured Storage	Benjamin Gaines	06/18/19 17:21	Retrieve from Storage
JC89914-11.1	Benjamin Gaines	Secured Staging Area	06/18/19 17:22	Return to Storage
JC89914-11.1	Secured Staging Area	Natasha Torres	06/19/19 07:48	Retrieve from Storage
JC89914-11.1	Natasha Torres	Secured Storage	06/19/19 08:17	Return to Storage
JC89914-11.1	Secured Storage	Ruchitaben Chauhan	06/19/19 08:19	Retrieve from Storage
JC89914-11.1	Ruchitaben Chauhan	Tharun Murali	06/19/19 12:08	Custody Transfer
JC89914-11.1	Tharun Murali	Ruchitaben Chauhan	06/19/19 12:12	Custody Transfer
JC89914-11.1	Secured Storage	Benjamin Gaines	06/19/19 15:50	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC89914-11.1	Benjamin Gaines	Secured Staging Area	06/19/19 15:50	Return to Storage
JC89914-11.1	Secured Staging Area	Michelle Schmitz	06/20/19 09:25	Retrieve from Storage
JC89914-11.1	Michelle Schmitz	Secured Storage	06/20/19 11:02	Return to Storage
JC89914-11.1	Secured Storage	Sahara Feliciano	06/20/19 15:22	Retrieve from Storage
JC89914-11.1	Sahara Feliciano	Secured Staging Area	06/20/19 15:22	Return to Storage
JC89914-11.1	Secured Storage	Sahara Feliciano	06/20/19 15:23	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC89914-11.1	Sahara Feliciano	Secured Staging Area	06/20/19 15:23	Return to Storage
JC89914-11.1	Secured Staging Area	Courtney Dringus	06/21/19 10:25	Retrieve from Storage
JC89914-11.1	Courtney Dringus	Secured Storage	06/21/19 10:32	Return to Storage

SGS Internal Chain of Custody

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 06/14/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC89914-11.1.1	Natasha Torres	Organics Prep	06/18/19 08:09	Extract from JC89914-11.1
JC89914-11.1.1	Organics Prep	Natasha Torres	06/18/19 13:47	Extract from JC89914-11.1
JC89914-11.1.1	Natasha Torres	Extract Storage	06/18/19 13:47	Return to Storage
JC89914-11.1.1	Extract Storage	Vincent Drago	06/18/19 15:13	Retrieve from Storage
JC89914-11.1.1	Vincent Drago	GC3G	06/18/19 15:13	Load on Instrument
JC89914-11.1.1	GC3G	Vincent Drago	06/28/19 16:57	Unload from Instrument
JC89914-11.1.1	Vincent Drago	Extract Freezer	06/28/19 17:14	Return to Storage
JC89914-11.1.2	Natasha Torres	Organics Prep	06/18/19 14:47	Extract from JC89914-11.1
JC89914-11.1.2	Organics Prep	Natasha Torres	06/19/19 08:13	Extract from JC89914-11.1
JC89914-11.1.2	Natasha Torres	Extract Storage	06/19/19 08:13	Return to Storage
JC89914-11.1.2	Extract Storage	Tianwei Ruan	06/19/19 16:31	Retrieve from Storage
JC89914-11.1.2	Tianwei Ruan	GCXX	06/19/19 16:31	Load on Instrument
JC89914-11.1.2	GCXX	Tianwei Ruan	07/12/19 10:58	Unload from Instrument
JC89914-11.1.2	Tianwei Ruan	Extract Freezer	07/12/19 10:59	Return to Storage
JC89914-11.1.3	Natasha Torres	Organics Prep	06/18/19 14:48	Extract from JC89914-11.1
JC89914-11.1.3	Organics Prep	Natasha Torres	06/19/19 08:14	Extract from JC89914-11.1
JC89914-11.1.3	Natasha Torres	Extract Storage	06/19/19 08:14	Return to Storage
JC89914-11.1.3	Extract Storage	Mailisi Heshuote	06/19/19 10:28	Retrieve from Storage
JC89914-11.1.3	Mailisi Heshuote	GC1G	06/19/19 10:28	Load on Instrument
JC89914-11.1.4	Natasha Torres	Organics Prep	06/19/19 07:49	Extract from JC89914-11.1
JC89914-11.1.4	Organics Prep	Chatiyah Canaday	06/19/19 12:37	Extract from JC89914-11.1
JC89914-11.1.4	Chatiyah Canaday	Extract Storage	06/19/19 12:37	Return to Storage
JC89914-11.1.4	Extract Storage	Angela Rastelli	06/19/19 16:42	Retrieve from Storage
JC89914-11.1.4	Angela Rastelli	GCMSZ	06/19/19 16:42	Load on Instrument
JC89914-11.1.4	GCMSZ	Angela Rastelli	06/20/19 09:56	Unload from Instrument
JC89914-11.1.4	Angela Rastelli	Extract Freezer	06/20/19 09:56	Return to Storage
JC89914-11.1.5	Tharun Murali	TCLP	06/19/19 12:08	Leachate from JC89914-11.1
JC89914-11.1.5	TCLP	Tharun Murali	06/21/19 15:51	Leachate from JC89914-11.1
JC89914-11.1.5	Tharun Murali	Secured Storage	06/21/19 15:58	Return to Storage
JC89914-11.2	Sahara Feliciano	Secured Storage	06/14/19 21:38	Return to Storage
JC89914-11.2	Secured Storage	Dwayne Johnson	06/18/19 12:00	Retrieve from Storage
JC89914-11.2	Dwayne Johnson	Secured Staging Area	06/18/19 12:00	Return to Storage
JC89914-11.2	Secured Staging Area	Moustafa Ramadan	06/18/19 16:01	Retrieve from Storage
JC89914-11.2	Moustafa Ramadan	Secured Storage	06/18/19 17:27	Return to Storage
JC89914-11.2	Secured Storage	Benjamin Gaines	06/19/19 10:23	Retrieve from Storage
JC89914-11.2	Benjamin Gaines	Secured Staging Area	06/19/19 10:23	Return to Storage
JC89914-11.2	Secured Staging Area	Benjamin Gaines	06/19/19 10:25	Retrieve from Storage
JC89914-11.2	Benjamin Gaines	Secured Storage	06/19/19 14:24	Return to Storage

SGS Internal Chain of Custody

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 06/14/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC89914-11.2	Secured Storage	Benjamin Gaines	06/19/19 15:08	Retrieve from Storage
JC89914-11.2	Benjamin Gaines	Secured Staging Area	06/19/19 15:08	Return to Storage
JC89914-11.2	Secured Staging Area	Courtney Dringus	06/20/19 08:25	Retrieve from Storage
JC89914-11.2	Courtney Dringus	Secured Storage	06/20/19 12:57	Return to Storage
JC89914-11.2	Secured Storage	Sahara Feliciano	07/05/19 15:06	Retrieve from Storage
JC89914-11.2	Sahara Feliciano	Secured Staging Area	07/05/19 15:06	Return to Storage
JC89914-11.2	Secured Staging Area	Natasha Torres	07/05/19 15:13	Retrieve from Storage
JC89914-11.2	Natasha Torres	Secured Storage	07/05/19 15:37	Return to Storage
JC89914-11.2.1	Moustafa Ramadan	Metals Digestion	06/18/19 16:11	Digestate from JC89914-11.2
JC89914-11.2.1	Metals Digestion	Moustafa Ramadan	06/18/19 16:11	Digestate from JC89914-11.2
JC89914-11.2.1	Moustafa Ramadan	Metals Digestate Storage	06/18/19 16:11	Return to Storage
JC89914-11.2.1	Metals Digestate Storage	Gulcag Temizau	06/20/19 08:12	Retrieve from Storage
JC89914-11.2.1	Gulcag Temizau	Metals Digestate Storage	06/20/19 08:13	Return to Storage
JC89914-11.2.2	Natasha Torres	Organics Prep	07/05/19 15:13	Extract from JC89914-11.2
JC89914-11.2.2	Organics Prep	Luis Jimenez	07/05/19 20:43	Extract from JC89914-11.2
JC89914-11.2.2	Luis Jimenez	Extract Storage	07/05/19 20:43	Return to Storage
JC89914-11.2.2	Extract Storage	Christopher Sowa	07/08/19 22:46	Retrieve from Storage
JC89914-11.2.2	Christopher Sowa	GCMS3P	07/08/19 22:46	Load on Instrument
JC89914-11.2.2	GCMS3P	Henny Salim	07/09/19 08:26	Unload from Instrument
JC89914-11.2.2	Henny Salim	Extract Freezer	07/09/19 08:26	Return to Storage
JC89914-12.1	Sahara Feliciano	Secured Storage	06/14/19 21:38	Return to Storage
JC89914-12.1	Secured Storage	Benjamin Gaines	06/17/19 17:02	Retrieve from Storage
JC89914-12.1	Benjamin Gaines	Secured Staging Area	06/17/19 17:02	Return to Storage
JC89914-12.1	Secured Staging Area	Natasha Torres	06/18/19 08:09	Retrieve from Storage
JC89914-12.1	Natasha Torres	Edouard Adrian Lee	06/18/19 09:45	Custody Transfer
JC89914-12.1	Edouard Adrian Lee	Secured Storage	06/18/19 13:59	Return to Storage
JC89914-12.1	Secured Storage	Todd Shoemaker	06/18/19 14:19	Retrieve from Storage
JC89914-12.1	Todd Shoemaker	Secured Staging Area	06/18/19 14:19	Return to Storage
JC89914-12.1	Secured Staging Area	Natasha Torres	06/18/19 14:43	Retrieve from Storage
JC89914-12.1	Natasha Torres	Sarah Halim	06/18/19 15:16	Custody Transfer
JC89914-12.1	Sarah Halim	Secured Storage	06/18/19 16:40	Return to Storage
JC89914-12.1	Secured Storage	Benjamin Gaines	06/18/19 17:21	Retrieve from Storage
JC89914-12.1	Benjamin Gaines	Secured Staging Area	06/18/19 17:22	Return to Storage
JC89914-12.1	Secured Staging Area	Natasha Torres	06/19/19 07:48	Retrieve from Storage
JC89914-12.1	Natasha Torres	Secured Storage	06/19/19 08:17	Return to Storage
JC89914-12.1	Secured Storage	Ruchitaben Chauhan	06/19/19 08:19	Retrieve from Storage
JC89914-12.1	Ruchitaben Chauhan	Tharun Murali	06/19/19 12:08	Custody Transfer
JC89914-12.1	Tharun Murali	Ruchitaben Chauhan	06/19/19 12:12	Custody Transfer
JC89914-12.1	Secured Storage	Benjamin Gaines	06/19/19 15:50	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC89914-12.1	Benjamin Gaines	Secured Staging Area	06/19/19 15:50	Return to Storage

SGS Internal Chain of Custody

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 06/14/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC89914-12.1	Secured Staging Area	Michelle Schmitz	06/20/19 09:25	Retrieve from Storage
JC89914-12.1	Michelle Schmitz	Secured Storage	06/20/19 11:02	Return to Storage
JC89914-12.1	Secured Storage	Sahara Feliciano	06/20/19 15:23	Retrieve from Storage
JC89914-12.1	Sahara Feliciano	Secured Staging Area	06/20/19 15:23	Return to Storage
JC89914-12.1	Secured Staging Area	Courtney Dringus	06/21/19 10:25	Retrieve from Storage
JC89914-12.1	Courtney Dringus	Secured Storage	06/21/19 10:32	Return to Storage
JC89914-12.1.1	Natasha Torres	Organics Prep	06/18/19 08:09	Extract from JC89914-12.1
JC89914-12.1.1	Organics Prep	Natasha Torres	06/18/19 13:47	Extract from JC89914-12.1
JC89914-12.1.1	Natasha Torres	Extract Storage	06/18/19 13:47	Return to Storage
JC89914-12.1.1	Extract Storage	Vincent Drago	06/18/19 15:13	Retrieve from Storage
JC89914-12.1.1	Vincent Drago	GC3G	06/18/19 15:13	Load on Instrument
JC89914-12.1.1	GC3G	Vincent Drago	06/28/19 16:57	Unload from Instrument
JC89914-12.1.1	Vincent Drago	Extract Freezer	06/28/19 17:14	Return to Storage
JC89914-12.1.2	Natasha Torres	Organics Prep	06/18/19 14:47	Extract from JC89914-12.1
JC89914-12.1.2	Organics Prep	Natasha Torres	06/19/19 08:13	Extract from JC89914-12.1
JC89914-12.1.2	Natasha Torres	Extract Storage	06/19/19 08:13	Return to Storage
JC89914-12.1.2	Extract Storage	Tianwei Ruan	06/19/19 16:31	Retrieve from Storage
JC89914-12.1.2	Tianwei Ruan	GCXX	06/19/19 16:31	Load on Instrument
JC89914-12.1.2	GCXX	Tianwei Ruan	07/12/19 10:58	Unload from Instrument
JC89914-12.1.2	Tianwei Ruan	Extract Freezer	07/12/19 10:59	Return to Storage
JC89914-12.1.3	Natasha Torres	Organics Prep	06/18/19 14:48	Extract from JC89914-12.1
JC89914-12.1.3	Organics Prep	Natasha Torres	06/19/19 08:14	Extract from JC89914-12.1
JC89914-12.1.3	Natasha Torres	Extract Storage	06/19/19 08:14	Return to Storage
JC89914-12.1.3	Extract Storage	Mailisi Heshuote	06/19/19 10:28	Retrieve from Storage
JC89914-12.1.3	Mailisi Heshuote	GC1G	06/19/19 10:28	Load on Instrument
JC89914-12.1.4	Natasha Torres	Organics Prep	06/19/19 07:49	Extract from JC89914-12.1
JC89914-12.1.4	Organics Prep	Chatiyah Canaday	06/19/19 12:37	Extract from JC89914-12.1
JC89914-12.1.4	Chatiyah Canaday	Extract Storage	06/19/19 12:37	Return to Storage
JC89914-12.1.4	Extract Storage	Angela Rastelli	06/19/19 16:42	Retrieve from Storage
JC89914-12.1.4	Angela Rastelli	GCMSZ	06/19/19 16:42	Load on Instrument
JC89914-12.1.4	GCMSZ	Angela Rastelli	06/20/19 09:56	Unload from Instrument
JC89914-12.1.4	Angela Rastelli	Extract Freezer	06/20/19 09:56	Return to Storage
JC89914-12.1.5	Tharun Murali	TCLP	06/19/19 12:08	Leachate from JC89914-12.1
JC89914-12.1.5	TCLP	Tharun Murali	06/21/19 15:47	Leachate from JC89914-12.1
JC89914-12.1.5	Tharun Murali	Secured Storage	06/21/19 15:48	Return to Storage
JC89914-12.2	Sahara Feliciano	Secured Storage	06/14/19 21:38	Return to Storage
JC89914-12.2	Secured Storage	Dwayne Johnson	06/18/19 12:00	Retrieve from Storage
JC89914-12.2	Dwayne Johnson	Secured Staging Area	06/18/19 12:00	Return to Storage

SGS Internal Chain of Custody

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Received: 06/14/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC89914-12.2	Secured Staging Area	Moustafa Ramadan	06/18/19 16:01	Retrieve from Storage
JC89914-12.2	Moustafa Ramadan	Secured Storage	06/18/19 17:27	Return to Storage
JC89914-12.2	Secured Storage	Benjamin Gaines	06/19/19 10:23	Retrieve from Storage
JC89914-12.2	Benjamin Gaines	Secured Staging Area	06/19/19 10:23	Return to Storage
JC89914-12.2	Secured Staging Area	Benjamin Gaines	06/19/19 10:25	Retrieve from Storage
JC89914-12.2	Benjamin Gaines	Secured Storage	06/19/19 14:24	Return to Storage
JC89914-12.2	Secured Storage	Benjamin Gaines	06/19/19 15:08	Retrieve from Storage
JC89914-12.2	Benjamin Gaines	Secured Staging Area	06/19/19 15:08	Return to Storage
JC89914-12.2	Secured Staging Area	Courtney Dringus	06/20/19 08:25	Retrieve from Storage
JC89914-12.2	Courtney Dringus	Secured Storage	06/20/19 12:57	Return to Storage
JC89914-12.2	Secured Storage	Sahara Feliciano	07/05/19 15:06	Retrieve from Storage
JC89914-12.2	Sahara Feliciano	Secured Staging Area	07/05/19 15:06	Return to Storage
JC89914-12.2	Secured Staging Area	Natasha Torres	07/05/19 15:13	Retrieve from Storage
JC89914-12.2	Natasha Torres	Secured Storage	07/05/19 15:37	Return to Storage
JC89914-12.2.1	Natasha Torres	Organics Prep	07/05/19 15:13	Extract from JC89914-12.2
JC89914-12.2.1	Organics Prep	Luis Jimenez	07/05/19 20:43	Extract from JC89914-12.2
JC89914-12.2.1	Luis Jimenez	Extract Storage	07/05/19 20:43	Return to Storage
JC89914-12.2.1	Extract Storage	Christopher Sowa	07/08/19 22:46	Retrieve from Storage
JC89914-12.2.1	Christopher Sowa	GCMS3P	07/08/19 22:46	Load on Instrument
JC89914-12.2.1	GCMS3P	Henny Salim	07/09/19 08:26	Unload from Instrument
JC89914-12.2.1	Henny Salim	Extract Freezer	07/09/19 08:26	Return to Storage

QC Evaluation: DOD QSM5 Limits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V1C7250	SW846 8260C						
V1C7250-BS	67-64-1	Acetone	BSP	REC	94	%	36-164
V1C7250-BS	71-43-2	Benzene	BSP	REC	93	%	77-121
V1C7250-BS	78-93-3	2-Butanone (MEK)	BSP	REC	96	%	51-148
V1C7250-BS	104-51-8	n-Butylbenzene	BSP	REC	101	%	70-128
V1C7250-BS	135-98-8	sec-Butylbenzene	BSP	REC	99	%	73-126
V1C7250-BS	98-06-6	tert-Butylbenzene	BSP	REC	102	%	73-125
V1C7250-BS	56-23-5	Carbon tetrachloride	BSP	REC	102	%	70-135
V1C7250-BS	108-90-7	Chlorobenzene	BSP	REC	99	%	79-120
V1C7250-BS	67-66-3	Chloroform	BSP	REC	91	%	78-123
V1C7250-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	100	%	78-121
V1C7250-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	99	%	77-121
V1C7250-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	100	%	75-120
V1C7250-BS	75-34-3	1,1-Dichloroethane	BSP	REC	94	%	76-125
V1C7250-BS	107-06-2	1,2-Dichloroethane	BSP	REC	94	%	73-128
V1C7250-BS	75-35-4	1,1-Dichloroethene	BSP	REC	93	%	70-131
V1C7250-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	91	%	77-123
V1C7250-BS	156-60-5	trans-1,2-Dichloroethene	BSP	REC	91	%	74-125
V1C7250-BS	123-91-1	1,4-Dioxane	BSP	REC	105	%	55-138
V1C7250-BS	100-41-4	Ethylbenzene	BSP	REC	95	%	76-122
V1C7250-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	94	%	73-125
V1C7250-BS	75-09-2	Methylene chloride	BSP	REC	92	%	70-128
V1C7250-BS	103-65-1	n-Propylbenzene	BSP	REC	99	%	73-125
V1C7250-BS	127-18-4	Tetrachloroethene	BSP	REC	101	%	73-128
V1C7250-BS	108-88-3	Toluene	BSP	REC	94	%	77-121
V1C7250-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	101	%	73-130
V1C7250-BS	79-01-6	Trichloroethene	BSP	REC	100	%	77-123
V1C7250-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	97	%	75-123
V1C7250-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	99	%	73-124
V1C7250-BS	75-01-4	Vinyl chloride	BSP	REC	107	%	56-135
V1C7250-BS		m,p-Xylene	BSP	REC	98	%	77-124
V1C7250-BS	95-47-6	o-Xylene	BSP	REC	100	%	77-123
V1C7250-BS	1330-20-7	Xylene (total)	BSP	REC	99	%	78-124
V1C7250-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	100	%	78-119
V1C7250-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	103	%	71-136
V1C7250-BS	2037-26-5	Toluene-D8	BSP	SURR	104	%	85-116
V1C7250-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	95	%	79-119
JC89881-1MS*	67-64-1	Acetone	MS	REC	59	%	36-164
JC89881-1MS*	71-43-2	Benzene	MS	REC	79	%	77-121
JC89881-1MS*	78-93-3	2-Butanone (MEK)	MS	REC	71	%	51-148
JC89881-1MS*	104-51-8	n-Butylbenzene	MS	REC	44	%	70-128
JC89881-1MS*	135-98-8	sec-Butylbenzene	MS	REC	52	%	73-126
JC89881-1MS*	98-06-6	tert-Butylbenzene	MS	REC	63	%	73-125

* Sample used for QC is not from job JC89914

QC Evaluation: DOD QSM5 Limits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC89881-1MS*	56-23-5	Carbon tetrachloride	MS	REC	81	%	70-135
JC89881-1MS*	108-90-7	Chlorobenzene	MS	REC	76	%	79-120
JC89881-1MS*	67-66-3	Chloroform	MS	REC	78	%	78-123
JC89881-1MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	65	%	78-121
JC89881-1MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	62	%	77-121
JC89881-1MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	63	%	75-120
JC89881-1MS*	75-34-3	1,1-Dichloroethane	MS	REC	85	%	76-125
JC89881-1MS*	107-06-2	1,2-Dichloroethane	MS	REC	76	%	73-128
JC89881-1MS*	75-35-4	1,1-Dichloroethene	MS	REC	83	%	70-131
JC89881-1MS*	156-59-2	cis-1,2-Dichloroethene	MS	REC	81	%	77-123
JC89881-1MS*	156-60-5	trans-1,2-Dichloroethene	MS	REC	80	%	74-125
JC89881-1MS*	123-91-1	1,4-Dioxane	MS	REC	101	%	55-138
JC89881-1MS*	100-41-4	Ethylbenzene	MS	REC	71	%	76-122
JC89881-1MS*	1634-04-4	Methyl Tert Butyl Ether	MS	REC	78	%	73-125
JC89881-1MS*	75-09-2	Methylene chloride	MS	REC	83	%	70-128
JC89881-1MS*	103-65-1	n-Propylbenzene	MS	REC	61	%	73-125
JC89881-1MS*	127-18-4	Tetrachloroethene	MS	REC	71	%	73-128
JC89881-1MS*	108-88-3	Toluene	MS	REC	77	%	77-121
JC89881-1MS*	71-55-6	1,1,1-Trichloroethane	MS	REC	83	%	73-130
JC89881-1MS*	79-01-6	Trichloroethene	MS	REC	91	%	77-123
JC89881-1MS*	95-63-6	1,2,4-Trimethylbenzene	MS	REC	60	%	75-123
JC89881-1MS*	108-67-8	1,3,5-Trimethylbenzene	MS	REC	61	%	73-124
JC89881-1MS*	75-01-4	Vinyl chloride	MS	REC	88	%	56-135
JC89881-1MS*		m,p-Xylene	MS	REC	72	%	77-124
JC89881-1MS*	95-47-6	o-Xylene	MS	REC	75	%	77-123
JC89881-1MS*	1330-20-7	Xylene (total)	MS	REC	73	%	78-124
JC89881-1MS*	1868-53-7	Dibromofluoromethane	MS	SURR	100	%	78-119
JC89881-1MS*	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	92	%	71-136
JC89881-1MS*	2037-26-5	Toluene-D8	MS	SURR	104	%	85-116
JC89881-1MS*	460-00-4	4-Bromofluorobenzene	MS	SURR	97	%	79-119
JC89881-1MSD*	67-64-1	Acetone	MSD	REC	59	%	36-164
JC89881-1MSD*	67-64-1	Acetone	MSD	RPD	3	%	20
JC89881-1MSD*	71-43-2	Benzene	MSD	REC	77	%	77-121
JC89881-1MSD*	71-43-2	Benzene	MSD	RPD	4	%	20
JC89881-1MSD*	78-93-3	2-Butanone (MEK)	MSD	REC	70	%	51-148
JC89881-1MSD*	78-93-3	2-Butanone (MEK)	MSD	RPD	3	%	20
JC89881-1MSD*	104-51-8	n-Butylbenzene	MSD	REC	43	%	70-128
JC89881-1MSD*	104-51-8	n-Butylbenzene	MSD	RPD	6	%	20
JC89881-1MSD*	135-98-8	sec-Butylbenzene	MSD	REC	50	%	73-126
JC89881-1MSD*	135-98-8	sec-Butylbenzene	MSD	RPD	7	%	20
JC89881-1MSD*	98-06-6	tert-Butylbenzene	MSD	REC	59	%	73-125
JC89881-1MSD*	98-06-6	tert-Butylbenzene	MSD	RPD	9	%	20
JC89881-1MSD*	56-23-5	Carbon tetrachloride	MSD	REC	77	%	70-135
JC89881-1MSD*	56-23-5	Carbon tetrachloride	MSD	RPD	7	%	20
JC89881-1MSD*	108-90-7	Chlorobenzene	MSD	REC	73	%	79-120

* Sample used for QC is not from job JC89914

QC Evaluation: DOD QSM5 Limits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC89881-1MSD*	108-90-7	Chlorobenzene	MSD	RPD	6	%	20
JC89881-1MSD*	67-66-3	Chloroform	MSD	REC	76	%	78-123
JC89881-1MSD*	67-66-3	Chloroform	MSD	RPD	5	%	20
JC89881-1MSD*	95-50-1	1,2-Dichlorobenzene	MSD	REC	63	%	78-121
JC89881-1MSD*	95-50-1	1,2-Dichlorobenzene	MSD	RPD	5	%	20
JC89881-1MSD*	541-73-1	1,3-Dichlorobenzene	MSD	REC	60	%	77-121
JC89881-1MSD*	541-73-1	1,3-Dichlorobenzene	MSD	RPD	5	%	20
JC89881-1MSD*	106-46-7	1,4-Dichlorobenzene	MSD	REC	59	%	75-120
JC89881-1MSD*	106-46-7	1,4-Dichlorobenzene	MSD	RPD	8	%	20
JC89881-1MSD*	75-34-3	1,1-Dichloroethane	MSD	REC	83	%	76-125
JC89881-1MSD*	75-34-3	1,1-Dichloroethane	MSD	RPD	4	%	20
JC89881-1MSD*	107-06-2	1,2-Dichloroethane	MSD	REC	74	%	73-128
JC89881-1MSD*	107-06-2	1,2-Dichloroethane	MSD	RPD	5	%	20
JC89881-1MSD*	75-35-4	1,1-Dichloroethene	MSD	REC	81	%	70-131
JC89881-1MSD*	75-35-4	1,1-Dichloroethene	MSD	RPD	5	%	20
JC89881-1MSD*	156-59-2	cis-1,2-Dichloroethene	MSD	REC	80	%	77-123
JC89881-1MSD*	156-59-2	cis-1,2-Dichloroethene	MSD	RPD	3	%	20
JC89881-1MSD*	156-60-5	trans-1,2-Dichloroethene	MSD	REC	80	%	74-125
JC89881-1MSD*	156-60-5	trans-1,2-Dichloroethene	MSD	RPD	3	%	20
JC89881-1MSD*	123-91-1	1,4-Dioxane	MSD	REC	104	%	55-138
JC89881-1MSD*	123-91-1	1,4-Dioxane	MSD	RPD	1	%	20
JC89881-1MSD*	100-41-4	Ethylbenzene	MSD	REC	67	%	76-122
JC89881-1MSD*	100-41-4	Ethylbenzene	MSD	RPD	7	%	20
JC89881-1MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	78	%	73-125
JC89881-1MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	2	%	20
JC89881-1MSD*	75-09-2	Methylene chloride	MSD	REC	84	%	70-128
JC89881-1MSD*	75-09-2	Methylene chloride	MSD	RPD	1	%	20
JC89881-1MSD*	103-65-1	n-Propylbenzene	MSD	REC	59	%	73-125
JC89881-1MSD*	103-65-1	n-Propylbenzene	MSD	RPD	7	%	20
JC89881-1MSD*	127-18-4	Tetrachloroethene	MSD	REC	69	%	73-128
JC89881-1MSD*	127-18-4	Tetrachloroethene	MSD	RPD	5	%	20
JC89881-1MSD*	108-88-3	Toluene	MSD	REC	75	%	77-121
JC89881-1MSD*	108-88-3	Toluene	MSD	RPD	4	%	20
JC89881-1MSD*	71-55-6	1,1,1-Trichloroethane	MSD	REC	78	%	73-130
JC89881-1MSD*	71-55-6	1,1,1-Trichloroethane	MSD	RPD	7	%	20
JC89881-1MSD*	79-01-6	Trichloroethene	MSD	REC	89	%	77-123
JC89881-1MSD*	79-01-6	Trichloroethene	MSD	RPD	4	%	20
JC89881-1MSD*	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	57	%	75-123
JC89881-1MSD*	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	8	%	20
JC89881-1MSD*	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	58	%	73-124
JC89881-1MSD*	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	7	%	20
JC89881-1MSD*	75-01-4	Vinyl chloride	MSD	REC	88	%	56-135
JC89881-1MSD*	75-01-4	Vinyl chloride	MSD	RPD	2	%	20
JC89881-1MSD*		m,p-Xylene	MSD	REC	68	%	77-124
JC89881-1MSD*		m,p-Xylene	MSD	RPD	8	%	20

* Sample used for QC is not from job JC89914

QC Evaluation: DOD QSM5 Limits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC89881-1MSD*	95-47-6	o-Xylene	MSD	REC	72	%	77-123
JC89881-1MSD*	95-47-6	o-Xylene	MSD	RPD	7	%	20
JC89881-1MSD*	1330-20-7	Xylene (total)	MSD	REC	69	%	78-124
JC89881-1MSD*	1330-20-7	Xylene (total)	MSD	RPD	8	%	20
JC89881-1MSD*	1868-53-7	Dibromofluoromethane	MSD	SURR	100	%	78-119
JC89881-1MSD*	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	91	%	71-136
JC89881-1MSD*	2037-26-5	Toluene-D8	MSD	SURR	104	%	85-116
JC89881-1MSD*	460-00-4	4-Bromofluorobenzene	MSD	SURR	97	%	79-119
V1C7250-MB	1868-53-7	Dibromofluoromethane	MB	SURR	102	%	78-119
V1C7250-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	106	%	71-136
V1C7250-MB	2037-26-5	Toluene-D8	MB	SURR	103	%	85-116
V1C7250-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	95	%	79-119
JC89914-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	107	%	78-119
JC89914-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	112	%	71-136
JC89914-1	2037-26-5	Toluene-D8	SAMP	SURR	103	%	85-116
JC89914-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	79-119
JC89914-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	105	%	78-119
JC89914-2	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	112	%	71-136
JC89914-2	2037-26-5	Toluene-D8	SAMP	SURR	102	%	85-116
JC89914-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	100	%	79-119
JC89914-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	78-119
JC89914-3	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	111	%	71-136
JC89914-3	2037-26-5	Toluene-D8	SAMP	SURR	103	%	85-116
JC89914-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	79-119
JC89914-4	1868-53-7	Dibromofluoromethane	SAMP	SURR	105	%	78-119
JC89914-4	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	112	%	71-136
JC89914-4	2037-26-5	Toluene-D8	SAMP	SURR	106	%	85-116
JC89914-4	460-00-4	4-Bromofluorobenzene	SAMP	SURR	101	%	79-119
JC89914-5	1868-53-7	Dibromofluoromethane	SAMP	SURR	106	%	78-119
JC89914-5	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	113	%	71-136
JC89914-5	2037-26-5	Toluene-D8	SAMP	SURR	103	%	85-116
JC89914-5	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	79-119
JC89914-6	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	78-119
JC89914-6	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	111	%	71-136
JC89914-6	2037-26-5	Toluene-D8	SAMP	SURR	104	%	85-116
JC89914-6	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	79-119
JC89914-7	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	78-119
JC89914-7	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	113	%	71-136
JC89914-7	2037-26-5	Toluene-D8	SAMP	SURR	103	%	85-116
JC89914-7	460-00-4	4-Bromofluorobenzene	SAMP	SURR	100	%	79-119
JC89914-8	1868-53-7	Dibromofluoromethane	SAMP	SURR	105	%	78-119
JC89914-8	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	114	%	71-136
JC89914-8	2037-26-5	Toluene-D8	SAMP	SURR	103	%	85-116
JC89914-8	460-00-4	4-Bromofluorobenzene	SAMP	SURR	95	%	79-119

* Sample used for QC is not from job JC89914

QC Evaluation: DOD QSM5 Limits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP21103	SW846 8270D						
OP21103-BS1	95-48-7	2-Methylphenol	BSP	REC	61	%	32-122
OP21103-BS1		3&4-Methylphenol	BSP	REC	62	%	34-119
OP21103-BS1	87-86-5	Pentachlorophenol	BSP	REC	72	%	25-133
OP21103-BS1	108-95-2	Phenol	BSP	REC	59	%	34-121
OP21103-BS1	83-32-9	Acenaphthene	BSP	REC	54	%	40-123
OP21103-BS1	208-96-8	Acenaphthylene	BSP	REC	55	%	32-132
OP21103-BS1	120-12-7	Anthracene	BSP	REC	61	%	47-123
OP21103-BS1	56-55-3	Benzo(a)anthracene	BSP	REC	68	%	49-126
OP21103-BS1	50-32-8	Benzo(a)pyrene	BSP	REC	61	%	45-129
OP21103-BS1	205-99-2	Benzo(b)fluoranthene	BSP	REC	61	%	45-132
OP21103-BS1	191-24-2	Benzo(g,h,i)perylene	BSP	REC	57	%	43-134
OP21103-BS1	207-08-9	Benzo(k)fluoranthene	BSP	REC	64	%	47-132
OP21103-BS1	218-01-9	Chrysene	BSP	REC	63	%	50-124
OP21103-BS1	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	57	%	45-134
OP21103-BS1	132-64-9	Dibenzofuran	BSP	REC	58	%	44-120
OP21103-BS1	206-44-0	Fluoranthene	BSP	REC	65	%	50-127
OP21103-BS1	86-73-7	Fluorene	BSP	REC	60	%	43-125
OP21103-BS1	118-74-1	Hexachlorobenzene	BSP	REC	62	%	45-122
OP21103-BS1	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	69	%	45-133
OP21103-BS1	91-20-3	Naphthalene	BSP	REC	58	%	35-123
OP21103-BS1	85-01-8	Phenanthrene	BSP	REC	60	%	50-121
OP21103-BS1	129-00-0	Pyrene	BSP	REC	70	%	47-127
OP21103-BS1	367-12-4	2-Fluorophenol	BSP	SURR	55	%	35-115
OP21103-BS1	4165-62-2	Phenol-d5	BSP	SURR	59	%	33-122
OP21103-BS1	118-79-6	2,4,6-Tribromophenol	BSP	SURR	67	%	39-132
OP21103-BS1	4165-60-0	Nitrobenzene-d5	BSP	SURR	60	%	37-122
OP21103-BS1	321-60-8	2-Fluorobiphenyl	BSP	SURR	54	%	44-115
OP21103-BS1	1718-51-0	Terphenyl-d14	BSP	SURR	79	%	54-127
OP21103-MS	95-48-7	2-Methylphenol	MS	REC	72	%	32-122
OP21103-MS		3&4-Methylphenol	MS	REC	73	%	34-119
OP21103-MS	87-86-5	Pentachlorophenol	MS	REC	90	%	25-133
OP21103-MS	108-95-2	Phenol	MS	REC	71	%	34-121
OP21103-MS	83-32-9	Acenaphthene	MS	REC	67	%	40-123
OP21103-MS	208-96-8	Acenaphthylene	MS	REC	69	%	32-132
OP21103-MS	120-12-7	Anthracene	MS	REC	77	%	47-123
OP21103-MS	56-55-3	Benzo(a)anthracene	MS	REC	84	%	49-126
OP21103-MS	50-32-8	Benzo(a)pyrene	MS	REC	80	%	45-129
OP21103-MS	205-99-2	Benzo(b)fluoranthene	MS	REC	80	%	45-132
OP21103-MS	191-24-2	Benzo(g,h,i)perylene	MS	REC	83	%	43-134
OP21103-MS	207-08-9	Benzo(k)fluoranthene	MS	REC	78	%	47-132
OP21103-MS	218-01-9	Chrysene	MS	REC	77	%	50-124
OP21103-MS	53-70-3	Dibenzo(a,h)anthracene	MS	REC	84	%	45-134

* Sample used for QC is not from job JC89914

QC Evaluation: DOD QSM5 Limits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP21103-MS	132-64-9	Dibenzofuran	MS	REC	72	%	44-120
OP21103-MS	206-44-0	Fluoranthene	MS	REC	76	%	50-127
OP21103-MS	86-73-7	Fluorene	MS	REC	75	%	43-125
OP21103-MS	118-74-1	Hexachlorobenzene	MS	REC	79	%	45-122
OP21103-MS	193-39-5	Indeno(1,2,3-cd)pyrene	MS	REC	99	%	45-133
OP21103-MS	91-20-3	Naphthalene	MS	REC	69	%	35-123
OP21103-MS	85-01-8	Phenanthrene	MS	REC	75	%	50-121
OP21103-MS	129-00-0	Pyrene	MS	REC	89	%	47-127
OP21103-MS	367-12-4	2-Fluorophenol	MS	SURR	63	%	35-115
OP21103-MS	4165-62-2	Phenol-d5	MS	SURR	71	%	33-122
OP21103-MS	118-79-6	2,4,6-Tribromophenol	MS	SURR	88	%	39-132
OP21103-MS	4165-60-0	Nitrobenzene-d5	MS	SURR	72	%	37-122
OP21103-MS	321-60-8	2-Fluorobiphenyl	MS	SURR	69	%	44-115
OP21103-MS	1718-51-0	Terphenyl-d14	MS	SURR	100	%	54-127
OP21103-MSD	95-48-7	2-Methylphenol	MSD	REC	58	%	32-122
OP21103-MSD	95-48-7	2-Methylphenol	MSD	RPD	25 [a]	%	20
OP21103-MSD		3&4-Methylphenol	MSD	REC	59	%	34-119
OP21103-MSD		3&4-Methylphenol	MSD	RPD	25 [a]	%	20
OP21103-MSD	87-86-5	Pentachlorophenol	MSD	REC	67	%	25-133
OP21103-MSD	87-86-5	Pentachlorophenol	MSD	RPD	32 [a]	%	20
OP21103-MSD	108-95-2	Phenol	MSD	REC	57	%	34-121
OP21103-MSD	108-95-2	Phenol	MSD	RPD	24 [a]	%	20
OP21103-MSD	83-32-9	Acenaphthene	MSD	REC	54	%	40-123
OP21103-MSD	83-32-9	Acenaphthene	MSD	RPD	25 [a]	%	20
OP21103-MSD	208-96-8	Acenaphthylene	MSD	REC	55	%	32-132
OP21103-MSD	208-96-8	Acenaphthylene	MSD	RPD	25 [a]	%	20
OP21103-MSD	120-12-7	Anthracene	MSD	REC	60	%	47-123
OP21103-MSD	120-12-7	Anthracene	MSD	RPD	27 [a]	%	20
OP21103-MSD	56-55-3	Benzo(a)anthracene	MSD	REC	63	%	49-126
OP21103-MSD	56-55-3	Benzo(a)anthracene	MSD	RPD	26 [a]	%	20
OP21103-MSD	50-32-8	Benzo(a)pyrene	MSD	REC	59	%	45-129
OP21103-MSD	50-32-8	Benzo(a)pyrene	MSD	RPD	29 [a]	%	20
OP21103-MSD	205-99-2	Benzo(b)fluoranthene	MSD	REC	57	%	45-132
OP21103-MSD	205-99-2	Benzo(b)fluoranthene	MSD	RPD	30 [a]	%	20
OP21103-MSD	191-24-2	Benzo(g,h,i)perylene	MSD	REC	64	%	43-134
OP21103-MSD	191-24-2	Benzo(g,h,i)perylene	MSD	RPD	26 [a]	%	20
OP21103-MSD	207-08-9	Benzo(k)fluoranthene	MSD	REC	57	%	47-132
OP21103-MSD	207-08-9	Benzo(k)fluoranthene	MSD	RPD	31 [a]	%	20
OP21103-MSD	218-01-9	Chrysene	MSD	REC	58	%	50-124
OP21103-MSD	218-01-9	Chrysene	MSD	RPD	26 [a]	%	20
OP21103-MSD	53-70-3	Dibenzo(a,h)anthracene	MSD	REC	63	%	45-134
OP21103-MSD	53-70-3	Dibenzo(a,h)anthracene	MSD	RPD	30 [a]	%	20
OP21103-MSD	132-64-9	Dibenzofuran	MSD	REC	59	%	44-120
OP21103-MSD	132-64-9	Dibenzofuran	MSD	RPD	23 [a]	%	20
OP21103-MSD	206-44-0	Fluoranthene	MSD	REC	58	%	50-127

* Sample used for QC is not from job JC89914

QC Evaluation: DOD QSM5 Limits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP21103-MSD	206-44-0	Fluoranthene	MSD	RPD	24 [a]	%	20
OP21103-MSD	86-73-7	Fluorene	MSD	REC	59	%	43-125
OP21103-MSD	86-73-7	Fluorene	MSD	RPD	26 [a]	%	20
OP21103-MSD	118-74-1	Hexachlorobenzene	MSD	REC	62	%	45-122
OP21103-MSD	118-74-1	Hexachlorobenzene	MSD	RPD	27 [a]	%	20
OP21103-MSD	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	REC	75	%	45-133
OP21103-MSD	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	RPD	29 [a]	%	20
OP21103-MSD	91-20-3	Naphthalene	MSD	REC	57	%	35-123
OP21103-MSD	91-20-3	Naphthalene	MSD	RPD	22 [a]	%	20
OP21103-MSD	85-01-8	Phenanthrene	MSD	REC	58	%	50-121
OP21103-MSD	85-01-8	Phenanthrene	MSD	RPD	26 [a]	%	20
OP21103-MSD	129-00-0	Pyrene	MSD	REC	67	%	47-127
OP21103-MSD	129-00-0	Pyrene	MSD	RPD	25 [a]	%	20
OP21103-MSD	367-12-4	2-Fluorophenol	MSD	SURR	52	%	35-115
OP21103-MSD	4165-62-2	Phenol-d5	MSD	SURR	56	%	33-122
OP21103-MSD	118-79-6	2,4,6-Tribromophenol	MSD	SURR	69	%	39-132
OP21103-MSD	4165-60-0	Nitrobenzene-d5	MSD	SURR	59	%	37-122
OP21103-MSD	321-60-8	2-Fluorobiphenyl	MSD	SURR	55	%	44-115
OP21103-MSD	1718-51-0	Terphenyl-d14	MSD	SURR	82	%	54-127
OP21103-MB1	367-12-4	2-Fluorophenol	MB	SURR	64	%	35-115
OP21103-MB1	4165-62-2	Phenol-d5	MB	SURR	66	%	33-122
OP21103-MB1	118-79-6	2,4,6-Tribromophenol	MB	SURR	71	%	39-132
OP21103-MB1	4165-60-0	Nitrobenzene-d5	MB	SURR	67	%	37-122
OP21103-MB1	321-60-8	2-Fluorobiphenyl	MB	SURR	59	%	44-115
OP21103-MB1	1718-51-0	Terphenyl-d14	MB	SURR	91	%	54-127
JC89914-9	367-12-4	2-Fluorophenol	SAMP	SURR	56	%	35-115
JC89914-9	4165-62-2	Phenol-d5	SAMP	SURR	58	%	33-122
JC89914-9	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	75	%	39-132
JC89914-9	4165-60-0	Nitrobenzene-d5	SAMP	SURR	64	%	37-122
JC89914-9	321-60-8	2-Fluorobiphenyl	SAMP	SURR	61	%	44-115
JC89914-9	1718-51-0	Terphenyl-d14	SAMP	SURR	85	%	54-127
JC89914-10	367-12-4	2-Fluorophenol	SAMP	SURR	56	%	35-115
JC89914-10	4165-62-2	Phenol-d5	SAMP	SURR	58	%	33-122
JC89914-10	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	73	%	39-132
JC89914-10	4165-60-0	Nitrobenzene-d5	SAMP	SURR	62	%	37-122
JC89914-10	321-60-8	2-Fluorobiphenyl	SAMP	SURR	59	%	44-115
JC89914-10	1718-51-0	Terphenyl-d14	SAMP	SURR	93	%	54-127
JC89914-11	367-12-4	2-Fluorophenol	SAMP	SURR	56	%	35-115
JC89914-11	4165-62-2	Phenol-d5	SAMP	SURR	59	%	33-122
JC89914-11	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	75	%	39-132
JC89914-11	4165-60-0	Nitrobenzene-d5	SAMP	SURR	63	%	37-122
JC89914-11	321-60-8	2-Fluorobiphenyl	SAMP	SURR	59	%	44-115
JC89914-11	1718-51-0	Terphenyl-d14	SAMP	SURR	95	%	54-127
JC89914-12	367-12-4	2-Fluorophenol	SAMP	SURR	64	%	35-115
JC89914-12	4165-62-2	Phenol-d5	SAMP	SURR	66	%	33-122

* Sample used for QC is not from job JC89914

QC Evaluation: DOD QSM5 Limits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC89914-12	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	73	%	39-132
JC89914-12	4165-60-0	Nitrobenzene-d5	SAMP	SURR	69	%	37-122
JC89914-12	321-60-8	2-Fluorobiphenyl	SAMP	SURR	63	%	44-115
JC89914-12	1718-51-0	Terphenyl-d14	SAMP	SURR	95	%	54-127
OP21084	SW846 8151A						
OP21084-BS1	93-72-1	2,4,5-TP (Silvex)	BSP	REC	94	%	43-129
OP21084-BS1	19719-28-9	2,4-DCAA (sig#1)	BSP	SURR	77	%	27-122
OP21084-BS1	19719-28-9	2,4-DCAA (sig#2)	BSP	SURR	90	%	27-122
OP21084-MS*	93-72-1	2,4,5-TP (Silvex)	MS	REC	50	%	43-129
OP21084-MS*	19719-28-9	2,4-DCAA (sig#1)	MS	SURR	30	%	27-122
OP21084-MS*	19719-28-9	2,4-DCAA (sig#2)	MS	SURR	32	%	27-122
OP21084-MSD*	93-72-1	2,4,5-TP (Silvex)	MSD	REC	30	%	43-129
OP21084-MSD*	93-72-1	2,4,5-TP (Silvex)	MSD	RPD	44	%	30
OP21084-MSD*	19719-28-9	2,4-DCAA (sig#1)	MSD	SURR	23	%	27-122
OP21084-MSD*	19719-28-9	2,4-DCAA (sig#2)	MSD	SURR	22	%	27-122
OP21084-MB1	19719-28-9	2,4-DCAA (sig#1)	MB	SURR	80	%	27-122
OP21084-MB1	19719-28-9	2,4-DCAA (sig#2)	MB	SURR	93	%	27-122
JC89914-9	19719-28-9	2,4-DCAA (sig#1)	SAMP	SURR	52	%	27-122
JC89914-9	19719-28-9	2,4-DCAA (sig#2)	SAMP	SURR	49	%	27-122
JC89914-10	19719-28-9	2,4-DCAA (sig#1)	SAMP	SURR	28	%	27-122
JC89914-10	19719-28-9	2,4-DCAA (sig#2)	SAMP	SURR	26	%	27-122
JC89914-11	19719-28-9	2,4-DCAA (sig#1)	SAMP	SURR	42	%	27-122
JC89914-11	19719-28-9	2,4-DCAA (sig#2)	SAMP	SURR	47	%	27-122
JC89914-12	19719-28-9	2,4-DCAA (sig#1)	SAMP	SURR	38	%	27-122
JC89914-12	19719-28-9	2,4-DCAA (sig#2)	SAMP	SURR	38	%	27-122
OP21101	SW846 8082A						
OP21101-BS1	12674-11-2	Aroclor 1016	BSP	REC	98	%	47-134
OP21101-BS1	11096-82-5	Aroclor 1260	BSP	REC	103	%	53-140
OP21101-BS1	877-09-8	Tetrachloro-m-xylene (sig#1)	BSP	SURR	95	%	44-130
OP21101-BS1	877-09-8	Tetrachloro-m-xylene (sig#2)	BSP	SURR	107	%	44-130
OP21101-MS*	12674-11-2	Aroclor 1016	MS	REC	90	%	47-134
OP21101-MS*	11096-82-5	Aroclor 1260	MS	REC	32	%	53-140
OP21101-MS*	877-09-8	Tetrachloro-m-xylene (sig#1)	MS	SURR	74	%	44-130
OP21101-MS*	877-09-8	Tetrachloro-m-xylene (sig#2)	MS	SURR	84	%	44-130
OP21101-MSD*	12674-11-2	Aroclor 1016	MSD	REC	92	%	47-134
OP21101-MSD*	12674-11-2	Aroclor 1016	MSD	RPD	3	%	30
OP21101-MSD*	11097-69-1	Aroclor 1254	MSD	RPD	0	%	30
OP21101-MSD*	11096-82-5	Aroclor 1260	MSD	REC	73	%	53-140
OP21101-MSD*	11096-82-5	Aroclor 1260	MSD	RPD	13	%	30
OP21101-MSD*	877-09-8	Tetrachloro-m-xylene (sig#1)	MSD	SURR	77	%	44-130
OP21101-MSD*	877-09-8	Tetrachloro-m-xylene (sig#2)	MSD	SURR	88	%	44-130

* Sample used for QC is not from job JC89914

QC Evaluation: DOD QSM5 Limits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP21101-MB1	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	83	%	44-130
OP21101-MB1	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	85	%	44-130
OP21101-MB1	877-09-8	Tetrachloro-m-xylene (sig#2)	MB	SURR	87	%	44-130
OP21101-MB1	877-09-8	Tetrachloro-m-xylene (sig#2)	MB	SURR	94	%	44-130
JC89914-9	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	83	%	44-130
JC89914-9	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	89	%	44-130
JC89914-10	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	78	%	44-130
JC89914-10	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	84	%	44-130
JC89914-11	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	70	%	44-130
JC89914-11	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	74	%	44-130
JC89914-12	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	79	%	44-130
JC89914-12	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	83	%	44-130
OP21102	SW846 8081B						
OP21102-BS1	309-00-2	Aldrin	BSP	REC	89	%	45-136
OP21102-BS1	319-84-6	alpha-BHC	BSP	REC	88	%	45-137
OP21102-BS1	319-85-7	beta-BHC	BSP	REC	88	%	50-136
OP21102-BS1	319-86-8	delta-BHC	BSP	REC	86	%	47-139
OP21102-BS1	58-89-9	gamma-BHC (Lindane)	BSP	REC	88	%	49-135
OP21102-BS1	5103-71-9	alpha-Chlordane	BSP	REC	92	%	54-133
OP21102-BS1	60-57-1	Dieldrin	BSP	REC	90	%	56-136
OP21102-BS1	72-54-8	4,4'-DDD	BSP	REC	86	%	56-139
OP21102-BS1	72-55-9	4,4'-DDE	BSP	REC	91	%	56-134
OP21102-BS1	50-29-3	4,4'-DDT	BSP	REC	86	%	50-141
OP21102-BS1	72-20-8	Endrin	BSP	REC	97	%	57-140
OP21102-BS1	1031-07-8	Endosulfan sulfate	BSP	REC	82	%	55-136
OP21102-BS1	959-98-8	Endosulfan-I	BSP	REC	82	%	53-132
OP21102-BS1	33213-65-9	Endosulfan-II	BSP	REC	90	%	53-134
OP21102-BS1	76-44-8	Heptachlor	BSP	REC	89	%	47-136
OP21102-BS1	877-09-8	Tetrachloro-m-xylene (sig#1)	BSP	SURR	85	%	42-129
OP21102-BS1	877-09-8	Tetrachloro-m-xylene (sig#2)	BSP	SURR	81	%	42-129
OP21102-MS*	309-00-2	Aldrin	MS	REC	65	%	45-136
OP21102-MS*	319-84-6	alpha-BHC	MS	REC	68	%	45-137
OP21102-MS*	319-85-7	beta-BHC	MS	REC	54	%	50-136
OP21102-MS*	319-86-8	delta-BHC	MS	REC	60	%	47-139
OP21102-MS*	58-89-9	gamma-BHC (Lindane)	MS	REC	64	%	49-135
OP21102-MS*	5103-71-9	alpha-Chlordane	MS	REC	68	%	54-133
OP21102-MS*	60-57-1	Dieldrin	MS	REC	67	%	56-136
OP21102-MS*	72-54-8	4,4'-DDD	MS	REC	76	%	56-139
OP21102-MS*	72-55-9	4,4'-DDE	MS	REC	68	%	56-134
OP21102-MS*	50-29-3	4,4'-DDT	MS	REC	78	%	50-141
OP21102-MS*	72-20-8	Endrin	MS	REC	69	%	57-140
OP21102-MS*	1031-07-8	Endosulfan sulfate	MS	REC	68	%	55-136
OP21102-MS*	959-98-8	Endosulfan-I	MS	REC	61	%	53-132

* Sample used for QC is not from job JC89914

QC Evaluation: DOD QSM5 Limits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP21102-MS*	33213-65-9	Endosulfan-II	MS	REC	67	%	53-134
OP21102-MS*	76-44-8	Heptachlor	MS	REC	71	%	47-136
OP21102-MS*	877-09-8	Tetrachloro-m-xylene (sig#1)	MS	SURR	67	%	42-129
OP21102-MS*	877-09-8	Tetrachloro-m-xylene (sig#2)	MS	SURR	64	%	42-129
OP21102-MSD*	309-00-2	Aldrin	MSD	REC	66	%	45-136
OP21102-MSD*	309-00-2	Aldrin	MSD	RPD	2	%	30
OP21102-MSD*	319-84-6	alpha-BHC	MSD	REC	69	%	45-137
OP21102-MSD*	319-84-6	alpha-BHC	MSD	RPD	2	%	30
OP21102-MSD*	319-85-7	beta-BHC	MSD	REC	56	%	50-136
OP21102-MSD*	319-85-7	beta-BHC	MSD	RPD	5	%	30
OP21102-MSD*	319-86-8	delta-BHC	MSD	REC	62	%	47-139
OP21102-MSD*	319-86-8	delta-BHC	MSD	RPD	4	%	30
OP21102-MSD*	58-89-9	gamma-BHC (Lindane)	MSD	REC	66	%	49-135
OP21102-MSD*	58-89-9	gamma-BHC (Lindane)	MSD	RPD	5	%	30
OP21102-MSD*	5103-71-9	alpha-Chlordane	MSD	REC	66	%	54-133
OP21102-MSD*	5103-71-9	alpha-Chlordane	MSD	RPD	1	%	30
OP21102-MSD*	60-57-1	Dieldrin	MSD	REC	69	%	56-136
OP21102-MSD*	60-57-1	Dieldrin	MSD	RPD	4	%	30
OP21102-MSD*	72-54-8	4,4'-DDD	MSD	REC	76	%	56-139
OP21102-MSD*	72-54-8	4,4'-DDD	MSD	RPD	1	%	30
OP21102-MSD*	72-55-9	4,4'-DDE	MSD	REC	69	%	56-134
OP21102-MSD*	72-55-9	4,4'-DDE	MSD	RPD	3	%	30
OP21102-MSD*	50-29-3	4,4'-DDT	MSD	REC	74	%	50-141
OP21102-MSD*	50-29-3	4,4'-DDT	MSD	RPD	1	%	30
OP21102-MSD*	72-20-8	Endrin	MSD	REC	71	%	57-140
OP21102-MSD*	72-20-8	Endrin	MSD	RPD	4	%	30
OP21102-MSD*	1031-07-8	Endosulfan sulfate	MSD	REC	68	%	55-136
OP21102-MSD*	1031-07-8	Endosulfan sulfate	MSD	RPD	2	%	30
OP21102-MSD*	959-98-8	Endosulfan-I	MSD	REC	64	%	53-132
OP21102-MSD*	959-98-8	Endosulfan-I	MSD	RPD	5	%	30
OP21102-MSD*	33213-65-9	Endosulfan-II	MSD	REC	68	%	53-134
OP21102-MSD*	33213-65-9	Endosulfan-II	MSD	RPD	3	%	30
OP21102-MSD*	76-44-8	Heptachlor	MSD	REC	72	%	47-136
OP21102-MSD*	76-44-8	Heptachlor	MSD	RPD	3	%	30
OP21102-MSD*	877-09-8	Tetrachloro-m-xylene (sig#1)	MSD	SURR	71	%	42-129
OP21102-MSD*	877-09-8	Tetrachloro-m-xylene (sig#2)	MSD	SURR	68	%	42-129
OP21102-MB1	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	83	%	42-129
OP21102-MB1	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	85	%	42-129
OP21102-MB1	877-09-8	Tetrachloro-m-xylene (sig#2)	MB	SURR	82	%	42-129
OP21102-MB1	877-09-8	Tetrachloro-m-xylene (sig#2)	MB	SURR	82	%	42-129
JC89914-9	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	72	%	42-129
JC89914-9	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	72	%	42-129
JC89914-10	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	67	%	42-129
JC89914-10	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	68	%	42-129
JC89914-11	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	59	%	42-129

* Sample used for QC is not from job JC89914

QC Evaluation: DOD QSM5 Limits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC89914-11	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	59	%	42-129
JC89914-12	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	72	%	42-129
JC89914-12	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	72	%	42-129
MP15743	SW846 6010D						
MP15743-B1	7440-38-2	Arsenic	BSP	REC	103	%	82-111
MP15743-B1	7440-39-3	Barium	BSP	REC	104	%	83-113
MP15743-B1	7440-41-7	Beryllium	BSP	REC	106	%	83-113
MP15743-B1	7440-43-9	Cadmium	BSP	REC	105	%	82-113
MP15743-B1	7440-47-3	Chromium	BSP	REC	104.5	%	85-113
MP15743-B1	7440-50-8	Copper	BSP	REC	104	%	81-117
MP15743-B1	7439-92-1	Lead	BSP	REC	111	%	81-112
MP15743-B1	7439-96-5	Manganese	BSP	REC	108.5	%	84-114
MP15743-B1	7440-02-0	Nickel	BSP	REC	104	%	83-113
MP15743-B1	7782-49-2	Selenium	BSP	REC	103	%	78-111
MP15743-B1	7440-22-4	Silver	BSP	REC	103.2	%	82-112
MP15743-B1	7440-66-6	Zinc	BSP	REC	105	%	82-113
MP15743-S1*	7440-38-2	Arsenic	MS	REC	96.9	%	82-111
MP15743-S1*	7440-39-3	Barium	MS	REC	102.4	%	83-113
MP15743-S1*	7440-41-7	Beryllium	MS	REC	100.8	%	83-113
MP15743-S1*	7440-43-9	Cadmium	MS	REC	100.5	%	82-113
MP15743-S1*	7440-47-3	Chromium	MS	REC	100.6	%	85-113
MP15743-S1*	7440-50-8	Copper	MS	REC	104.3	%	81-117
MP15743-S1*	7439-92-1	Lead	MS	REC	110	%	81-112
MP15743-S1*	7439-96-5	Manganese	MS	REC	84.2	%	84-114
MP15743-S1*	7440-02-0	Nickel	MS	REC	97.9	%	83-113
MP15743-S1*	7782-49-2	Selenium	MS	REC	99.7	%	78-111
MP15743-S1*	7440-22-4	Silver	MS	REC	104.9	%	82-112
MP15743-S1*	7440-66-6	Zinc	MS	REC	96.2	%	82-113
MP15743-S2*	7440-38-2	Arsenic	MSD	REC	97	%	82-111
MP15743-S2*	7440-38-2	Arsenic	MSD	RPD	3.1	%	20
MP15743-S2*	7440-39-3	Barium	MSD	REC	102.4	%	83-113
MP15743-S2*	7440-39-3	Barium	MSD	RPD	2.2	%	20
MP15743-S2*	7440-41-7	Beryllium	MSD	REC	101.5	%	83-113
MP15743-S2*	7440-41-7	Beryllium	MSD	RPD	3.8	%	20
MP15743-S2*	7440-43-9	Cadmium	MSD	REC	100.9	%	82-113
MP15743-S2*	7440-43-9	Cadmium	MSD	RPD	3.4	%	20
MP15743-S2*	7440-47-3	Chromium	MSD	REC	101.7	%	85-113
MP15743-S2*	7440-47-3	Chromium	MSD	RPD	3.6	%	20
MP15743-S2*	7440-50-8	Copper	MSD	REC	103.8	%	81-117
MP15743-S2*	7440-50-8	Copper	MSD	RPD	2.4	%	20
MP15743-S2*	7439-92-1	Lead	MSD	REC	112	%	81-112
MP15743-S2*	7439-92-1	Lead	MSD	RPD	4.2	%	20
MP15743-S2*	7439-96-5	Manganese	MSD	REC	81.7	%	84-114

* Sample used for QC is not from job JC89914

QC Evaluation: DOD QSM5 Limits

Job Number: JC89914
Account: NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage
Collected: 06/14/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP15743-S2*	7439-96-5	Manganese	MSD	RPD	0	%	20
MP15743-S2*	7440-02-0	Nickel	MSD	REC	97.2	%	83-113
MP15743-S2*	7440-02-0	Nickel	MSD	RPD	2.1	%	20
MP15743-S2*	7782-49-2	Selenium	MSD	REC	100.9	%	78-111
MP15743-S2*	7782-49-2	Selenium	MSD	RPD	4.2	%	20
MP15743-S2*	7440-22-4	Silver	MSD	REC	104.2	%	82-112
MP15743-S2*	7440-22-4	Silver	MSD	RPD	2.3	%	20
MP15743-S2*	7440-66-6	Zinc	MSD	REC	95.6	%	82-113
MP15743-S2*	7440-66-6	Zinc	MSD	RPD	1.7	%	20
MP15749	SW846 7471B						
MP15749-B1	7439-97-6	Mercury	BSP	REC	99	%	80-124
MP15749-S1	7439-97-6	Mercury	MS	REC	92	%	80-124
MP15749-S2	7439-97-6	Mercury	MSD	REC	92.7	%	80-124
MP15749-S2	7439-97-6	Mercury	MSD	RPD	0	%	20
GP21932	SW846 9012B/LACHAT						
GP21932-B1	57-12-5	Cyanide	BSP	REC	107	%	76-120
GP21932-S1*	57-12-5	Cyanide	MS	REC	101.4	%	76-120
GP21932-D1*	57-12-5	Cyanide	DUP	RPD	0	%	20
GP21943	SW846 3060A/7196A						
GP21943-B1	18540-29-9	Chromium, Hexavalent	BSP	REC	90.5	%	84-110
GP21943-B2	18540-29-9	Chromium, Hexavalent	BSP	REC	94.9	%	84-110
GP21943-S1	18540-29-9	Chromium, Hexavalent	MS	REC	76.1 [b]	%	84-110
GP21943-S2	18540-29-9	Chromium, Hexavalent	MS	REC	77.8 [c]	%	84-110
GP21943-D1	18540-29-9	Chromium, Hexavalent	DUP	RPD	13.6	%	20

(a) Outside of program requirements.
(b) Good recovery on soluble XCR matrix spike. Good recovery (97.4%) on the post-spike.
(c) Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.

* Sample used for QC is not from job JC89914

MS Volatiles

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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

Method Blank Summary

Job Number: JC89914
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
V1C7250-MB	1C165382.D	1	06/19/19	PS	n/a	n/a	V1C7250

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC89914-1, JC89914-2, JC89914-3, JC89914-4, JC89914-5, JC89914-6, JC89914-7, JC89914-8

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	
78-93-3	2-Butanone (MEK)	ND	10	3.7	ug/kg	
104-51-8	n-Butylbenzene	ND	2.0	0.41	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.0	0.43	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.0	0.50	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	
67-66-3	Chloroform	ND	2.0	0.49	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	
75-34-3	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	
123-91-1	1,4-Dioxane	ND	130	37	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.55	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.47	ug/kg	
75-09-2	Methylene chloride	ND	5.0	0.99	ug/kg	
103-65-1	n-Propylbenzene	ND	2.0	0.47	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.58	ug/kg	
108-88-3	Toluene	ND	1.0	0.53	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.48	ug/kg	
79-01-6	Trichloroethene	ND	1.0	0.76	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.64	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.43	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	

Method Blank Summary

Job Number: JC89914
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
V1C7250-MB	1C165382.D	1	06/19/19	PS	n/a	n/a	V1C7250

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC89914-1, JC89914-2, JC89914-3, JC89914-4, JC89914-5, JC89914-6, JC89914-7, JC89914-8

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	75-127%
17060-07-0	1,2-Dichloroethane-D4	106%	75-130%
2037-26-5	Toluene-D8	103%	80-120%
460-00-4	4-Bromofluorobenzene	95%	79-127%

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

Blank Spike Summary

Job Number: JC89914
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
V1C7250-BS	1C165380.D	1	06/19/19	PS	n/a	n/a	V1C7250

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC89914-1, JC89914-2, JC89914-3, JC89914-4, JC89914-5, JC89914-6, JC89914-7, JC89914-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	200	187	94	48-149
71-43-2	Benzene	50	46.4	93	74-117
78-93-3	2-Butanone (MEK)	200	192	96	65-143
104-51-8	n-Butylbenzene	50	50.7	101	74-123
135-98-8	sec-Butylbenzene	50	49.6	99	74-123
98-06-6	tert-Butylbenzene	50	51.0	102	73-124
56-23-5	Carbon tetrachloride	50	51.0	102	69-136
108-90-7	Chlorobenzene	50	49.3	99	79-117
67-66-3	Chloroform	50	45.6	91	76-119
95-50-1	1,2-Dichlorobenzene	50	50.1	100	77-117
541-73-1	1,3-Dichlorobenzene	50	49.7	99	75-117
106-46-7	1,4-Dichlorobenzene	50	49.8	100	76-115
75-34-3	1,1-Dichloroethane	50	46.8	94	75-124
107-06-2	1,2-Dichloroethane	50	47.1	94	74-124
75-35-4	1,1-Dichloroethene	50	46.3	93	64-129
156-59-2	cis-1,2-Dichloroethene	50	45.7	91	74-118
156-60-5	trans-1,2-Dichloroethene	50	45.7	91	71-125
123-91-1	1,4-Dioxane	1250	1310	105	64-128
100-41-4	Ethylbenzene	50	47.6	95	75-118
1634-04-4	Methyl Tert Butyl Ether	50	46.9	94	75-123
75-09-2	Methylene chloride	50	46.0	92	73-120
103-65-1	n-Propylbenzene	50	49.5	99	75-120
127-18-4	Tetrachloroethene	50	50.3	101	69-128
108-88-3	Toluene	50	47.2	94	74-117
71-55-6	1,1,1-Trichloroethane	50	50.5	101	73-131
79-01-6	Trichloroethene	50	50.2	100	80-120
95-63-6	1,2,4-Trimethylbenzene	50	48.7	97	76-119
108-67-8	1,3,5-Trimethylbenzene	50	49.5	99	74-119
75-01-4	Vinyl chloride	50	53.5	107	55-145
	m,p-Xylene	100	97.5	98	75-120
95-47-6	o-Xylene	50	50.1	100	75-119
1330-20-7	Xylene (total)	150	148	99	76-119

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC89914
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
V1C7250-BS	1C165380.D	1	06/19/19	PS	n/a	n/a	V1C7250

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC89914-1, JC89914-2, JC89914-3, JC89914-4, JC89914-5, JC89914-6, JC89914-7, JC89914-8

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	75-127%
17060-07-0	1,2-Dichloroethane-D4	103%	75-130%
2037-26-5	Toluene-D8	104%	80-120%
460-00-4	4-Bromofluorobenzene	95%	79-127%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC89914
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
JC89881-1MS	1C165396.D	1	06/19/19	PS	n/a	n/a	V1C7250
JC89881-1MSD	1C165397.D	1	06/19/19	PS	n/a	n/a	V1C7250
JC89881-1 [a]	1C165383.D	1	06/19/19	PS	n/a	n/a	V1C7250

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC89914-1, JC89914-2, JC89914-3, JC89914-4, JC89914-5, JC89914-6, JC89914-7, JC89914-8

CAS No.	Compound	JC89881-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	7.2	J	240	149	59	235	145	59	3	10-157/31
71-43-2	Benzene	ND		60.1	47.5	79	58.8	45.5	77	4	58-125/22
78-93-3	2-Butanone (MEK)	ND		240	170	71	235	165	70	3	29-146/27
104-51-8	n-Butylbenzene	ND		60.1	26.7	44	58.8	25.1	43	6	23-149/29
135-98-8	sec-Butylbenzene	ND		60.1	31.4	52	58.8	29.4	50	7	33-147/26
98-06-6	tert-Butylbenzene	ND		60.1	37.7	63	58.8	34.6	59	9	39-145/26
56-23-5	Carbon tetrachloride	ND		60.1	48.5	81	58.8	45.2	77	7	51-143/25
108-90-7	Chlorobenzene	ND		60.1	45.7	76	58.8	43.2	73	6	54-130/22
67-66-3	Chloroform	ND		60.1	47.1	78	58.8	44.6	76	5	61-125/22
95-50-1	1,2-Dichlorobenzene	ND		60.1	38.8	65	58.8	36.9	63	5	41-134/22
541-73-1	1,3-Dichlorobenzene	ND		60.1	37.2	62	58.8	35.4	60	5	41-135/22
106-46-7	1,4-Dichlorobenzene	ND		60.1	37.6	63	58.8	34.8	59	8	41-133/22
75-34-3	1,1-Dichloroethane	ND		60.1	50.9	85	58.8	48.7	83	4	61-131/23
107-06-2	1,2-Dichloroethane	ND		60.1	45.4	76	58.8	43.3	74	5	56-126/21
75-35-4	1,1-Dichloroethene	ND		60.1	50.1	83	58.8	47.7	81	5	53-132/23
156-59-2	cis-1,2-Dichloroethene	ND		60.1	48.6	81	58.8	47.3	80	3	57-125/22
156-60-5	trans-1,2-Dichloroethene	ND		60.1	48.1	80	58.8	46.8	80	3	56-130/23
123-91-1	1,4-Dioxane	ND		1500	1520	101	1470	1530	104	1	53-140/30
100-41-4	Ethylbenzene	ND		60.1	42.6	71	58.8	39.6	67	7	49-132/23
1634-04-4	Methyl Tert Butyl Ether	ND		60.1	46.7	78	58.8	45.8	78	2	58-123/23
75-09-2	Methylene chloride	3.0	J	60.1	53.1	83	58.8	52.5	84	1	57-123/23
103-65-1	n-Propylbenzene	ND		60.1	36.9	61	58.8	34.5	59	7	41-139/23
127-18-4	Tetrachloroethene	ND		60.1	42.7	71	58.8	40.7	69	5	39-154/26
108-88-3	Toluene	ND		60.1	46.1	77	58.8	44.2	75	4	54-127/22
71-55-6	1,1,1-Trichloroethane	ND		60.1	49.6	83	58.8	46.1	78	7	57-138/24
79-01-6	Trichloroethene	ND		60.1	54.8	91	58.8	52.4	89	4	52-140/24
95-63-6	1,2,4-Trimethylbenzene	ND		60.1	36.0	60	58.8	33.3	57	8	39-142/23
108-67-8	1,3,5-Trimethylbenzene	ND		60.1	36.4	61	58.8	34.1	58	7	40-140/23
75-01-4	Vinyl chloride	ND		60.1	52.8	88	58.8	51.8	88	2	43-146/26
	m,p-Xylene	ND		120	86.6	72	118	80.0	68	8	45-137/23
95-47-6	o-Xylene	ND		60.1	45.2	75	58.8	42.2	72	7	48-135/22
1330-20-7	Xylene (total)	ND		180	132	73	177	122	69	8	46-137/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC89914
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
JC89881-1MS	1C165396.D	1	06/19/19	PS	n/a	n/a	V1C7250
JC89881-1MSD	1C165397.D	1	06/19/19	PS	n/a	n/a	V1C7250
JC89881-1 [a]	1C165383.D	1	06/19/19	PS	n/a	n/a	V1C7250

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC89914-1, JC89914-2, JC89914-3, JC89914-4, JC89914-5, JC89914-6, JC89914-7, JC89914-8

CAS No.	Surrogate Recoveries	MS	MSD	JC89881-1	Limits
1868-53-7	Dibromofluoromethane	100%	100%	106%	75-127%
17060-07-0	1,2-Dichloroethane-D4	92%	91%	112%	75-130%
2037-26-5	Toluene-D8	104%	104%	106%	80-120%
460-00-4	4-Bromofluorobenzene	97%	97%	105%	79-127%

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

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: V1C7200-BFB
Lab File ID: 1C164004.D
Instrument ID: GCMS1C
Injection Date: 04/24/19
Injection Time: 14:40

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	9866	18.0		Pass
75	30.0 - 60.0% of mass 95	26882	49.0		Pass
95	Base peak, 100% relative abundance	54821	100.0		Pass
96	5.0 - 9.0% of mass 95	3741	6.82		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	47850	87.3		Pass
175	5.0 - 9.0% of mass 174	3704	6.76	(7.74) [a]	Pass
176	95.0 - 101.0% of mass 174	46538	84.9	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	3149	5.74	(6.77) [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
V1C7200-IC7200	1C164005.D	04/24/19	15:12	00:32	Initial cal 0.5
V1C7200-IC7200	1C164006.D	04/24/19	15:38	00:58	Initial cal 1
V1C7200-IC7200	1C164007.D	04/24/19	16:05	01:25	Initial cal 2
V1C7200-IC7200	1C164008.D	04/24/19	16:31	01:51	Initial cal 4
V1C7200-IC7200	1C164009.D	04/24/19	16:58	02:18	Initial cal 8
V1C7200-IC7200	1C164010.D	04/24/19	17:24	02:44	Initial cal 20
V1C7200-ICC7200	1C164011.D	04/24/19	17:51	03:11	Initial cal 50
V1C7200-IC7200	1C164012.D	04/24/19	18:17	03:37	Initial cal 100
V1C7200-IC7200	1C164013.D	04/24/19	18:44	04:04	Initial cal 200
V1C7200-ICV7200	1C164016.D	04/24/19	20:03	05:23	Initial cal verification 50
V1C7200-ICV7200	1C164017.D	04/24/19	20:30	05:50	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: V1C7250-BFB
Lab File ID: 1C165379.D
Instrument ID: GCMS1C
Injection Date: 06/19/19
Injection Time: 08:38

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	8512	18.2		Pass
75	30.0 - 60.0% of mass 95	23104	49.4		Pass
95	Base peak, 100% relative abundance	46757	100.0		Pass
96	5.0 - 9.0% of mass 95	3025	6.47		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	44680	95.6		Pass
175	5.0 - 9.0% of mass 174	3552	7.60	(7.95) [a]	Pass
176	95.0 - 101.0% of mass 174	43389	92.8	(97.1) [a]	Pass
177	5.0 - 9.0% of mass 176	2644	5.65	(6.09) [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
V1C7250-CC7200	1C165379.D	06/19/19	08:38	00:00	Continuing cal 50
V1C7250-BS	1C165380.D	06/19/19	09:15	00:37	Blank Spike
V1C7250-MB	1C165382.D	06/19/19	10:19	01:41	Method Blank
JC89881-1	1C165383.D	06/19/19	10:46	02:08	(used for QC only; not part of job JC89914)
JC89914-1	1C165384.D	06/19/19	11:12	02:34	NWIRP-S1-WC-CF-027
JC89914-2	1C165385.D	06/19/19	11:39	03:01	NWIRP-S1-WC-CF-028
JC89914-3	1C165386.D	06/19/19	12:05	03:27	NWIRP-S1-WC-CF-029
JC89914-4	1C165387.D	06/19/19	12:32	03:54	NWIRP-S1-WC-CF-030
JC89914-5	1C165388.D	06/19/19	12:58	04:20	NWIRP-S1-WC-CF-031
JC89914-6	1C165389.D	06/19/19	13:25	04:47	NWIRP-S1-WC-CF-032
JC89914-7	1C165390.D	06/19/19	13:52	05:14	NWIRP-S1-WC-CF-033
JC89914-8	1C165391.D	06/19/19	14:18	05:40	NWIRP-S1-WC-CF-034
ZZZZZZ	1C165392.D	06/19/19	14:45	06:07	(unrelated sample)
ZZZZZZ	1C165395.D	06/19/19	16:06	07:28	(unrelated sample)
JC89881-1MS	1C165396.D	06/19/19	16:32	07:54	Matrix Spike
JC89881-1MSD	1C165397.D	06/19/19	16:59	08:21	Matrix Spike Duplicate
V1C7250-ECC7200	1C165398.D	06/19/19	17:25	08:47	Ending cal 50

Internal Standard Area Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	V1C7250-CC7200	**Injection Date:**	06/19/19
Lab File ID:	1C165379.D	**Injection Time:**	08:38
Instrument ID:	GCMS1C	**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	44364	7.36	155991	9.60	218367	10.52	175215	13.66	92906	15.97
Upper Limit [a]	88728	7.86	311982	10.10	436734	11.02	350430	14.16	185812	16.47
Lower Limit [b]	22182	6.86	77996	9.10	109184	10.02	87608	13.16	46453	15.47

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V1C7250-BS	50636	7.36	173351	9.60	240992	10.52	192444	13.66	102650	15.97
V1C7250-MB	48998	7.36	167437	9.60	227124	10.52	185348	13.66	96362	15.97
JC89881-1	45463	7.36	148107	9.60	205871	10.52	162840	13.66	74603	15.97
JC89914-1	45210	7.36	151798	9.60	211600	10.52	170751	13.66	87536	15.97
JC89914-2	47244	7.36	154101	9.60	212485	10.52	172285	13.66	85158	15.97
JC89914-3	44618	7.36	149049	9.60	205013	10.52	166620	13.66	86154	15.97
JC89914-4	47606	7.36	148596	9.60	203457	10.52	161330	13.66	79132	15.97
JC89914-5	47417	7.36	149982	9.60	206915	10.52	169841	13.66	88748	15.97
JC89914-6	44540	7.36	150098	9.60	205785	10.52	167986	13.66	86043	15.97
JC89914-7	45197	7.36	149751	9.60	204715	10.52	168140	13.66	84037	15.97
JC89914-8	47483	7.36	150409	9.60	205539	10.52	169668	13.66	90009	15.97
ZZZZZZ	42810	7.36	151285	9.60	208851	10.52	170398	13.66	89791	15.97
ZZZZZZ	54978	7.36	151035	9.60	215293	10.52	158769	13.66	66355	15.97
JC89881-1MS	47474	7.36	198824	9.60	279125	10.52	217875	13.66	112128	15.97
JC89881-1MSD	50680	7.36	214965	9.60	300016	10.52	232628	13.66	116954	15.97
V1C7250-ECC7206	60994	7.36	218348	9.60	305049	10.52	240010	13.66	124166	15.97

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.

Surrogate Recovery Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Method: SW846 8260C **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC89914-1	1C165384.D	107	112	103	99
JC89914-2	1C165385.D	105	112	102	100
JC89914-3	1C165386.D	104	111	103	97
JC89914-4	1C165387.D	105	112	106	101
JC89914-5	1C165388.D	106	113	103	96
JC89914-6	1C165389.D	104	111	104	97
JC89914-7	1C165390.D	104	113	103	100
JC89914-8	1C165391.D	105	114	103	95
JC89881-1MS	1C165396.D	100	92	104	97
JC89881-1MSD	1C165397.D	100	91	104	97
V1C7250-BS	1C165380.D	100	103	104	95
V1C7250-MB	1C165382.D	102	106	103	95

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%

Initial Calibration Summary

Job Number: JC89914 **Sample:** V1C7200-ICC7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C164011.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report GCMS1C

Method : C:\MSDCHEM\1\METHODS\M1CS7200.M (RTE Integrator)
Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Calibration Files
1 =1C164006.D 0.5 =1C164005.D 100 =1C164012.D 50 =1C164011.D
20 =1C164010.D 200 =1C164013.D 4 =1C164008.D 2 =1C164007.D
8 =1C164009.D =

Compound	1	0.5	100	50	20	200	4	2	8	Avg	%RSD
1) tert butyl alcohol-d9	----------ISTD----------										
2) tertiary butyl alcohol			1.382	1.299	1.340	1.361	1.299	1.213	1.403	1.328	4.83
3) ethanol										0.000#	-1.00
4) 1,4-dioxane			0.130	0.123	0.121	0.129	0.098		0.127	0.121	9.95
5) I pentafluorobenzene	----------ISTD----------										
6) chlorodifluoromethane		0.492	0.512	0.534	0.549	0.507	0.505	0.517	0.551	0.521	3.87
7) dichlorodifluoromethane		0.773	0.591	0.765	0.779	0.784	0.729	0.774	0.703	0.755	0.739	8.32
8) chloromethane		0.571	0.599	0.529	0.543	0.539	0.485	0.545	0.525	0.543	0.542	5.79
9) vinyl chloride		0.554	0.448	0.517	0.536	0.535	0.492	0.522	0.478	0.510	0.510	6.43
10) 1,3-butadiene		0.316	0.275	0.331	0.345	0.323	0.313	0.326	0.329	0.325	0.320	5.99
11) bromomethane		0.440	0.384	0.368	0.384	0.387	0.347	0.399	0.384	0.407	0.389	6.61
12) chloroethane		0.317		0.311	0.311	0.314	0.288	0.308	0.287	0.308	0.306	3.76
13) trichlorofluoromethane		0.750	0.686	0.781	0.802	0.802	0.736	0.790	0.737	0.764	0.761	4.99
14) vinyl bromide		0.298		0.306	0.312	0.310	0.290	0.309	0.264	0.298	0.298	5.34
15) ethyl ether				0.214	0.213	0.205	0.205	0.194	0.184	0.207	0.203	5.20
16) acrolein				0.055	0.054	0.052	0.054			0.047	0.052	6.21
17) freon 113		0.300		0.351	0.363	0.337	0.334	0.352	0.310	0.344	0.336	6.37
18) 1,1-dichloroethene		0.419	0.397	0.405	0.422	0.394	0.375	0.411	0.441	0.421	0.409	4.69
19) acetone				0.104	0.099	0.101	0.098	0.102	0.100	0.109	0.102	3.51
20) acetonitrile				0.042	0.042	0.044	0.041	0.045	0.036	0.047	0.042	8.67
21) iodomethane				0.491	0.436	0.336	0.486	0.244		0.274	0.378	28.61

----- Linear regression ----- Coefficient = 0.9965
Response Ratio = -0.02896 + 0.48886 *A

Initial Calibration Summary

Job Number: JC89914 **Sample:** V1C7200-ICC7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C164011.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

22)	carbon disulfide										
	1.504	1.254	1.307	1.239	1.184	1.344	1.425	1.320	1.322	7.83	
23)	methylene chloride										
		0.438	0.446	0.435	0.413	0.449	0.463	0.465	0.444	3.97	
24)	methyl acetate										
		0.247	0.255	0.252	0.242	0.227		0.266	0.248	5.36	
25)	methyl tert butyl ether										
	1.046	1.090	1.150	1.157	1.107	1.092	1.131	1.062	1.147	1.109	3.60
26)	trans-1,2-dichloroethene										
	0.464	0.513	0.432	0.454	0.441	0.403	0.460	0.469	0.453	0.454	6.53
27)	di-isopropyl ether										
	1.333	1.349	1.388	1.406	1.374	1.300	1.370	1.370	1.402	1.366	2.49
28)	2-butanone										
		0.040	0.040	0.040	0.038	0.036	0.033	0.041	0.038	7.39	
29)	1,1-dichloroethane										
	0.750	0.767	0.745	0.784	0.784	0.690	0.822	0.803	0.793	0.771	5.06
30)	chloroprene										
	0.667	0.610	0.667	0.695	0.674	0.628	0.672	0.676	0.692	0.665	4.22
31)	acrylonitrile										
		0.116	0.116	0.114	0.112	0.091		0.116	0.111	8.79	
32)	hexane										
	0.697	0.673	0.714	0.743	0.696	0.670	0.744	0.704	0.713	0.706	3.70
33)	vinyl acetate										
		0.068	0.070	0.068	0.064	0.051		0.065	0.064	10.57	
34)	ethyl tert-butyl ether										
	1.212	1.278	1.365	1.379	1.338	1.293	1.326	1.283	1.373	1.316	4.18
35)	ethyl acetate										
		0.049	0.051	0.051	0.047	0.042		0.050	0.048	7.05	
36)	2,2-dichloropropane										
	0.694	0.658	0.679	0.712	0.672	0.634	0.712	0.718	0.707	0.687	4.19
37)	cis-1,2-dichloroethene										
	0.494	0.474	0.473	0.491	0.484	0.435	0.515	0.538	0.508	0.490	5.95
38)	methyl acrylate										
		0.055	0.055	0.052	0.054	0.034		0.051	0.050	16.35	
39)	propionitrile										
	0.043		0.049	0.049	0.051	0.047	0.048	0.045	0.056	0.048	7.62
40)	bromochloromethane										
	0.190		0.219	0.222	0.218	0.203	0.221	0.205	0.225	0.213	5.78
41)	tetrahydrofuran										
		0.046	0.047	0.047	0.044	0.040		0.051	0.046	7.90	
42)	chloroform										
	0.556	0.659	0.511	0.528	0.526	0.476	0.541	0.568	0.545	0.546	9.23
43)	t-butyl formate										
		0.295	0.333	0.269	0.306	0.271	0.258	0.322	0.293	9.86	
44)	dibromofluoromethane (s)										
	0.417	0.417	0.428	0.425	0.423	0.422	0.422	0.419	0.422	0.422	0.84
45)	methacrylonitrile										
		0.145	0.149	0.142	0.141	0.139	0.119	0.145	0.140	6.95	
46)	1,1,1-trichloroethane										
	0.690	0.624	0.724	0.745	0.707	0.684	0.731	0.729	0.723	0.706	5.21
47)	cyclohexane										
	0.767	0.570	0.688	0.716	0.747	0.642	0.727	0.682	0.735	0.697	8.70
48)	1,1-dichloropropene										
	0.582	0.575	0.589	0.621	0.597	0.558	0.617	0.619	0.625	0.598	3.96
49)	iso-butyl alcohol										
		0.015	0.016	0.016	0.015	0.015		0.017	0.016	6.04	
50)	carbon tetrachloride										
	0.615	0.548	0.630	0.652	0.615	0.595	0.628	0.631	0.637	0.617	4.92
51)	tert amyl alcohol										
		0.015	0.015	0.015	0.015	0.014		0.015	0.015	4.02	

52) I 1,4-difluorobenzene ----------ISTD----------
53) 1,2-dichloroethane-d4 (s)
0.318 0.309 0.311 0.307 0.320 0.309 0.315 0.316 0.322 0.314 1.71
54) n-butyl alcohol
0.008 0.008 0.008 0.008 0.007 0.006 0.008 0.007# 10.61
55) 2,2,4-trimethylpentane
1.191 0.971 1.196 1.241 1.226 1.116 1.321 1.241 1.300 1.200 8.73
56) benzene
1.277 1.410 1.156 1.208 1.232 1.050 1.307 1.309 1.318 1.252 8.40
57) tert-amyl methyl ether
0.160 0.199 0.203 0.202 0.187 0.195 0.197 0.218 0.195 8.56
58) heptane
0.241 0.270 0.280 0.275 0.250 0.291 0.263 0.291 0.270 6.66
59) isopropyl acetate
0.055 0.054 0.051 0.052 0.044 0.055 0.052 7.85
60) 1,2-dichloroethane
0.469 0.383 0.389 0.397 0.354 0.406 0.420 0.437 0.407 8.68
61) trichloroethene
0.318 0.289 0.322 0.335 0.327 0.300 0.324 0.349 0.337 0.322 5.76
62) ethyl acrylate
0.260 0.310 0.317 0.310 0.294 0.305 0.290 0.334 0.302 7.23
63) 2-nitropropane
0.000# -1.00
64) 2-chloroethyl vinyl ether
0.133 0.144 0.147 0.165 0.147 0.144 0.143 0.139 0.175 0.149 8.87
65) methyl methacrylate
0.064 0.064 0.063 0.061 0.057 0.067 0.063 5.13
66) 1,2-dichloropropane
0.304 0.295 0.288 0.298 0.309 0.265 0.310 0.295 0.318 0.298 5.11
67) dibromomethane
0.157 0.177 0.180 0.176 0.167 0.175 0.176 0.189 0.175 5.24
68) methylcyclohexane
0.634 0.521 0.543 0.528 0.490 0.573 0.596 0.561 0.556 8.20
69) bromodichloromethane
0.403 0.408 0.435 0.434 0.420 0.409 0.418 0.440 0.434 0.422 3.25
70) epichlorohydrin
0.024 0.024 0.024 0.024 0.023 0.022 0.026 0.024 5.06
71) cis-1,3-dichloropropene
0.474 0.492 0.485 0.495 0.487 0.459 0.489 0.474 0.508 0.485 2.90
72) 4-methyl-2-pentanone
0.085 0.093 0.084 0.085 0.086 0.079 0.087 0.086 0.095 0.087 5.57
73) 3-methyl-1-butanol
0.011 0.011 0.011 0.011 0.010 0.010 0.012 0.011 7.44

74) I chlorobenzene-d5 ----------ISTD----------
75) toluene-d8 (s)
1.348 1.350 1.347 1.337 1.339 1.329 1.340 1.373 1.358 1.347 0.97
76) toluene
0.939 1.030 0.869 0.885 0.868 0.807 0.945 0.951 0.941 0.915 7.06
77) trans-1,3-dichloropropene
0.484 0.524 0.521 0.530 0.511 0.489 0.514 0.512 0.550 0.515 3.90
78) ethyl methacrylate
0.318 0.322 0.387 0.386 0.381 0.360 0.369 0.343 0.410 0.364 8.59
79) 1,1,2-trichloroethane
0.218 0.226 0.254 0.255 0.247 0.239 0.250 0.228 0.252 0.241 5.71
80) tetrachloroethene
0.303 0.314 0.320 0.329 0.310 0.296 0.333 0.342 0.316 0.318 4.67
81) 1,3-dichloropropane
0.403 0.435 0.446 0.453 0.449 0.413 0.457 0.455 0.468 0.442 4.85

Initial Calibration Summary

Job Number: JC89914 **Sample:** V1C7200-ICC7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C164011.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

82)	2-hexanone											
		0.090	0.093	0.099	0.101	0.103	0.090	0.104	0.103	0.112	0.099	7.35
83)	butyl acetate											
				0.179	0.182	0.182	0.169	0.185	0.175	0.197	0.181	4.76
84)	dibromochloromethane											
		0.339	0.332	0.393	0.384	0.361	0.379	0.353	0.348	0.372	0.363	5.78
85)	1,2-dibromoethane											
		0.361	0.331	0.408	0.404	0.397	0.389	0.385	0.374	0.397	0.383	6.40
86)	n-butyl ether											
		1.382	1.483	1.373	1.378	1.344	1.251	1.382	1.389	1.411	1.377	4.42
87)	chlorobenzene											
		0.920	0.986	0.916	0.921	0.899	0.853	0.939	0.964	0.960	0.928	4.25
88)	1,1,1,2-tetrachloroethane											
		0.324	0.295	0.356	0.357	0.339	0.333	0.348	0.334	0.352	0.338	5.77
89)	ethylbenzene											
		1.702	1.965	1.601	1.641	1.586	1.451	1.744	1.745	1.706	1.682	8.40
90)	m,p-xylene											
		0.639	0.694	0.597	0.610	0.605	0.531	0.640	0.662	0.647	0.625	7.43
91)	o-xylene											
		0.579	0.640	0.578	0.596	0.589	0.523	0.630	0.613	0.621	0.597	5.94
92)	styrene											
		1.012	1.014	0.962	0.994	0.977	0.863	1.026	1.016	1.041	0.989	5.39
93)	bromoform											
		0.192	0.196	0.246	0.238	0.218	0.240	0.208	0.219	0.223	0.220	8.70
94)	butyl acrylate											
		0.559	0.548	0.599	0.602	0.588	0.567	0.571	0.570	0.613	0.580	3.78
95)	isopropylbenzene											
		1.584	1.811	1.567	1.586	1.550	1.439	1.621	1.675	1.615	1.605	6.24
96)	cis-1,4-dichloro-2-butene											
				0.144	0.140	0.133	0.139	0.122		0.139	0.136	5.71
97)	I 1,4-dichlorobenzene-d ----------ISTD----------											
98)	4-bromofluorobenzene (s)											
		0.928	0.944	0.940	0.931	0.929	0.953	0.938	0.939	0.946	0.939	0.88
99)	bromobenzene											
		0.786	0.827	0.771	0.783	0.775	0.715	0.807	0.790	0.812	0.785	4.07
100)	1,1,2,2-tetrachloroethane											
		0.534	0.595	0.640	0.636	0.620	0.627	0.617	0.630	0.643	0.616	5.50
101)	trans-1,4-dichloro-2-butene											
				0.172	0.173	0.163	0.169	0.156		0.173	0.168	4.12
102)	1,2,3-trichloropropane											
				0.159	0.161	0.160	0.153	0.152		0.166	0.159	3.34
103)	n-propylbenzene											
		3.621	3.902	3.473	3.603	3.492	3.166	3.771	3.767	3.702	3.611	5.99
104)	4-ethyltoluene											
											0.000#	-1.00
105)	2-chlorotoluene											
		0.711	0.707	0.687	0.704	0.698	0.632	0.745	0.712	0.730	0.703	4.49
106)	4-chlorotoluene											
		2.237	2.571	2.146	2.168	2.135	1.999	2.233	2.250	2.259	2.222	6.95
107)	1,3,5-trimethylbenzene											
		2.592	2.907	2.534	2.589	2.514	2.345	2.646	2.629	2.688	2.605	5.78
108)	tert-butylbenzene											
		0.410		0.444	0.454	0.445	0.419	0.438	0.428	0.455	0.437	3.73
109)	1,2,4-trimethylbenzene											
		2.607	2.950	2.508	2.555	2.524	2.336	2.674	2.687	2.641	2.609	6.39
110)	sec-butylbenzene											
		3.232	3.413	3.187	3.258	3.154	2.939	3.312	3.383	3.266	3.238	4.33
111)	1,3-dichlorobenzene											
		1.445	1.636	1.452	1.464	1.455	1.355	1.548	1.512	1.514	1.487	5.28

Initial Calibration Summary

Job Number: JC89914 **Sample:** V1C7200-ICC7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C164011.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

```
112)  p-isopropyltoluene
            2.786 2.957 2.732 2.790 2.752 2.523 2.887 2.790 2.854   2.785    4.35
113)  1,4-dichlorobenzene
            1.493 1.639 1.446 1.465 1.431 1.353 1.504 1.505 1.532   1.485    5.27
114)  benzyl chloride
            1.189 1.386 1.309 1.309 1.235 1.251 1.224 1.242 1.363   1.279    5.20
115)  1,2-dichlorobenzene
            1.320 1.499 1.392 1.407 1.373 1.307 1.426 1.316 1.446   1.387    4.70
116)  1,4-diethylbenzene
                                                                    0.000#  -1.00
117)  n-butylbenzene
            1.370 1.505 1.385 1.420 1.389 1.283 1.500 1.437 1.451   1.416    4.88
118)  1,2-dibromo-3-chloropropane
                        0.127 0.126 0.127 0.123 0.123 0.107 0.130   0.123    6.19
119)  1,3,5-trichlorobenzene
            1.100 1.285 1.142 1.142 1.117 1.054 1.158 1.126 1.151   1.142    5.47
120)  1,2,4,5-tetramethylbenzene
                                                                    0.000#  -1.00
121)  2-ethylhexyl acrylate
                        0.637 0.584 0.506 0.622             0.508   0.571   10.83
122)  1,2,4-trichlorobenzene
            0.932 0.910 0.957 0.953 0.923 0.884 0.955 0.888 0.967   0.930    3.30
123)  hexachlorobutadiene
            0.631 0.662 0.651 0.674 0.645 0.602 0.670 0.676 0.666   0.653    3.71
124)  naphthalene
            1.716 2.032 1.812 1.824 1.812 1.701 1.780 1.708 1.898   1.809    5.85
125)  1,2,3-trichlorobenzene
            0.778 0.998 0.887 0.889 0.844 0.828 0.898 0.866 0.918   0.879    7.01
126)  hexachloroethane
            0.423       0.537 0.524 0.489 0.526 0.492 0.496 0.494   0.498    7.10
127)  2-methylnaphthalene
                        1.258 1.223 1.122 1.198 0.958       1.152   1.152    9.26
128)  bis(chloromethyl)ether
                                                                    0.000#  -1.00
129)  ethylenimine
                                                                    0.000#  -1.00
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M1CS7200.M        Thu Apr 25 08:06:45 2019
```

Initial Calibration Verification

Job Number: JC89914 **Sample:** V1C7200-ICV7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C164016.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V1C7200\1C164016.D Vial: 14
Acq On : 24 Apr 2019 8:03 pm Operator: ROBERTS
Sample : ICV7200-50 Inst : GCMS1C
Misc : MS34128,V1C7200,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7200.M (RTE Integrator)
Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Apr 25 08:03:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 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		tert butyl alcohol-d9	1.000	1.000	0.0	102	-0.02	7.36
2	M	tertiary butyl alcohol	1.328	1.294	2.6	102	-0.02	7.48
3		ethanol		----------NA----------				
4	M	1,4-dioxane	0.121	0.121	0.0	100	0.00	11.25
5	I	pentafluorobenzene	1.000	1.000	0.0	105	0.00	9.60
6	M	chlorodifluoromethane	0.521	0.552	-6.0	106	0.00	3.90
7	M	dichlorodifluoromethane	0.739	0.681	7.8	92	0.00	3.86
8	M	chloromethane	0.542	0.580	-7.0	112	0.00	4.28
9	M	vinyl chloride	0.510	0.478	6.3	94	0.00	4.51
10		1,3-butadiene	0.320	0.378	-18.1	115	0.00	4.59
11	M	bromomethane	0.389	0.368	5.4	101	0.02	5.19
12	M	chloroethane	0.306	0.269	12.1	91	0.01	5.38
13	M	trichlorofluoromethane	0.761	0.738	3.0	97	0.00	5.81
14		vinyl bromide	0.298	0.310	-4.0	104	0.00	5.72
15	M	ethyl ether	0.203	0.212	-4.4	105	0.00	6.25
16	M	acrolein	0.052	0.055	-5.8	107	0.00	6.54
17		freon 113	0.336	0.386	-14.9	112	0.00	6.62
18	M	1,1-dichloroethene	0.409	0.386	5.6	96	0.00	6.68
19	M	acetone	0.102	0.099	2.9	104	0.00	6.75
20	M	acetonitrile		----------NA----------				
		----------	True	Calc.	% Drift	----------		
21	M	iodomethane	50.000	44.599	10.8	98	0.00	6.97
		----------	AvgRF	CCRF	% Dev	----------		
22	M	carbon disulfide	1.322	1.384	-4.7	111	0.00	7.09
23	M	methylene chloride	0.444	0.428	3.6	101	0.00	7.42
24	M	methyl acetate	0.248	0.234	5.6	97	0.00	7.21
25	M	methyl tert butyl ether	1.109	1.096	1.2	100	0.00	7.71
26	M	trans-1,2-dichloroethene	0.454	0.432	4.8	100	0.00	7.79
27	M	di-isopropyl ether	1.366	1.296	5.1	97	0.00	8.30
28	M	2-butanone	0.038	0.039	-2.6	102	0.00	9.06
29	M	1,1-dichloroethane	0.771	0.766	0.6	103	0.00	8.36
30	M	chloroprene	0.665	0.685	-3.0	104	0.00	8.46
31	M	acrylonitrile	0.111	0.113	-1.8	103	0.00	7.77
32		hexane	0.706	0.766	-8.5	108	0.00	8.06
33	M	vinyl acetate	0.064	0.062	3.1	94	0.00	8.34
34	M	ethyl tert-butyl ether	1.316	1.284	2.4	98	0.00	8.77
35	M	ethyl acetate	0.048	0.049	-2.1	101	0.00	9.07
36	M	2,2-dichloropropane	0.687	0.660	3.9	98	0.00	9.08
37	M	cis-1,2-dichloroethene	0.490	0.466	4.9	100	0.00	9.10

Initial Calibration Verification

Job Number: JC89914 **Sample:** V1C7200-ICV7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C164016.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

38		methyl acrylate	0.050	0.053	-6.0	101	0.00	9.15
39	M	propionitrile	0.048	0.049	-2.1	104	0.00	9.18
40	M	bromochloromethane	0.213	0.219	-2.8	103	0.00	9.42
41	M	tetrahydrofuran	0.046	0.046	0.0	104	0.00	9.45
42	M	chloroform	0.546	0.514	5.9	102	0.00	9.47
43	M	t-butyl formate	0.293	0.289	1.4	91	0.00	9.48
44	S	dibromofluoromethane (s)	0.422	0.431	-2.1	107	0.00	9.67
45	M	methacrylonitrile	0.140	0.142	-1.4	100	0.00	9.36
46	M	1,1,1-trichloroethane	0.706	0.705	0.1	99	0.00	9.70
47		cyclohexane	0.697	0.660	5.3	97	0.00	9.76
48		1,1-dichloropropene	0.598	0.601	-0.5	102	0.00	9.88
49		iso-butyl alcohol	0.016	0.015	6.3	99	0.00	9.91
50		carbon tetrachloride	0.617	0.637	-3.2	103	0.00	9.91
51		tert amyl alcohol	0.015	0.015	0.0	105	0.00	10.02
52	I	1,4-difluorobenzene	1.000	1.000	0.0	106	0.00	10.52
53	S	1,2-dichloroethane-d4 (s)	0.314	0.301	4.1	104	0.00	10.09
54	M	n-butyl alcohol	0.007	0.007#	0.0	102	0.00	10.65
55		2,2,4-trimethylpentane	1.200	1.162	3.2	99	0.00	10.11
56	M	benzene	1.252	1.169	6.6	103	0.00	10.15
57	M	tert-amyl methyl ether	0.195	0.186	4.6	97	0.00	10.16
58	M	heptane	0.270	0.321	-18.9	122	0.00	10.29
59	M	isopropyl acetate	0.052	0.049	5.8	96	0.00	10.06
60	M	1,2-dichloroethane	0.407	0.364	10.6	99	0.00	10.18
61	M	trichloroethene	0.322	0.326	-1.2	103	0.00	10.86
62		ethyl acrylate	0.302	0.306	-1.3	102	0.00	10.86
63	M	2-nitropropane		----------NA----------				
64	M	2-chloroethyl vinyl ether	0.149	0.164	-10.1	105	0.00	11.65
65	M	methyl methacrylate	0.063	0.061	3.2	102	0.00	11.12
66	M	1,2-dichloropropane	0.298	0.286	4.0	102	0.00	11.13
67	M	dibromomethane	0.175	0.168	4.0	99	0.00	11.30
68	M	methylcyclohexane	0.556	0.521	6.3	102	0.00	11.06
69	M	bromodichloromethane	0.422	0.406	3.8	99	0.00	11.43
70		epichlorohydrin	0.024	0.024	0.0	106	0.00	11.79
71	M	cis-1,3-dichloropropene	0.485	0.475	2.1	102	0.00	11.87
72	M	4-methyl-2-pentanone	0.087	0.082	5.7	101	0.00	11.96
73	M	3-methyl-1-butanol	0.011	0.011	0.0	102	0.00	11.98
74	I	chlorobenzene-d5	1.000	1.000	0.0	106	0.00	13.66
75	S	toluene-d8 (s)	1.347	1.318	2.2	104	0.00	12.15
76		toluene	0.915	0.856	6.4	102	0.00	12.22
77		trans-1,3-dichloropropene	0.515	0.517	-0.4	103	0.00	12.43
78		ethyl methacrylate	0.364	0.372	-2.2	102	0.00	12.41
79		1,1,2-trichloroethane	0.241	0.243	-0.8	100	0.00	12.65
80	M	tetrachloroethene		----------NA----------				
81	M	1,3-dichloropropane	0.442	0.437	1.1	102	0.00	12.83
82		2-hexanone	0.099	0.097	2.0	102	0.00	12.80
83	M	butyl acetate	0.181	0.175	3.3	102	0.00	12.87
84	M	dibromochloromethane	0.363	0.382	-5.2	105	0.00	13.10
85	M	1,2-dibromoethane	0.383	0.385	-0.5	101	0.00	13.24
86		n-butyl ether	1.377	1.387	-0.7	106	0.00	13.57
87	M	chlorobenzene	0.928	0.900	3.0	103	0.00	13.69
88	M	1,1,1,2-tetrachloroethane	0.338	0.345	-2.1	102	0.00	13.75
89	M	ethylbenzene	1.682	1.566	6.9	101	0.00	13.73
90	M	m,p-xylene	0.625	0.589	5.8	102	0.00	13.84
91	M	o-xylene	0.597	0.567	5.0	101	0.00	14.26
92	M	styrene	0.989	0.957	3.2	102	0.00	14.27
93	M	bromoform	0.220	0.244	-10.9	108	0.00	14.55
94		butyl acrylate	0.580	0.569	1.9	100	0.00	14.07
95		isopropylbenzene	1.605	1.540	4.0	103	0.00	14.59

Initial Calibration Verification

Job Number: JC89914 **Sample:** V1C7200-ICV7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C164016.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

96		cis-1,4-dichloro-2-butene	0.136	0.133	2.2	100	0.00	14.69	
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	105	0.00	15.97	
98	S	4-bromofluorobenzene (s)	0.939	0.936	0.3	106	0.00	14.81	
99	M	bromobenzene	0.785	0.756	3.7	102	0.00	15.00	
100	M	1,1,2,2-tetrachloroethane	0.616	0.611	0.8	101	0.00	14.92	
101	M	trans-1,4-dichloro-2-bute	0.168	0.185	-10.1	112	0.00	14.96	
102	M	1,2,3-trichloropropane	0.159	0.156	1.9	102	0.00	14.99	
103	M	n-propylbenzene	3.611	3.485	3.5	102	0.00	15.00	
104		4-ethyltoluene		----------NA----------					
105	M	2-chlorotoluene	0.703	0.677	3.7	101	0.00	15.15	
106	M	4-chlorotoluene	2.222	2.130	4.1	104	0.00	15.25	
107	M	1,3,5-trimethylbenzene	2.605	2.486	4.6	101	0.00	15.15	
108	M	tert-butylbenzene	0.437	0.445	-1.8	103	0.00	15.49	
109	M	1,2,4-trimethylbenzene	2.609	2.504	4.0	103	0.00	15.54	
110	M	sec-butylbenzene	3.238	3.165	2.3	102	0.00	15.71	
111	M	1,3-dichlorobenzene	1.487	1.459	1.9	105	0.00	15.91	
112	M	p-isopropyltoluene	2.785	2.742	1.5	104	0.00	15.83	
113	M	1,4-dichlorobenzene	1.485	1.432	3.6	103	0.00	16.00	
114		benzyl chloride	1.279	1.601	-25.2	129	0.00	16.12	
115	M	1,2-dichlorobenzene	1.387	1.375	0.9	103	0.00	16.40	
116		1,4-diethylbenzene		----------NA----------					
117	M	n-butylbenzene	1.416	1.382	2.4	102	0.00	16.25	
118	M	1,2-dibromo-3-chloropropa	0.123	0.119	3.3	100	0.00	17.19	
119		1,3,5-trichlorobenzene	1.142	1.121	1.8	103	0.00	17.35	
120		1,2,4,5-tetramethylbenzen		----------NA----------					
121		2-ethylhexyl acrylate	0.571	0.589	-3.2	106	0.00	17.88	
122	M	1,2,4-trichlorobenzene	0.930	0.890	4.3	98	0.00	17.92	
123	M	hexachlorobutadiene	0.653	0.630	3.5	99	0.00	18.01	
124	M	naphthalene	1.809	1.780	1.6	103	0.00	18.16	
125	M	1,2,3-trichlorobenzene	0.879	0.827	5.9	98	0.00	18.38	
126	m	hexachloroethane	0.498	0.527	-5.8	106	0.00	16.66	
127		2-methylnaphthalene	1.152	1.152	0.0	99	0.00	19.13	
128		bis(chloromethyl)ether		----------NA----------					
129		ethylenimine		----------NA----------					

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1C164011.D M1CS7200.M Thu Apr 25 08:06:32 2019

Initial Calibration Verification

Job Number: JC89914 **Sample:** V1C7200-ICV7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C164017.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V1C7200\1C164017.D Vial: 15
Acq On : 24 Apr 2019 8:30 pm Operator: ROBERTS
Sample : ICV7200-50 Inst : GCMS1C
Misc : MS34128,V1C7200,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7200.M (RTE Integrator)
Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Apr 25 08:03:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 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		tert butyl alcohol-d9	1.000	1.000	0.0	104	-0.02	7.36
2	M	tertiary butyl alcohol		----------	NA	----------		
3		ethanol		----------	NA	----------		
4	M	1,4-dioxane		----------	NA	----------		
5	I	pentafluorobenzene	1.000	1.000	0.0	107	0.00	9.60
6	M	chlorodifluoromethane		----------	NA	----------		
7	M	dichlorodifluoromethane		----------	NA	----------		
8	M	chloromethane		----------	NA	----------		
9	M	vinyl chloride		----------	NA	----------		
10		1,3-butadiene		----------	NA	----------		
11	M	bromomethane		----------	NA	----------		
12	M	chloroethane		----------	NA	----------		
13	M	trichlorofluoromethane		----------	NA	----------		
14		vinyl bromide		----------	NA	----------		
15	M	ethyl ether		----------	NA	----------		
16	M	acrolein		----------	NA	----------		
17		freon 113		----------	NA	----------		
18	M	1,1-dichloroethene		----------	NA	----------		
19	M	acetone		----------	NA	----------		
20	M	acetonitrile	0.042	0.042	0.0	105	0.00	7.22
		----------	True	Calc.	% Drift	----------		
21	M	iodomethane		----------	NA	----------		
		----------	AvgRF	CCRF	% Dev	----------		
22	M	carbon disulfide		----------	NA	----------		
23	M	methylene chloride		----------	NA	----------		
24	M	methyl acetate		----------	NA	----------		
25	M	methyl tert butyl ether		----------	NA	----------		
26	M	trans-1,2-dichloroethene		----------	NA	----------		
27	M	di-isopropyl ether		----------	NA	----------		
28	M	2-butanone		----------	NA	----------		
29	M	1,1-dichloroethane		----------	NA	----------		
30	M	chloroprene		----------	NA	----------		
31	M	acrylonitrile		----------	NA	----------		
32		hexane		----------	NA	----------		
33	M	vinyl acetate		----------	NA	----------		
34	M	ethyl tert-butyl ether		----------	NA	----------		
35	M	ethyl acetate		----------	NA	----------		
36	M	2,2-dichloropropane		----------	NA	----------		
37	M	cis-1,2-dichloroethene		----------	NA	----------		

Initial Calibration Verification

Job Number: JC89914 **Sample:** V1C7200-ICV7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C164017.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

38		methyl acrylate		----------NA----------					
39	M	propionitrile		----------NA----------					
40	M	bromochloromethane		----------NA----------					
41	M	tetrahydrofuran		----------NA----------					
42	M	chloroform		----------NA----------					
43	M	t-butyl formate		----------NA----------					
44	S	dibromofluoromethane (s)	0.422	0.418	0.9	106	0.00	9.67	
45	M	methacrylonitrile		----------NA----------					
46	M	1,1,1-trichloroethane		----------NA----------					
47		cyclohexane		----------NA----------					
48		1,1-dichloropropene		----------NA----------					
49		iso-butyl alcohol		----------NA----------					
50		carbon tetrachloride		----------NA----------					
51		tert amyl alcohol		----------NA----------					
52	I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	10.52	
53	S	1,2-dichloroethane-d4 (s)	0.314	0.311	1.0	105	0.00	10.09	
54	M	n-butyl alcohol		----------NA----------					
55		2,2,4-trimethylpentane		----------NA----------					
56	M	benzene		----------NA----------					
57	M	tert-amyl methyl ether		----------NA----------					
58	M	heptane		----------NA----------					
59	M	isopropyl acetate		----------NA----------					
60	M	1,2-dichloroethane		----------NA----------					
61	M	trichloroethene		----------NA----------					
62		ethyl acrylate		----------NA----------					
63	M	2-nitropropane		----------NA----------					
64	M	2-chloroethyl vinyl ether		----------NA----------					
65	M	methyl methacrylate		----------NA----------					
66	M	1,2-dichloropropane		----------NA----------					
67	M	dibromomethane		----------NA----------					
68	M	methylcyclohexane		----------NA----------					
69	M	bromodichloromethane		----------NA----------					
70		epichlorohydrin		----------NA----------					
71	M	cis-1,3-dichloropropene		----------NA----------					
72	M	4-methyl-2-pentanone		----------NA----------					
73	M	3-methyl-1-butanol		----------NA----------					
74	I	chlorobenzene-d5	1.000	1.000	0.0	107	0.00	13.66	
75	S	toluene-d8 (s)	1.347	1.330	1.3	107	0.00	12.15	
76		toluene		----------NA----------					
77		trans-1,3-dichloropropene		----------NA----------					
78		ethyl methacrylate		----------NA----------					
79		1,1,2-trichloroethane		----------NA----------					
80	M	tetrachloroethene	0.318	0.309	2.8	101	0.00	12.80	
81	M	1,3-dichloropropane		----------NA----------					
82		2-hexanone		----------NA----------					
83	M	butyl acetate		----------NA----------					
84	M	dibromochloromethane		----------NA----------					
85	M	1,2-dibromoethane		----------NA----------					
86		n-butyl ether		----------NA----------					
87	M	chlorobenzene		----------NA----------					
88	M	1,1,1,2-tetrachloroethane		----------NA----------					
89	M	ethylbenzene		----------NA----------					
90	M	m,p-xylene		----------NA----------					
91	M	o-xylene		----------NA----------					
92	M	styrene		----------NA----------					
93	M	bromoform		----------NA----------					
94		butyl acrylate		----------NA----------					
95		isopropylbenzene		----------NA----------					

Initial Calibration Verification

Job Number: JC89914 **Sample:** V1C7200-ICV7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C164017.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

96		cis-1,4-dichloro-2-butene		----------NA----------				
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	15.97
98	S	4-bromofluorobenzene (s)	0.939	0.934	0.5	106	0.00	14.81
99	M	bromobenzene		----------NA----------				
100	M	1,1,2,2-tetrachloroethane		----------NA----------				
101	M	trans-1,4-dichloro-2-bute		----------NA----------				
102	M	1,2,3-trichloropropane		----------NA----------				
103	M	n-propylbenzene		----------NA----------				
104		4-ethyltoluene		----------NA----------				
105	M	2-chlorotoluene		----------NA----------				
106	M	4-chlorotoluene		----------NA----------				
107	M	1,3,5-trimethylbenzene		----------NA----------				
108	M	tert-butylbenzene		----------NA----------				
109	M	1,2,4-trimethylbenzene		----------NA----------				
110	M	sec-butylbenzene		----------NA----------				
111	M	1,3-dichlorobenzene		----------NA----------				
112	M	p-isopropyltoluene		----------NA----------				
113	M	1,4-dichlorobenzene		----------NA----------				
114		benzyl chloride		----------NA----------				
115	M	1,2-dichlorobenzene		----------NA----------				
116		1,4-diethylbenzene		----------NA----------				
117	M	n-butylbenzene		----------NA----------				
118	M	1,2-dibromo-3-chloropropa		----------NA----------				
119		1,3,5-trichlorobenzene		----------NA----------				
120		1,2,4,5-tetramethylbenzen		----------NA----------				
121		2-ethylhexyl acrylate		----------NA----------				
122	M	1,2,4-trichlorobenzene		----------NA----------				
123	M	hexachlorobutadiene		----------NA----------				
124	M	naphthalene		----------NA----------				
125	M	1,2,3-trichlorobenzene		----------NA----------				
126	m	hexachloroethane		----------NA----------				
127		2-methylnaphthalene		----------NA----------				
128		bis(chloromethyl)ether		----------NA----------				
129		ethylenimine		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1C164011.D M1CS7200.M Thu Apr 25 08:06:34 2019

Continuing Calibration Summary

Job Number: JC89914 **Sample:** V1C7250-CC7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C165379.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ja...19\v1c7250\1c165379.d Vial: 1
Acq On : 19 Jun 2019 8:38 am Operator: PrashanS
Sample : CC7200-50 Inst : GCMS1C
Misc : MS35567,V1C7250,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7200.M (RTE Integrator)
Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Apr 25 08:03:13 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		tert butyl alcohol-d9	1.000	1.000	0.0	79	-0.02	7.36
2	M	tertiary butyl alcohol	1.328	1.407	-5.9	85	-0.02	7.48
3		ethanol		----------NA----------				
4	M	1,4-dioxane	0.121	0.123	-1.7	79	0.01	11.26
5	I	pentafluorobenzene	1.000	1.000	0.0	95	0.00	9.60
6	M	chlorodifluoromethane	0.521	0.547	-5.0	94	0.00	3.90
7	M	dichlorodifluoromethane	0.739	0.787	-6.5	96	0.00	3.86
8	M	chloromethane	0.542	0.553	-2.0	96	0.00	4.28
9	M	vinyl chloride	0.510	0.563	-10.4	100	0.00	4.51
10		1,3-butadiene	0.320	0.359	-12.2	99	0.00	4.59
11	M	bromomethane	0.389	0.387	0.5	96	0.02	5.20
12	M	chloroethane	0.306	0.309	-1.0	94	0.01	5.38
13	M	trichlorofluoromethane	0.761	0.825	-8.4	97	0.00	5.81
14		vinyl bromide	0.298	0.416	-39.6#	126	0.00	5.72
15	M	ethyl ether	0.203	0.200	1.5	89	0.00	6.25
16	M	acrolein	0.052	0.050	3.8	88	0.00	6.54
17		freon 113	0.336	0.334	0.6	87	0.00	6.62
18	M	1,1-dichloroethene	0.409	0.413	-1.0	93	0.00	6.68
19	M	acetone	0.102	0.095	6.9	90	0.00	6.75
20	M	acetonitrile	0.042	0.037#	11.9	83	0.00	7.21
		----------	True	Calc.	% Drift	----------		
21	M	iodomethane	50.000	43.381	13.2	86	0.00	6.97
		----------	AvgRF	CCRF	% Dev	----------		
22	M	carbon disulfide	1.322	1.262	4.5	92	0.00	7.09
23	M	methylene chloride	0.444	0.442	0.5	94	0.00	7.42
24	M	methyl acetate	0.248	0.224	9.7	83	0.00	7.21
25	M	methyl tert butyl ether	1.109	1.099	0.9	90	0.00	7.71
26	M	trans-1,2-dichloroethene	0.454	0.445	2.0	93	0.00	7.78
27	M	di-isopropyl ether	1.366	1.329	2.7	90	0.00	8.30
28	M	2-butanone	0.038	0.038#	0.0	89	0.00	9.06
29	M	1,1-dichloroethane	0.771	0.771	0.0	93	0.00	8.36
30	M	chloroprene	0.665	0.690	-3.8	94	0.00	8.46
31	M	acrylonitrile	0.111	0.105	5.4	86	0.00	7.77
32		hexane	0.706	0.680	3.7	87	0.00	8.06
33	M	vinyl acetate	0.064	0.064	0.0	86	0.00	8.34
34	M	ethyl tert-butyl ether	1.316	1.310	0.5	90	0.00	8.77
35	M	ethyl acetate	0.048	0.046#	4.2	87	0.00	9.07
36	M	2,2-dichloropropane	0.687	0.738	-7.4	98	0.00	9.08
37	M	cis-1,2-dichloroethene	0.490	0.486	0.8	94	0.00	9.09

Continuing Calibration Summary

Job Number: JC89914 **Sample:** V1C7250-CC7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C165379.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

38		methyl acrylate	0.050	0.051	-2.0	87	0.00	9.16
39	M	propionitrile	0.048	0.045#	6.3	86	0.00	9.18
40	M	bromochloromethane	0.213	0.217	-1.9	93	0.00	9.41
41	M	tetrahydrofuran	0.046	0.042#	8.7	86	0.00	9.44
42	M	chloroform	0.546	0.532	2.6	95	0.00	9.47
43	M	t-butyl formate	0.293	0.322	-9.9	92	0.00	9.48
44	S	dibromofluoromethane (s)	0.422	0.434	-2.8	97	0.00	9.66
45	M	methacrylonitrile	0.140	0.136	2.9	87	0.00	9.36
46	M	1,1,1-trichloroethane	0.706	0.778	-10.2	99	0.00	9.70
47		cyclohexane	0.697	0.659	5.5	87	0.00	9.76
48		1,1-dichloropropene	0.598	0.618	-3.3	94	0.00	9.88
49		iso-butyl alcohol	0.016	0.014#	12.5	82	0.00	9.90
50		carbon tetrachloride	0.617	0.688	-11.5	100	0.00	9.90
51		tert amyl alcohol	0.015	0.014#	6.7	87	0.00	10.02
52	I	1,4-difluorobenzene	1.000	1.000	0.0	94	0.00	10.52
53	S	1,2-dichloroethane-d4 (s)	0.314	0.328	-4.5	100	0.00	10.09
54	M	n-butyl alcohol	0.007	0.007#	0.0	85	0.00	10.65
55		2,2,4-trimethylpentane	1.200	1.153	3.9	87	0.00	10.11
56	M	benzene	1.252	1.232	1.6	96	0.00	10.15
57	M	tert-amyl methyl ether	0.195	0.199	-2.1	92	0.00	10.16
58	M	heptane	0.270	0.266	1.5	89	0.00	10.29
59	M	isopropyl acetate	0.052	0.052	0.0	90	0.00	10.06
60	M	1,2-dichloroethane	0.407	0.408	-0.2	98	0.00	10.18
61	M	trichloroethene	0.322	0.345	-7.1	97	0.00	10.86
62		ethyl acrylate	0.302	0.286	5.3	85	0.00	10.86
63	M	2-nitropropane		----------NA----------				
64	M	2-chloroethyl vinyl ether	0.149	0.163	-9.4	92	0.00	11.65
65	M	methyl methacrylate	0.063	0.059	6.3	86	0.00	11.12
66	M	1,2-dichloropropane	0.298	0.295	1.0	93	0.00	11.13
67	M	dibromomethane	0.175	0.174	0.6	91	0.00	11.30
68	M	methylcyclohexane	0.556	0.534	4.0	92	0.00	11.06
69	M	bromodichloromethane	0.422	0.443	-5.0	96	0.00	11.42
70		epichlorohydrin	0.024	0.022#	8.3	86	0.00	11.79
71	M	cis-1,3-dichloropropene	0.485	0.498	-2.7	94	0.00	11.87
72	M	4-methyl-2-pentanone	0.087	0.079	9.2	87	0.00	11.96
73	M	3-methyl-1-butanol	0.011	0.010#	9.1	86	0.00	11.98
74	I	chlorobenzene-d5	1.000	1.000	0.0	96	0.00	13.66
75	S	toluene-d8 (s)	1.347	1.380	-2.4	99	0.00	12.15
76		toluene	0.915	0.901	1.5	98	0.00	12.22
77		trans-1,3-dichloropropene	0.515	0.541	-5.0	98	0.00	12.43
78		ethyl methacrylate	0.364	0.360	1.1	90	0.00	12.41
79		1,1,2-trichloroethane	0.241	0.245	-1.7	92	0.00	12.65
80	M	tetrachloroethene	0.318	0.336	-5.7	98	0.00	12.80
81	M	1,3-dichloropropane	0.442	0.442	0.0	94	0.00	12.83
82		2-hexanone	0.099	0.096	3.0	92	0.00	12.80
83	M	butyl acetate	0.181	0.172	5.0	91	0.00	12.87
84	M	dibromochloromethane	0.363	0.389	-7.2	97	0.00	13.09
85	M	1,2-dibromoethane	0.383	0.333	13.1	79	0.00	13.24
86		n-butyl ether	1.377	1.341	2.6	94	0.00	13.57
87	M	chlorobenzene	0.928	0.951	-2.5	99	0.00	13.69
88	M	1,1,1,2-tetrachloroethane	0.338	0.367	-8.6	99	0.00	13.75
89	M	ethylbenzene	1.682	1.696	-0.8	99	0.00	13.73
90	M	m,p-xylene	0.625	0.647	-3.5	102	0.00	13.84
91	M	o-xylene	0.597	0.619	-3.7	100	0.00	14.25
92	M	styrene	0.989	1.037	-4.9	100	0.00	14.27
93	M	bromoform	0.220	0.244	-10.9	99	0.00	14.55
94		butyl acrylate	0.580	0.563	2.9	90	0.00	14.07
95		isopropylbenzene	1.605	1.672	-4.2	101	0.00	14.59

Continuing Calibration Summary

Job Number: JC89914 **Sample:** V1C7250-CC7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C165379.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

96		cis-1,4-dichloro-2-butene	0.136	0.145	-6.6	100	0.00	14.68
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	15.97
98	S	4-bromofluorobenzene (s)	0.939	0.890	5.2	93	0.00	14.81
99	M	bromobenzene	0.785	0.809	-3.1	100	0.00	15.00
100	M	1,1,2,2-tetrachloroethane	0.616	0.604	1.9	92	0.00	14.92
101	M	trans-1,4-dichloro-2-bute	0.168	0.169	-0.6	95	0.00	14.96
102	M	1,2,3-trichloropropane	0.159	0.159	0.0	96	0.00	14.99
103	M	n-propylbenzene	3.611	3.761	-4.2	102	0.00	14.99
104		4-ethyltoluene		----------NA----------				
105	M	2-chlorotoluene	0.703	0.749	-6.5	103	0.00	15.15
106	M	4-chlorotoluene	2.222	2.197	1.1	99	0.00	15.25
107	M	1,3,5-trimethylbenzene	2.605	2.655	-1.9	100	0.00	15.14
108	M	tert-butylbenzene	0.437	0.463	-5.9	99	0.00	15.49
109	M	1,2,4-trimethylbenzene	2.609	2.642	-1.3	101	0.00	15.54
110	M	sec-butylbenzene	3.238	3.391	-4.7	101	0.00	15.71
111	M	1,3-dichlorobenzene	1.487	1.562	-5.0	104	0.00	15.91
112	M	p-isopropyltoluene	2.785	2.935	-5.4	102	0.00	15.83
113	M	1,4-dichlorobenzene	1.485	1.539	-3.6	102	0.00	15.99
114		benzyl chloride	1.279	1.416	-10.7	105	0.00	16.11
115	M	1,2-dichlorobenzene	1.387	1.446	-4.3	100	0.00	16.40
116		1,4-diethylbenzene		----------NA----------				
117	M	n-butylbenzene	1.416	1.516	-7.1	104	0.00	16.24
118	M	1,2-dibromo-3-chloropropa	0.123	0.126	-2.4	97	0.00	17.19
119		1,3,5-trichlorobenzene	1.142	1.256	-10.0	107	0.00	17.34
120		1,2,4,5-tetramethylbenzen		----------NA----------				
121		2-ethylhexyl acrylate	0.571	0.570	0.2	95	0.00	17.88
122	M	1,2,4-trichlorobenzene	0.930	1.047	-12.6	107	0.00	17.92
123	M	hexachlorobutadiene	0.653	0.688	-5.4	99	0.00	18.01
124	M	naphthalene	1.809	1.887	-4.3	101	0.00	18.16
125	M	1,2,3-trichlorobenzene	0.879	0.934	-6.3	102	0.00	18.37
126	m	hexachloroethane	0.498	0.557	-11.8	103	0.00	16.65
127		2-methylnaphthalene	1.152	1.180	-2.4	94	0.00	19.12
128		bis(chloromethyl)ether		----------NA----------				
129		ethylenimine		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1C164011.D M1CS7200.M Thu Jun 20 06:31:59 2019

Continuing Calibration Summary

Job Number: JC89914 **Sample:** V1C7250-ECC7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C165398.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ja...19\v1c7250\1c165398.d Vial: 20
Acq On : 19 Jun 2019 5:25 pm Operator: PrashanS
Sample : ECC7200-50 Inst : GCMS1C
Misc : MS35558,V1C7250,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7200.M (RTE Integrator)
Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Apr 25 08:03:13 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		tert butyl alcohol-d9	1.000	1.000	0.0	108	-0.02	7.36
2	M	tertiary butyl alcohol	1.328	1.377	-3.7	115	-0.02	7.48
3		ethanol		----------NA----------				
4	M	1,4-dioxane	0.121	0.137	-13.2	121	0.00	11.24
5	I	pentafluorobenzene	1.000	1.000	0.0	133	0.00	9.60
6	M	chlorodifluoromethane	0.521	0.498	4.4	120	0.00	3.89
7	M	dichlorodifluoromethane	0.739	0.671	9.2	114	0.00	3.86
8	M	chloromethane	0.542	0.549	-1.3	134	0.00	4.28
9	M	vinyl chloride	0.510	0.534	-4.7	132	0.00	4.51
10		1,3-butadiene	0.320	0.338	-5.6	130	0.00	4.59
11	M	bromomethane	0.389	0.378	2.8	131	0.02	5.19
12	M	chloroethane	0.306	0.311	-1.6	132	0.00	5.37
13	M	trichlorofluoromethane	0.761	0.729	4.2	120	0.00	5.81
14		vinyl bromide	0.298	0.412	-38.3	175	0.00	5.72
15	M	ethyl ether	0.203	0.206	-1.5	128	0.00	6.25
16	M	acrolein	0.052	0.049#	5.8	121	0.00	6.54
17		freon 113	0.336	0.317	5.7	116	0.00	6.62
18	M	1,1-dichloroethene	0.409	0.405	1.0	127	0.00	6.68
19	M	acetone	0.102	0.087	14.7	115	0.00	6.75
20	M	acetonitrile	0.042	0.038#	9.5	120	0.00	7.21
		----------	True	Calc.	% Drift	----------		
21	M	iodomethane	50.000	48.224	3.6	135	0.00	6.97
		----------	AvgRF	CCRF	% Dev	----------		
22	M	carbon disulfide	1.322	1.248	5.6	127	0.00	7.09
23	M	methylene chloride	0.444	0.433	2.5	129	0.00	7.42
24	M	methyl acetate	0.248	0.222	10.5	115	0.00	7.21
25	M	methyl tert butyl ether	1.109	1.051	5.2	120	0.00	7.71
26	M	trans-1,2-dichloroethene	0.454	0.441	2.9	129	0.00	7.78
27	M	di-isopropyl ether	1.366	1.343	1.7	127	0.00	8.30
28	M	2-butanone	0.038	0.037#	2.6	121	0.00	9.06
29	M	1,1-dichloroethane	0.771	0.753	2.3	127	0.00	8.36
30	M	chloroprene	0.665	0.645	3.0	123	0.00	8.46
31	M	acrylonitrile	0.111	0.105	5.4	120	0.00	7.77
32		hexane	0.706	0.629	10.9	112	0.00	8.06
33	M	vinyl acetate	0.064	0.063	1.6	120	0.00	8.34
34	M	ethyl tert-butyl ether	1.316	1.259	4.3	121	0.00	8.77
35	M	ethyl acetate	0.048	0.046#	4.2	120	0.00	9.07
36	M	2,2-dichloropropane	0.687	0.625	9.0	117	0.00	9.08
37	M	cis-1,2-dichloroethene	0.490	0.475	3.1	128	0.00	9.09

Continuing Calibration Summary

Job Number: JC89914 **Sample:** V1C7250-ECC7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C165398.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

38		methyl acrylate	0.050	0.050#	0.0	119	0.00	9.16
39	M	propionitrile	0.048	0.044#	8.3	119	-0.01	9.18
40	M	bromochloromethane	0.213	0.217	-1.9	129	0.00	9.41
41	M	tetrahydrofuran	0.046	0.040#	13.0	114	0.00	9.44
42	M	chloroform	0.546	0.496	9.2	124	0.00	9.47
43	M	t-butyl formate	0.293	0.275	6.1	109	0.00	9.48
44	S	dibromofluoromethane (s)	0.422	0.420	0.5	131	0.00	9.66
45	M	methacrylonitrile	0.140	0.134	4.3	120	0.00	9.36
46	M	1,1,1-trichloroethane	0.706	0.687	2.7	122	0.00	9.70
47		cyclohexane	0.697	0.643	7.7	119	0.00	9.76
48		1,1-dichloropropene	0.598	0.594	0.7	127	0.00	9.88
49		iso-butyl alcohol	0.016	0.014#	12.5	120	-0.01	9.90
50		carbon tetrachloride	0.617	0.606	1.8	123	0.00	9.90
51		tert amyl alcohol	0.015	0.013#	13.3	112	0.00	10.02
52	I	1,4-difluorobenzene	1.000	1.000	0.0	131	0.00	10.52
53	S	1,2-dichloroethane-d4 (s)	0.314	0.291	7.3	124	0.00	10.09
54	M	n-butyl alcohol	0.007	0.007#	0.0	123	-0.01	10.65
55		2,2,4-trimethylpentane	1.200	1.057	11.9	112	0.00	10.11
56	M	benzene	1.252	1.204	3.8	130	0.00	10.15
57	M	tert-amyl methyl ether	0.195	0.190	2.6	122	0.00	10.16
58	M	heptane	0.270	0.242	10.4	113	0.00	10.29
59	M	isopropyl acetate	0.052	0.051	1.9	123	0.00	10.06
60	M	1,2-dichloroethane	0.407	0.357	12.3	120	0.00	10.18
61	M	trichloroethene	0.322	0.338	-5.0	132	0.00	10.86
62		ethyl acrylate	0.302	0.283	6.3	117	0.00	10.86
63	M	2-nitropropane		----------NA----------				
64	M	2-chloroethyl vinyl ether	0.149	0.144	3.4	114	0.00	11.65
65	M	methyl methacrylate	0.063	0.059	6.3	120	0.00	11.12
66	M	1,2-dichloropropane	0.298	0.295	1.0	130	0.00	11.13
67	M	dibromomethane	0.175	0.167	4.6	122	0.00	11.30
68	M	methylcyclohexane	0.556	0.512	7.9	123	0.00	11.06
69	M	bromodichloromethane	0.422	0.407	3.6	123	0.00	11.42
70		epichlorohydrin	0.024	0.021#	12.5	114	0.00	11.79
71	M	cis-1,3-dichloropropene	0.485	0.477	1.6	126	0.00	11.87
72	M	4-methyl-2-pentanone	0.087	0.079	9.2	122	0.00	11.96
73	M	3-methyl-1-butanol	0.011	0.010#	9.1	119	-0.01	11.98
74	I	chlorobenzene-d5	1.000	1.000	0.0	132	0.00	13.66
75	S	toluene-d8 (s)	1.347	1.387	-3.0	137	0.00	12.15
76		toluene	0.915	0.891	2.6	133	0.00	12.22
77		trans-1,3-dichloropropene	0.515	0.504	2.1	125	0.00	12.43
78		ethyl methacrylate	0.364	0.358	1.6	122	0.00	12.41
79		1,1,2-trichloroethane	0.241	0.241	0.0	125	0.00	12.65
80	M	tetrachloroethene	0.318	0.333	-4.7	133	0.00	12.80
81	M	1,3-dichloropropane	0.442	0.432	2.3	126	0.00	12.82
82		2-hexanone	0.099	0.094	5.1	124	0.00	12.80
83	M	butyl acetate	0.181	0.175	3.3	127	0.00	12.87
84	M	dibromochloromethane	0.363	0.375	-3.3	129	0.00	13.09
85	M	1,2-dibromoethane	0.383	0.332	13.3	108	0.00	13.24
86		n-butyl ether	1.377	1.372	0.4	131	0.00	13.57
87	M	chlorobenzene	0.928	0.938	-1.1	134	0.00	13.69
88	M	1,1,1,2-tetrachloroethane	0.338	0.351	-3.8	129	0.00	13.74
89	M	ethylbenzene	1.682	1.625	3.4	131	0.00	13.73
90	M	m,p-xylene	0.625	0.622	0.5	134	0.00	13.83
91	M	o-xylene	0.597	0.607	-1.7	134	0.00	14.26
92	M	styrene	0.989	1.009	-2.0	134	0.00	14.27
93	M	bromoform	0.220	0.232	-5.5	129	0.00	14.55
94		butyl acrylate	0.580	0.555	4.3	122	0.00	14.07
95		isopropylbenzene	1.605	1.582	1.4	132	0.00	14.59

Continuing Calibration Summary

Job Number: JC89914 **Sample:** V1C7250-ECC7200
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1C165398.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

96		cis-1,4-dichloro-2-butene	0.136	0.123	9.6	115	0.00	14.68
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	130	0.00	15.97
98	S	4-bromofluorobenzene (s)	0.939	0.884	5.9	123	0.00	14.81
99	M	bromobenzene	0.785	0.802	-2.2	133	0.00	15.00
100	M	1,1,2,2-tetrachloroethane	0.616	0.618	-0.3	126	0.00	14.92
101	M	trans-1,4-dichloro-2-bute	0.168	0.153	8.9	115	0.00	14.95
102	M	1,2,3-trichloropropane	0.159	0.154	3.1	124	0.00	14.99
103	M	n-propylbenzene	3.611	3.627	-0.4	131	0.00	14.99
104		4-ethyltoluene		----------NA----------				
105	M	2-chlorotoluene	0.703	0.735	-4.6	136	0.00	15.15
106	M	4-chlorotoluene	2.222	2.113	4.9	127	0.00	15.25
107	M	1,3,5-trimethylbenzene	2.605	2.579	1.0	130	0.00	15.14
108	M	tert-butylbenzene	0.437	0.469	-7.3	135	0.00	15.49
109	M	1,2,4-trimethylbenzene	2.609	2.525	3.2	129	0.00	15.54
110	M	sec-butylbenzene	3.238	3.287	-1.5	131	0.00	15.71
111	M	1,3-dichlorobenzene	1.487	1.511	-1.6	134	0.00	15.91
112	M	p-isopropyltoluene	2.785	2.808	-0.8	131	0.00	15.83
113	M	1,4-dichlorobenzene	1.485	1.502	-1.1	133	0.00	15.99
114		benzyl chloride	1.279	1.186	7.3	118	0.00	16.12
115	M	1,2-dichlorobenzene	1.387	1.441	-3.9	133	0.00	16.40
116		1,4-diethylbenzene		----------NA----------				
117	M	n-butylbenzene	1.416	1.440	-1.7	132	0.00	16.24
118	M	1,2-dibromo-3-chloropropa	0.123	0.110	10.6	114	0.00	17.19
119		1,3,5-trichlorobenzene	1.142	1.177	-3.1	134	0.00	17.34
120		1,2,4,5-tetramethylbenzen		----------NA----------				
121		2-ethylhexyl acrylate	0.571	0.541	5.3	121	0.00	17.88
122	M	1,2,4-trichlorobenzene	0.930	0.967	-4.0	132	0.00	17.92
123	M	hexachlorobutadiene	0.653	0.628	3.8	121	0.00	18.01
124	M	naphthalene	1.809	1.797	0.7	128	0.00	18.16
125	M	1,2,3-trichlorobenzene	0.879	0.869	1.1	127	0.00	18.37
126	m	hexachloroethane	0.498	0.539	-8.2	134	0.00	16.65
127		2-methylnaphthalene	1.152	1.130	1.9	120	0.00	19.12
128		bis(chloromethyl)ether		----------NA----------				
129		ethylenimine		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1C164011.D M1CS7200.M Thu Jun 20 06:32:39 2019

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

Method Blank Summary

Job Number: JC89914
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
OP21103-MB1	Z138886.D	1	06/19/19	AR	06/19/19	OP21103	EZ6837

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC89914-9, JC89914-10, JC89914-11, JC89914-12

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	67	21	ug/kg	
	3&4-Methylphenol	ND	67	27	ug/kg	
87-86-5	Pentachlorophenol	ND	130	31	ug/kg	
108-95-2	Phenol	ND	67	17	ug/kg	
83-32-9	Acenaphthene	ND	33	11	ug/kg	
208-96-8	Acenaphthylene	ND	33	17	ug/kg	
120-12-7	Anthracene	ND	33	20	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	
218-01-9	Chrysene	ND	33	10	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	33	15	ug/kg	
132-64-9	Dibenzofuran	ND	67	14	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	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	33	16	ug/kg	
91-20-3	Naphthalene	ND	33	9.4	ug/kg	
85-01-8	Phenanthrene	ND	33	11	ug/kg	
129-00-0	Pyrene	ND	33	11	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	64%	23-115%
4165-62-2	Phenol-d5	66%	27-114%
118-79-6	2,4,6-Tribromophenol	71%	19-152%
4165-60-0	Nitrobenzene-d5	67%	26-134%
321-60-8	2-Fluorobiphenyl	59%	39-124%
1718-51-0	Terphenyl-d14	91%	36-134%

Method Blank Summary

Job Number: JC89914
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
OP21387-MB1	3P77873.D	1	07/08/19	CS	07/05/19	OP21387	E3P3646

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

JC89914-9, JC89914-10, JC89914-11, JC89914-12

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	3.3	0.81	ug/kg	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	76%	10-146%
321-60-8	2-Fluorobiphenyl	66%	46-115%
1718-51-0	Terphenyl-d14	75%	10-170%

Blank Spike Summary

Job Number: JC89914
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
OP21103-BS1	Z138887.D	1	06/19/19	AR	06/19/19	OP21103	EZ6837

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC89914-9, JC89914-10, JC89914-11, JC89914-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
95-48-7	2-Methylphenol	1670	1010	61	40-126
	3&4-Methylphenol	1670	1040	62	40-127
87-86-5	Pentachlorophenol	1670	1200	72	15-149
108-95-2	Phenol	1670	985	59	50-109
83-32-9	Acenaphthene	1670	897	54	53-119
208-96-8	Acenaphthylene	1670	916	55	41-125
120-12-7	Anthracene	1670	1010	61	51-120
56-55-3	Benzo(a)anthracene	1670	1130	68	54-118
50-32-8	Benzo(a)pyrene	1670	1020	61	55-121
205-99-2	Benzo(b)fluoranthene	1670	1020	61	57-116
191-24-2	Benzo(g,h,i)perylene	1670	953	57	40-124
207-08-9	Benzo(k)fluoranthene	1670	1070	64	59-116
218-01-9	Chrysene	1670	1050	63	51-115
53-70-3	Dibenzo(a,h)anthracene	1670	958	57	48-121
132-64-9	Dibenzofuran	1670	967	58	51-119
206-44-0	Fluoranthene	1670	1090	65	58-117
86-73-7	Fluorene	1670	1000	60	56-114
118-74-1	Hexachlorobenzene	1670	1030	62	50-128
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1150	69	49-124
91-20-3	Naphthalene	1670	959	58	44-116
85-01-8	Phenanthrene	1670	999	60	53-119
129-00-0	Pyrene	1670	1170	70	54-124

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	55%	23-115%
4165-62-2	Phenol-d5	59%	27-114%
118-79-6	2,4,6-Tribromophenol	67%	19-152%
4165-60-0	Nitrobenzene-d5	60%	26-134%
321-60-8	2-Fluorobiphenyl	54%	39-124%
1718-51-0	Terphenyl-d14	79%	36-134%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC89914
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
OP21387-BS12	3P77874.D	1	07/08/19	CS	07/05/19	OP21387	E3P3646

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

JC89914-9, JC89914-10, JC89914-11, JC89914-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
123-91-1	1,4-Dioxane	33.3	17.9	54	10-110

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	79%	10-146%
321-60-8	2-Fluorobiphenyl	67%	46-115%
1718-51-0	Terphenyl-d14	86%	10-170%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC89914
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
OP21103-MS	Z138893.D	1	06/19/19	AR	06/19/19	OP21103	EZ6837
OP21103-MSD	Z138894.D	1	06/19/19	AR	06/19/19	OP21103	EZ6837
JC89914-9	Z138892.D	1	06/19/19	AR	06/19/19	OP21103	EZ6837

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC89914-9, JC89914-10, JC89914-11, JC89914-12

CAS No.	Compound	JC89914-9 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-48-7	2-Methylphenol	73 U		1830	1320	72	1780	1030	58	25 [a]	10-138/33
	3&4-Methylphenol	73 U		1830	1340	73	1780	1040	59	25 [a]	10-143/33
87-86-5	Pentachlorophenol	150 U		1830	1640	90	1780	1190	67	32 [a]	10-148/39
108-95-2	Phenol	73 U		1830	1300	71	1780	1020	57	24 [a]	24-114/32
83-32-9	Acenaphthene	37 U		1830	1230	67	1780	953	54	25 [a]	21-136/34
208-96-8	Acenaphthylene	37 U		1830	1260	69	1780	976	55	25 [a]	10-143/36
120-12-7	Anthracene	34.1	J	1830	1450	77	1780	1100	60	27 [a]	10-147/39
56-55-3	Benzo(a)anthracene	225		1830	1760	84	1780	1350	63	26 [a]	10-151/41
50-32-8	Benzo(a)pyrene	210		1830	1680	80	1780	1250	59	29 [a]	10-149/40
205-99-2	Benzo(b)fluoranthene	263		1830	1720	80	1780	1270	57	30 [a]	10-147/42
191-24-2	Benzo(g,h,i)perylene	148		1830	1660	83	1780	1280	64	26 [a]	10-150/41
207-08-9	Benzo(k)fluoranthene	87.5		1830	1510	78	1780	1100	57	31 [a]	12-142/41
218-01-9	Chrysene	213		1830	1630	77	1780	1250	58	26 [a]	10-151/41
53-70-3	Dibenzo(a,h)anthracene	42.0		1830	1570	84	1780	1160	63	30 [a]	10-152/38
132-64-9	Dibenzofuran	73 U		1830	1310	72	1780	1040	59	23 [a]	17-141/36
206-44-0	Fluoranthene	261		1830	1650	76	1780	1290	58	24 [a]	10-151/44
86-73-7	Fluorene	37 U		1830	1370	75	1780	1050	59	26 [a]	19-133/36
118-74-1	Hexachlorobenzene	73 U		1830	1450	79	1780	1100	62	27 [a]	18-142/37
193-39-5	Indeno(1,2,3-cd)pyrene	141		1830	1960	99	1780	1470	75	29 [a]	10-148/41
91-20-3	Naphthalene	37 U		1830	1270	69	1780	1020	57	22 [a]	10-136/36
85-01-8	Phenanthrene	85.4		1830	1460	75	1780	1120	58	26 [a]	11-145/45
129-00-0	Pyrene	313		1830	1950	89	1780	1510	67	25 [a]	11-155/44

CAS No.	Surrogate Recoveries	MS	MSD	JC89914-9	Limits
367-12-4	2-Fluorophenol	63%	52%	56%	23-115%
4165-62-2	Phenol-d5	71%	56%	58%	27-114%
118-79-6	2,4,6-Tribromophenol	88%	69%	75%	19-152%
4165-60-0	Nitrobenzene-d5	72%	59%	64%	26-134%
321-60-8	2-Fluorobiphenyl	69%	55%	61%	39-124%
1718-51-0	Terphenyl-d14	100%	82%	85%	36-134%

(a) Outside of program requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC89914
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
OP21387-MSA	3P77879.D	1	07/09/19	CS	07/05/19	OP21387	E3P3646
OP21387-MSDA	3P77880.D	1	07/09/19	CS	07/05/19	OP21387	E3P3646
JC89914-11 [a]	3P77878.D	1	07/09/19	CS	07/05/19	OP21387	E3P3646

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

JC89914-9, JC89914-10, JC89914-11, JC89914-12

CAS No.	Compound	JC89914-11 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	3.7 U		38.3	19.1	50	37	16.2	44	16	10-110/53

CAS No.	Surrogate Recoveries	MS	MSD	JC89914-11	Limits
4165-60-0	Nitrobenzene-d5	73%	66%	74%	10-146%
321-60-8	2-Fluorobiphenyl	63%	62%	66%	46-115%
1718-51-0	Terphenyl-d14	80%	84%	83%	10-170%

(a) Sample extracted outside the holding time.

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample:	E3P3622-DFTPP	**Injection Date:**	06/16/19
Lab File ID:	3P77262.D	**Injection Time:**	02:11
Instrument ID:	GCMS3P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	109716	49.9		Pass
68	Less than 2.0% of mass 69	1646	0.75	(1.39) [a]	Pass
69	Mass 69 relative abundance	118325	53.8		Pass
70	Less than 2.0% of mass 69	586	0.27	(0.50) [a]	Pass
127	40.0 - 60.0% of mass 198	119621	54.4		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	219976	100.0		Pass
199	5.0 - 9.0% of mass 198	14284	6.49		Pass
275	10.0 - 30.0% of mass 198	51701	23.5		Pass
365	1.0 - 100.0% of mass 198	6560	2.98		Pass
441	Present, but less than mass 443	14876	6.76	(72.2) [b]	Pass
442	40.0 - 100.0% of mass 198	95880	43.6		Pass
443	17.0 - 23.0% of mass 442	20591	9.36	(21.5) [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
E3P3622-IC3622	3P77263.D	06/16/19	02:21	00:10	Initial cal 5
E3P3622-IC3622	3P77264.D	06/16/19	02:42	00:31	Initial cal 2.5
E3P3622-ICC3622	3P77265.D	06/16/19	03:03	00:52	Initial cal 1
E3P3622-IC3622	3P77266.D	06/16/19	03:24	01:13	Initial cal 0.5
E3P3622-IC3622	3P77267.D	06/16/19	03:46	01:35	Initial cal 0.2
E3P3622-IC3622	3P77268.D	06/16/19	04:07	01:56	Initial cal 0.1
E3P3622-IC3622	3P77269.D	06/16/19	04:28	02:17	Initial cal 0.05
E3P3622-IC3622	3P77270.D	06/16/19	04:49	02:38	Initial cal 0.02
E3P3622-IC3622	3P77271.D	06/16/19	05:10	02:59	Initial cal 0.01
E3P3622-ICV3622	3P77272.D	06/16/19	05:31	03:20	Initial cal verification 5
E3P3622-ICV3622	3P77273.D	06/16/19	05:53	03:42	Initial cal verification 1
OP20806-MB1	3P77274.D	06/16/19	06:14	04:03	Method Blank
OP20806-BS12	3P77275.D	06/16/19	06:35	04:24	Blank Spike
OP20806-BSD12	3P77280.D	06/16/19	11:21	09:10	Blank Spike Duplicate
ZZZZZZ	3P77281.D	06/16/19	11:43	09:32	(unrelated sample)
E3P3622-ECC3622	3P77282.D	06/16/19	12:15	10:04	Ending cal 1.0

Instrument Performance Check (DFTPP)

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: E3P3646-DFTPP
Lab File ID: 3P77870.D
Instrument ID: GCMS3P
Injection Date: 07/08/19
Injection Time: 21:34

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	167472	44.6		Pass
68	Less than 2.0% of mass 69	3	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	191815	51.1		Pass
70	Less than 2.0% of mass 69	680	0.18	(0.35) [a]	Pass
127	40.0 - 60.0% of mass 198	195786	52.2		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	375237	100.0		Pass
199	5.0 - 9.0% of mass 198	26416	7.04		Pass
275	10.0 - 30.0% of mass 198	92563	24.7		Pass
365	1.0 - 100.0% of mass 198	11703	3.12		Pass
441	Present, but less than mass 443	31688	8.44	(78.7) [b]	Pass
442	40.0 - 100.0% of mass 198	193717	51.6		Pass
443	17.0 - 23.0% of mass 442	40272	10.7	(20.8) [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
E3P3646-CC3622	3P77872.D	07/08/19	22:12	00:38	Continuing cal 1.0
OP21387-MB1	3P77873.D	07/08/19	22:46	01:12	Method Blank
OP21387-BS12	3P77874.D	07/08/19	23:07	01:33	Blank Spike
JC89914-12	3P77875.D	07/08/19	23:28	01:54	NWIRP-S1-WC-CF-038
JC89914-9	3P77876.D	07/08/19	23:49	02:15	NWIRP-S1-WC-CF-035
JC89914-10	3P77877.D	07/09/19	00:10	02:36	NWIRP-S1-WC-CF-036
JC89914-11	3P77878.D	07/09/19	00:31	02:57	NWIRP-S1-WC-CF-037
OP21387-MSA	3P77879.D	07/09/19	00:51	03:17	Matrix Spike
OP21387-MSDA	3P77880.D	07/09/19	01:12	03:38	Matrix Spike Duplicate
E3P3646-ECC3622	3P77882.D	07/09/19	02:30	04:56	Ending cal 1.0

Instrument Performance Check (DFTPP)

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: EZ6786-DFTPP
Lab File ID: Z137798.D
Instrument ID: GCMSZ
Injection Date: 05/24/19
Injection Time: 00:47

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	29245	39.7		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	34042	46.2		Pass
70	Less than 2.0% of mass 69	129	0.18	(0.38) [a]	Pass
127	40.0 - 60.0% of mass 198	40869	55.5		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	73648	100.0		Pass
199	5.0 - 9.0% of mass 198	5024	6.82		Pass
275	10.0 - 30.0% of mass 198	18100	24.6		Pass
365	1.0 - 100.0% of mass 198	2747	3.73		Pass
441	Present, but less than mass 443	8948	12.1	(82.3) [b]	Pass
442	40.0 - 100.0% of mass 198	57883	78.6		Pass
443	17.0 - 23.0% of mass 442	10876	14.8	(18.8) [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
EZ6786-IC6786	Z137799.D	05/24/19	01:13	00:26	Initial cal 100
EZ6786-IC6786	Z137800.D	05/24/19	01:40	00:53	Initial cal 80
EZ6786-ICC6786	Z137801.D	05/24/19	02:08	01:21	Initial cal 50
EZ6786-IC6786	Z137802.D	05/24/19	02:35	01:48	Initial cal 25
EZ6786-IC6786	Z137803.D	05/24/19	03:02	02:15	Initial cal 10
EZ6786-IC6786	Z137804.D	05/24/19	03:29	02:42	Initial cal 5
EZ6786-IC6786	Z137805.D	05/24/19	03:57	03:10	Initial cal 2
EZ6786-IC6786	Z137806.D	05/24/19	04:24	03:37	Initial cal 1
EZ6786-ICV6786	Z137808.D	05/24/19	05:18	04:31	Initial cal verification 50
EZ6786-ICV6786	Z137809.D	05/24/19	05:45	04:58	Initial cal verification 50
EZ6786-ICV6786	Z137810.D	05/24/19	06:12	05:25	Initial cal verification 50
EZ6786-ICV6786	Z137811.D	05/24/19	06:39	05:52	Initial cal verification 50
EZ6786-ICV6786	Z137812.D	05/24/19	07:06	06:19	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: EZ6787-DFTPP
Lab File ID: Z137813.D
Instrument ID: GCMSZ
Injection Date: 05/24/19
Injection Time: 07:29

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	28112	38.2		Pass
68	Less than 2.0% of mass 69	165	0.22	(0.48) [a]	Pass
69	Mass 69 relative abundance	34109	46.4		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	39763	54.1		Pass
197	Less than 1.0% of mass 198	198	0.27		Pass
198	Base peak, 100% relative abundance	73544	100.0		Pass
199	5.0 - 9.0% of mass 198	4983	6.78		Pass
275	10.0 - 30.0% of mass 198	19410	26.4		Pass
365	1.0 - 100.0% of mass 198	2827	3.84		Pass
441	Present, but less than mass 443	9436	12.8	(78.3) [b]	Pass
442	40.0 - 100.0% of mass 198	61571	83.7		Pass
443	17.0 - 23.0% of mass 442	12053	16.4	(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
EZ6787-IC6787	Z137814.D	05/24/19	07:43	00:14	Initial cal 100
EZ6787-IC6787	Z137815.D	05/24/19	08:10	00:41	Initial cal 80
EZ6787-ICC6787	Z137816.D	05/24/19	08:37	01:08	Initial cal 50
EZ6787-IC6787	Z137817.D	05/24/19	09:04	01:35	Initial cal 25
EZ6787-IC6787	Z137818.D	05/24/19	09:31	02:02	Initial cal 10
EZ6787-IC6787	Z137819.D	05/24/19	09:58	02:29	Initial cal 5
EZ6787-IC6787	Z137820.D	05/24/19	10:25	02:56	Initial cal 2
EZ6787-IC6787	Z137821.D	05/24/19	10:52	03:23	Initial cal 1
EZ6787-ICV6787	Z137822.D	05/24/19	11:19	03:50	Initial cal verification 50
EZ6787-ICV6787	Z137823.D	05/24/19	11:46	04:17	Initial cal verification 50
EZ6787-ICV6786	Z137825.D	05/24/19	12:49	05:20	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample:	EZ6837-DFTPP	**Injection Date:**	06/19/19
Lab File ID:	Z138884.D	**Injection Time:**	15:35
Instrument ID:	GCMSZ		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	21176	38.5		Pass
68	Less than 2.0% of mass 69	200	0.36	(0.77) [a]	Pass
69	Mass 69 relative abundance	26007	47.3		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	30214	54.9		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	55003	100.0		Pass
199	5.0 - 9.0% of mass 198	3949	7.18		Pass
275	10.0 - 30.0% of mass 198	13727	25.0		Pass
365	1.0 - 100.0% of mass 198	2353	4.28		Pass
441	Present, but less than mass 443	6395	11.6	(73.4) [b]	Pass
442	40.0 - 100.0% of mass 198	44875	81.6		Pass
443	17.0 - 23.0% of mass 442	8716	15.8	(19.4) [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
EZ6837-CC6786	Z138885.D	06/19/19	15:50	00:15	Continuing cal 25
OP21103-MB1	Z138886.D	06/19/19	16:17	00:42	Method Blank
OP21103-BS1	Z138887.D	06/19/19	16:45	01:10	Blank Spike
ZZZZZZ	Z138888.D	06/19/19	17:12	01:37	(unrelated sample)
JC89914-12	Z138889.D	06/19/19	17:40	02:05	NWIRP-S1-WC-CF-038
JC89914-10	Z138890.D	06/19/19	18:07	02:32	NWIRP-S1-WC-CF-036
JC89914-11	Z138891.D	06/19/19	18:34	02:59	NWIRP-S1-WC-CF-037
JC89914-9	Z138892.D	06/19/19	19:01	03:26	NWIRP-S1-WC-CF-035
OP21103-MS	Z138893.D	06/19/19	19:28	03:53	Matrix Spike
OP21103-MSD	Z138894.D	06/19/19	19:56	04:21	Matrix Spike Duplicate
EZ6837-ECC6786	Z138895.D	06/19/19	20:23	04:48	Ending cal 25

Internal Standard Area Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	E3P3646-CC3622	**Injection Date:**	07/08/19
Lab File ID:	3P77872.D	**Injection Time:**	22:12
Instrument ID:	GCMS3P	**Method:**	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	20804	6.18	11626	7.90	23301	9.34	19408	13.24
Upper Limit [a]	41608	6.68	23252	8.40	46602	9.84	38816	13.74
Lower Limit [b]	10402	5.68	5813	7.40	11651	8.84	9704	12.74

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
OP21387-MB1	32888	6.18	16931	7.90	32697	9.35	23550	13.24
OP21387-BS12	37138	6.18	19494	7.90	36382	9.34	27292	13.24
JC89914-12 [c]	39388	6.18	20760	7.89	37741	9.34	29965	13.24
JC89914-9 [c]	34636	6.18	18138	7.90	34691	9.34	34332	13.24
JC89914-10 [c]	35689	6.18	18917	7.90	36121	9.34	34475	13.24
JC89914-11 [c]	39893	6.18	20429	7.90	37730	9.34	31703	13.24
OP21387-MSA	36069	6.18	18814	7.90	36210	9.34	35211	13.24
OP21387-MSDA	40369	6.18	20054	7.90	36612	9.34	30654	13.24
E3P3646-ECC3622	23590	6.19	13511	7.90	27181	9.35	29099	13.25

IS 1 = Naphthalene-d8
IS 2 = Acenaphthene-D10
IS 3 = Phenanthrene-d10
IS 4 = 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.
(c) Sample extracted outside the holding time.

Internal Standard Area Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	EZ6837-CC6786	**Injection Date:**	06/19/19
Lab File ID:	Z138885.D	**Injection Time:**	15:50
Instrument ID:	GCMSZ	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	104876	4.51	365538	5.43	197785	6.75	376785	8.28	351241	12.01	315567	14.07
Upper Limit [a]	209752	5.01	731076	5.93	395570	7.25	753570	8.78	702482	12.51	631134	14.57
Lower Limit [b]	52438	4.01	182769	4.93	98893	6.25	188393	7.78	175621	11.51	157784	13.57

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP21103-MB1	96845	4.51	355607	5.43	214266	6.75	384050	8.27	309015	12.00	278618	14.07
OP21103-BS1	91867	4.51	331901	5.43	194436	6.75	340679	8.28	286740	12.01	259491	14.07
ZZZZZZ	74484	4.51	265243	5.43	155550	6.75	267220	8.27	269775	12.00	266285	14.06
JC89914-12	93364	4.51	331586	5.43	198602	6.74	334737	8.27	243498	12.00	243460	14.07
JC89914-10	93279	4.51	327240	5.42	188235	6.75	308820	8.27	211613	12.00	230716	14.07
JC89914-11	91986	4.51	324548	5.43	190341	6.75	309849	8.27	206308	12.00	231232	14.07
JC89914-9	85391	4.51	292469	5.43	164649	6.75	267281	8.27	199395	12.01	229113	14.07
OP21103-MS	81490	4.52	287427	5.43	162538	6.75	265507	8.28	201536	12.01	220387	14.07
OP21103-MSD	84217	4.52	295733	5.43	169013	6.75	278556	8.28	210595	12.01	230763	14.07
EZ6837-ECC6786	92747	4.51	325260	5.43	181583	6.75	343380	8.28	309555	12.01	273907	14.07

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.

Surrogate Recovery Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Method: SW846 8270D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
JC89914-9	Z138892.D	56	58	75	64	61	85
JC89914-10	Z138890.D	56	58	73	62	59	93
JC89914-11	Z138891.D	56	59	75	63	59	95
JC89914-12	Z138889.D	64	66	73	69	63	95
OP21103-BS1	Z138887.D	55	59	67	60	54	79
OP21103-MB1	Z138886.D	64	66	71	67	59	91
OP21103-MS	Z138893.D	63	71	88	72	69	100
OP21103-MSD	Z138894.D	52	56	69	59	55	82

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%

Surrogate Recovery Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Method: SW846 8270D BY SIM **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
JC89914-9	3P77876.D	69	61	81
JC89914-10	3P77877.D	74	64	82
JC89914-11	3P77878.D	74	66	83
JC89914-12	3P77875.D	60	52	66
OP21387-BS12	3P77874.D	79	67	86
OP21387-MB1	3P77873.D	76	66	75
OP21387-MSA	3P77879.D	73	63	80
OP21387-MSDA	3P77880.D	66	62	84

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	10-146%
S2 = 2-Fluorobiphenyl	46-115%
S3 = Terphenyl-d14	10-170%

Initial Calibration Summary

Job Number: JC89914 **Sample:** E3P3622-ICC3622
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3P77265.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report MSGC3P

Method : C:\MSDCHEM\1\MET...\M3P3622SIMDOD.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Sun Jun 16 09:48:51 2019
Response via : Initial Calibration

Calibration Files
2.5 =3p77264.D 1.0 =3p77265.D 0.5 =3p77266.D 0.2 =3p77267.D
0.1 =3p77268.D 0.05=3p77269.D 0.02=3p77270.D 0.01=3p77271.D
5 =3p77263.D = = =

Compound	2.5	1.0	0.5	0.2	0.1	0.05	0.02	0.01	5	Avg	%RSD
1) I Naphthalene-d8	----------ISTD----------										
2) 1,4-Dioxane	0.098	0.101	0.105	0.102	0.104	0.108	0.067		0.117	0.100	14.35
3) 2-Fluorophenol	0.234	0.234	0.234	0.227	0.220	0.206	0.205	0.213	0.271	0.227	8.86
4) Phenol-d5	0.369	0.365	0.360	0.349	0.347	0.341	0.343	0.340	0.410	0.358	6.15
5) Phenol	0.243	0.247	0.250	0.241	0.228	0.213	0.212	0.202	0.266	0.234	9.02
6) bis(2-Chloroethyl)ether	0.334	0.341	0.356	0.354	0.349	0.317	0.328	0.321	0.361	0.340	4.61
7) Nitrobenzene-d5	0.383	0.368	0.367	0.358	0.357	0.345	0.348	0.337	0.426	0.365	7.31
8) Naphthalene	1.024	1.002	1.033	1.032	1.059	1.028	1.074	1.192	1.128	1.064	5.69
9) Hexachlorobutadiene	0.185	0.187	0.190	0.192	0.203	0.196	0.207	0.236	0.206	0.200	7.85
10) 2-Methylnaphthalene-d10	0.443	0.440	0.446	0.436	0.441	0.440	0.433	0.435	0.485	0.444	3.52
11) 2-Methylnaphthalene	0.527	0.516	0.540	0.536	0.535	0.541	0.529	0.641	0.582	0.550	7.05
12) 1-Methylnaphthalene	0.587	0.579	0.589	0.587	0.595	0.587	0.570	0.662	0.645	0.600	5.24
13) I Acenaphthene-d10	----------ISTD----------										
14) 2-Fluorobiphenyl	1.586	1.559	1.622	1.637	1.598	1.602	1.583	1.618	1.736	1.616	3.15
15) Acenaphthylene	1.857	1.609	1.612	1.535	1.510	1.463	1.430	1.420	2.147	1.620	14.70
16) Acenaphthene	1.286	1.211	1.262	1.274	1.233	1.210	1.288	1.303	1.444	1.279	5.51
17) Fluorene	1.419	1.282	1.319	1.291	1.262	1.270	1.271	1.406	1.591	1.346	8.11
18) 4,6-dinitro-2-methylphenol	0.156	0.101	0.081	0.066	0.060				0.199	0.111	50.26
---- Quadratic regression ---- Coefficient = 0.9993											
Response Ratio = -0.17824 + 0.11291 *A + 0.00143 *A^2											
19) 2,4,6-Tribromophenol	0.150	0.129	0.123	0.111	0.108	0.105				0.121	14.13
20) Phenanthrene-d10	----------ISTD----------										
21) Hexachlorobenzene	0.190	0.182	0.194	0.195	0.198	0.190	0.215	0.193	0.217	0.197	5.91

Initial Calibration Summary

Job Number: JC89914 **Sample:** E3P3622-ICC3622
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3P77265.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

```
22)  Pentachlorophenol
           0.072 0.056 0.053 0.046 0.043 0.040             0.088        0.057   30.63
            ---- Quadratic regression ----  Coefficient =  0.9998
              Response Ratio = -0.02805 + 0.05530 *A + 0.00053 *A^2

23)  Phenanthrene
           0.989 0.942 0.999 1.004 0.985 0.989 1.004 1.032 1.114        1.006    4.64
24)  Anthracene
           0.927 0.820 0.817 0.771 0.727 0.704 0.703 0.714 1.090        0.808   15.94
25)  Fluoranthene-d10
           0.920 0.849 0.868 0.838 0.809 0.764 0.800 0.872 1.061        0.865   10.00
26)  Fluoranthene
           1.069 1.030 1.058 1.005 0.968 0.862 0.919 0.882 1.225        1.002   11.17
27)  Pyrene
           1.108 1.020 1.029 1.015 0.999 0.963 0.926 0.995 1.266        1.036    9.62
28)  Terphenyl-d14
           0.714 0.673 0.693 0.684 0.663 0.634 0.620 0.681 0.814        0.686    8.15
29)  Benzo[a]anthracene
           0.906 0.752 0.707 0.636 0.656 0.576 0.606 0.687              0.691   14.99
30)  Chrysene
           0.974 0.911 0.949 0.927 0.856 0.814 0.787 0.795 1.096        0.901   11.14

31) I   Perylene-d12          ----------------ISTD---------------------
32)  Benzo[b]fluoranthene
           1.499 1.383 1.420 1.355 1.210 1.199 1.350 1.496 1.680        1.399   10.70
33)  Benzo[k]fluoranthene
           1.382 1.274 1.384 1.288 1.159                   1.555        1.340   10.00
34)  Benzo[a]pyrene
           1.236 1.045 1.008 0.948 0.881 0.857 0.849 1.210 1.419        1.050   18.89
35)  Indeno[1,2,3-cd]pyrene
           1.387 1.255 1.273 1.174 1.033 1.054 1.093 1.034 1.569        1.208   15.14
36)  Dibenz[a,h]anthracene
           1.162 1.061 1.080 0.990 0.857 0.868 0.945 0.838 1.306        1.012   15.47
37)  Benzo[g,h,i]perylene
           1.140 1.050 1.112 1.064 0.953 1.015 1.063 1.086 1.285        1.085    8.49
-------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M3P3622SIMDOD.M        Sun Jun 16 09:51:56 2019
```

Initial Calibration Verification

Job Number: JC89914 **Sample:** E3P3622-ICV3622
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3P77272.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\E3P3622\3p77272.D Vial: 11
Acq On : 16 Jun 2019 5:31 am Operator: chriss2
Sample : icv3622-5 Inst : MSGC3P
Misc : op20806,e3p3622,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\MET...\M3P3622SIMDOD.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Sun Jun 16 09:48:51 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	Naphthalene-d8	1.000	1.000	0.0	99	0.00	6.19
5		Phenol	0.234	0.263	-12.4	106	0.00	4.71
13	I	Acenaphthene-d10	1.000	1.000	0.0	94	0.00	7.90
		----------	True	Calc.	% Drift	----------		
18		4,6-dinitro-2-methylpheno	5.000	4.526	9.5	96	0.00	8.49
20		Phenanthrene-d10	1.000	1.000	0.0	87	0.00	9.35
		----------	True	Calc.	% Drift	----------		
22	t	Pentachlorophenol	5.000	6.375	-27.5	123	0.00	9.19

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3p77265.D M3P3622SIMDOD.M Sun Jun 16 09:52:34 2019

Initial Calibration Verification

Job Number: JC89914 **Sample:** E3P3622-ICV3622
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3P77273.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\E3P3622\3p77273.D Vial: 12
Acq On : 16 Jun 2019 5:53 am Operator: chriss2
Sample : icv3622-1 Inst : MSGC3P
Misc : op20806,e3p3622,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\MET...\M3P3622SIMDOD.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Sun Jun 16 09:48:51 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	Naphthalene-d8	1.000	1.000	0.0	92	0.00	6.19
2	t	1,4-Dioxane	0.100	0.087	13.0	79	0.00	2.04
6	t	bis(2-Chloroethyl)ether	0.340	0.314	7.6	84	0.00	4.72
8	t	Naphthalene	1.064	1.022	3.9	94	0.00	6.21
9	t	Hexachlorobutadiene	0.200	0.197	1.5	96	0.00	6.35
11	t	2-Methylnaphthalene	0.550	0.533	3.1	95	0.00	6.89
13	I	Acenaphthene-d10	1.000	1.000	0.0	90	0.00	7.90
15	t	Acenaphthylene	1.620	1.576	2.7	88	0.00	7.76
16	t	Acenaphthene	1.279	1.181	7.7	88	0.00	7.93
17	t	Fluorene	1.346	1.275	5.3	90	0.00	8.43
20		Phenanthrene-d10	1.000	1.000	0.0	79	0.00	9.35
21	t	Hexachlorobenzene	0.197	0.206	-4.6	89	0.00	8.98
		----------	AvgRF	CCRF	% Dev	----------		
23	t	Phenanthrene	1.006	1.066	-6.0	89	0.00	9.37
24	t	Anthracene	0.808	0.859	-6.3	82	0.00	9.42
26	t	Fluoranthene	1.002	1.058	-5.6	81	0.00	10.54
27	t	Pyrene	1.036	1.117	-7.8	86	0.00	10.76
29	t	Benzo[a]anthracene	0.691	0.766	-10.9	80	0.00	11.93
30	t	Chrysene	0.901	1.019	-13.1	88	0.00	11.96
31	I	Perylene-d12	1.000	1.000	0.0	65	0.00	13.24
32	t	Benzo[b]fluoranthene	1.399	1.423	-1.7	67	0.00	12.92
33	t	Benzo[k]fluoranthene	1.340	1.592	-18.8	82	0.00	12.94
34	t	Benzo[a]pyrene	1.050	1.098	-4.6	69	0.00	13.19
35	t	Indeno[1,2,3-cd]pyrene	1.208	1.368	-13.2	71	0.00	14.26
36	t	Dibenz[a,h]anthracene	1.012	1.163	-14.9	72	0.00	14.28
37	t	Benzo[g,h,i]perylene	1.085	1.243	-14.6	77	0.00	14.55

(#) = Out of Range SPCC's out = 0 CCC's out = 0

7.7.3

7

Initial Calibration Verification

Job Number: JC89914 **Sample:** E3P3622-ICV3622
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3P77273.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

3p77265.D M3P3622SIMDOD.M Sun Jun 16 09:52:37 2019

Continuing Calibration Summary

Job Number: JC89914 **Sample:** E3P3646-CC3622
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3P77872.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\E3P3646\3p77872.D Vial: 2
Acq On : 8 Jul 2019 10:12 pm Operator: chriss2
Sample : cc3622-1.0 Inst : MSGC3P
Misc : op21387,e3p3646,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\MET...\M3P3622SIMDOD.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Sun Jun 16 09:48:51 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	Naphthalene-d8	1.000	1.000	0.0	70	0.00	6.18
2	t	1,4-Dioxane	0.100	0.094	6.0	65	-0.01	2.02
3	S	2-Fluorophenol	0.227	0.233	-2.6	69	0.00	3.72
4	S	Phenol-d5	0.358	0.357	0.3	68	0.00	4.65
5		Phenol	0.234	0.242	-3.4	68	-0.04	4.67
6	t	bis(2-Chloroethyl)ether	0.340	0.315	7.4	64	0.00	4.71
7	S	Nitrobenzene-d5	0.365	0.401	-9.9	76	0.00	5.50
8	t	Naphthalene	1.064	0.999	6.1	70	0.00	6.20
9	t	Hexachlorobutadiene	0.200	0.180	10.0	67	0.00	6.35
10	S	2-Methylnaphthalene-d10	0.444	0.430	3.2	68	0.02	6.86
11	t	2-Methylnaphthalene	0.550	0.522	5.1	71	0.00	6.88
12	t	1-Methylnaphthalene	0.600	0.582	3.0	70	0.00	6.98
13	I	Acenaphthene-d10	1.000	1.000	0.0	75	0.00	7.90
14	S	2-Fluorobiphenyl	1.616	1.440	10.9	69	0.00	7.25
15	t	Acenaphthylene	1.620	1.646	-1.6	76	0.00	7.75
16	t	Acenaphthene	1.279	1.146	10.4	71	0.00	7.93
17	t	Fluorene	1.346	1.228	8.8	72	0.00	8.43
		----------	True	Calc.	% Drift	----------		
18		4,6-dinitro-2-methylpheno	5.000	4.631	7.4	78	0.00	8.49
		----------	AvgRF	CCRF	% Dev	----------		
19	S	2,4,6-Tribromophenol	0.121	0.140	-15.7	81	0.00	8.67
20		Phenanthrene-d10	1.000	1.000	0.0	75	0.00	9.34
21	t	Hexachlorobenzene	0.197	0.166	15.7	69	0.00	8.97
		----------	True	Calc.	% Drift	----------		
22	t	Pentachlorophenol	5.000	5.429	-8.6	88	0.00	9.18
		----------	AvgRF	CCRF	% Dev	----------		
23	t	Phenanthrene	1.006	0.888	11.7	71	0.00	9.37
24	t	Anthracene	0.808	0.850	-5.2	78	0.00	9.42
25	S	Fluoranthene-d10	0.865	0.834	3.6	74	0.00	10.51
26	t	Fluoranthene	1.002	0.992	1.0	72	0.00	10.53
27	t	Pyrene	1.036	1.012	2.3	75	0.00	10.75
28	S	Terphenyl-d14	0.686	0.700	-2.0	78	0.00	10.92
29	t	Benzo[a]anthracene	0.691	0.862	-24.7#	86	0.00	11.92
30	t	Chrysene	0.901	0.882	2.1	73	0.00	11.96
31	I	Perylene-d12	1.000	1.000	0.0	92	0.00	13.24

Continuing Calibration Summary

Job Number: JC89914 **Sample:** E3P3646-CC3622
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3P77872.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

32	t	Benzo[b]fluoranthene	1.399	1.116	20.2#	74	0.00	12.91
33	t	Benzo[k]fluoranthene	1.340	1.094	18.4	79	0.00	12.94
34	t	Benzo[a]pyrene	1.050	0.999	4.9	88	0.00	13.19
35	t	Indeno[1,2,3-cd]pyrene	1.208	1.119	7.4	82	0.00	14.26
36	t	Dibenz[a,h]anthracene	1.012	0.937	7.4	81	0.00	14.28
37	t	Benzo[g,h,i]perylene	1.085	0.914	15.8	80	0.00	14.55

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3p77265.D M3P3622SIMDOD.M Tue Jul 09 09:17:35 2019

Continuing Calibration Summary

Job Number: JC89914 **Sample:** E3P3646-ECC3622
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3P77882.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\E3P3646\3p77882.D Vial: 2
Acq On : 9 Jul 2019 2:30 am Operator: chriss2
Sample : ecc3622-1.0 Inst : MSGC3P
Misc : op21387,e3p3646,30.0,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\MET...\M3P3622SIMDOD.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Sun Jun 16 09:48:51 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	Naphthalene-d8	1.000	1.000	0.0	79	0.00	6.19
2	t	1,4-Dioxane	0.100	0.117	-17.0	92	-0.01	2.02
3	S	2-Fluorophenol	0.227	0.228	-0.4	77	0.00	3.72
4	S	Phenol-d5	0.358	0.350	2.2	76	0.00	4.65
5		Phenol	0.234	0.232	0.9	75	0.00	4.67
6	t	bis(2-Chloroethyl)ether	0.340	0.296	12.9	69	0.00	4.71
7	S	Nitrobenzene-d5	0.365	0.422	-15.6	91	0.00	5.50
8	t	Naphthalene	1.064	1.005	5.5	79	0.00	6.21
9	t	Hexachlorobutadiene	0.200	0.194	3.0	82	0.00	6.35
10	S	2-Methylnaphthalene-d10	0.444	0.440	0.9	79	0.02	6.86
11	t	2-Methylnaphthalene	0.550	0.528	4.0	81	0.00	6.89
12	t	1-Methylnaphthalene	0.600	0.589	1.8	81	0.00	6.99
13	I	Acenaphthene-d10	1.000	1.000	0.0	87	0.00	7.90
14	S	2-Fluorobiphenyl	1.616	1.490	7.8	83	0.00	7.26
15	t	Acenaphthylene	1.620	1.695	-4.6	91	0.00	7.76
16	t	Acenaphthene	1.279	1.169	8.6	84	0.00	7.93
17	t	Fluorene	1.346	1.311	2.6	89	0.00	8.43
		----------	True	Calc.	% Drift	----------		
18		4,6-dinitro-2-methylpheno	5.000	2.216	55.7#	34	0.00	8.50
		----------	AvgRF	CCRF	% Dev	----------		
19	S	2,4,6-Tribromophenol	0.121	0.140	-15.7	94	0.00	8.67
20		Phenanthrene-d10	1.000	1.000	0.0	88	0.00	9.35
21	t	Hexachlorobenzene	0.197	0.168	14.7	81	0.00	8.98
		----------	True	Calc.	% Drift	----------		
22	t	Pentachlorophenol	5.000	5.381	-7.6	102	0.00	9.18
		----------	AvgRF	CCRF	% Dev	----------		
23	t	Phenanthrene	1.006	0.929	7.7	86	0.00	9.38
24	t	Anthracene	0.808	0.903	-11.8	96	0.00	9.42
25	S	Fluoranthene-d10	0.865	0.899	-3.9	93	0.00	10.52
26	t	Fluoranthene	1.002	1.046	-4.4	89	0.00	10.54
27	t	Pyrene	1.036	1.085	-4.7	93	0.00	10.76
28	S	Terphenyl-d14	0.686	0.762	-11.1	99	0.00	10.93
29	t	Benzo[a]anthracene	0.691	0.957	-38.5	112	0.00	11.93
30	t	Chrysene	0.901	0.967	-7.3	93	0.00	11.97
31	I	Perylene-d12	1.000	1.000	0.0	137	0.00	13.25

Continuing Calibration Summary

Job Number: JC89914 **Sample:** E3P3646-ECC3622
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3P77882.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

32	t	Benzo[b]fluoranthene	1.399	1.018	27.2	101	0.00	12.92
33	t	Benzo[k]fluoranthene	1.340	0.918	31.5	99	0.00	12.94
34	t	Benzo[a]pyrene	1.050	0.917	12.7	121	0.00	13.20
35	t	Indeno[1,2,3-cd]pyrene	1.208	1.059	12.3	116	0.00	14.27
36	t	Dibenz[a,h]anthracene	1.012	0.895	11.6	116	0.00	14.28
37	t	Benzo[g,h,i]perylene	1.085	0.909	16.2	119	0.01	14.56

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3p77265.D M3P3622SIMDOD.M Tue Jul 09 09:23:05 2019

Initial Calibration Summary

Job Number: JC89914 **Sample:** EZ6786-ICC6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z137801.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report GCMSZ

Method : C:\MSDCHEM\1\METHODS\MZ6786.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri May 24 11:17:37 2019
Response via : Initial Calibration

Calibration Files
100 =z137799.D 80 =z137800.D 50 =z137801.D 25 =z137802.D
10 =z137803.D 5 =z137804.D 2 =z137805.D 1 =z137806.D

Compound	100	80	50	25	10	5	2	1	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	ISTD									
2) 1,4-Dioxane	0.611	0.599	0.605	0.626	0.628	0.590	0.619	0.632	0.614	2.42
3) Pyridine	1.596	1.669	1.583	1.717	1.635	1.631	1.569	1.577	1.622	3.18
4) N-Nitrosodim	0.896	0.892	0.896	0.931	0.930	0.906	0.895	0.878	0.903	2.05
5) 2-Fluorophen	1.386	1.385	1.382	1.426	1.383	1.357	1.306	1.282	1.364	3.45
6) Indene	2.205	2.235	2.236	2.375	2.406	2.451	2.405	2.501	2.352	4.74
7) Cumene	3.308	3.356	3.392	3.574	3.591	3.599	3.586	3.612	3.502	3.62
8) Phenol-d5	1.731	1.737	1.764	1.818	1.838	1.800	1.736	1.650	1.759	3.42
9) Phenol	1.842	1.846	1.891	1.986	1.966	1.973	1.926	1.757	1.898	4.21
10) Aniline		1.769	1.814	1.963	2.084	2.192	2.074	2.039	1.991	7.67
11) bis(2-Chloro	1.321	1.324	1.375	1.430	1.423	1.436	1.425	1.334	1.383	3.67
12) 2-Chlorophen	1.417	1.415	1.470	1.524	1.533	1.505	1.436	1.478	1.472	3.16
13) Decane	1.142	1.185	1.212	1.313	1.346	1.288	1.324	1.335	1.268	6.10
14) 1,3-Dichloro	1.536	1.551	1.587	1.683	1.700	1.717	1.702	1.615	1.636	4.45
15) 1,4-Dichloro	1.536	1.575	1.600	1.704	1.710	1.704	1.757	1.679	1.658	4.69
16) Benzyl alcoh	0.844	0.848	0.887	0.924	0.897	0.864			0.877	3.53
17) 1,2-Dichloro	1.405	1.436	1.496	1.590	1.609	1.621	1.636	1.637	1.554	6.06
18) Acetophenone	1.870	1.879	1.946	2.053	2.089	2.122	1.953	2.021	1.992	4.73
19) 2-Methylphen	1.252	1.268	1.302	1.384	1.394	1.376	1.284	1.303	1.320	4.24
20) 2,2'-oxybis(	0.373	0.378	0.380	0.409	0.405	0.426	0.428		0.400	5.75
21) 3&4-Methylph	1.346	1.347	1.392	1.443	1.486	1.446	1.301	1.328	1.386	4.76
22) n-Nitroso-di	0.959	0.970	0.972	1.023	1.062	1.075	0.985	1.013	1.007	4.33
23) Hexachloroet	0.489	0.496	0.510	0.544	0.547	0.535	0.486	0.486	0.512	5.18
24) I Naphthalene-d8	ISTD									
25) Nitrobenzene	0.429	0.436	0.440	0.461	0.442	0.454	0.428	0.441	0.441	2.58
26) Nitrobenzene	0.440	0.449	0.457	0.480	0.468	0.457	0.466	0.443	0.457	2.97
27) Quinoline	0.778	0.784	0.795	0.825	0.811	0.843	0.782	0.820	0.805	2.94
28) Isophorone	0.724	0.727	0.747	0.792	0.768	0.776	0.752	0.760	0.756	3.09
29) 2-Nitropheno	0.214	0.218	0.223	0.235	0.223	0.216	0.209	0.190	0.216	6.06
30) 2,4-Dimethyl	0.398	0.403	0.397	0.413	0.393	0.384	0.367	0.370	0.391	4.09
31) Benzoic Acid	0.311	0.353	0.347	0.349	0.309	0.260			0.322	11.14
32) bis(2-Chloro	0.448	0.455	0.459	0.485	0.471	0.486	0.469	0.481	0.469	2.99
33) 2,4-Dichloro	0.332	0.337	0.346	0.359	0.344	0.339	0.303	0.328	0.336	4.85
34) 2,6-Dichloro	0.316	0.324	0.331	0.348	0.330	0.340	0.347	0.301	0.330	4.87
35) 1,3,5-Trichl	0.336	0.351	0.358	0.386	0.373	0.377	0.402	0.373	0.370	5.58
36) 1,2,4-Trichl	0.329	0.340	0.343	0.365	0.354	0.364	0.348	0.373	0.352	4.16
37) 1,2,3-Trichl	0.325	0.330	0.338	0.360	0.363	0.354	0.374	0.375	0.352	5.49
38) Naphthalene	1.116	1.146	1.168	1.234	1.217	1.259	1.291	1.237	1.208	4.93
39) 4-Chloroanil	0.438	0.452	0.461	0.508	0.501	0.520	0.496	0.487	0.483	6.06
40) 2,3-Dichloro	0.382	0.387	0.399	0.426	0.423	0.424	0.411	0.408	0.407	4.17
41) Caprolactam	0.170	0.165	0.171	0.178	0.169	0.177	0.160	0.160	0.169	4.04
42) Hexachlorobu	0.177	0.182	0.187	0.197	0.193	0.190	0.200	0.186	0.189	4.00
43) 4-Chloro-3-m	0.347	0.356	0.361	0.378	0.374	0.370	0.344	0.310	0.355	6.17
44) 2-Methylnaph	0.581	0.596	0.601	0.647	0.625	0.646	0.638	0.651	0.623	4.35
45) 1-Methylnaph	0.637	0.659	0.677	0.720	0.714	0.724	0.710	0.738	0.697	5.09

Initial Calibration Summary

Job Number: JC89914 **Sample:** EZ6786-ICC6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z137801.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

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46) Dimethylnaph 0.640 0.652 0.670 0.723 0.714 0.738 0.708 0.703 0.694   5.08

47) I   Acenaphthene-d10      ----------------ISTD--------------------
48) Hexachlorocy 0.377 0.382 0.378 0.390 0.362 0.332 0.313 0.259 0.349  12.94
49) 2,4,6-Trichl 0.408 0.415 0.421 0.443 0.439 0.433 0.440 0.384 0.423   4.80
50) 2,4,5-Trichl 0.436 0.439 0.455 0.484 0.466 0.463 0.426 0.370 0.442   7.84
51) 2-Fluorobiph 1.516 1.544 1.575 1.679 1.699 1.695 1.740 1.694 1.643   5.14
52) 2-Chloronaph 1.325 1.344 1.344 1.429 1.432 1.447 1.427 1.365 1.389   3.55
53) Biphenyl     1.695 1.738 1.740 1.877 1.862 1.862 1.969 1.843 1.823   5.01
54) 2-Nitroanili 0.444 0.439 0.429 0.455 0.439 0.451 0.389 0.366 0.426   7.44
55) Dimethylphth 1.451 1.468 1.484 1.595 1.597 1.660 1.637 1.527 1.552   5.17
56) Acenaphthyle 2.091 2.122 2.153 2.291 2.235 2.289 2.275 2.183 2.205   3.57
57) 2,6-Dinitrot 0.344 0.341 0.349 0.364 0.344 0.366 0.304 0.309 0.340   6.71
58) 3-Nitroanili 0.387 0.394 0.398 0.416 0.423 0.414 0.356 0.286 0.384  11.74
59) Acenaphthene 1.346 1.360 1.378 1.476 1.454 1.488 1.467 1.508 1.435   4.40
60) 2,4-Dinitrop 0.206 0.198 0.193 0.175 0.137 0.100 0.057       0.152  37.35
         ----- Quadratic regression -----              Coefficient =  0.9998
              Response Ratio = -0.01929 + 0.18509 *A + 0.00492 *A^2

61) 4-Nitropheno 0.246 0.240 0.237 0.247 0.231 0.203             0.234   7.04
62) Dibenzofuran 1.789 1.831 1.865 1.998 2.001 2.090 1.963 2.060 1.950   5.63
63) 2,4-Dinitrot 0.467 0.463 0.472 0.501 0.478 0.473 0.383 0.343 0.448  12.19
64) 2,3,4,6-Tetr 0.361 0.362 0.368 0.384 0.356 0.361 0.342 0.281 0.352   8.79
65) Diethylphtha 1.482 1.485 1.495 1.615 1.603 1.654 1.573 1.556 1.558   4.19
66) Fluorene     1.405 1.425 1.464 1.593 1.582 1.638 1.635 1.544 1.536   6.05
67) 4-Chlorophen 0.604 0.621 0.631 0.694 0.692 0.729 0.730 0.716 0.677   7.53
68) 4-Nitroanili 0.392 0.389 0.400 0.445 0.443 0.415 0.336 0.312 0.391  12.02

69) I   Phenanthrene-d10      ----------------ISTD--------------------
70) 4,6-Dinitro- 0.160 0.159 0.153 0.150 0.126 0.110             0.143  14.16
71) n-Nitrosodip 0.602 0.614 0.614 0.650 0.627 0.650 0.634 0.597 0.624   3.25
72) 1,2-Diphenyl 0.904 0.932 0.924 0.964 0.947 0.936 0.935 0.892 0.929   2.47
73) 2,4,6-Tribro 0.146 0.147 0.148 0.153 0.149 0.139 0.131 0.127 0.142   6.50
74) 4-Bromopheny 0.230 0.244 0.237 0.246 0.246 0.246 0.245 0.235 0.241   2.64
75) Hexachlorobe 0.270 0.278 0.282 0.294 0.292 0.297 0.288 0.254 0.282   5.14
76) Pentachlorop 0.169 0.169 0.166 0.166 0.146 0.131 0.100 0.085 0.142  23.47
         ----- Quadratic regression -----              Coefficient =  0.9999
              Response Ratio = -0.00749 + 0.16894 *A + 0.00038 *A^2

77) Phenanthrene 1.124 1.131 1.149 1.231 1.218 1.252 1.238 1.300 1.205   5.27
78) Anthracene   1.142 1.166 1.175 1.251 1.232 1.249 1.202 1.195 1.201   3.34
79) Carbazole    1.168 1.175 1.195 1.260 1.241 1.229 1.220 1.187 1.209   2.73
80) Di-n-butylph 1.458 1.476 1.472 1.545 1.492 1.503 1.342 1.366 1.457   4.73
81) Fluoranthene 1.230 1.236 1.237 1.321 1.296 1.303 1.217 1.158 1.250   4.30
82) Octadecane   0.493 0.516 0.512 0.544 0.533 0.552 0.518 0.496 0.520   4.09

83) I   Chrysene-d12          ----------------ISTD--------------------
84) Pyrene       1.364 1.443 1.425 1.460 1.415 1.451 1.424 1.318 1.412   3.41
85) Terphenyl-d1 0.866 0.911 0.905 0.927 0.897 0.931 0.905 0.862 0.901   2.83
86) Butylbenzylp 0.699 0.722 0.717 0.726 0.684 0.695 0.596 0.550 0.674   9.63
87) Benzo[a]anth 1.198 1.225 1.233 1.258 1.249 1.246 1.265 1.216 1.236   1.83
88) 3,3'-Dichlor 0.485 0.490 0.501 0.514 0.498 0.468 0.423 0.411 0.474   7.94
89) Chrysene     1.194 1.220 1.230 1.267 1.242 1.294 1.246 1.237 1.241   2.40
90) bis(2-Ethylh 0.962 0.994 0.992 1.002 0.952 0.948 0.804 0.722 0.922  11.11

91) I   Perylene-d12          ----------------ISTD--------------------
92) Di-n-octylph 1.510 1.579 1.586 1.607 1.548 1.572 1.249       1.522   8.17
93) Benzo[b]fluo 1.276 1.290 1.253 1.311 1.297 1.277 1.236 1.204 1.268   2.76
94) Benzo[k]fluo 1.066 1.135 1.214 1.246 1.236 1.248 1.208 1.125 1.185   5.71
95) Benzo[a]pyre 1.089 1.117 1.139 1.181 1.138 1.127 1.065 1.035 1.111   4.17
```

Initial Calibration Summary

Job Number: JC89914 **Sample:** EZ6786-ICC6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z137801.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

```
 96) Indeno[1,2,3 1.260 1.284 1.288 1.281 1.201 1.150 1.100 1.091 1.207   6.94
 97) Dibenz(a,h)a 1.078 1.131 1.129 1.159 1.098 1.030 0.998 0.958 1.072   6.60
 98) Dibenz[a,h]a 1.216 1.269 1.275 1.300 1.269 1.174 1.194 1.049 1.218   6.67
 99) 7,12-Dimethy 0.519 0.539 0.545 0.546 0.517 0.505 0.455 0.413 0.505   9.39
100) Benzo[g,h,i] 1.142 1.206 1.202 1.228 1.189 1.105 1.101 1.097 1.159   4.63

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

           MZ6786.M          Fri May 24 11:27:34 2019
```

7.7.6

7

Initial Calibration Verification

Job Number: JC89914 **Sample:** EZ6786-ICV6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z137808.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6786\z137808.D Vial: 11
Acq On : 24 May 2019 5:18 am Operator: chriss2
Sample : icv6786-50 Inst : GCMSZ
Misc : op20426,ez6786,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6786.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri May 24 11:17:37 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	4.55
2		1,4-Dioxane	0.614	0.653	-6.4	116	0.02	2.09
6	t	Indene	2.352	2.883	-22.6	138	0.00	4.74
7	t	Cumene	3.502	3.875	-10.7	122	0.00	3.96
13	t	Decane	1.268	1.349	-6.4	119	0.00	4.44
18	t	Acetophenone	1.992	2.358	-18.4	130	0.00	4.84
24	I	Naphthalene-d8	1.000	1.000	0.0	116	0.00	5.47
27	t	Quinoline	0.805	0.861	-7.0	126	-0.01	5.72
40	t	2,3-Dichloroaniline	0.407	0.396	2.7	115	0.00	6.18
41	t	Caprolactam	0.169	0.175	-3.6	119	-0.02	5.77
45	t	1-Methylnaphthalene	0.697	0.700	-0.4	120	0.00	6.04
46	t	Dimethylnaphthalene	0.694	0.724	-4.3	125	0.00	6.44
47	I	Acenaphthene-d10	1.000	1.000	0.0	116	0.00	6.79
48	t	Hexachlorocyclopentadiene	0.349	0.394	-12.9	120	0.00	6.09
53	t	Biphenyl	1.823	1.862	-2.1	124	0.00	6.32
69	I	Phenanthrene-d10	1.000	1.000	0.0	107	0.00	8.33
82	t	Octadecane	0.520	0.590	-13.5	123	0.00	8.24
83	I	Chrysene-d12	1.000	1.000	0.0	89	-0.01	12.06
91	I	Perylene-d12	1.000	1.000	0.0	83	-0.01	14.13
99	t	7,12-Dimethylbenz(a)anthr	0.505	0.449	11.1	68	-0.02	13.62

Initial Calibration Verification

Job Number: JC89914 **Sample:** EZ6786-ICV6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z137808.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

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(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137801.D MZ6786.M Fri May 24 11:29:08 2019

Initial Calibration Verification

Job Number: JC89914 **Sample:** EZ6786-ICV6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z137809.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6786\z137809.D Vial: 12
Acq On : 24 May 2019 5:45 am Operator: chriss2
Sample : icv6786-50 Inst : GCMSZ
Misc : op20426,ez6786,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6786.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri May 24 11:17:37 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	95	0.00	4.55
3	t	Pyridine	1.622	1.791	-10.4	107	0.10	2.51
10	t	Aniline	1.991	2.439	-22.5	127	0.00	4.32
16	t	Benzyl alcohol	0.877	1.132	-29.1	121	0.00	4.67
24	I	Naphthalene-d8	1.000	1.000	0.0	104	0.00	5.47
39	t	4-Chloroaniline	0.483	0.477	1.2	107	0.00	5.53
44	t	2-Methylnaphthalene	0.623	0.657	-5.5	113	0.00	5.97
47	I	Acenaphthene-d10	1.000	1.000	0.0	109	0.00	6.79
54	t	2-Nitroaniline	0.426	0.429	-0.7	109	0.00	6.42
58	t	3-Nitroaniline	0.384	0.397	-3.4	109	0.00	6.76
62	t	Dibenzofuran	1.950	1.949	0.1	114	0.00	6.98
68	t	4-Nitroaniline	0.391	0.405	-3.6	110	-0.01	7.33
69	I	Phenanthrene-d10	1.000	1.000	0.0	115	0.00	8.33
79	t	Carbazole	1.209	1.192	1.4	115	0.00	8.63

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137801.D MZ6786.M Fri May 24 11:29:12 2019

7.7.8

7

Initial Calibration Verification

Job Number: JC89914 **Sample:** EZ6786-ICV6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z137810.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6786\z137810.D Vial: 13
Acq On : 24 May 2019 6:12 am Operator: chriss2
Sample : icv6786-50 Inst : GCMSZ
Misc : op20426,ez6786,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6786.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri May 24 11:17:37 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	126	0.00	4.55
9	t	Phenol	1.898	1.923	-1.3	128	0.00	4.36
12	t	2-Chlorophenol	1.472	1.513	-2.8	130	0.00	4.42
19	t	2-Methylphenol	1.320	1.365	-3.4	132	-0.01	4.77
21	t	3&4-Methylphenol	1.386	1.452	-4.8	131	0.00	4.88
24	I	Naphthalene-d8	1.000	1.000	0.0	134	0.00	5.47
29	t	2-Nitrophenol	0.216	0.213	1.4	129	0.00	5.19
30	t	2,4-Dimethylphenol	0.391	0.355	9.2	120	0.00	5.25
31		Benzoic Acid	0.322	0.324	-0.6	125	0.00	5.37
33	t	2,4-Dichlorophenol	0.336	0.328	2.4	127	-0.01	5.39
34		2,6-Dichlorophenol	0.330	0.321	2.7	130	0.00	5.54
43	t	4-Chloro-3-methylphenol	0.355	0.345	2.8	128	-0.01	5.89
47	I	Acenaphthene-d10	1.000	1.000	0.0	137	0.00	6.79
49	t	2,4,6-Trichlorophenol	0.423	0.393	7.1	128	0.00	6.19
50	t	2,4,5-Trichlorophenol	0.442	0.430	2.7	130	-0.02	6.24
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	44.171	11.7	123	0.00	6.85
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.234	0.210	10.3	121	-0.02	6.98
64		2,3,4,6-Tetrachlorophenol	0.352	0.323	8.2	120	0.00	7.11
69	I	Phenanthrene-d10	1.000	1.000	0.0	126	0.00	8.33
70	t	4,6-Dinitro-2-methylpheno	0.143	0.145	-1.4	120	-0.01	7.35
		----------	True	Calc.	% Drift	----------		
76	t	Pentachlorophenol	50.000	49.325	1.3	124	-0.01	8.13

Initial Calibration Verification

Job Number: JC89914 **Sample:** EZ6786-ICV6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z137810.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

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(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137801.D MZ6786.M Fri May 24 11:29:16 2019

Initial Calibration Verification

Job Number: JC89914 **Sample:** EZ6786-ICV6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z137811.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6786\z137811.D Vial: 14
Acq On : 24 May 2019 6:39 am Operator: chriss2
Sample : icv6786-50 Inst : GCMSZ
Misc : op20426,ez6786,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6786.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri May 24 11:17:37 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	138	0.00	4.55
5	S	2-Fluorophenol	1.364	1.356	0.6	135	0.00	3.62
8	S	Phenol-d5	1.759	1.706	3.0	133	0.00	4.35
24	I	Naphthalene-d8	1.000	1.000	0.0	148	0.00	5.47
25	S	Nitrobenzene-d5	0.441	0.389	11.8	131	0.00	4.95
47	I	Acenaphthene-d10	1.000	1.000	0.0	150	0.00	6.79
51	S	2-Fluorobiphenyl	1.643	1.317	19.8	126	0.00	6.24
69	I	Phenanthrene-d10	1.000	1.000	0.0	132	0.00	8.33
73	S	2,4,6-Tribromophenol	0.142	0.133	6.3	120	0.00	7.55
83	I	Chrysene-d12	1.000	1.000	0.0	111	-0.01	12.06
85	S	Terphenyl-d14	0.901	0.981	-8.9	120	0.00	10.53

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137801.D MZ6786.M Fri May 24 11:29:20 2019

7.7.10

7

Initial Calibration Verification

Job Number: JC89914 **Sample:** EZ6786-ICV6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z137812.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6786\z137812.D Vial: 15
Acq On : 24 May 2019 7:06 am Operator: chriss2
Sample : icv6786-50 Inst : GCMSZ
Misc : op20426,ez6786,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6786.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri May 24 11:17:37 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	111	-0.01	12.06
88 t	3,3'-Dichlorobenzidine	0.474	0.451	4.9	100	0.00	12.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137801.D MZ6786.M Fri May 24 11:29:24 2019

Initial Calibration Verification

Job Number: JC89914 **Sample:** EZ6787-ICV6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z137825.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6786\z137825.D Vial: 27
Acq On : 24 May 2019 12:49 pm Operator: chriss2
Sample : icv6786-50 Inst : GCMSZ
Misc : op20426,ez6787,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6786.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri May 24 12:18:55 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	96	0.00	4.55
4	t	N-Nitrosodimethylamine	0.903	0.813	10.0	87	0.01	2.38
11	t	bis(2-Chloroethyl)ether	1.383	1.438	-4.0	101	0.00	4.36
14	t	1,3-Dichlorobenzene	1.636	1.687	-3.1	102	0.00	4.51
15	t	1,4-Dichlorobenzene	1.658	1.708	-3.0	103	0.00	4.56
17	t	1,2-Dichlorobenzene	1.554	1.629	-4.8	105	0.00	4.68
20	t	2,2'-oxybis(1-Chloropropa	0.400	0.451	-12.7	114	0.00	4.75
22	t	n-Nitroso-di-n-propylamin	1.007	1.061	-5.4	105	-0.01	4.84
23	t	Hexachloroethane	0.512	0.541	-5.7	102	0.00	4.92
24	I	Naphthalene-d8	1.000	1.000	0.0	97	0.00	5.47
26	t	Nitrobenzene	0.457	0.464	-1.5	98	0.00	4.96
28	t	Isophorone	0.756	0.746	1.3	97	0.00	5.14
32	t	bis(2-Chloroethoxy)methan	0.469	0.474	-1.1	100	0.00	5.29
36	t	1,2,4-Trichlorobenzene	0.352	0.365	-3.7	103	0.00	5.43
38	t	Naphthalene	1.208	1.292	-7.0	107	0.00	5.48
42	t	Hexachlorobutadiene	0.189	0.204	-7.9	106	0.00	5.57
47	I	Acenaphthene-d10	1.000	1.000	0.0	96	0.00	6.79
52	t	2-Chloronaphthalene	1.389	1.433	-3.2	102	0.00	6.33
55	t	Dimethylphthalate	1.552	1.584	-2.1	102	0.00	6.56
56	t	Acenaphthylene	2.205	2.265	-2.7	101	0.00	6.67
57	t	2,6-Dinitrotoluene	0.340	0.347	-2.1	95	0.00	6.61
59	t	Acenaphthene	1.435	1.493	-4.0	104	0.00	6.82

Initial Calibration Verification

Job Number: JC89914 **Sample:** EZ6787-ICV6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z137825.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

63	t	2,4-Dinitrotoluene	0.448	0.440	1.8	89	0.00	6.96
65	t	Diethylphthalate	1.558	1.548	0.6	99	-0.01	7.19
66	t	Fluorene	1.536	1.535	0.1	100	0.00	7.30
67	t	4-Chlorophenyl-phenylethe	0.677	0.659	2.7	100	0.00	7.30
69	I	Phenanthrene-d10	1.000	1.000	0.0	92	0.00	8.32
71	t	n-Nitrosodiphenylamine	0.624	0.561	10.1	84	0.00	7.42
72	t	1,2-Diphenylhydrazine	0.929	0.970	-4.4	97	0.00	7.46
74	t	4-Bromophenyl-phenylether	0.241	0.259	-7.5	100	0.00	7.81
75	t	Hexachlorobenzene	0.282	0.295	-4.6	96	0.00	7.89
		----------	AvgRF	CCRF	% Dev	----------		
77	t	Phenanthrene	1.205	1.253	-4.0	100	0.00	8.36
78	t	Anthracene	1.201	1.188	1.1	93	0.00	8.42
80	t	Di-n-butylphthalate	1.457	1.532	-5.1	96	0.00	9.12
81	t	Fluoranthene	1.250	1.284	-2.7	95	0.00	9.93
83	I	Chrysene-d12	1.000	1.000	0.0	82	0.00	12.07
84	t	Pyrene	1.412	1.615	-14.4	93	0.00	10.25
86	t	Butylbenzylphthalate	0.674	0.781	-15.9	89	0.00	11.31
87	t	Benzo[a]anthracene	1.236	1.329	-7.5	88	0.00	12.05
89	t	Chrysene	1.241	1.383	-11.4	92	0.00	12.11
90	t	bis(2-Ethylhexyl)phthalat	0.922	1.080	-17.1	89	0.00	12.25
91	I	Perylene-d12	1.000	1.000	0.0	79	-0.01	14.13
92	t	Di-n-octylphthalate	1.522	1.590	-4.5	79	0.00	13.21
93	t	Benzo[b]fluoranthene	1.268	1.296	-2.2	81	-0.01	13.62
94	t	Benzo[k]fluoranthene	1.185	1.341	-13.2	87	-0.02	13.66
95	t	Benzo[a]pyrene	1.111	1.145	-3.1	79	0.00	14.05
96	t	Indeno[1,2,3-cd]pyrene	1.207	1.249	-3.5	76	-0.01	15.44
98	t	Dibenz[a,h]anthracene	1.218	1.285	-5.5	79	-0.01	15.47
100	t	Benzo[g,h,i]perylene	1.159	1.290	-11.3	84	0.00	15.77

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137816a.D MZ6786.M Fri May 24 13:15:00 2019

7.7.12

7

Continuing Calibration Summary

Job Number: JC89914 **Sample:** EZ6837-CC6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z138885.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\altheam\ez6837\z138885.d Vial: 2
Acq On : 19 Jun 2019 3:50 pm Operator: angelar
Sample : cc6786-25 Inst : GCMSZ
Misc : op20426,ez6837,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6786.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Jun 14 17:20:33 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	119	-0.04	4.51
2		1,4-Dioxane	0.614	0.452	26.4#	86	-0.04	2.03
3	t	Pyridine	1.622	1.179	27.3#	82	-0.04	2.37
4	t	N-Nitrosodimethylamine	0.903	0.700	22.5#	89	-0.04	2.33
5	S	2-Fluorophenol	1.364	1.196	12.3	100	-0.09	3.54
6	t	Indene	2.352	2.124	9.7	106	-0.04	4.70
7	t	Cumene	3.502	3.275	6.5	109	-0.04	3.92
8	S	Phenol-d5	1.759	1.601	9.0	105	0.03	4.26
9	t	Phenol	1.898	1.778	6.3	106	0.03	4.28
10	t	Aniline	1.991	1.610	19.1	98	-0.04	4.28
11	t	bis(2-Chloroethyl)ether	1.383	1.202	13.1	100	-0.04	4.32
12	t	2-Chlorophenol	1.472	1.358	7.7	106	-0.06	4.37
13	t	Decane	1.268	1.279	-0.9	116	-0.04	4.40
14	t	1,3-Dichlorobenzene	1.636	1.510	7.7	107	-0.04	4.47
15	t	1,4-Dichlorobenzene	1.658	1.542	7.0	108	-0.04	4.53
16	t	Benzyl alcohol	0.877	0.824	6.0	106	-0.04	4.62
17	t	1,2-Dichlorobenzene	1.554	1.423	8.4	106	-0.04	4.64
18	t	Acetophenone	1.992	1.911	4.1	111	-0.04	4.81
19	t	2-Methylphenol	1.320	1.207	8.6	104	-0.07	4.71
20	t	2,2'-oxybis(1-Chloropropa	0.400	0.372	7.0	108	-0.04	4.71
21	t	3&4-Methylphenol	1.386	1.280	7.6	106	-0.07	4.82
22	t	n-Nitroso-di-n-propylamin	1.007	0.975	3.2	113	-0.04	4.81
23	t	Hexachloroethane	0.512	0.532	-3.9	116	-0.04	4.88
24	I	Naphthalene-d8	1.000	1.000	0.0	122	-0.04	5.43
25	S	Nitrobenzene-d5	0.441	0.430	2.5	114	-0.04	4.92
26	t	Nitrobenzene	0.457	0.448	2.0	114	-0.04	4.93
27	t	Quinoline	0.805	0.739	8.2	109	-0.04	5.69
28	t	Isophorone	0.756	0.714	5.6	110	-0.04	5.10
29	t	2-Nitrophenol	0.216	0.206	4.6	107	-0.04	5.16
30	t	2,4-Dimethylphenol	0.391	0.365	6.6	108	-0.05	5.20
31		Benzoic Acid	0.322	0.338	-5.0	118	-0.08	5.29
32	t	bis(2-Chloroethoxy)methan	0.469	0.421	10.2	106	-0.04	5.25
33	t	2,4-Dichlorophenol	0.336	0.324	3.6	110	-0.06	5.34
34		2,6-Dichlorophenol	0.330	0.322	2.4	113	-0.05	5.49
35	t	1,3,5-Trichlorobenzene	0.370	0.368	0.5	116	-0.04	5.17
36	t	1,2,4-Trichlorobenzene	0.352	0.352	0.0	118	-0.04	5.39
37	t	1,2,3-Trichlorobenzene	0.352	0.346	1.7	117	-0.04	5.55
38	t	Naphthalene	1.208	1.115	7.7	110	-0.04	5.45
39	t	4-Chloroaniline	0.483	0.437	9.5	105	-0.04	5.49
40	t	2,3-Dichloroaniline	0.407	0.387	4.9	111	-0.05	6.14
41	t	Caprolactam	0.169	0.174	-3.0	119	-0.05	5.74

Continuing Calibration Summary

Job Number: JC89914 **Sample:** EZ6837-CC6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z138885.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42	t	Hexachlorobutadiene	0.189	0.212	-12.2	131	-0.04	5.54
43	t	4-Chloro-3-methylphenol	0.355	0.352	0.8	114	-0.04	5.84
44	t	2-Methylnaphthalene	0.623	0.592	5.0	112	-0.04	5.93
45	t	1-Methylnaphthalene	0.697	0.668	4.2	113	-0.04	6.01
46	t	Dimethylnaphthalene	0.694	0.664	4.3	112	-0.04	6.40
47	I	Acenaphthene-d10	1.000	1.000	0.0	124	-0.05	6.75
48	t	Hexachlorocyclopentadiene	0.349	0.261	25.2#	83	-0.05	6.05
49	t	2,4,6-Trichlorophenol	0.423	0.438	-3.5	123	-0.05	6.15
50	t	2,4,5-Trichlorophenol	0.442	0.464	-5.0	119	-0.07	6.18
51	S	2-Fluorobiphenyl	1.643	1.557	5.2	115	-0.05	6.20
52	t	2-Chloronaphthalene	1.389	1.287	7.3	112	-0.04	6.30
53	t	Biphenyl	1.823	1.715	5.9	114	-0.04	6.28
54	t	2-Nitroaniline	0.426	0.569	-33.6#	155	0.07	6.38
55	t	Dimethylphthalate	1.552	1.491	3.9	116	-0.05	6.51
56	t	Acenaphthylene	2.205	2.036	7.7	111	-0.05	6.63
57	t	2,6-Dinitrotoluene	0.340	0.333	2.1	114	-0.05	6.57
58	t	3-Nitroaniline	0.384	0.357	7.0	107	-0.05	6.71
59	t	Acenaphthene	1.435	1.327	7.5	112	-0.05	6.78
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	55.396	-10.8	140	-0.04	6.81
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.234	0.261	-11.5	131	-0.03	6.88
62	t	Dibenzofuran	1.950	1.811	7.1	113	-0.05	6.93
63	t	2,4-Dinitrotoluene	0.448	0.467	-4.2	116	-0.04	6.93
64		2,3,4,6-Tetrachlorophenol	0.352	0.393	-11.6	127	-0.06	7.05
65	t	Diethylphthalate	1.558	2.372	-52.2#	183	-0.06	7.14
66	t	Fluorene	1.536	1.494	2.7	117	-0.05	7.26
67	t	4-Chlorophenyl-phenylethe	0.677	0.698	-3.1	125	-0.05	7.25
68	t	4-Nitroaniline	0.391	0.348	11.0	97	-0.06	7.28
69	I	Phenanthrene-d10	1.000	1.000	0.0	132	-0.05	8.28
70	t	4,6-Dinitro-2-methylpheno	0.143	0.144	-0.7	127	-0.04	7.33
71	t	n-Nitrosodiphenylamine	0.624	0.559	10.4	114	-0.06	7.37
72	t	1,2-Diphenylhydrazine	0.929	0.839	9.7	115	-0.05	7.41
73	S	2,4,6-Tribromophenol	0.142	0.145	-2.1	126	-0.05	7.50
74	t	4-Bromophenyl-phenylether	0.241	0.226	6.2	121	-0.06	7.76
75	t	Hexachlorobenzene	0.282	0.268	5.0	120	-0.05	7.84
		----------	True	Calc.	% Drift	----------		
76	t	Pentachlorophenol	50.000	48.551	2.9	126	-0.07	8.07
		----------	AvgRF	CCRF	% Dev	----------		
77	t	Phenanthrene	1.205	1.093	9.3	117	-0.06	8.30
78	t	Anthracene	1.201	1.119	6.8	118	-0.05	8.37
79	t	Carbazole	1.209	1.054	12.8	111	-0.06	8.57
80	t	Di-n-butylphthalate	1.457	1.367	6.2	117	-0.06	9.06
81	t	Fluoranthene	1.250	1.221	2.3	122	-0.06	9.87
82	t	Octadecane	0.520	0.478	8.1	116	-0.06	8.18
83	I	Chrysene-d12	1.000	1.000	0.0	128	0.03	12.01
84	t	Pyrene	1.412	1.383	2.1	121	-0.01	10.19
85	S	Terphenyl-d14	0.901	0.921	-2.2	127	-0.07	10.46
86	t	Butylbenzylphthalate	0.674	0.656	2.7	116	-0.07	11.24
87	t	Benzo[a]anthracene	1.236	1.181	4.4	120	0.05	12.00
88	t	3,3'-Dichlorobenzidine	0.474	0.432	8.9	108	-0.07	12.00
89	t	Chrysene	1.241	1.116	10.1	113	-0.01	12.05
90	t	bis(2-Ethylhexyl)phthalat	0.922	0.838	9.1	107	-0.04	12.17

Continuing Calibration Summary

Job Number: JC89914 **Sample:** EZ6837-CC6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z138885.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

91	I	Perylene-d12	1.000	1.000	0.0	105	-0.06	14.07
92	t	Di-n-octylphthalate	1.522	1.556	-2.2	101	-0.09	13.13
93	t	Benzo[b]fluoranthene	1.268	1.244	1.9	99	-0.06	13.57
94	t	Benzo[k]fluoranthene	1.185	1.170	1.3	98	-0.07	13.60
95	t	Benzo[a]pyrene	1.111	1.059	4.7	94	-0.06	13.99
96	t	Indeno[1,2,3-cd]pyrene	1.207	1.408	-16.7	115	-0.06	15.39
97	t	Dibenz(a,h)acridine	1.072	1.070	0.2	97	-0.07	15.12
98	t	Dibenz[a,h]anthracene	1.218	1.202	1.3	97	-0.08	15.41
99	t	7,12-Dimethylbenz(a)anthr	0.505	0.485	4.0	93	-0.07	13.56
100	t	Benzo[g,h,i]perylene	1.159	1.106	4.6	94	-0.07	15.70

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z138703a.D MZ6786.M Wed Jun 19 23:24:52 2019

7.7.13

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Continuing Calibration Summary

Job Number: JC89914 **Sample:** EZ6837-ECC6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z138895.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\altheam\ez6837\z138895.d Vial: 2
Acq On : 19 Jun 2019 8:23 pm Operator: angelar
Sample : ecc6786-25 Inst : GCMSZ
Misc : op21103,ez6837,30.0,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6786.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Wed Jun 19 23:32:12 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	105	0.00	4.51
2		1,4-Dioxane	0.614	0.421	31.4	71	0.00	2.02
3	t	Pyridine	1.622	1.204	25.8	74	0.00	2.36
4	t	N-Nitrosodimethylamine	0.903	0.650	28.0	73	0.00	2.33
5	S	2-Fluorophenol	1.364	1.125	17.5	83	0.00	3.54
6	t	Indene	2.352	2.072	11.9	92	0.00	4.70
7	t	Cumene	3.502	3.180	9.2	94	0.00	3.92
8	S	Phenol-d5	1.759	1.545	12.2	89	0.00	4.27
9	t	Phenol	1.898	1.688	11.1	89	0.00	4.28
10	t	Aniline	1.991	1.591	20.1	85	0.00	4.27
11	t	bis(2-Chloroethyl)ether	1.383	1.158	16.3	85	0.00	4.32
12	t	2-Chlorophenol	1.472	1.302	11.5	90	0.00	4.37
13	t	Decane	1.268	1.279	-0.9	102	0.00	4.40
14	t	1,3-Dichlorobenzene	1.636	1.497	8.5	94	0.00	4.47
15	t	1,4-Dichlorobenzene	1.658	1.526	8.0	94	0.00	4.53
16	t	Benzyl alcohol	0.877	0.771	12.1	88	0.00	4.62
17	t	1,2-Dichlorobenzene	1.554	1.445	7.0	96	0.00	4.64
18	t	Acetophenone	1.992	1.881	5.6	96	0.00	4.81
19	t	2-Methylphenol	1.320	1.208	8.5	92	0.00	4.71
20	t	2,2'-oxybis(1-Chloropropa	0.400	0.364	9.0	94	0.00	4.71
21	t	3&4-Methylphenol	1.386	1.258	9.2	92	0.00	4.82
22	t	n-Nitroso-di-n-propylamin	1.007	0.994	1.3	102	0.00	4.81
23	t	Hexachloroethane	0.512	0.538	-5.1	104	0.00	4.88
24	I	Naphthalene-d8	1.000	1.000	0.0	109	0.00	5.43
25	S	Nitrobenzene-d5	0.441	0.436	1.1	103	0.00	4.92
26	t	Nitrobenzene	0.457	0.456	0.2	103	0.00	4.93
27	t	Quinoline	0.805	0.747	7.2	98	0.00	5.69
28	t	Isophorone	0.756	0.711	6.0	97	0.00	5.10
29	t	2-Nitrophenol	0.216	0.206	4.6	95	0.00	5.16
30	t	2,4-Dimethylphenol	0.391	0.371	5.1	98	0.00	5.20
31		Benzoic Acid	0.322	0.323	-0.3	101	0.00	5.29
32	t	bis(2-Chloroethoxy)methan	0.469	0.413	11.9	92	0.00	5.25
33	t	2,4-Dichlorophenol	0.336	0.325	3.3	98	0.00	5.34
34		2,6-Dichlorophenol	0.330	0.323	2.1	101	0.00	5.49
35	t	1,3,5-Trichlorobenzene	0.370	0.371	-0.3	104	0.00	5.17
36	t	1,2,4-Trichlorobenzene	0.352	0.354	-0.6	105	0.00	5.39
37	t	1,2,3-Trichlorobenzene	0.352	0.354	-0.6	107	0.00	5.55
38	t	Naphthalene	1.208	1.108	8.3	98	0.00	5.45
39	t	4-Chloroaniline	0.483	0.439	9.1	94	0.00	5.49
40	t	2,3-Dichloroaniline	0.407	0.397	2.5	101	0.00	6.14
41	t	Caprolactam	0.169	0.170	-0.6	104	0.00	5.74

Continuing Calibration Summary

Job Number: JC89914 **Sample:** EZ6837-ECC6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z138895.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42	t	Hexachlorobutadiene	0.189	0.214	-13.2	118	0.00	5.54
43	t	4-Chloro-3-methylphenol	0.355	0.356	-0.3	102	0.00	5.84
44	t	2-Methylnaphthalene	0.623	0.587	5.8	98	0.00	5.94
45	t	1-Methylnaphthalene	0.697	0.679	2.6	102	0.00	6.01
46	t	Dimethylnaphthalene	0.694	0.685	1.3	103	0.00	6.40
47	I	Acenaphthene-d10	1.000	1.000	0.0	114	0.00	6.75
48	t	Hexachlorocyclopentadiene	0.349	0.157	55.0#	46#	0.00	6.05
49	t	2,4,6-Trichlorophenol	0.423	0.435	-2.8	112	0.00	6.15
50	t	2,4,5-Trichlorophenol	0.442	0.474	-7.2	112	0.00	6.18
51	S	2-Fluorobiphenyl	1.643	1.560	5.1	106	0.00	6.20
52	t	2-Chloronaphthalene	1.389	1.298	6.6	104	0.00	6.30
53	t	Biphenyl	1.823	1.707	6.4	104	0.00	6.28
54	t	2-Nitroaniline	0.426	0.594	-39.4	149	0.00	6.38
55	t	Dimethylphthalate	1.552	1.481	4.6	106	0.00	6.51
56	t	Acenaphthylene	2.205	2.000	9.3	100	0.00	6.63
57	t	2,6-Dinitrotoluene	0.340	0.324	4.7	102	0.00	6.57
58	t	3-Nitroaniline	0.384	0.371	3.4	102	0.00	6.71
59	t	Acenaphthene	1.435	1.306	9.0	101	0.00	6.78
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	33.906	32.2	74	0.00	6.81
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.234	0.266	-13.7	123	0.00	6.88
62	t	Dibenzofuran	1.950	1.801	7.6	103	0.00	6.93
63	t	2,4-Dinitrotoluene	0.448	0.461	-2.9	105	0.00	6.93
64		2,3,4,6-Tetrachlorophenol	0.352	0.388	-10.2	116	0.00	7.05
65	t	Diethylphthalate	1.558	2.251	-44.5	159	0.00	7.14
66	t	Fluorene	1.536	1.486	3.3	106	0.00	7.26
67	t	4-Chlorophenyl-phenylethe	0.677	0.707	-4.4	116	0.00	7.25
68	t	4-Nitroaniline	0.391	0.383	2.0	98	0.00	7.28
69	I	Phenanthrene-d10	1.000	1.000	0.0	121	0.00	8.28
70	t	4,6-Dinitro-2-methylpheno	0.143	0.093	35.0	74	0.00	7.33
71	t	n-Nitrosodiphenylamine	0.624	0.562	9.9	104	0.00	7.37
72	t	1,2-Diphenylhydrazine	0.929	0.866	6.8	108	0.00	7.41
73	S	2,4,6-Tribromophenol	0.142	0.144	-1.4	114	0.00	7.50
74	t	4-Bromophenyl-phenylether	0.241	0.232	3.7	113	0.00	7.76
75	t	Hexachlorobenzene	0.282	0.268	5.0	110	0.00	7.84
		----------	True	Calc.	% Drift	----------		
76	t	Pentachlorophenol	50.000	47.881	4.2	114	0.00	8.07
		----------	AvgRF	CCRF	% Dev	----------		
77	t	Phenanthrene	1.205	1.092	9.4	107	0.00	8.30
78	t	Anthracene	1.201	1.108	7.7	107	0.00	8.36
79	t	Carbazole	1.209	1.049	13.2	100	0.00	8.57
80	t	Di-n-butylphthalate	1.457	1.393	4.4	109	0.00	9.06
81	t	Fluoranthene	1.250	1.226	1.9	112	0.00	9.87
82	t	Octadecane	0.520	0.471	9.4	104	0.00	8.18
83	I	Chrysene-d12	1.000	1.000	0.0	113	0.00	12.01
84	t	Pyrene	1.412	1.376	2.5	106	0.00	10.19
85	S	Terphenyl-d14	0.901	0.921	-2.2	112	0.00	10.46
86	t	Butylbenzylphthalate	0.674	0.648	3.9	101	0.00	11.24
87	t	Benzo[a]anthracene	1.236	1.155	6.6	104	0.00	12.00
88	t	3,3'-Dichlorobenzidine	0.474	0.457	3.6	100	0.00	12.00
89	t	Chrysene	1.241	1.070	13.8	95	0.00	12.05
90	t	bis(2-Ethylhexyl)phthalat	0.922	0.815	11.6	92	0.00	12.17

Continuing Calibration Summary

Job Number: JC89914 **Sample:** EZ6837-ECC6786
Account: NOREASCA NOREAS, Inc. **Lab FileID:** Z138895.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

91	I	Perylene-d12	1.000	1.000	0.0	91	0.00	14.07
92	t	Di-n-octylphthalate	1.522	1.564	-2.8	88	0.00	13.14
93	t	Benzo[b]fluoranthene	1.268	1.233	2.8	85	0.00	13.57
94	t	Benzo[k]fluoranthene	1.185	1.139	3.9	83	0.00	13.60
95	t	Benzo[a]pyrene	1.111	1.063	4.3	82	0.00	13.99
96	t	Indeno[1,2,3-cd]pyrene	1.207	1.403	-16.2	99	0.00	15.39
97	t	Dibenz(a,h)acridine	1.072	1.075	-0.3	84	0.00	15.12
98	t	Dibenz[a,h]anthracene	1.218	1.215	0.2	85	0.00	15.41
99	t	7,12-Dimethylbenz(a)anthr	0.505	0.490	3.0	82	0.00	13.56
100	t	Benzo[g,h,i]perylene	1.159	1.116	3.7	83	0.00	15.70

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z138885.d MZ6786.M Thu Jun 20 01:43:36 2019

7.7.14

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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

Method Blank Summary

Job Number: JC89914
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
OP21084-MB1	3G123410.D	1	06/18/19	VDT	06/18/19	OP21084	G3G4329

The QC reported here applies to the following samples: **Method:** SW846 8151A

JC89914-9, JC89914-10, JC89914-11, JC89914-12

CAS No.	Compound	Result	RL	MDL	Units	Q
93-72-1	2,4,5-TP (Silvex)	ND	3.3	3.0	ug/kg	

CAS No.	Surrogate Recoveries		Limits
19719-28-9	2,4-DCAA	93%	10-159%
19719-28-9	2,4-DCAA	80%	10-159%

Method Blank Summary

Job Number: JC89914
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
OP21102-MB1	6G65694.D	1	06/19/19	MH	06/19/19	OP21102	G6G2042

The QC reported here applies to the following samples: **Method:** SW846 8081B

JC89914-9, JC89914-10, JC89914-11, JC89914-12

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	
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	
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	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	85%	25-135%
877-09-8	Tetrachloro-m-xylene	82%	25-135%
2051-24-3	Decachlorobiphenyl	89%	10-156%
2051-24-3	Decachlorobiphenyl	83%	10-156%

Method Blank Summary

Job Number: JC89914
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
OP21102-MB1	1G153580.D	1	06/19/19	MH	06/19/19	OP21102	G1G4959

The QC reported here applies to the following samples: **Method:** SW846 8081B

JC89914-9, JC89914-10, JC89914-11, JC89914-12

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	
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	
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	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	83%	25-135%
877-09-8	Tetrachloro-m-xylene	82%	25-135%
2051-24-3	Decachlorobiphenyl	82%	10-156%
2051-24-3	Decachlorobiphenyl	86%	10-156%

Method Blank Summary

Job Number: JC89914
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
OP21101-MB1	EF190094.D	1	06/19/19	TR	06/19/19	OP21101	GEF6455

The QC reported here applies to the following samples: **Method:** SW846 8082A

JC89914-9, JC89914-10, JC89914-11, JC89914-12

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	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	85%	31-146%
877-09-8	Tetrachloro-m-xylene	94%	31-146%
2051-24-3	Decachlorobiphenyl	96%	17-164%
2051-24-3	Decachlorobiphenyl	86%	17-164%

Method Blank Summary

Job Number: JC89914
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
OP21101-MB1	XX2436638.D	1	06/19/19	TR	06/19/19	OP21101	GXX6721

The QC reported here applies to the following samples: **Method:** SW846 8082A

JC89914-9, JC89914-10, JC89914-11, JC89914-12

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	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	83%	31-146%
877-09-8	Tetrachloro-m-xylene	87%	31-146%
2051-24-3	Decachlorobiphenyl	89%	17-164%
2051-24-3	Decachlorobiphenyl	88%	17-164%

Blank Spike Summary

Job Number: JC89914
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
OP21084-BS1	3G123411.D	1	06/18/19	VDT	06/18/19	OP21084	G3G4329

The QC reported here applies to the following samples: **Method:** SW846 8151A

JC89914-9, JC89914-10, JC89914-11, JC89914-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
93-72-1	2,4,5-TP (Silvex)	26.7	25.0	94	49-139

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	90%	10-159%
19719-28-9	2,4-DCAA	77%	10-159%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC89914
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
OP21102-BS1	1G153581.D	1	06/19/19	MH	06/19/19	OP21102	G1G4959

The QC reported here applies to the following samples: **Method:** SW846 8081B

JC89914-9, JC89914-10, JC89914-11, JC89914-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
309-00-2	Aldrin	16.7	14.8	89	46-120
319-84-6	alpha-BHC	16.7	14.6	88	45-116
319-85-7	beta-BHC	16.7	14.6	88	42-121
319-86-8	delta-BHC	16.7	14.4	86	42-121
58-89-9	gamma-BHC (Lindane)	16.7	14.6	88	46-118
5103-71-9	alpha-Chlordane	16.7	15.3	92	49-119
60-57-1	Dieldrin	16.7	15.0	90	48-126
72-54-8	4,4'-DDD	16.7	14.3	86	47-120
72-55-9	4,4'-DDE	16.7	15.1	91	48-121
50-29-3	4,4'-DDT	16.7	14.3	86	45-135
72-20-8	Endrin	16.7	16.2	97	51-137
1031-07-8	Endosulfan sulfate	16.7	13.7	82	48-128
959-98-8	Endosulfan-I	16.7	13.7	82	47-118
33213-65-9	Endosulfan-II	16.7	15.0	90	49-121
76-44-8	Heptachlor	16.7	14.8	89	48-120

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	85%	25-135%
877-09-8	Tetrachloro-m-xylene	81%	25-135%
2051-24-3	Decachlorobiphenyl	82%	10-156%
2051-24-3	Decachlorobiphenyl	84%	10-156%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC89914
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
OP21101-BS1	EF190095.D	1	06/19/19	TR	06/19/19	OP21101	GEF6455

The QC reported here applies to the following samples: **Method:** SW846 8082A

JC89914-9, JC89914-10, JC89914-11, JC89914-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	133	131	98	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	138	103	63-155

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	95%	31-146%
877-09-8	Tetrachloro-m-xylene	107%	31-146%
2051-24-3	Decachlorobiphenyl	109%	17-164%
2051-24-3	Decachlorobiphenyl	100%	17-164%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC89914
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
OP21084-MS	3G123422.D	1	06/18/19	VDT	06/18/19	OP21084	G3G4329
OP21084-MSD	3G123423.D	1	06/18/19	VDT	06/18/19	OP21084	G3G4329
JC89945-1	3G123420.D	1	06/18/19	VDT	06/18/19	OP21084	G3G4329

The QC reported here applies to the following samples: **Method:** SW846 8151A

JC89914-9, JC89914-10, JC89914-11, JC89914-12

CAS No.	Compound	JC89945-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
93-72-1	2,4,5-TP (Silvex)	ND		31.4	15.7	50	33.7	10	30	44	10-159/51

CAS No.	Surrogate Recoveries	MS	MSD	JC89945-1	Limits
19719-28-9	2,4-DCAA	32%	22%	14%	10-159%
19719-28-9	2,4-DCAA	30%	23%	14%	10-159%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC89914
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
OP21102-MS	6G65698.D	1	06/19/19	MH	06/19/19	OP21102	G6G2042
OP21102-MSD	6G65699.D	1	06/19/19	MH	06/19/19	OP21102	G6G2042
JC89886-10	6G65697.D	1	06/19/19	MH	06/19/19	OP21102	G6G2042

The QC reported here applies to the following samples: **Method:** SW846 8081B

JC89914-9, JC89914-10, JC89914-11, JC89914-12

CAS No.	Compound	JC89886-10 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	ND		19.8	12.9	65	20.1	13.2	66	2	23-143/44
319-84-6	alpha-BHC	ND		19.8	13.5	68	20.1	13.8	69	2	18-152/47
319-85-7	beta-BHC	ND		19.8	10.7	54	20.1	11.2	56	5	7-143/48
319-86-8	delta-BHC	ND		19.8	12.0	60	20.1	12.5	62	4	13-155/49
58-89-9	gamma-BHC (Lindane)	ND		19.8	12.7	64	20.1	13.3	66	5	23-138/49
5103-71-9	alpha-Chlordane	3.4		19.8	16.8	68	20.1	16.7	66	1	16-149/46
60-57-1	Dieldrin	ND		19.8	13.2	67	20.1	13.8	69	4	14-154/46
72-54-8	4,4'-DDD	ND		19.8	15.1	76	20.1	15.3	76	1	18-149/51
72-55-9	4,4'-DDE	ND		19.8	13.4	68	20.1	13.8	69	3	10-154/49
50-29-3	4,4'-DDT	1.7		19.8	16.8	78	20.1	16.5	74	1	10-170/50
72-20-8	Endrin	ND		19.8	13.7	69	20.1	14.2	71	4	18-173/49
1031-07-8	Endosulfan sulfate	ND		19.8	13.4	68	20.1	13.7	68	2	19-132/50
959-98-8	Endosulfan-I	ND		19.8	12.2	61	20.1	12.8	64	5	18-143/46
33213-65-9	Endosulfan-II	ND		19.8	13.2	67	20.1	13.6	68	3	21-132/46
76-44-8	Heptachlor	ND		19.8	14.1	71	20.1	14.5	72	3	22-146/46

CAS No.	Surrogate Recoveries	MS	MSD	JC89886-10	Limits
877-09-8	Tetrachloro-m-xylene	67%	71%	72%	25-135%
877-09-8	Tetrachloro-m-xylene	64%	68%	70%	25-135%
2051-24-3	Decachlorobiphenyl	67%	71%	73%	10-156%
2051-24-3	Decachlorobiphenyl	68%	69%	73%	10-156%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC89914
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
OP21101-MS	EF190097.D	1	06/19/19	TR	06/19/19	OP21101	GEF6455
OP21101-MSD	EF190098.D	1	06/19/19	TR	06/19/19	OP21101	GEF6455
JC89886-5	EF190096.D	1	06/19/19	TR	06/19/19	OP21101	GEF6455

The QC reported here applies to the following samples: **Method:** SW846 8082A

JC89914-9, JC89914-10, JC89914-11, JC89914-12

CAS No.	Compound	JC89886-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND		160	143	90	160	147	92	3	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	433		160	484	32	160	550	73	13	15-200/68

CAS No.	Surrogate Recoveries	MS	MSD	JC89886-5	Limits
877-09-8	Tetrachloro-m-xylene	74%	77%	73%	31-146%
877-09-8	Tetrachloro-m-xylene	84%	88%	82%	31-146%
2051-24-3	Decachlorobiphenyl	94%	97%	97%	17-164%
2051-24-3	Decachlorobiphenyl	96%	102%	97%	17-164%

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G1G4959-CC4954	**Injection Date:**	06/19/19
Lab File ID:	1G153576.D	**Injection Time:**	09:30
Instrument ID:	GC1G	**Method:**	SW846 8081B

	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT
Check Std	179930013	1.89	608074667	1.67
Upper Limit [a]	359860026	2.39	1216149334	2.17
Lower Limit [b]	89965007	1.39	304037334	1.17

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT
OP21102-MB1	146636041	1.89	505809736	1.67
OP21102-BS1	154131720	1.89	511072575	1.67
JC89914-9	160556133	1.89	556721816	1.67
JC89914-10	164650250	1.89	557567056	1.67
JC89914-11	169332630	1.89	571629048	1.67
JC89914-12	153100968	1.89	526148238	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.

Internal Standard Area Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G6G2042-CC2038	**Injection Date:**	06/19/19
Lab File ID:	6G65692.D	**Injection Time:**	09:30
Instrument ID:	GC6G	**Method:**	SW846 8081B

	IS 1 AREA	RT	IS 2 AREA	RT
Check Std	258729493	2.16	211079592	1.95
Upper Limit [a]	517458986	2.66	422159184	2.45
Lower Limit [b]	129364747	1.66	105539796	1.45

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT
OP21102-MB1	212963868	2.16	172514364	1.94
ZZZZZZ	224117140	2.16	183122080	1.94
JC89886-10	225577952	2.16	181163828	1.94
OP21102-MS	234483828	2.16	186238259	1.95
OP21102-MSD	232578048	2.16	183716591	1.95
ZZZZZZ	225225296	2.16	176833290	1.94
ZZZZZZ	228357208	2.16	180139677	1.95

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.

DDT/Endrin Breakdown Check

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample:	G1G4954-DDT	**Injection Date:**	06/14/19
Lab File ID:	1G153427.D	**Injection Time:**	03:33
Instrument ID:	GC1G		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	5095290	2039894
4,4'-DDE	6770584	2413532
4,4'-DDT	1004994214	319652798
DDT Breakdown [a]	1.2 %	1.4 %
Endrin aldehyde	10276957	3103211
Endrin ketone	8950767	4706062
Endrin	598014623	186478966
Endrin Breakdown [b]	3.1 %	4 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 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
G1G4954-IC4954	1G153429.D	06/14/19	04:09	00:36	Initial cal 1
G1G4954-IC4954	1G153430.D	06/14/19	04:27	00:54	Initial cal 2
G1G4954-IC4954	1G153431.D	06/14/19	04:45	01:12	Initial cal 5
G1G4954-IC4954	1G153432.D	06/14/19	05:03	01:31	Initial cal 10
G1G4954-ICC4954	1G153433.D	06/14/19	05:21	01:49	Initial cal 25
G1G4954-IC4954	1G153434.D	06/14/19	05:39	02:07	Initial cal 50
G1G4954-IC4954	1G153435.D	06/14/19	05:58	02:25	Initial cal 75
G1G4954-IC4954	1G153436.D	06/14/19	06:16	02:43	Initial cal 100
G1G4954-IC4954	1G153437.D	06/14/19	06:34	03:01	Initial cal 500
G1G4954-IC4954	1G153438.D	06/14/19	06:52	03:19	Initial cal 500
G1G4954-ICV4954	1G153439.D	06/14/19	07:10	03:38	Initial cal verification 25
G1G4954-ICV4954	1G153440.D	06/14/19	07:28	03:56	Initial cal verification 500
G1G4954-ICV4954	1G153441.D	06/14/19	07:46	04:14	Initial cal verification 500
G1G4954-ICV4954	1G153442.D	06/14/19	08:05	04:32	Initial cal verification 50
G1G4954-ICV4954	1G153443.D	06/14/19	08:23	04:50	Initial cal verification 50

DDT/Endrin Breakdown Check

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample:	G1G4959-DDT	**Injection Date:**	06/19/19
Lab File ID:	1G153575.D	**Injection Time:**	09:12
Instrument ID:	GC1G		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	6863668	1772729
4,4'-DDE	10797516	3468313
4,4'-DDT	1027381475	300382242
DDT Breakdown [a]	1.7 %	1.7 %
Endrin aldehyde	3568727	1582298
Endrin ketone	6224400	1990828
Endrin	634117808	184513477
Endrin Breakdown [b]	1.5 %	1.9 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 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
G1G4959-CC4954	1G153576.D	06/19/19	09:30	00:18	Continuing cal 25
G1G4959-CC4954	1G153577.D	06/19/19	09:48	00:36	Continuing cal 500
G1G4959-CC4954	1G153578.D	06/19/19	10:06	00:54	Continuing cal 500
OP21102-MB1	1G153580.D	06/19/19	10:42	01:30	Method Blank
OP21102-BS1	1G153581.D	06/19/19	11:00	01:48	Blank Spike
JC89914-9	1G153582.D	06/19/19	11:18	02:06	NWIRP-S1-WC-CF-035
JC89914-10	1G153583.D	06/19/19	11:36	02:24	NWIRP-S1-WC-CF-036
JC89914-11	1G153584.D	06/19/19	11:55	02:43	NWIRP-S1-WC-CF-037
JC89914-12	1G153585.D	06/19/19	12:13	03:01	NWIRP-S1-WC-CF-038
G1G4959-CC4954	1G153586.D	06/19/19	13:25	04:13	Continuing cal 50
G1G4959-CC4954	1G153588.D	06/19/19	14:01	04:49	Continuing cal 500
G1G4959-CC4954	1G153589.D	06/19/19	14:19	05:07	Continuing cal 500
OP20885-MB1	1G153591.D	06/19/19	14:55	05:43	Method Blank
ZZZZZZ	1G153592.D	06/19/19	15:13	06:01	(unrelated sample)
ZZZZZZ	1G153593.D	06/19/19	15:31	06:20	(unrelated sample)
G1G4959-ECC4954	1G153594.D	06/19/19	16:37	07:25	Ending cal 25

DDT/Endrin Breakdown Check

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample:	G6G2038-DDT	**Injection Date:**	06/16/19
Lab File ID:	6G65615.D	**Injection Time:**	23:02
Instrument ID:	GC6G		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	2845516	4864532
4,4'-DDE	2938828	2792758
4,4'-DDT	308299892	311475683
DDT Breakdown [a]	1.8 %	2.4 %
Endrin aldehyde	940553	516470
Endrin ketone	2728052	1715994
Endrin	219464762	215264188
Endrin Breakdown [b]	1.6 %	1 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 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
G6G2038-IC2038	6G65617.D	06/16/19	23:37	00:36	Initial cal 1
G6G2038-IC2038	6G65618.D	06/16/19	23:55	00:53	Initial cal 2
G6G2038-IC2038	6G65619.D	06/17/19	00:13	01:11	Initial cal 5
G6G2038-IC2038	6G65620.D	06/17/19	00:31	01:29	Initial cal 10
G6G2038-ICC2038	6G65621.D	06/17/19	00:49	01:47	Initial cal 25
G6G2038-IC2038	6G65622.D	06/17/19	01:07	02:05	Initial cal 50
G6G2038-IC2038	6G65623.D	06/17/19	01:25	02:23	Initial cal 75
G6G2038-IC2038	6G65624.D	06/17/19	01:42	02:41	Initial cal 100
G6G2038-IC2038	6G65625.D	06/17/19	02:00	02:58	Initial cal 500
G6G2038-IC2038	6G65626.D	06/17/19	02:18	03:16	Initial cal 500
G6G2038-ICV2038	6G65627.D	06/17/19	02:36	03:34	Initial cal verification 25
G6G2038-ICV2038	6G65628.D	06/17/19	02:54	03:52	Initial cal verification 500
G6G2038-ICV2038	6G65629.D	06/17/19	03:11	04:09	Initial cal verification 500
G6G2038-ICV2038	6G65630.D	06/17/19	03:29	04:27	Initial cal verification 50
G6G2038-ICV2038	6G65631.D	06/17/19	03:47	04:45	Initial cal verification 50

DDT/Endrin Breakdown Check

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample:	G6G2042-DDT	**Injection Date:**	06/19/19
Lab File ID:	6G65691.D	**Injection Time:**	09:13
Instrument ID:	GC6G		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	2490832	7590758
4,4'-DDE	2032456	3055204
4,4'-DDT	319046100	330579863
DDT Breakdown [a]	1.4 %	3.1 %
Endrin aldehyde	948883	1186551
Endrin ketone	1679965	2739321
Endrin	222003280	229351152
Endrin Breakdown [b]	1.2 %	1.7 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 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
G6G2042-CC2038	6G65692.D	06/19/19	09:30	00:18	Continuing cal 50
OP21102-MB1	6G65694.D	06/19/19	10:06	00:53	Method Blank
ZZZZZZ	6G65696.D	06/19/19	10:41	01:28	(unrelated sample)
JC89886-10	6G65697.D	06/19/19	10:58	01:46	(used for QC only; not part of job JC89914)
OP21102-MS	6G65698.D	06/19/19	11:16	02:03	Matrix Spike
OP21102-MSD	6G65699.D	06/19/19	11:34	02:21	Matrix Spike Duplicate
ZZZZZZ	6G65700.D	06/19/19	11:51	02:38	(unrelated sample)
ZZZZZZ	6G65701.D	06/19/19	12:09	02:56	(unrelated sample)

GC Identification Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G3G4329-CC4318	**Injection Date:**	06/18/19
Lab File ID:	3G123408.D	**Injection Time:**	13:29
Instrument ID:	GC3G	**Method:**	SW846 8151A

Sample ID:	OP21084-BS1	**Injection Date:**	06/18/19
Lab File ID:	3G123411.D	**Injection Time:**	14:56
Client ID:	Blank Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
2,4,5-TP (Silvex)	1	9.90	9.91	26.2		ug/kg	4.7
2,4,5-TP (Silvex)	2 [a]	11.31	11.32	25.0		ug/kg	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G3G4329-CC4318	**Injection Date:**	06/18/19
Lab File ID:	3G123414.D	**Injection Time:**	16:21
Instrument ID:	GC3G	**Method:**	SW846 8151A

Sample ID:	OP21084-MS	**Injection Date:**	06/18/19
Lab File ID:	3G123422.D	**Injection Time:**	20:09
Client ID:	Matrix Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
2,4,5-TP (Silvex)	1	9.90	9.92	20.3		ug/kg	25.6
2,4,5-TP (Silvex)	2 [a]	11.31	11.32	15.7		ug/kg	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G3G4329-CC4318	**Injection Date:**	06/18/19
Lab File ID:	3G123414.D	**Injection Time:**	16:21
Instrument ID:	GC3G	**Method:**	SW846 8151A

Sample ID:	OP21084-MSD	**Injection Date:**	06/18/19
Lab File ID:	3G123423.D	**Injection Time:**	20:38
Client ID:	Matrix Spike Duplicate		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
2,4,5-TP (Silvex)	1	9.90	9.92	13.0		ug/kg	26.1
2,4,5-TP (Silvex)	2 [a]	11.31	11.32	10		ug/kg	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G1G4959-CC4954	**Injection Date:**	06/19/19
Lab File ID:	1G153576.D	**Injection Time:**	09:30
Instrument ID:	GC1G	**Method:**	SW846 8081B

Sample ID:	JC89914-9	**Injection Date:**	06/19/19
Lab File ID:	1G153582.D	**Injection Time:**	11:18
Client ID:	NWIRP-S1-WC-CF-035		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
alpha-Chlordane	1	4.62	4.63	5.2		ug/kg	53.7
alpha-Chlordane [a]	2 [b]	6.10	6.11	3.0		ug/kg	
Dieldrin	1	5.13	5.13	1.1		ug/kg	23.4
Dieldrin	2 [b]	6.66	6.67	0.87		ug/kg	
4,4'-DDE [a]	1 [b]	4.73	4.74	0.73		ug/kg	48.7
4,4'-DDE [a]	2	6.37	6.38	1.2		ug/kg	
4,4'-DDT	1	6.01	6.02	1.3		ug/kg	8.0
4,4'-DDT	2 [b]	7.96	7.96	1.2		ug/kg	

(a) More than 40 % RPD for detected concentrations between the two GC columns.
(b) Final result reported from this column.

GC Identification Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G1G4959-CC4954	**Injection Date:**	06/19/19
Lab File ID:	1G153576.D	**Injection Time:**	09:30
Instrument ID:	GC1G	**Method:**	SW846 8081B

Sample ID:	JC89914-10	**Injection Date:**	06/19/19
Lab File ID:	1G153583.D	**Injection Time:**	11:36
Client ID:	NWIRP-S1-WC-CF-036		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
alpha-Chlordane	1	4.62	4.63	6.7		ug/kg	31.0
alpha-Chlordane	2 [a]	6.10	6.11	4.9		ug/kg	
Dieldrin	1 [a]	5.13	5.13	1.8		ug/kg	0.0
Dieldrin	2	6.67	6.67	1.8		ug/kg	
4,4'-DDD	1 [a]	5.59	5.59	5.3		ug/kg	14.0
4,4'-DDD	2	7.38	7.39	6.1		ug/kg	
4,4'-DDE	1 [a]	4.74	4.74	3.4		ug/kg	21.1
4,4'-DDE	2	6.37	6.38	4.2		ug/kg	
4,4'-DDT	1	6.02	6.02	9.7		ug/kg	7.5
4,4'-DDT	2 [a]	7.96	7.96	9.0		ug/kg	
Heptachlor	1	3.28	3.28	0.89		ug/kg	10.7
Heptachlor	2 [a]	4.25	4.25	0.80		ug/kg	

(a) Final result reported from this column.

GC Identification Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G1G4959-CC4954	**Injection Date:**	06/19/19
Lab File ID:	1G153576.D	**Injection Time:**	09:30
Instrument ID:	GC1G	**Method:**	SW846 8081B

Sample ID:	JC89914-11	**Injection Date:**	06/19/19
Lab File ID:	1G153584.D	**Injection Time:**	11:55
Client ID:	NWIRP-S1-WC-CF-037		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
alpha-Chlordane	1	4.61	4.63	6.2		ug/kg	21.4
alpha-Chlordane	2 [a]	6.10	6.11	5.0		ug/kg	
Dieldrin	1 [a]	5.13	5.13	2.0		ug/kg	4.9
Dieldrin	2	6.67	6.67	2.1		ug/kg	
4,4'-DDD	1 [a]	5.59	5.59	7.3		ug/kg	14.0
4,4'-DDD	2	7.38	7.39	8.4		ug/kg	
4,4'-DDE [b]	1 [a]	4.74	4.74	2.6		ug/kg	42.4
4,4'-DDE [b]	2	6.37	6.38	4.0		ug/kg	
4,4'-DDT	1 [a]	6.02	6.02	7.5		ug/kg	18.2
4,4'-DDT	2	7.96	7.96	9.0		ug/kg	
Heptachlor	1	3.28	3.28	0.76		ug/kg	0.0
Heptachlor	2 [a]	4.25	4.25	0.76		ug/kg	

(a) Final result reported from this column.
(b) More than 40 % RPD for detected concentrations between the two GC columns.

GC Identification Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G1G4959-CC4954	**Injection Date:**	06/19/19
Lab File ID:	1G153576.D	**Injection Time:**	09:30
Instrument ID:	GC1G	**Method:**	SW846 8081B

Sample ID:	JC89914-12	**Injection Date:**	06/19/19
Lab File ID:	1G153585.D	**Injection Time:**	12:13
Client ID:	NWIRP-S1-WC-CF-038		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
alpha-Chlordane	1	4.62	4.63	3.5		ug/kg	22.2
alpha-Chlordane	2 [a]	6.10	6.11	2.8		ug/kg	
Dieldrin	1	5.13	5.13	0.80		ug/kg	16.2
Dieldrin	2 [a]	6.66	6.67	0.68	J	ug/kg	
4,4'-DDT	1 [a]	6.02	6.02	1.3		ug/kg	14.3
4,4'-DDT	2	7.95	7.96	1.5		ug/kg	

(a) Final result reported from this column.

GC Identification Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G1G4959-CC4954	**Injection Date:**	06/19/19
Lab File ID:	1G153576.D	**Injection Time:**	09:30
Instrument ID:	GC1G	**Method:**	SW846 8081B

Sample ID:	OP21102-BS1	**Injection Date:**	06/19/19
Lab File ID:	1G153581.D	**Injection Time:**	11:00
Client ID:	Blank Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aldrin	1	3.60	3.60	16.4		ug/kg	10.3
Aldrin	2 [a]	4.71	4.72	14.8		ug/kg	
alpha-BHC	1	2.55	2.55	15.3		ug/kg	4.7
alpha-BHC	2 [a]	3.24	3.24	14.6		ug/kg	
beta-BHC	1	2.89	2.89	15.4		ug/kg	5.3
beta-BHC	2 [a]	3.74	3.74	14.6		ug/kg	
delta-BHC	1 [a]	3.06	3.06	14.4		ug/kg	2.1
delta-BHC	2	4.14	4.15	14.7		ug/kg	
gamma-BHC (Lindane)	1	2.82	2.82	14.9		ug/kg	2.0
gamma-BHC (Lindane)	2 [a]	3.67	3.67	14.6		ug/kg	
alpha-Chlordane	1	4.63	4.63	15.5		ug/kg	1.3
alpha-Chlordane	2 [a]	6.10	6.11	15.3		ug/kg	
Dieldrin	1	5.13	5.13	15.1		ug/kg	0.7
Dieldrin	2 [a]	6.67	6.67	15.0		ug/kg	
4,4'-DDD	1	5.59	5.59	15.2		ug/kg	6.1
4,4'-DDD	2 [a]	7.39	7.39	14.3		ug/kg	
4,4'-DDE	1 [a]	4.74	4.74	15.1		ug/kg	0.7
4,4'-DDE	2	6.38	6.38	15.2		ug/kg	
4,4'-DDT	1	6.02	6.02	15.8		ug/kg	10.0
4,4'-DDT	2 [a]	7.96	7.96	14.3		ug/kg	
Endrin	1	5.46	5.46	16.5		ug/kg	1.8
Endrin	2 [a]	7.20	7.20	16.2		ug/kg	
Endosulfan sulfate	1	7.15	7.15	14.2		ug/kg	3.6
Endosulfan sulfate	2 [a]	8.69	8.70	13.7		ug/kg	
Endosulfan-I	1	4.80	4.80	15.0		ug/kg	9.1
Endosulfan-I	2 [a]	6.21	6.21	13.7		ug/kg	
Endosulfan-II	1 [a]	5.79	5.79	15.0		ug/kg	0.7
Endosulfan-II	2	7.58	7.58	15.1		ug/kg	
Heptachlor	1	3.28	3.28	15.2		ug/kg	2.7
Heptachlor	2 [a]	4.25	4.25	14.8		ug/kg	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G6G2042-CC2038	**Injection Date:**	06/19/19
Lab File ID:	6G65692.D	**Injection Time:**	09:30
Instrument ID:	GC6G	**Method:**	SW846 8081B

Sample ID:	OP21102-MS	**Injection Date:**	06/19/19
Lab File ID:	6G65698.D	**Injection Time:**	11:16
Client ID:	Matrix Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aldrin	1 [a]	4.15	4.16	12.9		ug/kg	0.0
Aldrin	2	5.09	5.09	12.9		ug/kg	
alpha-BHC	1 [a]	3.02	3.02	13.5		ug/kg	0.0
alpha-BHC	2	3.63	3.63	13.5		ug/kg	
beta-BHC	1 [a]	3.40	3.40	10.7		ug/kg	27.4
beta-BHC	2	4.15	4.15	14.1		ug/kg	
delta-BHC	1 [a]	3.58	3.58	12.0		ug/kg	6.5
delta-BHC	2	4.54	4.54	12.8		ug/kg	
gamma-BHC (Lindane)	1 [a]	3.32	3.32	12.7		ug/kg	6.8
gamma-BHC (Lindane)	2	4.06	4.06	13.6		ug/kg	
alpha-Chlordane	1	5.21	5.21	22.0		ug/kg	26.8
alpha-Chlordane	2 [a]	6.42	6.42	16.8		ug/kg	
Dieldrin	1 [a]	5.72	5.72	13.2		ug/kg	6.6
Dieldrin	2	6.95	6.95	14.1		ug/kg	
4,4'-DDD	1 [a]	6.18	6.18	15.1		ug/kg	18.1
4,4'-DDD	2	7.64	7.65	12.6		ug/kg	
4,4'-DDE	1 [a]	5.33	5.33	13.4		ug/kg	3.8
4,4'-DDE	2	6.69	6.69	12.9		ug/kg	
4,4'-DDT	1 [a]	6.60	6.60	16.8		ug/kg	1.2
4,4'-DDT	2	8.17	8.18	16.6		ug/kg	
Endrin	1 [a]	6.04	6.04	13.7		ug/kg	3.7
Endrin	2	7.46	7.46	13.2		ug/kg	
Endosulfan sulfate	1 [a]	7.69	7.69	13.4		ug/kg	18.9
Endosulfan sulfate	2	8.85	8.85	16.2		ug/kg	
Endosulfan-I	1 [a]	5.39	5.39	12.2		ug/kg	7.1
Endosulfan-I	2	6.52	6.52	13.1		ug/kg	
Endosulfan-II	1 [a]	6.37	6.37	13.2		ug/kg	1.5
Endosulfan-II	2	7.81	7.81	13.0		ug/kg	
Heptachlor	1	3.82	3.82	14.5		ug/kg	2.8
Heptachlor	2 [a]	4.64	4.64	14.1		ug/kg	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G6G2042-CC2038	**Injection Date:**	06/19/19
Lab File ID:	6G65692.D	**Injection Time:**	09:30
Instrument ID:	GC6G	**Method:**	SW846 8081B

Sample ID:	OP21102-MSD	**Injection Date:**	06/19/19
Lab File ID:	6G65699.D	**Injection Time:**	11:34
Client ID:	Matrix Spike Duplicate		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aldrin	1 [a]	4.16	4.16	13.2		ug/kg	1.5
Aldrin	2	5.09	5.09	13.4		ug/kg	
alpha-BHC	1 [a]	3.02	3.02	13.8		ug/kg	0.7
alpha-BHC	2	3.63	3.63	13.9		ug/kg	
beta-BHC	1 [a]	3.40	3.40	11.2		ug/kg	26.4
beta-BHC	2	4.15	4.15	14.6		ug/kg	
delta-BHC	1 [a]	3.58	3.58	12.5		ug/kg	6.9
delta-BHC	2	4.54	4.54	13.4		ug/kg	
gamma-BHC (Lindane)	1 [a]	3.32	3.32	13.3		ug/kg	5.1
gamma-BHC (Lindane)	2	4.06	4.06	14.0		ug/kg	
alpha-Chlordane	1	5.21	5.21	21.5		ug/kg	25.1
alpha-Chlordane	2 [a]	6.42	6.42	16.7		ug/kg	
Dieldrin	1 [a]	5.72	5.72	13.8		ug/kg	1.4
Dieldrin	2	6.95	6.95	14.0		ug/kg	
4,4'-DDD	1 [a]	6.18	6.18	15.3		ug/kg	15.5
4,4'-DDD	2	7.64	7.65	13.1		ug/kg	
4,4'-DDE	1 [a]	5.33	5.33	13.8		ug/kg	2.2
4,4'-DDE	2	6.69	6.69	13.5		ug/kg	
4,4'-DDT	1	6.60	6.60	17.3		ug/kg	4.7
4,4'-DDT	2 [a]	8.17	8.18	16.5		ug/kg	
Endrin	1 [a]	6.04	6.04	14.2		ug/kg	2.9
Endrin	2	7.46	7.46	13.8		ug/kg	
Endosulfan sulfate	1 [a]	7.69	7.69	13.7		ug/kg	28.8
Endosulfan sulfate	2	8.85	8.85	18.3		ug/kg	
Endosulfan-I	1 [a]	5.39	5.39	12.8		ug/kg	5.3
Endosulfan-I	2	6.52	6.52	13.5		ug/kg	
Endosulfan-II	1 [a]	6.37	6.37	13.6		ug/kg	1.5
Endosulfan-II	2	7.81	7.81	13.4		ug/kg	
Heptachlor	1	3.82	3.82	14.8		ug/kg	2.0
Heptachlor	2 [a]	4.64	4.64	14.5		ug/kg	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	GEF6455-CC6451	**Injection Date:**	06/19/19
Lab File ID:	EF190092.D	**Injection Time:**	09:30
Instrument ID:	GCEF	**Method:**	SW846 8082A

Sample ID:	OP21101-BS1	**Injection Date:**	06/19/19
Lab File ID:	EF190095.D	**Injection Time:**	10:45
Client ID:	Blank Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aroclor 1016	1 [a]			131		ug/kg	8.1
Aroclor 1016	2			142		ug/kg	
AR1016-A	1	4.01	3.99	121		ug/kg	
AR1016-A	2	5.08	5.06	154		ug/kg	
AR1016-B	1	4.56	4.54	136		ug/kg	
AR1016-B	2	5.84	5.83	145		ug/kg	
AR1016-C	1	5.45	5.39	118		ug/kg	
AR1016-C	2	6.85	6.80	137		ug/kg	
AR1016-D	1	5.66	5.63	147		ug/kg	
AR1016-D	2	7.12	7.08	142		ug/kg	
AR1016-E	1	6.41	6.38	134		ug/kg	
AR1016-E	2	8.07	8.05	135		ug/kg	
Aroclor 1260	1 [a]			138		ug/kg	3.6
Aroclor 1260	2			143		ug/kg	
AR1260-A	1	10.13	10.08	131		ug/kg	
AR1260-A	2	12.15	12.12	134		ug/kg	
AR1260-B	1	10.32	10.30	147		ug/kg	
AR1260-B	2	12.31	12.29	161		ug/kg	
AR1260-C	1	10.86	10.84	137		ug/kg	
AR1260-C	2	12.99	12.98	147		ug/kg	
AR1260-D	1	11.58	11.54	143		ug/kg	
AR1260-D	2	13.58	13.55	139		ug/kg	
AR1260-E	1	12.24	12.22	130		ug/kg	
AR1260-E	2	14.46	14.41	134		ug/kg	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	GEF6455-CC6451	**Injection Date:**	06/19/19
Lab File ID:	EF190092.D	**Injection Time:**	09:30
Instrument ID:	GCEF	**Method:**	SW846 8082A

Sample ID:	OP21101-MS	**Injection Date:**	06/19/19
Lab File ID:	EF190097.D	**Injection Time:**	11:35
Client ID:	Matrix Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aroclor 1016	1 [a]			143		ug/kg	1.4
Aroclor 1016	2			145		ug/kg	
AR1016-A	1	4.00	3.99	162		ug/kg	
AR1016-A	2	5.07	5.06	119		ug/kg	
AR1016-B	1	4.56	4.54	159		ug/kg	
AR1016-B	2	5.84	5.83	142		ug/kg	
AR1016-C	1	5.41	5.39	134		ug/kg	
AR1016-C	2	6.81	6.80	148		ug/kg	
AR1016-D	1	5.65	5.63	139		ug/kg	
AR1016-D	2	7.09	7.08	156		ug/kg	
AR1016-E	1	6.40	6.38	124		ug/kg	
AR1016-E	2	8.06	8.05	161		ug/kg	
Aroclor 1260	1 [a]			484		ug/kg	5.6
Aroclor 1260	2			512		ug/kg	
AR1260-A	1	10.07	10.08	479		ug/kg	
AR1260-A	2	12.11	12.12	534		ug/kg	
AR1260-B	1	10.31	10.30	456		ug/kg	
AR1260-B	2	12.30	12.29	485		ug/kg	
AR1260-C	1	10.84	10.84	471		ug/kg	
AR1260-C	2	12.98	12.98	496		ug/kg	
AR1260-D	1	11.53	11.54	511		ug/kg	
AR1260-D	2	13.55	13.55	519		ug/kg	
AR1260-E	1	12.15	12.22	502		ug/kg	
AR1260-E	2	14.40	14.41	526		ug/kg	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	GEF6455-CC6451	**Injection Date:**	06/19/19
Lab File ID:	EF190092.D	**Injection Time:**	09:30
Instrument ID:	GCEF	**Method:**	SW846 8082A

Sample ID:	OP21101-MSD	**Injection Date:**	06/19/19
Lab File ID:	EF190098.D	**Injection Time:**	12:00
Client ID:	Matrix Spike Duplicate		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aroclor 1016	1 [a]			147		ug/kg	4.7
Aroclor 1016	2			154		ug/kg	
AR1016-A	1	4.00	3.99	168		ug/kg	
AR1016-A	2	5.06	5.06	153		ug/kg	
AR1016-B	1	4.55	4.54	165		ug/kg	
AR1016-B	2	5.84	5.83	145		ug/kg	
AR1016-C	1	5.40	5.39	136		ug/kg	
AR1016-C	2	6.80	6.80	150		ug/kg	
AR1016-D	1	5.64	5.63	139		ug/kg	
AR1016-D	2	7.08	7.08	160		ug/kg	
AR1016-E	1	6.39	6.38	127		ug/kg	
AR1016-E	2	8.05	8.05	160		ug/kg	
Aroclor 1260	1 [a]			550		ug/kg	11.5
Aroclor 1260	2			617		ug/kg	
AR1260-A	1	10.06	10.08	559		ug/kg	
AR1260-A	2	12.11	12.12	602		ug/kg	
AR1260-B	1	10.30	10.30	503		ug/kg	
AR1260-B	2	12.29	12.29	556		ug/kg	
AR1260-C	1	10.83	10.84	541		ug/kg	
AR1260-C	2	12.97	12.98	707		ug/kg	
AR1260-D	1	11.52	11.54	583		ug/kg	
AR1260-D	2	13.54	13.55	603		ug/kg	
AR1260-E	1	12.14	12.22	562		ug/kg	
AR1260-E	2	14.39	14.41	616		ug/kg	

(a) QC results reported from this column.

Surrogate Recovery Summary

Job Number: JC89914
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]
JC89914-9	3G123416.D	49	52
JC89914-10	3G123417.D	26	28
JC89914-11	3G123418.D	47	42
JC89914-12	3G123419.D	38	38
OP21084-BS1	3G123411.D	90	77
OP21084-MB1	3G123410.D	93	80
OP21084-MS	3G123422.D	32	30
OP21084-MSD	3G123423.D	22	23

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: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Method: SW846 8081B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
JC89914-9	1G153582.D	72	72	68	104
JC89914-10	1G153583.D	67	68	59	109
JC89914-11	1G153584.D	59	59	52	105
JC89914-12	1G153585.D	72	72	67	94
OP21102-BS1	1G153581.D	85	81	82	84
OP21102-MB1	6G65694.D	85	82	89	83
OP21102-MB1	1G153580.D	83	82	82	86
OP21102-MS	6G65698.D	67	64	67	68
OP21102-MSD	6G65699.D	71	68	71	69

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

Surrogate Recovery Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Method: SW846 8082A **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
JC89914-9	XX2436690.D	83	89	82	94
JC89914-10	XX2436691.D	78	84	79	89
JC89914-11	XX2436692.D	70	74	71	79
JC89914-12	XX2436693.D	79	83	72	81
OP21101-BS1	EF190095.D	95	107	109	100
OP21101-MB1	EF190094.D	85	94	96	86
OP21101-MB1	XX2436638.D	83	87	89	88
OP21101-MS	EF190097.D	74	84	94	96
OP21101-MSD	EF190098.D	77	88	97	102

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

GC Surrogate Retention Time Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G3G4329-CC4318	**Injection Date:**	06/18/19
Lab File ID:	3G123408.D	**Injection Time:**	13:29
Instrument ID:	GC3G	**Method:**	SW846 8151A

	S1 [a] **RT**	**S1** [b] **RT**
Check Std	8.03	7.17

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S1** [b] **RT**
OP21084-MB1	3G123410.D	06/18/19	14:27	8.03	7.18
OP21084-BS1	3G123411.D	06/18/19	14:56	8.03	7.17
ZZZZZZ	3G123412.D	06/18/19	15:24	8.03	7.18

Surrogate Compounds

S1 = 2,4-DCAA

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

GC Surrogate Retention Time Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G3G4329-CC4318	**Injection Date:**	06/18/19
Lab File ID:	3G123414.D	**Injection Time:**	16:21
Instrument ID:	GC3G	**Method:**	SW846 8151A

	S1 [a] RT	S1 [b] RT
Check Std	8.03	7.17

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
JC89914-9	3G123416.D	06/18/19	17:19	8.03	7.18
JC89914-10	3G123417.D	06/18/19	17:47	8.03	7.18
JC89914-11	3G123418.D	06/18/19	18:15	8.03	7.18
JC89914-12	3G123419.D	06/18/19	18:44	8.03	7.18
JC89945-1	3G123420.D	06/18/19	19:12	8.03	7.18
ZZZZZZ	3G123421.D	06/18/19	19:41	8.03	7.18
OP21084-MS	3G123422.D	06/18/19	20:09	8.03	7.17
OP21084-MSD	3G123423.D	06/18/19	20:38	8.03	7.17

Surrogate Compounds

S1 = 2,4-DCAA

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

GC Surrogate Retention Time Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G1G4959-CC4954	**Injection Date:**	06/19/19
Lab File ID:	1G153576.D	**Injection Time:**	09:30
Instrument ID:	GC1G	**Method:**	SW846 8081B

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	2.14	2.61	9.53	11.54

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
OP21102-MB1	1G153580.D	06/19/19	10:42	2.14	2.61	9.53	11.54
OP21102-BS1	1G153581.D	06/19/19	11:00	2.14	2.61	9.52	11.54
JC89914-9	1G153582.D	06/19/19	11:18	2.14	2.61	9.52	11.53
JC89914-10	1G153583.D	06/19/19	11:36	2.14	2.61	9.53	11.54
JC89914-11	1G153584.D	06/19/19	11:55	2.15	2.61	9.53	11.54
JC89914-12	1G153585.D	06/19/19	12:13	2.14	2.61	9.53	11.53

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: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	G6G2042-CC2038	**Injection Date:**	06/19/19
Lab File ID:	6G65692.D	**Injection Time:**	09:30
Instrument ID:	GC6G	**Method:**	SW846 8081B

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	2.55	2.97	9.95	11.93

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
OP21102-MB1	6G65694.D	06/19/19	10:06	2.54	2.97	9.95	11.93
ZZZZZZ	6G65696.D	06/19/19	10:41	2.54	2.97	9.95	11.93
JC89886-10	6G65697.D	06/19/19	10:58	2.54	2.97	9.95	11.93
OP21102-MS	6G65698.D	06/19/19	11:16	2.54	2.97	9.95	11.93
OP21102-MSD	6G65699.D	06/19/19	11:34	2.54	2.97	9.95	11.93
ZZZZZZ	6G65700.D	06/19/19	11:51	2.54	2.97	9.95	11.93
ZZZZZZ	6G65701.D	06/19/19	12:09	2.54	2.97	9.95	11.93

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: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	GEF6455-CC6451	**Injection Date:**	06/19/19
Lab File ID:	EF190092.D	**Injection Time:**	09:30
Instrument ID:	GCEF	**Method:**	SW846 8082A

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	3.42	4.11	14.60	17.05

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
OP21101-MB1	EF190094.D	06/19/19	10:20	3.43	4.12	14.61	17.06
OP21101-BS1	EF190095.D	06/19/19	10:45	3.43	4.12	14.60	17.05
JC89886-5	EF190096.D	06/19/19	11:10	3.43	4.12	14.60	17.05
OP21101-MS	EF190097.D	06/19/19	11:35	3.43	4.12	14.60	17.05
OP21101-MSD	EF190098.D	06/19/19	12:00	3.43	4.11	14.59	17.05
ZZZZZZ	EF190099.D	06/19/19	12:25	3.43	4.11	14.60	17.05
OP21056-MB1	EF190100.D	06/19/19	13:03	3.43	4.11	14.60	17.05
ZZZZZZ	EF190101.D	06/19/19	13:28	3.43	4.11	14.60	17.05
ZZZZZZ	EF190102.D	06/19/19	13:53	3.43	4.11	14.60	17.05

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: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	GXX6722-CC6720	**Injection Date:**	06/20/19
Lab File ID:	XX2436686.D	**Injection Time:**	09:56
Instrument ID:	GCXX	**Method:**	SW846 8082A

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	3.18	4.00	10.58	12.55

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
JC89914-9	XX2436690.D	06/20/19	14:00	3.19	3.99	10.59	12.55
JC89914-10	XX2436691.D	06/20/19	14:18	3.18	4.00	10.58	12.55
JC89914-11	XX2436692.D	06/20/19	14:36	3.18	4.00	10.58	12.55
JC89914-12	XX2436693.D	06/20/19	14:55	3.18	4.00	10.58	12.55

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: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Check Std:	GXX6721-CC6720	**Injection Date:**	06/19/19
Lab File ID:	XX2436636.D	**Injection Time:**	16:55
Instrument ID:	GCXX	**Method:**	SW846 8082A

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	3.18	3.99	10.60	12.56

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
OP21101-MB1	XX2436638.D	06/19/19	17:32	3.18	4.00	10.60	12.56
OP21056-MB1	XX2436639.D	06/19/19	17:50	3.18	4.00	10.59	12.56
ZZZZZZ	XX2436640.D	06/19/19	18:08	3.18	3.99	10.59	12.56
ZZZZZZ	XX2436641.D	06/19/19	18:27	3.18	3.99	10.59	12.56
ZZZZZZ	XX2436642.D	06/19/19	18:45	3.16	4.04	10.63	12.67

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: JC89914 **Sample:** G1G4954-ICC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153433.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report GC1G

Method : C:\MSDCHEM\1\METHODS\1PST4954.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jun 14 08:50:01 2019
Response via : Initial Calibration

Calibration Files
2 =1G153430.D 5 =1G153431.D 10 =1G153432.D 25 =1G153433.D
50 =1G153434.D 100 =1G153436.D 1 =1G153429.D 75 =1G153435.D

Compound	2	5	10	25	50	100	1	75	Avg	%RSD
1) I 1-bromo-2-nitrobenzen	ISTD									
2) Tetrachloro-	1.002	1.021	0.975	0.986	0.984	0.963	1.086	0.959	0.997	4.13
3) Hexachlorobe	1.238	1.294	1.232	1.195	1.172	1.125	1.289	1.132	1.210	5.39
4) alpha-BHC	1.292	1.292	1.303	1.373	1.420	1.438	1.384	1.411	1.364	4.41
5) gamma-BHC	1.271	1.249	1.235	1.269	1.285	1.293	1.312	1.277	1.274	1.89
6) Heptachlor	1.335	1.284	1.268	1.259	1.251	1.223	1.339	1.224	1.273	3.49
7) beta-BHC	0.613	0.596	0.590	0.578	0.573	0.556	0.690	0.556	0.594	7.31
8) delta-BHC	1.046	1.070	1.107	1.195	1.234	1.258	1.052	1.226	1.148	7.74
9) Aldrin	0.999	1.070	1.112	1.151	1.170	1.180	0.983	1.172	1.105	7.17
10) Alachlor		0.182	0.175	0.163	0.160	0.150		0.151	0.164	7.88
11) Heptachlor E	1.099	1.098	1.099	1.109	1.111	1.099	1.133	1.096	1.105	1.12
12) gamma-Chlord	1.133	1.109	1.114	1.122	1.127	1.118	1.214	1.115	1.131	3.04
13) alpha-Chlord	1.071	1.130	1.119	1.115	1.111	1.092	1.197	1.092	1.116	3.37
14) Endosulfan I	1.096	1.075	1.071	1.070	1.069	1.048	1.234	1.048	1.089	5.56
15) 4,4'-DDE	0.965	1.008	1.029	1.057	1.080	1.079	1.021	1.069	1.039	3.90
16) Dieldrin	1.142	1.122	1.126	1.128	1.133	1.131	1.181	1.125	1.136	1.68
17) Endrin	0.975	0.953	0.973	0.942	0.942	0.906	0.976	0.904	0.946	3.08
18) 4,4'-DDD	0.808	0.858	0.860	0.880	0.912	0.890	0.873	0.879	0.870	3.49
19) Endosulfan I	1.025	1.009	1.010	1.029	1.016	0.964	1.043	0.982	1.010	2.54
20) 4,4'-DDT	0.699	0.729	0.761	0.769	0.797	0.792	0.854	0.789	0.774	6.07
21) Endrin Aldeh	0.882	0.842	0.860	0.833	0.825	0.798	0.883	0.798	0.840	3.96
22) Endosulfan S	0.938	0.940	0.920	0.911	0.894	0.853	0.956	0.864	0.910	4.05
23) Methoxychlor	0.531	0.469	0.501	0.465	0.456	0.434	0.606	0.440	0.488	11.81
24) Mirex	0.938	0.940	0.922	0.862	0.828	0.768	0.991	0.787	0.880	9.16
25) Endrin Keton	1.015	1.046	1.061	1.029	1.022	0.984	1.041	0.998	1.024	2.46
26) Decachlorobi	1.195	1.112	1.054	0.987	0.932	0.844	1.250	0.873	1.031	14.38
27) I 1-bromo-2-nitrobenzen	ISTD									
28) Toxaphene{A}				0.040					0.040	0.00
29) Toxaphene{B}				0.049					0.049	0.00
30) Toxaphene{C}				0.034					0.034	0.00
31) Toxaphene{D}				0.040					0.040	0.00
32) Toxaphene{E}				0.031					0.031	0.00
33) I 1-bromo-2-nitrobenzen	ISTD									
34) Chlordane {A				0.070					0.070	0.00
35) Chlordane {B				0.043					0.043	0.00
36) Chlordane {C				0.148					0.148	0.00
37) Chlordane {D				0.231					0.231	0.00
38) Chlordane {E				0.033					0.033	0.00

Signal #2

1) I 1-bromo-2-nitrobenzen	ISTD									
2) Tetrachloro-	0.653	0.637	0.637	0.646	0.643	0.639	0.888	0.633	0.672	13.01

8.9.1

8

Initial Calibration Summary

Job Number: JC89914 **Sample:** G1G4954-ICC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153433.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

3)	Hexachlorobe	1.433	1.425	1.418	1.421	1.435	1.435	1.541	1.421	1.441	2.84
4)	alpha-BHC	1.253	1.291	1.305	1.356	1.415	1.472	1.362	1.434	1.361	5.57
5)	gamma-BHC	1.206	1.190	1.204	1.257	1.296	1.341	1.287	1.309	1.261	4.44
6)	Heptachlor	1.146	1.185	1.194	1.184	1.197	1.218	1.351	1.195	1.209	5.03
7)	beta-BHC	0.525	0.495	0.508	0.494	0.487	0.482	0.571	0.478	0.505	6.07
8)	delta-BHC	0.974	0.999	1.176	1.208	1.266	1.339	0.958	1.290	1.151	13.27
9)	Aldrin	1.171	1.112	1.131	1.147	1.167	1.193	1.174	1.171	1.158	2.28
10)	Alachlor		0.122	0.126	0.135	0.130	0.118		0.119	0.125	5.16
11)	Heptachlor E	1.043	1.022	1.023	1.079	1.093	1.098	1.127	1.086	1.071	3.55
12)	gamma-Chlord	1.078	1.090	1.058	1.060	1.071	1.084	1.347	1.067	1.107	8.82
13)	alpha-Chlord	0.986	0.993	0.992	1.013	1.033	1.046	0.999	1.027	1.011	2.19
14)	Endosulfan I	1.177	1.045	1.034	1.004	1.013	1.011	1.461	0.992	1.092	14.66
15)	4,4'-DDE	1.002	1.028	1.078	1.050	1.063	1.067	0.980	1.047	1.039	3.26
16)	Dieldrin	1.086	1.098	1.084	1.133	1.093	1.129	1.159	1.111	1.111	2.39
17)	Endrin	0.940	0.929	0.913	0.918	0.907	0.905	0.938	0.900	0.919	1.67
18)	4,4'-DDD	0.792	0.777	0.780	0.797	0.810	0.828	1.055	0.819	0.832	11.01
19)	Endosulfan I	0.930	0.971	0.944	0.949	0.954	0.950	0.900	0.949	0.943	2.20
20)	4,4'-DDT	0.889	0.823	0.878	0.846	0.817	0.827	1.038	0.814	0.867	8.61
21)	Endrin Aldeh	0.758	0.749	0.763	0.746	0.756	0.751	0.884	0.734	0.768	6.21
22)	Endosulfan S	0.934	0.847	0.850	0.847	0.844	0.836	0.880	0.829	0.859	3.96
23)	Methoxychlor	0.514	0.480	0.461	0.435	0.422	0.405	0.588	0.408	0.464	13.44
24)	Mirex	0.645	0.678	0.656	0.644	0.624	0.599	0.740	0.606	0.649	6.91
25)	Endrin Keton	1.021	0.965	0.945	0.940	0.937	0.932	1.028	0.931	0.962	4.14
26)	Decachlorobi	0.891	0.837	0.828	0.805	0.783	0.754	0.917	0.762	0.822	7.14

27)	I 1-bromo-2-nitrobenzen ----------ISTD----------			
28)	Toxaphene{A}	0.024	0.024	0.00
29)	Toxaphene{B}	0.030	0.030	0.00
30)	Toxaphene{C}	0.050	0.050	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	0.065	0.065	0.00
35)	Chlordane {B	0.035	0.035	0.00
36)	Chlordane {C	0.131	0.131	0.00
37)	Chlordane {D	0.215	0.215	0.00
38)	Chlordane {E	0.036	0.036	0.00

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

1PST4954.M Fri Jun 14 08:58:43 2019 RPT1

Initial Calibration Verification

Job Number: JC89914 **Sample:** G1G4954-ICV4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153439.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4954\1G153439.D\ECD1A.CH Vial: 13
Signal #2 : C:\MSDCHEM\1\DATA\1G4954\1G153439.D\ECD2B.CH
Acq On : 6-14-2019 07:10:42 AM Operator: christp
Sample : icv4954-25 Inst : GC1G
Misc : op20952,g1g4954,15.2,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4954.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jun 14 08:50:01 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	104	0.00	1.64- 1.70
2	SAB	Tetrachloro-m-xylene	0.997	0.881	11.6	93	0.00	2.12- 2.18
3		Hexachlorobenzene		----------NA----------				
4	A	alpha-BHC	1.364	1.419	-4.0	107	0.00	2.53- 2.59
5	MA	gamma-BHC	1.274	1.301	-2.1	106	0.00	2.79- 2.85
6	MA	Heptachlor	1.273	1.268	0.4	104	0.00	3.25- 3.31
7	B	beta-BHC	0.594	0.597	-0.5	107	0.00	2.86- 2.92
8	B	delta-BHC	1.148	1.202	-4.7	104	0.00	3.04- 3.10
9	MB	Aldrin	1.105	1.230	-11.3	111	0.00	3.57- 3.63
10		Alachlor		----------NA----------				
11	B	Heptachlor Epoxide	1.105	1.186	-7.3	111	0.00	4.27- 4.33
12	B	gamma-Chlordane	1.131	1.188	-5.0	110	0.00	4.43- 4.49
13	B	alpha-Chlordane	1.116	1.172	-5.0	109	0.00	4.60- 4.66
14	A	Endosulfan I	1.089	1.108	-1.7	107	0.00	4.78- 4.84
15	B	4,4'-DDE	1.039	1.107	-6.5	109	0.00	4.72- 4.78
16	MA	Dieldrin	1.136	1.181	-4.0	109	0.00	5.10- 5.16
17	MA	Endrin	0.946	0.940	0.6	104	0.00	5.44- 5.50
18	A	4,4'-DDD	0.870	0.927	-6.6	109	0.00	5.56- 5.63
19	B	Endosulfan II	1.010	1.028	-1.8	104	0.00	5.77- 5.83
20	MA	4,4'-DDT	0.774	0.766	1.0	103	0.00	6.00- 6.06
21	B	Endrin Aldehyde	0.840	0.899	-7.0	112	0.00	6.42- 6.48
22	B	Endosulfan Sulfate	0.910	0.901	1.0	103	0.00	7.13- 7.19
23	A	Methoxychlor	0.488	0.423	13.3	94	0.00	6.82- 6.88
24		Mirex	0.880	0.717	18.5	86	0.00	6.97- 7.03
25	B	Endrin Ketone	1.024	1.068	-4.3	108	0.00	7.59- 7.65
26	SA	Decachlorobiphenyl	1.031	0.896	13.1	94	0.00	9.50- 9.56
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.57- 1.77
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	0#	0.00	1.57- 1.77
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

8.9.2

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** G1G4954-ICV4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153439.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	1.86- 1.92
2	SAB	Tetrachloro-m-xylene	0.672	0.574	14.6	90	0.00	2.58- 2.64
3		Hexachlorobenzene		----------NA----------				
4	A	alpha-BHC	1.361	1.405	-3.2	105	0.00	3.22- 3.28
5	MA	gamma-BHC	1.261	1.294	-2.6	105	0.00	3.64- 3.70
6	MA	Heptachlor	1.209	1.223	-1.2	105	0.00	4.22- 4.28
7	B	beta-BHC	0.505	0.506	-0.2	104	0.00	3.71- 3.77
8	B	delta-BHC	1.151	1.282	-11.4	108	0.00	4.12- 4.18
9	MB	Aldrin	1.158	1.203	-3.9	107	0.00	4.69- 4.75
10		Alachlor		----------NA----------				
11	B	Heptachlor Epoxide	1.071	1.111	-3.7	105	0.00	5.54- 5.60
12	B	gamma-Chlordane	1.107	1.111	-0.4	107	0.00	5.84- 5.90
13	B	alpha-Chlordane	1.011	1.087	-7.5	109	0.00	6.08- 6.14
14	A	Endosulfan I	1.092	1.035	5.2	105	0.00	6.18- 6.24
15	B	4,4'-DDE	1.039	1.093	-5.2	106	0.00	6.35- 6.41
16	MA	Dieldrin	1.111	1.151	-3.6	103	0.00	6.64- 6.70
17	MA	Endrin	0.919	0.941	-2.4	104	0.00	7.18- 7.24
18	A	4,4'-DDD	0.832	0.839	-0.8	107	0.00	7.36- 7.42
19	B	Endosulfan II	0.943	0.999	-5.9	107	0.00	7.55- 7.61
20	MA	4,4'-DDT	0.867	0.830	4.3	100	0.00	7.94- 8.00
21	B	Endrin Aldehyde	0.768	0.813	-5.9	111	0.00	8.17- 8.23
22	B	Endosulfan Sulfate	0.859	0.856	0.3	103	0.00	8.67- 8.73
23	A	Methoxychlor	0.464	0.414	10.8	97	0.00	9.27- 9.33
24		Mirex	0.649	0.531	18.2	84	0.00	9.61- 9.67
25	B	Endrin Ketone	0.962	0.981	-2.0	106	0.00	9.67- 9.73
26	SA	Decachlorobiphenyl	0.822	0.719	12.5	91	0.00	11.52-11.58
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.79- 1.99
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	0#	0.00	1.79- 1.99
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1G153433.D 1PST4954.M Fri Jun 14 08:57:33 2019 RPT1

Initial Calibration Verification

Job Number: JC89914 **Sample:** G1G4954-ICV4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153440.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1G4954\1G153440.D\ECD1A.CH Vial: 14
Acq On : 6-14-2019 07:28:50 AM Operator: christp
Sample : icv4954-500 Inst : GC1G
Misc : op20952,g1g4954,15.2,,,10,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\MSDCHEM\1\DATA\1G4954\1G153440.D\ECD2B.CH Vial: 14
Acq On : 6-14-2019 07:28:49 AM Operator: christp
Sample : icv4954-500 Inst : GC1G
Misc : op20952,g1g4954,15.2,,,10,1 Multiplr: 1.00
IntFile : autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4954.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jun 14 08:50:01 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	1.64- 1.70
2	SAB	Tetrachloro-m-xylene	0.997	1.114	-11.7	115	0.00	2.11- 2.17
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	1.031	1.008	2.2	110	0.00	9.50- 9.56
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	98	0.00	1.57- 1.77
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	1.57- 1.77
34		Chlordane {A}	0.070	0.065	7.1	92	0.00	3.18- 3.38

Initial Calibration Verification

Job Number: JC89914 **Sample:** G1G4954-ICV4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153440.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

35		Chlordane {B}	0.043	0.040	7.0	94	0.00	3.64- 3.84
36		Chlordane {C}	0.148	0.141	4.7	95	0.00	4.36- 4.56
37		Chlordane {D}	0.231	0.224	3.0	97	0.00	4.52- 4.72
38		Chlordane {E}	0.033	0.032	3.0	98	0.00	5.60- 5.80
*****	Signal #2 *****							
1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.86- 1.92
2	SAB	Tetrachloro-m-xylene	0.672	0.684	-1.8	108	0.00	2.59- 2.65
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	0.822	0.843	-2.6	109	0.00	11.51-11.57
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.79- 1.99
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	1.79- 1.99
34		Chlordane {A}	0.065	0.062	4.6	95	0.00	4.16- 4.36
35		Chlordane {B}	0.035	0.034	2.9	96	0.00	4.82- 5.02
36		Chlordane {C}	0.131	0.123	6.1	94	0.00	5.77- 5.97
37		Chlordane {D}	0.215	0.208	3.3	97	0.00	6.01- 6.21
38		Chlordane {E}	0.036	0.031	13.9	85	0.00	7.57- 7.77

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1G153434.D 1PST4954.M Fri Jun 14 08:57:53 2019 RPT1

Initial Calibration Verification

Job Number: JC89914 **Sample:** G1G4954-ICV4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153441.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4954\1G153441.D\ECD1A.CH Vial: 15
Signal #2 : C:\MSDCHEM\1\DATA\1G4954\1G153441.D\ECD2B.CH
Acq On : 6-14-2019 07:46:56 AM Operator: christp
Sample : icv4954-500 Inst : GC1G
Misc : op20952,g1g4954,15.2,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4954.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jun 14 08:50:01 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	103	0.00	1.64- 1.70
2	SAB	Tetrachloro-m-xylene	0.997	1.044	-4.7	109	0.00	2.12- 2.18
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	1.031	0.993	3.7	109	0.00	9.50- 9.56
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.57- 1.77
28	L8	Toxaphene{A}	0.040	0.040	0.0	99	0.00	5.42- 5.62
29	L8	Toxaphene{B}	0.049	0.050	-2.0	100	0.00	5.68- 5.88
30	L8	Toxaphene{C}	0.034	0.035	-2.9	102	0.00	5.87- 6.07
31	L8	Toxaphene{D}	0.040	0.041	-2.5	101	0.00	6.22- 6.42
32	L8	Toxaphene{E}	0.031	0.032	-3.2	100	0.00	6.90- 7.10
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.57- 1.77
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: JC89914 **Sample:** G1G4954-ICV4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153441.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	1.86- 1.92
2	SAB	Tetrachloro-m-xylene	0.672	0.690	-2.7	109	0.00	2.58- 2.64
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	0.822	0.843	-2.6	109	0.00	11.51-11.57
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.79- 1.99
28	L8	Toxaphene{A}	0.024	0.024	0.0	98	0.00	6.53- 6.73
29	L8	Toxaphene{B}	0.030	0.031	-3.3	101	0.00	7.45- 7.65
30	L8	Toxaphene{C}	0.050	0.049	2.0	98	0.00	7.62- 7.82
31	L8	Toxaphene{D}	0.032	0.031	3.1	98	0.00	8.09- 8.29
32	L8	Toxaphene{E}	0.027	0.027	0.0	97	0.00	9.07- 9.27
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.79- 1.99
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1G153434.D 1PST4954.M Fri Jun 14 08:57:54 2019 RPT1

Initial Calibration Verification

Job Number: JC89914 **Sample:** G1G4954-ICV4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153442.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4954\1G153442.D\ECD1A.CH Vial: 16
Signal #2 : C:\MSDCHEM\1\DATA\1G4954\1G153442.D\ECD2B.CH
Acq On : 6-14-2019 08:05:00 AM Operator: christp
Sample : icv4954-50 Inst : GC1G
Misc : op20952,g1g4954,15.2,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4954.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jun 14 08:50:01 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	103	0.00	1.64- 1.70
2	SAB	Tetrachloro-m-xylene		----------NA----------				
3		Hexachlorobenzene	1.210	1.164	3.8	103	0.00	2.40- 2.46
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	99	0.00	1.57- 1.77
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	1.57- 1.77
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: JC89914 **Sample:** G1G4954-ICV4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153442.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	1.86- 1.92
2	SAB	Tetrachloro-m-xylene		----------NA----------				
3		Hexachlorobenzene	1.441	1.400	2.8	100	0.00	3.07- 3.13
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	1.79- 1.99
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	1.79- 1.99
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1G153434.D 1PST4954.M Fri Jun 14 08:57:55 2019 RPT1

Initial Calibration Verification

Job Number: JC89914 **Sample:** G1G4954-ICV4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153443.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1G4954\1G153443.D\ECD1A.CH Vial: 17
Acq On : 6-14-2019 08:23:16 AM Operator: christp
Sample : icv4954-50 Inst : GC1G
Misc : op20952,g1g4954,15.2,,,10,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\MSDCHEM\1\DATA\1G4954\1G153443.D\ECD2B.CH Vial: 17
Acq On : 6-14-2019 08:23:15 AM Operator: christp
Sample : icv4954-50 Inst : GC1G
Misc : op20952,g1g4954,15.2,,,10,1 Multiplr: 1.00
IntFile : autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4954.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jun 14 08:50:01 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	104	0.00	1.64- 1.70
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	0.164	0.156	4.9	101	0.00	3.71- 3.77
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	100	0.00	1.57- 1.77
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	1.57- 1.77
34		Chlordane {A}		----------NA----------				

Initial Calibration Verification

Job Number: JC89914 **Sample:** G1G4954-ICV4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153443.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

35		Chlordane {B}			----------NA----------				
36		Chlordane {C}			----------NA----------				
37		Chlordane {D}			----------NA----------				
38		Chlordane {E}			----------NA----------				
*****		Signal #2 *****							
1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	103	0.00	1.86-	1.92
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	0.125	0.117	6.4	93	0.00	4.48-	4.54
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	1.79-	1.99
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	1.79-	1.99
34		Chlordane {A}			----------NA----------				
35		Chlordane {B}			----------NA----------				
36		Chlordane {C}			----------NA----------				
37		Chlordane {D}			----------NA----------				
38		Chlordane {E}			----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1G153434.D 1PST4954.M Fri Jun 14 08:57:56 2019 RPT1

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G1G4959-CC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153576.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4959\1G153576.D\ECD1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\1G4959\1G153576.D\ECD2B.CH
Acq On : 6-19-2019 09:30:11 AM Operator: mailisih
Sample : cc4954-25 Inst : GC1G
Misc : op20961,g1g4959,930,,,5,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4954.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jun 14 08:50:01 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	1.64- 1.70
2	SAB	Tetrachloro-m-xylene	0.997	0.983	1.4	113	0.00	2.11- 2.17
3		Hexachlorobenzene	1.210	1.195	1.2	113	0.00	2.40- 2.46
4	A	alpha-BHC	1.364	1.386	-1.6	114	0.00	2.52- 2.58
5	MA	gamma-BHC	1.274	1.266	0.6	113	0.00	2.79- 2.85
6	MA	Heptachlor	1.273	1.290	-1.3	116	0.00	3.25- 3.31
7	B	beta-BHC	0.594	0.585	1.5	114	0.00	2.86- 2.92
8	B	delta-BHC	1.148	1.182	-3.0	112	0.00	3.03- 3.09
9	MB	Aldrin	1.105	1.192	-7.9	117	0.00	3.57- 3.63
10		Alachlor	0.164	0.172	-4.9	120	0.00	3.70- 3.76
11	B	Heptachlor Epoxide	1.105	1.168	-5.7	119	0.00	4.26- 4.32
12	B	gamma-Chlordane	1.131	1.152	-1.9	116	0.00	4.43- 4.49
13	B	alpha-Chlordane	1.116	1.123	-0.6	114	0.00	4.60- 4.66
14	A	Endosulfan I	1.089	1.073	1.5	113	0.00	4.77- 4.83
15	B	4,4'-DDE	1.039	1.045	-0.6	112	0.00	4.71- 4.77
16	MA	Dieldrin	1.136	1.129	0.6	113	0.00	5.10- 5.16
17	MA	Endrin	0.946	1.039	-9.8	125	0.00	5.43- 5.49
18	A	4,4'-DDD	0.870	0.872	-0.2	112	0.00	5.55- 5.62
19	B	Endosulfan II	1.010	0.999	1.1	110	0.00	5.76- 5.82
20	MA	4,4'-DDT	0.774	0.838	-8.3	123	0.00	5.99- 6.05
21	B	Endrin Aldehyde	0.840	0.835	0.6	113	0.00	6.41- 6.47
22	B	Endosulfan Sulfate	0.910	0.862	5.3	107	0.00	7.12- 7.18
23	A	Methoxychlor	0.488	0.509	-4.3	124	0.00	6.81- 6.87
24		Mirex	0.880	0.859	2.4	113	0.00	6.96- 7.02
25	B	Endrin Ketone	1.024	1.001	2.2	110	0.00	7.58- 7.64
26	SA	Decachlorobiphenyl	1.031	1.008	2.2	115	0.00	9.50- 9.56
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.57- 1.77
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	0#	0.00	1.57- 1.77
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

8.9.7

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G1G4959-CC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153576.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	110	0.00	1.86- 1.92
2	SAB	Tetrachloro-m-xylene	0.672	0.650	3.3	110	0.00	2.58- 2.64
3		Hexachlorobenzene	1.441	1.429	0.8	110	0.00	3.07- 3.13
4	A	alpha-BHC	1.361	1.375	-1.0	111	0.00	3.21- 3.27
5	MA	gamma-BHC	1.261	1.271	-0.8	111	0.00	3.64- 3.70
6	MA	Heptachlor	1.209	1.240	-2.6	115	0.00	4.22- 4.28
7	B	beta-BHC	0.505	0.488	3.4	108	0.00	3.71- 3.77
8	B	delta-BHC	1.151	1.243	-8.0	113	0.00	4.12- 4.18
9	MB	Aldrin	1.158	1.166	-0.7	111	0.00	4.69- 4.75
10		Alachlor	0.125	0.121	3.2	99	0.00	4.48- 4.54
11	B	Heptachlor Epoxide	1.071	1.089	-1.7	111	0.00	5.54- 5.60
12	B	gamma-Chlordane	1.107	1.074	3.0	111	0.00	5.83- 5.89
13	B	alpha-Chlordane	1.011	1.039	-2.8	113	0.00	6.08- 6.14
14	A	Endosulfan I	1.092	1.023	6.3	112	0.00	6.18- 6.24
15	B	4,4'-DDE	1.039	1.061	-2.1	111	0.00	6.35- 6.41
16	MA	Dieldrin	1.111	1.132	-1.9	110	0.00	6.64- 6.70
17	MA	Endrin	0.919	1.011	-10.0	121	0.00	7.17- 7.23
18	A	4,4'-DDD	0.832	0.808	2.9	111	0.00	7.36- 7.42
19	B	Endosulfan II	0.943	0.970	-2.9	112	0.00	7.55- 7.61
20	MA	4,4'-DDT	0.867	0.865	0.2	112	0.00	7.93- 7.99
21	B	Endrin Aldehyde	0.768	0.754	1.8	111	0.00	8.16- 8.22
22	B	Endosulfan Sulfate	0.859	0.815	5.1	106	0.00	8.67- 8.73
23	A	Methoxychlor	0.464	0.460	0.9	116	0.00	9.27- 9.33
24		Mirex	0.649	0.663	-2.2	113	0.00	9.61- 9.67
25	B	Endrin Ketone	0.962	0.927	3.6	108	0.00	9.66- 9.72
26	SA	Decachlorobiphenyl	0.822	0.836	-1.7	114	0.00	11.51-11.57
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.79- 1.99
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	0#	0.00	1.79- 1.99
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1G153433.D 1PST4954.M Wed Jun 19 12:44:49 2019 RPT1

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G1G4959-CC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153577.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4959\1G153577.D\ECD1A.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\1G4959\1G153577.D\ECD2B.CH
Acq On : 6-19-2019 09:48:25 AM Operator: mailisih
Sample : cc4954-500 Inst : GC1G
Misc : op20961,g1g4959,930,,,5,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4954.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jun 14 08:50:01 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	1.64- 1.70
2	SAB	Tetrachloro-m-xylene	0.997	0.974	2.3	105	0.00	2.11- 2.17
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	1.031	0.902	12.5	103	0.00	9.50- 9.56
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.57- 1.77
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	1.57- 1.77
34		Chlordane {A}	0.070	0.070	0.0	103	0.00	3.18- 3.38
35		Chlordane {B}	0.043	0.042	2.3	103	0.00	3.64- 3.84
36		Chlordane {C}	0.148	0.140	5.4	98	0.00	4.35- 4.55
37		Chlordane {D}	0.231	0.216	6.5	98	0.00	4.52- 4.72
38		Chlordane {E}	0.033	0.032	3.0	102	0.00	5.59- 5.79

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G1G4959-CC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153577.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	1.86- 1.92
2	SAB	Tetrachloro-m-xylene	0.672	0.642	4.5	104	0.00	2.58- 2.64
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	0.822	0.790	3.9	105	-0.01	11.51-11.57
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.79- 1.99
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	1.79- 1.99
34		Chlordane {A}	0.065	0.067	-3.1	104	0.00	4.15- 4.35
35		Chlordane {B}	0.035	0.034	2.9	100	0.00	4.81- 5.01
36		Chlordane {C}	0.131	0.126	3.8	98	0.00	5.76- 5.96
37		Chlordane {D}	0.215	0.207	3.7	98	0.00	6.00- 6.20
38		Chlordane {E}	0.036	0.033	8.3	93	0.00	7.56- 7.76

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1G153434.D 1PST4954.M Wed Jun 19 12:45:03 2019 RPT1

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G1G4959-CC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153578.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4959\1G153578.D\ECD1A.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\1G4959\1G153578.D\ECD2B.CH
Acq On : 19 Jun 2019 10:06 am Operator: mailisih
Sample : cc4954-500 Inst : GC1G
Misc : op20961,g1g4959,930,,,5,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4954.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jun 14 08:50:01 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	108	0.00	1.64- 1.70
2	SAB	Tetrachloro-m-xylene	0.997	0.951	4.6	104	0.00	2.11- 2.17
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	1.031	0.893	13.4	104	0.00	9.49- 9.55
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	104	0.00	1.57- 1.77
28	L8	Toxaphene{A}	0.040	0.036	10.0	95	0.00	5.41- 5.61
29	L8	Toxaphene{B}	0.049	0.046	6.1	97	0.00	5.68- 5.88
30	L8	Toxaphene{C}	0.034	0.037	-8.8	113	-0.02	5.85- 6.05
31	L8	Toxaphene{D}	0.040	0.045	-12.5	118	-0.01	6.21- 6.41
32	L8	Toxaphene{E}	0.031	0.030	3.2	98	-0.01	6.89- 7.09
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	106	0.00	1.57- 1.77
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: JC89914 **Sample:** G1G4959-CC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153578.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	1.86- 1.92
2	SAB	Tetrachloro-m-xylene	0.672	0.638	5.1	103	0.00	2.58- 2.64
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	0.822	0.801	2.6	107	-0.01	11.50-11.56
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.79- 1.99
28	L8	Toxaphene{A}	0.024	0.020	16.7	87	0.00	6.53- 6.73
29	L8	Toxaphene{B}	0.030	0.025	16.7	86	0.00	7.44- 7.64
30	L8	Toxaphene{C}	0.050	0.049	2.0	100	0.00	7.62- 7.82
31	L8	Toxaphene{D}	0.032	0.029	9.4	94	0.00	8.09- 8.29
32	L8	Toxaphene{E}	0.027	0.025	7.4	94	-0.01	9.06- 9.26
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.79- 1.99
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1G153434.D 1PST4954.M Wed Jun 19 12:45:04 2019 RPT1

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G1G4959-CC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153586.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4959\1G153586.D\ECD1A.CH Vial: 4
Signal #2 : C:\MSDCHEM\1\DATA\1G4959\1G153586.D\ECD2B.CH
Acq On : 6-19-2019 01:25:22 PM Operator: mailisih
Sample : cc4954-50 Inst : GC1G
Misc : op21102,g1g4959,16.2,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4954.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jun 14 08:50:01 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	111	0.00	1.63- 1.69
2	SAB	Tetrachloro-m-xylene	0.997	0.998	-0.1	113	0.00	2.11- 2.17
3		Hexachlorobenzene	1.210	1.192	1.5	113	0.00	2.40- 2.46
4	A	alpha-BHC	1.364	1.457	-6.8	114	0.00	2.52- 2.58
5	MA	gamma-BHC	1.274	1.319	-3.5	114	0.00	2.79- 2.85
6	MA	Heptachlor	1.273	1.276	-0.2	113	0.00	3.25- 3.31
7	B	beta-BHC	0.594	0.614	-3.4	119	0.00	2.86- 2.92
8	B	delta-BHC	1.148	1.266	-10.3	114	0.00	3.03- 3.09
9	MB	Aldrin	1.105	1.231	-11.4	117	0.00	3.57- 3.63
10		Alachlor	0.164	0.169	-3.0	117	0.00	3.70- 3.76
11	B	Heptachlor Epoxide	1.105	1.151	-4.2	115	-0.01	4.26- 4.32
12	B	gamma-Chlordane	1.131	1.161	-2.7	115	0.00	4.42- 4.48
13	B	alpha-Chlordane	1.116	1.129	-1.2	113	0.00	4.59- 4.65
14	A	Endosulfan I	1.089	1.090	-0.1	113	-0.01	4.77- 4.83
15	B	4,4'-DDE	1.039	1.063	-2.3	109	-0.01	4.71- 4.77
16	MA	Dieldrin	1.136	1.146	-0.9	112	-0.01	5.10- 5.16
17	MA	Endrin	0.946	1.010	-6.8	119	-0.01	5.42- 5.48
18	A	4,4'-DDD	0.870	0.931	-7.0	114	-0.01	5.55- 5.62
19	B	Endosulfan II	1.010	1.009	0.1	110	-0.01	5.75- 5.81
20	MA	4,4'-DDT	0.774	0.789	-1.9	110	-0.01	5.98- 6.04
21	B	Endrin Aldehyde	0.840	0.821	2.3	111	-0.02	6.40- 6.46
22	B	Endosulfan Sulfate	0.910	0.839	7.8	104	-0.01	7.12- 7.18
23	A	Methoxychlor	0.488	0.442	9.4	108	-0.01	6.80- 6.86
24		Mirex	0.880	0.816	7.3	110	-0.01	6.95- 7.01
25	B	Endrin Ketone	1.024	0.965	5.8	105	-0.01	7.58- 7.64
26	SA	Decachlorobiphenyl	1.031	0.918	11.0	109	-0.01	9.49- 9.55
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	107	0.00	1.56- 1.76
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	109	0.00	1.56- 1.76
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

8.9.10

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G1G4959-CC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153586.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	109	0.00	1.86- 1.92
2	SAB	Tetrachloro-m-xylene	0.672	0.652	3.0	110	0.00	2.58- 2.64
3		Hexachlorobenzene	1.441	1.429	0.8	108	0.00	3.07- 3.13
4	A	alpha-BHC	1.361	1.417	-4.1	109	0.00	3.21- 3.27
5	MA	gamma-BHC	1.261	1.302	-3.3	109	0.00	3.64- 3.70
6	MA	Heptachlor	1.209	1.222	-1.1	111	0.00	4.22- 4.28
7	B	beta-BHC	0.505	0.491	2.8	110	0.00	3.71- 3.77
8	B	delta-BHC	1.151	1.287	-11.8	111	0.00	4.12- 4.18
9	MB	Aldrin	1.158	1.184	-2.2	110	0.00	4.68- 4.74
10		Alachlor	0.125	0.123	1.6	103	0.00	4.48- 4.54
11	B	Heptachlor Epoxide	1.071	1.083	-1.1	108	0.00	5.54- 5.60
12	B	gamma-Chlordane	1.107	1.063	4.0	108	0.00	5.83- 5.89
13	B	alpha-Chlordane	1.011	1.041	-3.0	110	0.00	6.07- 6.13
14	A	Endosulfan I	1.092	1.010	7.5	108	0.00	6.18- 6.24
15	B	4,4'-DDE	1.039	1.056	-1.6	108	0.00	6.35- 6.41
16	MA	Dieldrin	1.111	1.101	0.9	110	0.00	6.64- 6.70
17	MA	Endrin	0.919	0.963	-4.8	116	0.00	7.17- 7.23
18	A	4,4'-DDD	0.832	0.820	1.4	110	0.00	7.35- 7.41
19	B	Endosulfan II	0.943	0.948	-0.5	108	0.00	7.55- 7.61
20	MA	4,4'-DDT	0.867	0.756	12.8	101	0.00	7.93- 7.99
21	B	Endrin Aldehyde	0.768	0.746	2.9	107	0.00	8.16- 8.22
22	B	Endosulfan Sulfate	0.859	0.777	9.5	100	0.00	8.66- 8.72
23	A	Methoxychlor	0.464	0.418	9.9	108	0.00	9.26- 9.32
24		Mirex	0.649	0.635	2.2	111	0.00	9.60- 9.66
25	B	Endrin Ketone	0.962	0.899	6.5	104	0.00	9.66- 9.72
26	SA	Decachlorobiphenyl	0.822	0.796	3.2	110	-0.01	11.50-11.56
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	106	0.00	1.79- 1.99
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	107	0.00	1.79- 1.99
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1G153434.D 1PST4954.M Wed Jun 19 13:41:54 2019 RPT1

8.9.10

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G1G4959-CC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153588.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4959\1G153588.D\ECD1A.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\1G4959\1G153588.D\ECD2B.CH
Acq On : 6-19-2019 02:01:24 PM Operator: mailisih
Sample : cc4954-500 Inst : GC1G
Misc : op21102,g1g4959,16.2,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4954.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jun 14 08:50:01 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	107	0.00	1.64- 1.70
2	SAB	Tetrachloro-m-xylene	0.997	1.067	-7.0	116	0.00	2.11- 2.17
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	1.031	0.916	11.2	105	0.00	9.50- 9.56
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	103	0.00	1.57- 1.77
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	1.57- 1.77
34		Chlordane {A}	0.070	0.071	-1.4	106	0.00	3.18- 3.38
35		Chlordane {B}	0.043	0.046	-7.0	112	0.00	3.64- 3.84
36		Chlordane {C}	0.148	0.150	-1.4	106	0.00	4.36- 4.56
37		Chlordane {D}	0.231	0.231	0.0	106	0.00	4.52- 4.72
38		Chlordane {E}	0.033	0.033	0.0	104	0.00	5.59- 5.79

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G1G4959-CC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153588.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	105	0.00	1.86- 1.92
2	SAB	Tetrachloro-m-xylene	0.672	0.653	2.8	106	0.00	2.58- 2.64
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	0.822	0.753	8.4	101	-0.01	11.50-11.56
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.79- 1.99
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	1.79- 1.99
34		Chlordane {A}	0.065	0.066	-1.5	104	0.00	4.15- 4.35
35		Chlordane {B}	0.035	0.035	0.0	104	0.00	4.81- 5.01
36		Chlordane {C}	0.131	0.127	3.1	100	0.00	5.76- 5.96
37		Chlordane {D}	0.215	0.210	2.3	100	0.00	6.00- 6.20
38		Chlordane {E}	0.036	0.032	11.1	91	0.00	7.56- 7.76

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1G153434.D 1PST4954.M Wed Jun 19 15:04:21 2019 RPT1

8.9.11

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G1G4959-CC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153589.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\1G4959\1G153589.D\ECD1A.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\1G4959\1G153589.D\ECD2B.CH
Acq On : 6-19-2019 02:19:22 PM Operator: mailisih
Sample : cc4954-500 Inst : GC1G
Misc : op21102,g1g4959,16.2,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\1PST4954.M (Chemstation Integrator)
Title : PEST/PCB
Last Update : Fri Jun 14 08:50:01 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	108	0.00	1.64- 1.70
2	SAB	Tetrachloro-m-xylene	0.997	0.982	1.5	107	0.00	2.11- 2.17
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	1.031	0.919	10.9	106	-0.01	9.49- 9.55
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	103	0.00	1.57- 1.77
28	L8	Toxaphene{A}	0.040	0.036	10.0	95	0.00	5.41- 5.61
29	L8	Toxaphene{B}	0.049	0.047	4.1	99	-0.01	5.67- 5.87
30	L8	Toxaphene{C}	0.034	0.039	-14.7	118	-0.01	5.86- 6.06
31	L8	Toxaphene{D}	0.040	0.045	-12.5	117	0.00	6.21- 6.41
32	L8	Toxaphene{E}	0.031	0.030	3.2	99	-0.01	6.89- 7.09
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	106	0.00	1.57- 1.77
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

8.9.12

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G1G4959-CC4954
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 1G153589.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	106	0.00	1.86- 1.92
2	SAB	Tetrachloro-m-xylene	0.672	0.648	3.6	106	0.00	2.58- 2.64
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	0.822	0.786	4.4	106	-0.02	11.50-11.56
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	103	0.00	1.79- 1.99
28	L8	Toxaphene{A}	0.024	0.020	16.7	88	0.00	6.53- 6.73
29	L8	Toxaphene{B}	0.030	0.027	10.0	93	0.00	7.44- 7.64
30	L8	Toxaphene{C}	0.050	0.044	12.0	91	0.00	7.62- 7.82
31	L8	Toxaphene{D}	0.032	0.028	12.5	91	-0.01	8.08- 8.28
32	L8	Toxaphene{E}	0.027	0.023	14.8	87	-0.01	9.06- 9.26
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	104	0.00	1.79- 1.99
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1G153434.D 1PST4954.M Wed Jun 19 15:04:22 2019 RPT1

Initial Calibration Summary

Job Number: JC89914 **Sample:** G3G4318-ICC4318
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3G123157.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report GC3G

Method : C:\MSDCHEM\1\METHODS\3H4318.M (Chemstation Integrator)
Title : HERB
Last Update : Tue Jun 04 13:26:25 2019
Response via : Initial Calibration

Calibration Files
500 =3G123159.D 400 =3G123158.D 300 =3G123157.D 200 =3G123156.D
100 =3G123155.D 50 =3G123154.D

	Compound	500	400	300	200	100	50	Avg	%RSD
1)	Dalapon	0.991	1.017	1.041	1.108	1.164	1.185	1.084 E7	7.40
2) S	2,4-DCAA	6.365	6.597	6.936	7.518	8.640	9.519	7.596 E6	16.38
3)	Dicamba	2.775	2.892	3.054	3.289	3.580	3.876	3.244 E7	13.03
4)	MCPP	3.922	4.327	5.058	6.142	8.442		5.578 E4	32.44
5)	MCPA	0.749	0.835	0.965	1.166	1.634		1.070 E5	32.95
6)	Dichloroprop	6.405	6.712	7.108	7.728	8.747	9.441	7.690 E6	15.53
7)	2,4-D	0.854	0.894	0.935	1.007	1.156	1.214	1.010 E7	14.44
8)	Pentachlorophenol	1.374	1.417	1.412	1.469	1.491	1.444	1.435 E8	2.94
9)	2,4,5-TP	5.009	5.159	5.186	5.348	5.467	5.460	5.272 E7	3.48
10)	2,4,5-T	5.008	5.200	5.202	5.423	5.517	5.422	5.295 E7	3.60
11)	2,4-DB	4.918	5.090	5.262	5.561	5.963	6.070	5.477 E6	8.58
12)	Dinoseb	3.062	3.197	3.347	3.591	3.843	3.947	3.498 E7	10.17
13)	Picloram	4.078	4.193	4.300	4.515	4.889	5.029	4.501 E7	8.57

Signal #2

1)	Dalapon	2.260	2.244	2.263	2.374	2.464	2.460	2.344 E6	4.36
2) S	2,4-DCAA	1.087	1.098	1.102	1.137	1.197	1.261	1.147 E6	6.00
3)	Dicamba	5.940	6.085	6.204	6.300	6.301	6.555	6.231 E6	3.38
4)	MCPP	2.271	2.277	2.243	2.198	2.025		2.203 E3	4.73
5)	MCPA	3.793	3.797	3.760	3.755	3.528		3.727 E3	3.03
6)	Dichloroprop	1.367	1.403	1.430	1.498	1.616	1.715	1.505 E6	8.98
7)	2,4-D	1.687	1.732	1.768	1.853	1.998	2.087	1.854 E6	8.52
8)	Pentachlorophenol	3.384	3.432	3.348	3.411	3.317	3.155	3.341 E7	3.00
9)	2,4,5-TP	1.246	1.265	1.276	1.294	1.286	1.260	1.271 E7	1.38
10)	2,4,5-T	1.144	1.165	1.179	1.200	1.220	1.237	1.191 E7	2.91
11)	2,4-DB	0.939	0.960	0.979	1.016	1.087	1.208	1.031 E6	9.78
12)	Dinoseb	7.393	7.528	7.574	7.970	8.154	8.463	7.847 E6	5.32
13)	Picloram	1.610	1.630	1.619	1.645	1.619	1.587	1.618 E7	1.21

(#) = Out of Range

3H4318.M Tue Jun 04 13:37:26 2019 GC3G

8.9.13

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** G3G4318-ICV4318
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3G123160.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\3G4318\3G123160.D\ECD1A.CH Vial: 8
Signal #2 : C:\MSDCHEM\1\DATA\3G4318\3G123160.D\ECD2B.CH
Acq On : 04 Jun 2019 12:21 pm Operator: vinced
Sample : icv4318-300 Inst : GC3G
Misc : op20687,g3g4318,30,,,2.5,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\3H4318.M (Chemstation Integrator)
Title : HERB
Last Update : Tue Jun 04 13:26:25 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	10.843	10.737 E6	1.0	103	0.00	2.27- 2.33
2 S	2,4-DCAA	7.596	7.073 E6	6.9	102	0.00	7.14- 7.21
3	Dicamba	32.444	32.034 E6	1.3	105	0.00	7.35- 7.41
4	MCPP	55.780	53.144 E3	4.7	105	0.00	7.62- 7.68
5	MCPA	106.994	106.709 E3	0.3	111	0.00	7.81- 7.87
6	Dichloroprop	7.690	7.017 E6	8.8	99	0.00	8.30- 8.36
7	2,4-D	10.101	9.413 E6	6.8	101	0.00	8.62- 8.68
8	Pentachlorophenol	143.466	158.832 E6	-10.7	112	0.00	8.87- 8.93
9	2,4,5-TP	52.716	51.694 E6	1.9	100	0.00	9.88- 9.94
10	2,4,5-T	52.955	51.570 E6	2.6	99	0.00	10.33-10.39
11	2,4-DB	5.477	5.471 E6	0.1	104	0.00	11.26-11.33
12	Dinoseb	34.979	34.269 E6	2.0	102	0.00	13.14-13.21
13	Picloram	45.007	34.506 E6	23.3#	80	0.00	12.79-12.86

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

1	Dalapon	2.344	2.331 E6	0.6	103	0.00	2.40- 2.47
2 S	2,4-DCAA	1.147	1.118 E6	2.5	101	0.00	8.00- 8.06
3	Dicamba	6.231	6.329 E6	-1.6	102	0.00	8.25- 8.31
4	MCPP	2.203	2.347 E3	-6.5	105	0.00	8.44- 8.50
5	MCPA	3.727	3.642 E3	2.3	97	0.00	8.80- 8.86
6	Dichloroprop	1.505	1.380 E6	8.3	97	0.00	9.33- 9.39
7	2,4-D	1.854	1.806 E6	2.6	102	0.00	9.86- 9.92
8	Pentachlorophenol	33.413	37.660 E6	-12.7	112	0.00	10.43-10.49
9	2,4,5-TP	12.713	12.220 E6	3.9	96	0.00	11.29-11.35
10	2,4,5-T	11.909	11.205 E6	5.9	95	0.00	12.03-12.09
11	2,4-DB	1031.447	989.673 E3	4.1	101	0.00	13.03-13.10
12	Dinoseb	7.847	7.792 E6	0.7	103	0.00	13.58-13.65
13	Picloram	16.183	12.565 E6	22.4#	78	0.00	15.64-15.71

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3G123157.D 3H4318.M Tue Jun 04 13:37:13 2019 GC3G

8.9.14

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G3G4329-CC4318
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3G123408.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

```
 Signal #1 : C:\MSDCHEM\1\DATA\3G4329\3G123408.D\ECD1A.CH Vial: 3
 Signal #2 : C:\MSDCHEM\1\DATA\3G4329\3G123408.D\ECD2B.CH
 Acq On    : 6-18-2019 01:29:59 PM                    Operator: vinced
 Sample    : cc4318-300                               Inst    : GC3G
 Misc      : op21043,g3g4329,1.0,,,10,1               Multiplr: 1.00
 IntFile Signal #1: autoint1.e     IntFile Signal #2: autoint2.e

 Method       : C:\MSDCHEM\1\METHODS\3H4318.M (Chemstation Integrator)
 Title        : HERB
 Last Update  : Tue Jun 04 13:26:25 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	10.843	10.127 E6	6.6	97	0.00	2.27- 2.33
2 S	2,4-DCAA	7.596	7.728 E6	-1.7	111	0.00	7.14- 7.21
3	Dicamba	32.444	32.406 E6	0.1	106	0.00	7.35- 7.41
4	MCPP	55.780	51.717 E3	7.3	102	0.00	7.62- 7.68
5	MCPA	106.994	101.559 E3	5.1	105	0.00	7.81- 7.87
6	Dichloroprop	7.690	7.837 E6	-1.9	110	0.00	8.30- 8.36
7	2,4-D	10.101	11.087 E6	-9.8	119	0.00	8.62- 8.68
8	Pentachlorophenol	143.466	153.862 E6	-7.2	109	0.00	8.87- 8.93
9	2,4,5-TP	52.716	56.214 E6	-6.6	108	0.00	9.88- 9.94
10	2,4,5-T	52.955	56.705 E6	-7.1	109	0.00	10.33-10.39
11	2,4-DB	5.477	5.724 E6	-4.5	109	0.01	11.27-11.34
12	Dinoseb	34.979	38.152 E6	-9.1	114	0.00	13.14-13.21
13	Picloram	45.007	47.549 E6	-5.6	111	0.02	12.80-12.87
*****	Signal #2 *****						
1	Dalapon	2.344	2.161 E6	7.8	95	0.00	2.40- 2.47
2 S	2,4-DCAA	1.147	1.112 E6	3.1	101	0.00	8.00- 8.06
3	Dicamba	6.231	6.129 E6	1.6	99	0.00	8.25- 8.31
4	MCPP	2.203	2.194 E3	0.4	98	0.00	8.43- 8.49
5	MCPA	3.727	3.723 E3	0.1	99	0.00	8.80- 8.86
6	Dichloroprop	1.505	1.432 E6	4.9	100	0.00	9.33- 9.39
7	2,4-D	1.854	1.762 E6	5.0	100	0.00	9.86- 9.92
8	Pentachlorophenol	33.413	33.723 E6	-0.9	101	0.00	10.43-10.49
9	2,4,5-TP	12.713	12.877 E6	-1.3	101	0.00	11.29-11.35
10	2,4,5-T	11.909	11.706 E6	1.7	99	0.00	12.03-12.09
11	2,4-DB	1031.447	943.082 E3	8.6	96	0.00	13.04-13.11
12	Dinoseb	7.847	7.764 E6	1.1	103	0.00	13.58-13.65
13	Picloram	16.183	15.691 E6	3.0	97	0.00	15.64-15.71

```
   (#) = Out of Range              SPCC's out = 0  CCC's out = 0
    3G123157.D 3H4318.M         Tue Jun 18 16:48:19 2019   GC3G
```

8.9.15

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G3G4329-CC4318
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3G123414.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\3G4329\3G123414.D\ECD1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\3G4329\3G123414.D\ECD2B.CH
Acq On : 6-18-2019 04:21:56 PM Operator: vinced
Sample : cc4318-200 Inst : GC3G
Misc : op21084,g3g4329,3.4,,,5,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\3H4318.M (Chemstation Integrator)
Title : HERB
Last Update : Tue Jun 04 13:26:25 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	10.843	10.535 E6	2.8	95	0.00	2.27- 2.33
2 S	2,4-DCAA	7.596	8.256 E6	-8.7	110	0.00	7.14- 7.21
3	Dicamba	32.444	35.192 E6	-8.5	107	0.00	7.35- 7.41
4	MCPP	55.780	57.777 E3	-3.6	94	0.00	7.62- 7.68
5	MCPA	106.994	119.504 E3	-11.7	102	0.00	7.81- 7.87
6	Dichloroprop	7.690	9.275 E6	-20.6#	120	0.00	8.30- 8.36
7	2,4-D	10.101	12.529 E6	-24.0#	124	0.00	8.62- 8.68
8	Pentachlorophenol	143.466	163.616 E6	-14.0	111	0.00	8.87- 8.93
9	2,4,5-TP	52.716	61.650 E6	-16.9	115	0.00	9.89- 9.95
10	2,4,5-T	52.955	61.218 E6	-15.6	113	0.01	10.34-10.40
11	2,4-DB	5.477	6.499 E6	-18.7	117	0.02	11.28-11.35
12	Dinoseb	34.979	41.655 E6	-19.1	116	0.00	13.14-13.21
13	Picloram	45.007	53.239 E6	-18.3	118	0.02	12.81-12.88

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

1	Dalapon	2.344	2.168 E6	7.5	91	0.00	2.40- 2.47
2 S	2,4-DCAA	1.147	1.142 E6	0.4	100	0.00	8.00- 8.06
3	Dicamba	6.231	6.300 E6	-1.1	100	0.00	8.25- 8.31
4	MCPP	2.203	2.185 E3	0.8	99	0.00	8.43- 8.49
5	MCPA	3.727	3.673 E3	1.4	98	0.00	8.80- 8.86
6	Dichloroprop	1.505	1.540 E6	-2.3	103	0.00	9.33- 9.39
7	2,4-D	1.854	1.914 E6	-3.2	103	0.00	9.87- 9.93
8	Pentachlorophenol	33.413	35.066 E6	-4.9	103	0.00	10.43-10.49
9	2,4,5-TP	12.713	13.356 E6	-5.1	103	0.00	11.29-11.35
10	2,4,5-T	11.909	12.239 E6	-2.8	102	0.00	12.03-12.09
11	2,4-DB	1031.447	1024.323 E3	0.7	101	0.01	13.04-13.11
12	Dinoseb	7.847	7.959 E6	-1.4	100	0.00	13.58-13.65
13	Picloram	16.183	16.209 E6	-0.2	99	0.01	15.64-15.71

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3G123156.D 3H4318.M Tue Jun 18 16:48:54 2019 GC3G

8.9.16

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G3G4329-CC4318
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 3G123425.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\data\sy...9\3g123425.d\ECD1A.CH Vial: 3
Signal #2 : C:\msdchem\1\data\syrap\3g4329\3g123425.d\ECD2B.CH
Acq On    : 18 Jun 2019   9:35 pm                    Operator: vinced
Sample    : cc4318-300                               Inst    : GC3G
Misc      : op21084,g3g4329,15.2,,,5,1               Multiplr: 1.00
IntFile Signal #1: autoint1.e   IntFile Signal #2: autoint2.e

Method       : C:\MSDCHEM\1\METHODS\3h4318.m (ChemStation Integrator)
Title        : HERB
Last Update  : Tue Jun 18 23:51:43 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	10.843	10.397 E6	4.1	100	0.00	2.27- 2.33
2 S	2,4-DCAA	7.596	7.395 E6	2.6	107	0.00	7.14- 7.21
3	Dicamba	32.444	32.166 E6	0.9	105	0.00	7.35- 7.41
4	MCPP	55.780	44.332 E3	20.5#	88	0.00	7.62- 7.68
5	MCPA	106.994	81.400 E3	23.9#	84	0.00	7.81- 7.87
6	Dichloroprop	7.690	8.074 E6	-5.0	114	0.00	8.30- 8.36
7	2,4-D	10.101	11.452 E6	-13.4	122	0.00	8.62- 8.68
8	Pentachlorophenol	143.466	163.779 E6	-14.2	116	0.00	8.87- 8.93
9	2,4,5-TP	52.716	60.747 E6	-15.2	117	0.00	9.88- 9.94
10	2,4,5-T	52.955	57.336 E6	-8.3	110	0.00	10.33-10.39
11	2,4-DB	5.477	5.999 E6	-9.5	114	0.00	11.27-11.34
12	Dinoseb	34.979	38.574 E6	-10.3	115	0.00	13.14-13.21
13	Picloram	45.007	51.318 E6	-14.0	119	0.00	12.81-12.88

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

1	Dalapon	2.344	2.216 E6	5.5	98	0.00	2.40- 2.47
2 S	2,4-DCAA	1.147	1.134 E6	1.1	103	0.00	8.00- 8.06
3	Dicamba	6.231	6.394 E6	-2.6	103	0.00	8.25- 8.31
4	MCPP	2.203	2.280 E3	-3.5	102	0.00	8.44- 8.50
5	MCPA	3.727	3.594 E3	3.6	96	0.00	8.80- 8.86
6	Dichloroprop	1.505	1.485 E6	1.3	104	0.00	9.33- 9.39
7	2,4-D	1.854	1.855 E6	-0.1	105	0.00	9.86- 9.92
8	Pentachlorophenol	33.413	35.087 E6	-5.0	105	0.00	10.43-10.49
9	2,4,5-TP	12.713	13.462 E6	-5.9	106	0.00	11.29-11.35
10	2,4,5-T	11.909	12.336 E6	-3.6	105	0.00	12.03-12.09
11	2,4-DB	1031.447	1012.516 E3	1.8	103	0.00	13.04-13.11
12	Dinoseb	7.847	7.838 E6	0.1	103	0.00	13.58-13.65
13	Picloram	16.183	17.126 E6	-5.8	106	0.00	15.64-15.71

```
   (#) = Out of Range              SPCC's out = 0  CCC's out = 0
    3g123408.d 3h4318.m         Wed Jun 19 02:56:29 2019
```

8.9.17

8

Initial Calibration Summary

Job Number: JC89914 **Sample:** G6G2038-ICC2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65621.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report GC6G

Method : C:\MSDCHEM\1\METHODS\6PST2038.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Mon Jun 17 08:52:07 2019
Response via : Initial Calibration

Calibration Files
5 =6g65619.d 10 =6g65620.d 25 =6g65621.d 50 =6g65622.d
100 =6g65624.d 1 =6g65617.d 75 =6g65623.d 2 =6g65618.d
= =

Compound	5	10	25	50	100	1	75	2	Avg	%RSD
1) I 1-bromo-2-nitrobenzen	ISTD									
2) Tetrachloro-m-xylene	0.691	0.693	0.712	0.721	0.752	0.680	0.730	0.733	0.714	3.45
3) hexachlorobenzene	1.552	1.540	1.578	1.609	1.691	1.640	1.637	1.522	1.596	3.64
4) alpha-BHC	1.122	1.152	1.273	1.409	1.612	1.143	1.514	1.105	1.291	15.24
5) gamma-BHC	1.130	1.126	1.208	1.315	1.467	1.163	1.383	1.061	1.232	11.51
6) Heptachlor	0.960	0.975	1.014	1.082	1.163	0.938	1.110	0.927	1.021	8.54
7) beta-BHC	0.547	0.534	0.522	0.535	0.554	0.843	0.534	0.557	0.578	18.64
8) delta-BHC	0.937	1.001	1.097	1.225	1.400	1.062	1.310	0.906	1.117	15.97
9) Aldrin	1.069	1.084	1.166	1.261	1.408	1.149	1.326	1.054	1.190	10.89
10) alachlor	0.162	0.126	0.130	0.131	0.132		0.129		0.135	9.84
11) Heptachlor Epoxide	1.125	1.028	1.098	1.168	1.275	1.223	1.206	1.198	1.165	6.73
12) gamma-Chlordane	0.953	0.955	1.010	1.094	1.247	1.171	1.166	1.007	1.075	10.29
13) alpha-Chlordane	0.928	0.932	1.022	1.097	1.215	0.858	1.141	0.886	1.010	12.87
14) Endosulfan I	1.130	1.070	1.137	1.191	1.288	1.163	1.220	1.125	1.166	5.75
15) 4,4'-DDE	0.909	0.897	0.952	1.009	1.112	1.153	1.047	1.095	1.022	9.40
16) Dieldrin	1.009	1.014	1.083	1.160	1.297	1.011	1.218	0.986	1.097	10.52
17) Endrin	0.938	0.967	1.026	1.087	1.203	1.008	1.134	0.968	1.041	8.85
18) 4,4'-DDD	0.685	0.702	0.726	0.763	0.852	0.890	0.803	0.646	0.758	11.19
19) Endosulfan II	0.965	0.972	0.996	1.048	1.166	1.075	1.106	0.967	1.037	7.20
20) 4,4'-DDT	0.571	0.586	0.649	0.708	0.800	0.607	0.749	0.537	0.651	14.30
21) Endrin Aldehyde	0.836	0.821	0.838	0.864	0.922	0.840	0.872	0.863	0.857	3.69
22) Endosulfan Sulfate	0.880	0.870	0.892	0.938	1.019	0.946	0.961	0.963	0.934	5.37
23) Methoxychlor										

8.9.18

8

Initial Calibration Summary

Job Number: JC89914 **Sample:** G6G2038-ICC2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65621.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

```
          0.333 0.330 0.363 0.383 0.394 0.358 0.384 0.347          0.361    6.65
 24)  Mirex
          0.848 0.834 0.831 0.835 0.864 0.907 0.835 0.939          0.862    4.67
 25)  Endrin Ketone
          1.109 1.000 1.032 1.087 1.154 1.220 1.101 0.938          1.080    8.23
 26)  Decachlorobiphenyl
          1.140 1.105 1.115 1.130 1.213 1.200 1.156 1.156          1.152    3.33

 27) I   1-bromo-2-nitrobenzen ----------------ISTD---------------------
 28)  Toxaphene{A}
                              0.016                                0.016    0.00
 29)  Toxaphene{B}
                              0.042                                0.042    0.00
 30)  Toxaphene{C}
                              0.033                                0.033    0.00
 31)  Toxaphene{D}
                              0.026                                0.026    0.00
 32)  Toxaphene{E}
                              0.026                                0.026    0.00

 33) I   1-bromo-2-nitrobenzen ----------------ISTD---------------------
 34)  Chlordane {A}
                              0.055                                0.055    0.00
 35)  Chlordane {B}
                              0.041                                0.041    0.00
 36)  Chlordane {C}
                              0.144                                0.144    0.00
 37)  Chlordane {D}
                              0.228                                0.228    0.00
 38)  Chlordane {E}
                              0.035                                0.035    0.00

Signal #2


  1) I   1-bromo-2-nitrobenzen ----------------ISTD---------------------
  2)  Tetrachloro-m-xylene
          0.978 0.947 0.935 0.924 0.951 1.049 0.940 1.028          0.969    4.75
  3)  hexachlorobenzene
          1.042 1.009 0.993 0.967 0.979 1.135 0.971 1.044          1.018    5.51
  4)  alpha-BHC
          1.293 1.267 1.293 1.316 1.391 1.325 1.356 1.308          1.319    2.97
  5)  gamma-BHC
          1.197 1.154 1.173 1.184 1.247 1.259 1.218 1.187          1.203    3.02
  6)  Heptachlor
          1.205 1.163 1.149 1.157 1.194 1.328 1.175 1.244          1.202    4.95
  7)  beta-BHC
          0.534 0.530 0.532 0.520 0.530 0.595 0.525 0.552          0.540    4.46
  8)  delta-BHC
          1.084 1.093 1.111 1.134 1.201 1.134 1.171 1.067          1.124    4.01
  9)  Aldrin
          1.147 1.101 1.083 1.071 1.109 1.228 1.089 1.158          1.123    4.65
 10)  alachlor
          0.165 0.158 0.153 0.149 0.142       0.144                0.152    5.79
 11)  Heptachlor Epoxide
          1.065 1.036 1.016 1.000 1.020 1.113 1.008 1.092          1.044    3.98
 12)  gamma-Chlordane
          1.073 1.027 1.012 0.995 1.021 1.159 1.005 1.109          1.050    5.54
 13)  alpha-Chlordane
          1.072 1.027 1.001 0.976 0.995 1.150 0.983 1.098          1.038    6.05
```

8.9.18

8

Initial Calibration Summary

Job Number: JC89914 **Sample:** G6G2038-ICC2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65621.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

```
14)  Endosulfan I
          0.994 0.964 0.946 0.923 0.944 1.054 0.931 1.030          0.973    4.93
15)  4,4'-DDE
          0.970 0.942 0.945 0.945 0.982 0.989 0.962 0.972          0.963    1.87
16)  Dieldrin
          1.067 1.029 1.019 1.009 1.043 1.156 1.026 1.107          1.057    4.81
17)  Endrin
          1.012 0.968 0.963 0.952 0.980 1.086 0.967 1.044          0.997    4.74
18)  4,4'-DDD
          0.807 0.801 0.802 0.802 0.820 0.931 0.811 0.851          0.828    5.40
19)  Endosulfan II
          0.971 0.929 0.916 0.906 0.921 1.116 0.914 1.026          0.962    7.70
20)  4,4'-DDT
          0.572 0.601 0.652 0.681 0.738 0.573 0.712 0.587          0.640   10.22
21)  Endrin Aldehyde
          0.784 0.765 0.748 0.732 0.741 0.846 0.735 0.822          0.772    5.49
22)  Endosulfan Sulfate
          0.900 0.874 0.839 0.813 0.816 0.940 0.814 0.926          0.865    6.02
23)  Methoxychlor
          0.356 0.373 0.392 0.399 0.413 0.369 0.407 0.344          0.382    6.51
24)  Mirex
          0.839 0.809 0.771 0.715 0.702 0.924 0.705 0.863          0.791   10.36
25)  Endrin Ketone
          0.955 0.926 0.916 0.903 0.917 0.990 0.907 0.951          0.933    3.19
26)  Decachlorobiphenyl
          0.839 0.809 0.780 0.744 0.737 0.970 0.737 0.849          0.808    9.80

27) I   1-bromo-2-nitrobenzen ----------------ISTD--------------------
28)  Toxaphene{A}
                              0.024                                0.024    0.00
29)  Toxaphene{B}
                              0.031                                0.031    0.00
30)  Toxaphene{C}
                              0.047                                0.047    0.00
31)  Toxaphene{D}
                              0.029                                0.029    0.00
32)  Toxaphene{E}
                              0.024                                0.024    0.00

33) I   1-bromo-2-nitrobenzen ----------------ISTD--------------------
34)  Chlordane {A}
                              0.064                                0.064    0.00
35)  Chlordane {B}
                              0.038                                0.038    0.00
36)  Chlordane {C}
                              0.122                                0.122    0.00
37)  Chlordane {D}
                              0.205                                0.205    0.00
38)  Chlordane {E}
                              0.032                                0.032    0.00
--------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          6PST2038.M        Mon Jun 17 08:58:40 2019
```

8.9.18

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** G6G2038-ICV2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65627.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2038\6g65627.d\ECD1A.CH Vial: 13
Signal #2 : C:\msdchem\1\data\G6G2038\6g65627.d\ECD2B.CH
Acq On : 17-Jun-19, 02:36:17 Operator: christp
Sample : icv2038-25 Inst : GC6G
Misc : op21020,g6g2038,15.9,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2038.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Mon Jun 17 08:52:07 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	-0.01	1.45- 2.45
2	SAB	Tetrachloro-m-xylene	0.714	0.671	6.0	95	0.00	2.52- 2.58
3		hexachlorobenzene		----------NA----------				
4	A	alpha-BHC	1.291	1.429	-10.7	113	0.00	2.99- 3.05
5	MA	gamma-BHC	1.232	1.333	-8.2	111	0.00	3.29- 3.35
6	MA	Heptachlor	1.021	1.092	-7.0	109	0.00	3.79- 3.85
7	B	beta-BHC	0.578	0.550	4.8	106	0.00	3.37- 3.43
8	B	delta-BHC	1.117	1.235	-10.6	114	0.00	3.55- 3.61
9	MB	Aldrin	1.190	1.297	-9.0	112	0.00	4.13- 4.19
10		alachlor		----------NA----------				
11	B	Heptachlor Epoxide	1.165	1.200	-3.0	110	0.00	4.85- 4.91
12	B	gamma-Chlordane	1.075	1.161	-8.0	116	0.00	5.01- 5.07
13	B	alpha-Chlordane	1.010	1.138	-12.7	112	0.00	5.19- 5.25
14	A	Endosulfan I	1.166	1.280	-9.8	114	0.00	5.37- 5.43
15	B	4,4'-DDE	1.022	0.999	2.3	106	0.00	5.31- 5.37
16	MA	Dieldrin	1.097	1.213	-10.6	113	0.00	5.69- 5.75
17	MA	Endrin	1.041	1.140	-9.5	112	0.00	6.02- 6.08
18	A	4,4'-DDD	0.758	0.753	0.7	105	0.00	6.17- 6.23
19	B	Endosulfan II	1.037	1.076	-3.8	109	0.00	6.35- 6.41
20	MA	4,4'-DDT	0.651	0.692	-6.3	108	0.00	6.58- 6.64
21	B	Endrin Aldehyde	0.857	0.933	-8.9	112	0.00	6.98- 7.04
22	B	Endosulfan Sulfate	0.934	0.935	-0.1	106	0.00	7.67- 7.73
23	A	Methoxychlor	0.361	0.367	-1.7	102	0.00	7.38- 7.44
24		Mirex	0.862	0.729	15.4	89	0.00	7.51- 7.57
25	B	Endrin Ketone	1.080	1.137	-5.3	111	0.00	8.11- 8.17
26	SA	Decachlorobiphenyl	1.152	1.055	8.4	96	0.00	9.93- 9.99
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.45- 2.45
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	0#	0.00	1.45- 2.45
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

8.9.19

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** G6G2038-ICV2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65627.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	1.66- 2.66
2	SAB	Tetrachloro-m-xylene	0.969	0.880	9.2	97	0.00	2.94- 3.00
3		hexachlorobenzene		----------NA----------				
4	A	alpha-BHC	1.319	1.417	-7.4	113	0.00	3.60- 3.66
5	MA	gamma-BHC	1.203	1.288	-7.1	113	0.00	4.03- 4.09
6	MA	Heptachlor	1.202	1.281	-6.6	115	0.00	4.61- 4.67
7	B	beta-BHC	0.540	0.591	-9.4	114	0.00	4.12- 4.18
8	B	delta-BHC	1.124	1.237	-10.1	114	0.00	4.52- 4.58
9	MB	Aldrin	1.123	1.191	-6.1	113	0.00	5.06- 5.12
10		alachlor		----------NA----------				
11	B	Heptachlor Epoxide	1.044	1.118	-7.1	113	0.00	5.88- 5.94
12	B	gamma-Chlordane	1.050	1.114	-6.1	113	0.00	6.17- 6.23
13	B	alpha-Chlordane	1.038	1.094	-5.4	112	0.00	6.39- 6.45
14	A	Endosulfan I	0.973	1.029	-5.8	112	0.00	6.49- 6.55
15	B	4,4'-DDE	0.963	1.041	-8.1	113	0.00	6.66- 6.72
16	MA	Dieldrin	1.057	1.136	-7.5	115	0.00	6.93- 6.99
17	MA	Endrin	0.997	1.072	-7.5	114	0.00	7.43- 7.49
18	A	4,4'-DDD	0.828	0.893	-7.9	115	0.00	7.62- 7.68
19	B	Endosulfan II	0.962	1.010	-5.0	113	0.00	7.78- 7.84
20	MA	4,4'-DDT	0.640	0.722	-12.8	114	0.00	8.15- 8.21
21	B	Endrin Aldehyde	0.772	0.839	-8.7	115	0.00	8.36- 8.42
22	B	Endosulfan Sulfate	0.865	0.905	-4.6	111	0.00	8.83- 8.89
23	A	Methoxychlor	0.382	0.415	-8.6	109	0.00	9.40- 9.46
24		Mirex	0.791	0.664	16.1	89	0.00	9.72- 9.78
25	B	Endrin Ketone	0.933	0.993	-6.4	112	0.00	9.79- 9.85
26	SA	Decachlorobiphenyl	0.808	0.747	7.5	98	0.00	11.90-11.96
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.66- 2.66
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	0#	0.00	1.66- 2.66
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g65621.d 6PST2038.M Mon Jun 17 08:57:42 2019

8.9.19

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** G6G2038-ICV2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65628.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2038\6g65628.d\ECD1A.CH Vial: 14
Signal #2 : C:\msdchem\1\data\G6G2038\6g65628.d\ECD2B.CH
Acq On : 17-Jun-19, 02:54:03 Operator: christp
Sample : icv2038-500 Inst : GC6G
Misc : op21020,g6g2038,15.9,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2038.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Mon Jun 17 08:52:07 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	1.46- 2.46
2	SAB	Tetrachloro-m-xylene	0.714	0.786	-10.1	108	0.00	2.52- 2.58
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	1.152	1.254	-8.9	110	0.00	9.93- 9.99
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.46- 2.46
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	1.46- 2.46
34		Chlordane {A}	0.055	0.051	7.3	93	0.00	3.72- 3.92
35		Chlordane {B}	0.041	0.040	2.4	95	0.00	4.20- 4.40
36		Chlordane {C}	0.144	0.139	3.5	96	0.00	4.95- 5.15
37		Chlordane {D}	0.228	0.225	1.3	98	0.00	5.11- 5.31
38		Chlordane {E}	0.035	0.030	14.3	87	0.00	6.18- 6.38

8.9.20

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** G6G2038-ICV2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65628.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	1.67- 2.67
2	SAB	Tetrachloro-m-xylene	0.969	0.997	-2.9	108	0.00	2.95- 3.01
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	0.808	0.824	-2.0	111	0.00	11.90-11.96
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.67- 2.67
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	1.67- 2.67
34		Chlordane {A}	0.064	0.061	4.7	95	0.00	4.54- 4.74
35		Chlordane {B}	0.038	0.036	5.3	95	0.00	5.18- 5.38
36		Chlordane {C}	0.122	0.117	4.1	96	0.00	6.10- 6.30
37		Chlordane {D}	0.205	0.199	2.9	97	0.00	6.32- 6.52
38		Chlordane {E}	0.032	0.031	3.1	98	0.00	7.79- 7.99

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g65622.d 6PST2038.M Mon Jun 17 08:57:58 2019

8.9.20

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** G6G2038-ICV2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65629.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2038\6g65629.d\ECD1A.CH Vial: 15
Signal #2 : C:\msdchem\1\data\G6G2038\6g65629.d\ECD2B.CH
Acq On : 17-Jun-19, 03:11:51 Operator: christp
Sample : icv2038-500 Inst : GC6G
Misc : op21020,g6g2038,15.9,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2038.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Mon Jun 17 08:52:07 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	1.45- 2.45
2	SAB	Tetrachloro-m-xylene	0.714	0.775	-8.5	108	0.00	2.52- 2.58
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	1.152	1.270	-10.2	113	0.00	9.93- 9.99
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.45- 2.45
28	L8	Toxaphene{A}	0.016	0.015	6.3	90	0.00	5.63- 5.83
29	L8	Toxaphene{B}	0.042	0.038	9.5	92	0.00	6.26- 6.46
30	L8	Toxaphene{C}	0.033	0.031	6.1	94	0.00	6.44- 6.64
31	L8	Toxaphene{D}	0.026	0.024	7.7	94	0.00	6.79- 6.99
32	L8	Toxaphene{E}	0.026	0.024	7.7	90	0.00	7.44- 7.64
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.45- 2.45
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: JC89914 **Sample:** G6G2038-ICV2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65629.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	1.67- 2.67
2	SAB	Tetrachloro-m-xylene	0.969	1.005	-3.7	111	0.00	2.94- 3.00
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	0.808	0.807	0.1	111	0.00	11.90-11.96
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.67- 2.67
28	L8	Toxaphene{A}	0.024	0.024	0.0	103	0.00	6.82- 7.02
29	L8	Toxaphene{B}	0.031	0.028	9.7	93	0.00	7.68- 7.88
30	L8	Toxaphene{C}	0.047	0.048	-2.1	102	0.00	7.85- 8.05
31	L8	Toxaphene{D}	0.029	0.029	0.0	102	0.00	8.28- 8.48
32	L8	Toxaphene{E}	0.024	0.024	0.0	101	0.00	9.19- 9.39
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.67- 2.67
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g65622.d 6PST2038.M Mon Jun 17 08:58:00 2019

8.9.21

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** G6G2038-ICV2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65630.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2038\6g65630.d\ECD1A.CH Vial: 16
Signal #2 : C:\msdchem\1\data\G6G2038\6g65630.d\ECD2B.CH
Acq On : 17-Jun-19, 03:29:39 Operator: christp
Sample : icv2038-50 Inst : GC6G
Misc : op21020,g6g2038,15.9,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2038.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Mon Jun 17 08:52:07 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	1.46- 2.46
2	SAB	Tetrachloro-m-xylene		----------NA----------				
3		hexachlorobenzene	1.596	1.628	-2.0	102	0.00	2.85- 2.91
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	1.46- 2.46
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	1.46- 2.46
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

8.9.22

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** G6G2038-ICV2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65630.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	1.67- 2.67
2	SAB	Tetrachloro-m-xylene		----------NA----------				
3		hexachlorobenzene	1.018	0.978	3.9	104	0.00	3.45- 3.51
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	102	0.00	1.67- 2.67
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	1.67- 2.67
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g65622.d 6PST2038.M Mon Jun 17 08:58:02 2019

8.9.22

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** G6G2038-ICV2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65631.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2038\6g65631.d\ECD1A.CH Vial: 17
Signal #2 : C:\msdchem\1\data\G6G2038\6g65631.d\ECD2B.CH
Acq On : 17-Jun-19, 03:47:35 Operator: christp
Sample : icv2038-50 Inst : GC6G
Misc : op21020,g6g2038,15.9,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2038.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Mon Jun 17 08:52:07 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	1.45- 2.45
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	0.135	0.135	0.0	105	0.00	4.28- 4.34
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	1.45- 2.45
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	1.45- 2.45
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

8.9.23

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** G6G2038-ICV2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65631.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	1.67-	2.67
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	0.160	-5.3	111	0.00	4.87-	4.93
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	1.67-	2.67
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	1.67-	2.67
34		Chlordane {A}		----------NA----------					
35		Chlordane {B}		----------NA----------					
36		Chlordane {C}		----------NA----------					
37		Chlordane {D}		----------NA----------					
38		Chlordane {E}		----------NA----------					

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g65622.d 6PST2038.M Mon Jun 17 08:58:04 2019

8.9.23

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G6G2042-CC2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65692.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2042\6g65692.d\ECD1A.CH Vial: 4
Signal #2 : C:\msdchem\1\data\G6G2042\6g65692.d\ECD2B.CH
Acq On : 19-Jun-19, 09:30:58 Operator: mailisih
Sample : cc2038-50 Inst : GC6G
Misc : op20889,g6g2042,1000,,,5,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2038.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Tue Jun 18 04:33:55 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	1.45- 2.45
2	SAB	Tetrachloro-m-xylene	0.714	0.741	-3.8	113	0.00	2.52- 2.58
3		hexachlorobenzene	1.596	1.713	-7.3	117	0.00	2.85- 2.91
4	A	alpha-BHC	1.291	1.526	-18.2	119	0.00	2.99- 3.05
5	MA	gamma-BHC	1.232	1.412	-14.6	118	0.00	3.29- 3.35
6	MA	Heptachlor	1.021	1.210	-18.5	123	0.00	3.79- 3.85
7	B	beta-BHC	0.578	0.552	4.5	113	0.00	3.37- 3.43
8	B	delta-BHC	1.117	1.293	-15.8	116	0.00	3.55- 3.61
9	MB	Aldrin	1.190	1.332	-11.9	116	0.00	4.13- 4.19
10		alachlor	0.135	0.138	-2.2	116	0.00	4.27- 4.33
11	B	Heptachlor Epoxide	1.165	1.244	-6.8	117	0.00	4.85- 4.91
12	B	gamma-Chlordane	1.075	1.162	-8.1	117	0.00	5.01- 5.07
13	B	alpha-Chlordane	1.010	1.150	-13.9	115	0.00	5.18- 5.24
14	A	Endosulfan I	1.166	1.284	-10.1	118	0.00	5.36- 5.42
15	B	4,4'-DDE	1.022	1.050	-2.7	114	0.00	5.30- 5.36
16	MA	Dieldrin	1.097	1.240	-13.0	117	0.00	5.69- 5.75
17	MA	Endrin	1.041	1.161	-11.5	117	0.00	6.01- 6.07
18	A	4,4'-DDD	0.758	0.822	-8.4	118	0.00	6.15- 6.21
19	B	Endosulfan II	1.037	1.114	-7.4	117	0.00	6.34- 6.40
20	MA	4,4'-DDT	0.651	0.828	-27.2#	129	0.00	6.57- 6.63
21	B	Endrin Aldehyde	0.857	0.894	-4.3	114	0.00	6.97- 7.03
22	B	Endosulfan Sulfate	0.934	0.993	-6.3	116	0.00	7.66- 7.72
23	A	Methoxychlor	0.361	0.423	-17.2	122	0.00	7.37- 7.43
24		Mirex	0.862	0.874	-1.4	115	0.00	7.51- 7.57
25	B	Endrin Ketone	1.080	1.180	-9.3	119	0.00	8.10- 8.16
26	SA	Decachlorobiphenyl	1.152	1.226	-6.4	119	0.00	9.92- 9.98
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	110	0.00	1.45- 2.45
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	111	0.00	1.45- 2.45
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: JC89914 **Sample:** G6G2042-CC2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65692.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	110	0.00	1.66- 2.66
2	SAB	Tetrachloro-m-xylene	0.969	0.939	3.1	112	0.00	2.94- 3.00
3		hexachlorobenzene	1.018	0.993	2.5	113	0.00	3.45- 3.51
4	A	alpha-BHC	1.319	1.379	-4.5	115	0.00	3.60- 3.66
5	MA	gamma-BHC	1.203	1.223	-1.7	114	0.00	4.03- 4.09
6	MA	Heptachlor	1.202	1.199	0.2	114	0.00	4.61- 4.67
7	B	beta-BHC	0.540	0.528	2.2	112	0.00	4.12- 4.18
8	B	delta-BHC	1.124	1.166	-3.7	113	0.00	4.51- 4.57
9	MB	Aldrin	1.123	1.103	1.8	113	0.00	5.06- 5.12
10		alachlor	0.152	0.153	-0.7	113	0.00	4.87- 4.93
11	B	Heptachlor Epoxide	1.044	1.028	1.5	113	0.00	5.88- 5.94
12	B	gamma-Chlordane	1.050	1.021	2.8	113	0.00	6.17- 6.23
13	B	alpha-Chlordane	1.038	0.999	3.8	113	0.00	6.39- 6.45
14	A	Endosulfan I	0.973	0.938	3.6	112	0.00	6.49- 6.55
15	B	4,4'-DDE	0.963	0.962	0.1	112	0.00	6.66- 6.72
16	MA	Dieldrin	1.057	1.026	2.9	112	0.00	6.92- 6.98
17	MA	Endrin	0.997	0.973	2.4	113	0.00	7.43- 7.49
18	A	4,4'-DDD	0.828	0.809	2.3	111	0.00	7.62- 7.68
19	B	Endosulfan II	0.962	0.909	5.5	111	0.00	7.78- 7.84
20	MA	4,4'-DDT	0.640	0.726	-13.4	118	0.00	8.15- 8.21
21	B	Endrin Aldehyde	0.772	0.729	5.6	110	0.00	8.35- 8.41
22	B	Endosulfan Sulfate	0.865	0.835	3.5	113	0.00	8.82- 8.88
23	A	Methoxychlor	0.382	0.412	-7.9	114	0.00	9.39- 9.45
24		Mirex	0.791	0.725	8.3	112	0.00	9.71- 9.77
25	B	Endrin Ketone	0.933	0.942	-1.0	115	0.00	9.79- 9.85
26	SA	Decachlorobiphenyl	0.808	0.788	2.5	117	0.00	11.90-11.96
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	109	0.00	1.66- 2.66
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	1.66- 2.66
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g65622.d 6PST2038.M Wed Jun 19 11:38:30 2019

8.9.24

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** G6G2042-CC2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65703.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G2042\6g65703.d\ECD1A.CH Vial: 2
Signal #2 : C:\msdchem\1\data\G6G2042\6g65703.d\ECD2B.CH
Acq On : 20-Jun-19, 00:17:30 Operator: christp
Sample : cc2038-25 Inst : GC6G
Misc : op21102,g6g2042,15.7,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST2038.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Tue Jun 18 04:33:55 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	-0.01	1.44- 2.44
2	SAB	Tetrachloro-m-xylene	0.714	0.723	-1.3	115	0.00	2.51- 2.57
3		hexachlorobenzene	1.596	1.642	-2.9	117	0.00	2.85- 2.91
4	A	alpha-BHC	1.291	1.327	-2.8	118	0.00	2.99- 3.05
5	MA	gamma-BHC	1.232	1.254	-1.8	117	0.00	3.29- 3.35
6	MA	Heptachlor	1.021	1.076	-5.4	120	0.00	3.79- 3.85
7	B	beta-BHC	0.578	0.545	5.7	118	0.00	3.36- 3.42
8	B	delta-BHC	1.117	1.062	4.9	109	0.00	3.55- 3.61
9	MB	Aldrin	1.190	1.165	2.1	113	0.00	4.12- 4.18
10		alachlor	0.135	0.130	3.7	112	0.00	4.27- 4.33
11	B	Heptachlor Epoxide	1.165	1.072	8.0	110	0.00	4.85- 4.91
12	B	gamma-Chlordane	1.075	0.982	8.7	110	0.00	5.01- 5.07
13	B	alpha-Chlordane	1.010	0.993	1.7	110	0.00	5.18- 5.24
14	A	Endosulfan I	1.166	1.097	5.9	109	0.00	5.36- 5.42
15	B	4,4'-DDE	1.022	0.954	6.7	113	0.00	5.30- 5.36
16	MA	Dieldrin	1.097	1.085	1.1	113	0.00	5.69- 5.75
17	MA	Endrin	1.041	1.025	1.5	113	0.00	6.02- 6.08
18	A	4,4'-DDD	0.758	0.717	5.4	112	0.00	6.15- 6.21
19	B	Endosulfan II	1.037	0.975	6.0	110	0.00	6.34- 6.40
20	MA	4,4'-DDT	0.651	0.726	-11.5	126	0.00	6.57- 6.63
21	B	Endrin Aldehyde	0.857	0.831	3.0	112	0.00	6.97- 7.03
22	B	Endosulfan Sulfate	0.934	0.885	5.2	112	0.00	7.66- 7.72
23	A	Methoxychlor	0.361	0.401	-11.1	125	0.00	7.37- 7.43
24		Mirex	0.862	0.821	4.8	112	0.00	7.51- 7.57
25	B	Endrin Ketone	1.080	1.052	2.6	115	0.00	8.10- 8.16
26	SA	Decachlorobiphenyl	1.152	1.137	1.3	115	0.00	9.92- 9.98
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	-0.01	1.44- 2.44
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	0#	-0.01	1.44- 2.44
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: JC89914 **Sample:** G6G2042-CC2038
Account: NOREASCA NOREAS, Inc. **Lab FileID:** 6G65703.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	110	0.00	1.66- 2.66
2	SAB	Tetrachloro-m-xylene	0.969	0.937	3.3	110	0.00	2.94- 3.00
3		hexachlorobenzene	1.018	0.982	3.5	109	0.00	3.45- 3.51
4	A	alpha-BHC	1.319	1.281	2.9	109	0.00	3.60- 3.66
5	MA	gamma-BHC	1.203	1.147	4.7	108	0.00	4.03- 4.09
6	MA	Heptachlor	1.202	1.142	5.0	109	0.00	4.61- 4.67
7	B	beta-BHC	0.540	0.507	6.1	105	0.00	4.12- 4.18
8	B	delta-BHC	1.124	1.078	4.1	107	0.00	4.51- 4.57
9	MB	Aldrin	1.123	1.044	7.0	106	0.00	5.06- 5.12
10		alachlor	0.152	0.150	1.3	107	0.00	4.87- 4.93
11	B	Heptachlor Epoxide	1.044	0.982	5.9	106	0.00	5.88- 5.94
12	B	gamma-Chlordane	1.050	0.971	7.5	106	0.00	6.17- 6.23
13	B	alpha-Chlordane	1.038	0.958	7.7	105	0.00	6.39- 6.45
14	A	Endosulfan I	0.973	0.896	7.9	104	0.00	6.49- 6.55
15	B	4,4'-DDE	0.963	0.899	6.6	105	0.00	6.66- 6.72
16	MA	Dieldrin	1.057	0.976	7.7	105	0.00	6.92- 6.98
17	MA	Endrin	0.997	0.928	6.9	106	0.00	7.43- 7.49
18	A	4,4'-DDD	0.828	0.757	8.6	104	0.00	7.62- 7.68
19	B	Endosulfan II	0.962	0.870	9.6	104	0.00	7.78- 7.84
20	MA	4,4'-DDT	0.640	0.692	-8.1	117	0.00	8.15- 8.21
21	B	Endrin Aldehyde	0.772	0.699	9.5	103	0.00	8.35- 8.41
22	B	Endosulfan Sulfate	0.865	0.799	7.6	105	0.00	8.82- 8.88
23	A	Methoxychlor	0.382	0.410	-7.3	115	0.00	9.40- 9.46
24		Mirex	0.791	0.732	7.5	104	0.00	9.72- 9.78
25	B	Endrin Ketone	0.933	0.898	3.8	108	0.00	9.79- 9.85
26	SA	Decachlorobiphenyl	0.808	0.763	5.6	108	0.00	11.90-11.96
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.66- 2.66
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	0#	0.00	1.66- 2.66
34		Chlordane {A}	----------NA----------					
35		Chlordane {B}	----------NA----------					
36		Chlordane {C}	----------NA----------					
37		Chlordane {D}	----------NA----------					
38		Chlordane {E}	----------NA----------					

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g65621.d 6PST2038.M Thu Jun 20 08:28:52 2019

Initial Calibration Summary

Job Number: JC89914 **Sample:** GEF6451-ICC6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF189989.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Response Factor Report gcef

Method : C:\HPCHEM\1\METHODS\PCB6451.M (Chemstation Integrator)
Title : GC/ECD- PCB
Last Update : Thu Jun 13 10:12:05 2019
Response via : Initial Calibration

Calibration Files
3000=EF189991.D 2000=EF189990.D 1000=EF189989.D 500 =EF189988.D
250 =EF189987.D 50 =EF189986.D

	Compound	3000	2000	1000	500	250	50	Avg	%RSD
1) S	Tetrachloro-m-xylen	1.331	1.310	1.274	1.236	1.254	1.247	1.275 E4	2.95
2)	AR1221-A			1.268				1.268 E2	0.00
3)	AR1221-B			1.877				1.877 E2	0.00
4)	AR1221-C			6.225				6.225 E2	0.00
5)	AR1221-D			6.151				6.151 E1	0.00
6)	AR1221-E			1.515				1.515 E2	0.00
7)	AR1232-A			4.869				4.869 E2	0.00
8)	AR1232-B			2.801				2.801 E2	0.00
9)	AR1232-C			6.460				6.460 E2	0.00
10)	AR1232-D			2.427				2.427 E2	0.00
11)	AR1232-E			2.156				2.156 E2	0.00
12)	AR1242-A			5.135				5.135 E2	0.00
13)	AR1242-B			1.191				1.191 E3	0.00
14)	AR1242-C			4.558				4.558 E2	0.00
15)	AR1242-D			4.569				4.569 E2	0.00
16)	AR1242-E			6.347				6.347 E2	0.00
17)	AR1248-A			2.579				2.579 E2	0.00
18)	AR1248-B			7.560				7.560 E2	0.00
19)	AR1248-C			7.338				7.338 E2	0.00
20)	AR1248-D			6.771				6.771 E2	0.00
21)	AR1248-E			5.824				5.824 E2	0.00
22)	AR1248-F			8.798				8.798 E2	0.00
23)	AR1248-G			1.031				1.031 E3	0.00
24)	AR1254-A			6.465				6.465 E2	0.00
25)	AR1254-B			8.063				8.063 E2	0.00
26)	AR1254-C			5.861				5.861 E2	0.00
27)	AR1254-D			1.145				1.145 E3	0.00
28)	AR1254-E			1.078				1.078 E3	0.00
29)	AR1254-F			9.603				9.603 E2	0.00
30)	AR1254-G			1.153				1.153 E3	0.00
31)	AR1262-A			8.382				8.382 E2	0.00
32)	AR1262-B			1.468				1.468 E3	0.00
33)	AR1262-C			1.051				1.051 E3	0.00
34)	AR1262-D			2.661				2.661 E3	0.00
35)	AR1262-E			3.022				3.022 E3	0.00
36)	AR1268-A			2.622				2.622 E3	0.00
37)	AR1268-B			3.027				3.027 E3	0.00
38)	AR1268-C			2.270				2.270 E3	0.00
39)	AR1268-D			9.621				9.621 E2	0.00
40)	AR1268-E			6.153				6.153 E3	0.00
41)	AR1016-A	3.235	3.326	3.460	3.471	3.833	3.569	3.482 E2	5.98
42)	AR1016-B	5.518	5.754	6.129	6.353	6.504	6.926	6.197 E2	8.27
43)	AR1016-C	1.293	1.351	1.443	1.482	1.524	1.609	1.450 E3	7.93
44)	AR1016-D	4.878	5.086	5.444	5.552	5.689	5.896	5.424 E2	7.01
45)	AR1016-E	5.102	5.258	5.527	5.397	5.521	5.615	5.403 E2	3.57
46)	AR1260-A	1.268	1.306	1.360	1.377	1.366	1.439	1.353 E3	4.37
47)	AR1260-B	0.922	0.959	1.018	0.996	1.053	1.025	0.995 E3	4.80

8.9.26

8

Initial Calibration Summary

Job Number: JC89914 **Sample:** GEF6451-ICC6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF189989.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

48)		AR1260-C	7.129	7.388	7.799	7.981	8.111	9.677	8.014 E2	11.16
49)		AR1260-D	2.062	2.116	2.194	2.210	2.160	2.167	2.151 E3	2.53
50)		AR1260-E	2.067	2.098	2.102	2.068	2.026	2.023	2.064 E3	1.65
51)	S	Decachlorobiphenyl	1.589	1.634	1.729	1.732	1.757	1.798	1.706 E4	4.62

Signal #2

1)	S	Tetrachloro-m-xylen	1.597	1.578	1.569	1.548	1.512	1.515	1.553 E4	2.22
2)		AR1221-A			1.538				1.538 E2	0.00
3)		AR1221-B			2.262				2.262 E2	0.00
4)		AR1221-C			6.357				6.357 E2	0.00
5)		AR1221-D			9.409				9.409 E1	0.00
6)		AR1221-E			8.401				8.401 E1	0.00
7)		AR1232-A			4.853				4.853 E2	0.00
8)		AR1232-B			3.476				3.476 E2	0.00
9)		AR1232-C			7.275				7.275 E2	0.00
10)		AR1232-D			3.571				3.571 E2	0.00
11)		AR1232-E			1.850				1.850 E2	0.00
12)		AR1242-A			6.125				6.125 E2	0.00
13)		AR1242-B			1.318				1.318 E3	0.00
14)		AR1242-C			6.509				6.509 E2	0.00
15)		AR1242-D			3.721				3.721 E2	0.00
16)		AR1242-E			6.294				6.294 E2	0.00
17)		AR1248-A			3.153				3.153 E2	0.00
18)		AR1248-B			7.864				7.864 E2	0.00
19)		AR1248-C			4.936				4.936 E2	0.00
20)		AR1248-D			5.618				5.618 E2	0.00
21)		AR1248-E			7.553				7.553 E2	0.00
22)		AR1248-F			9.659				9.659 E2	0.00
23)		AR1248-G			1.038				1.038 E3	0.00
24)		AR1254-A			1.188				1.188 E3	0.00
25)		AR1254-B			9.408				9.408 E2	0.00
26)		AR1254-C			6.460				6.460 E2	0.00
27)		AR1254-D			1.370				1.370 E3	0.00
28)		AR1254-E			1.107				1.107 E3	0.00
29)		AR1254-F			9.234				9.234 E2	0.00
30)		AR1254-G			1.417				1.417 E3	0.00
31)		AR1262-A			1.265				1.265 E3	0.00
32)		AR1262-B			1.824				1.824 E3	0.00
33)		AR1262-C			1.358				1.358 E3	0.00
34)		AR1262-D			2.988				2.988 E3	0.00
35)		AR1262-E			3.461				3.461 E3	0.00
36)		AR1268-A			3.185				3.185 E3	0.00
37)		AR1268-B			3.421				3.421 E3	0.00
38)		AR1268-C			2.593				2.593 E3	0.00
39)		AR1268-D			1.097				1.097 E3	0.00
40)		AR1268-E			6.806				6.806 E3	0.00
41)		AR1016-A	3.574	3.693	3.886	3.839	3.833	3.833	3.776 E2	3.14
42)		AR1016-B	6.523	6.817	7.271	7.573	7.665	7.683	7.255 E2	6.70
43)		AR1016-C	1.437	1.494	1.600	1.650	1.662	1.609	1.575 E3	5.72
44)		AR1016-D	6.773	7.080	7.669	7.891	7.875	6.955	7.374 E2	6.72
45)		AR1016-E	4.215	4.393	4.669	4.654	4.677	4.568	4.529 E2	4.14
46)		AR1260-A	1.628	1.667	1.740	1.744	1.723	1.660	1.694 E3	2.85
47)		AR1260-B	1.109	1.152	1.229	1.257	1.251	1.222	1.204 E3	4.96
48)		AR1260-C	0.973	0.993	1.051	1.069	1.069	1.040	1.032 E3	3.93
49)		AR1260-D	2.285	2.339	2.536	2.575	2.539	2.911	2.531 E3	8.72
50)		AR1260-E	2.390	2.418	2.476	2.483	2.452	2.482	2.450 E3	1.58
51)	S	Decachlorobiphenyl	1.694	1.707	1.829	1.883	1.968	2.374	1.909 E4	13.13

(#) = Out of Range

Initial Calibration Summary

Job Number: JC89914 **Sample:** GEF6451-ICC6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF189989.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

PCB6451.M Thu Jun 13 10:13:04 2019 GCEF

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF189996.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\1\DATA\GEF6451\EF189996.D\ECD1A.CH Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GEF6451\EF189996.D\ECD2B.CH
Acq On    : 12 Jun 2019   8:25 pm                    Operator: rebeccak
Sample    : icv6451-1000                             Inst    : gcef
Misc      : op20406,GEF6451,15.0,,,10,1              Multiplr: 1.00
IntFile Signal #1: AUTOINT1.E     IntFile Signal #2: .E

Method       : C:\HPCHEM\1\METHODS\PCB6451.M (Chemstation Integrator)
Title        : GC/ECD- PCB
Last Update  : Thu Jun 13 09:56:33 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	12.755	13.452 E3	-5.5	106	0.00	3.30- 3.55
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	348.222	344.597	1.0	100	0.00	3.88- 4.07

8.9.27

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF189996.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42		AR1016-B	619.743	621.690		-0.3	101	0.00	4.47- 4.60
43		AR1016-C	1.450	1.444	E3	0.4	100	0.01	5.34- 5.41
44		AR1016-D	542.403	555.167		-2.4	102	0.00	5.59- 5.65
45		AR1016-E	540.345	553.676		-2.5	100	0.00	6.34- 6.40
46		AR1260-A	1.353	1.424	E3	-5.2	105	0.02	10.00-10.13
47		AR1260-B	995.144	1005.509		-1.0	99	0.00	10.23-10.36
48		AR1260-C	801.438	779.668		2.7	100	0.00	10.76-10.90
49		AR1260-D	2.151	2.285	E3	-6.2	104	0.02	11.47-11.59
50		AR1260-E	2.064	2.073	E3	-0.4	99	0.07	12.15-12.29
51	S	Decachlorobiphenyl	17.065	19.697	E3	-15.4	114	0.00	14.52-14.66
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	15.532	16.130	E3	-3.9	103	0.00	3.99- 4.21
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	377.630	390.722		-3.5	101	0.00	4.98- 5.10
42		AR1016-B	725.531	739.036		-1.9	102	0.00	5.79- 5.85
43		AR1016-C	1.575	1.581	E3	-0.4	99	0.01	6.74- 6.80
44		AR1016-D	737.373	796.184		-8.0	104	0.00	7.02- 7.08
45		AR1016-E	452.921	456.943		-0.9	98	0.00	8.00- 8.07
46		AR1260-A	1.694	1.766	E3	-4.3	101	0.00	12.04-12.16
47		AR1260-B	1.204	1.288	E3	-7.0	105	0.00	12.21-12.34

8.9.27

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF189996.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

48		AR1260-C	1032.375	1094.943		-6.1	104	0.00	12.90-13.02
49		AR1260-D	2.531	2.616	E3	-3.4	103	0.01	13.47-13.60
50		AR1260-E	2.450	2.491	E3	-1.7	101	0.02	14.33-14.46
51	S	Decachlorobiphenyl	19.092	20.167	E3	-5.6	110	0.00	16.97-17.09

(#) = Out of Range SPCC's out = 0 CCC's out = 0
EF189989.D PCB6451.M Thu Jun 13 10:07:06 2019 GCEF

8.9.27

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF189998.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GEF6451\EF189998.D\ECD1A.CH Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GEF6451\EF189998.D\ECD2B.CH
Acq On : 12 Jun 2019 9:15 pm Operator: rebeccak
Sample : icv6451-1000 Inst : gcef
Misc : op20406,GEF6451,15.0,,,10,1 Multiplr: 1.00
IntFile Signal #1: AUTOINT1.E IntFile Signal #2: .E

Method : C:\HPCHEM\1\METHODS\PCB6451.M (Chemstation Integrator)
Title : GC/ECD- PCB
Last Update : Thu Jun 13 09:56:33 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	12.755	16.319	E3	-27.9#	128	0.00	3.29- 3.54
2		AR1221-A		----------		NA	----------		
3		AR1221-B		----------		NA	----------		
4		AR1221-C		----------		NA	----------		
5		AR1221-D		----------		NA	----------		
6		AR1221-E		----------		NA	----------		
7		AR1232-A	486.933	511.081		-5.0	105	0.00	3.87- 4.07
8		AR1232-B	280.124	293.593		-4.8	105	0.00	4.44- 4.64
9		AR1232-C	645.988	668.795		-3.5	104	0.01	5.29- 5.49
10		AR1232-D	242.715	254.866		-5.0	105	0.00	5.54- 5.74
11		AR1232-E	215.616	224.822		-4.3	104	0.00	6.29- 6.49
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	838.191	824.750		1.6	98	0.00	9.36- 9.56
32		AR1262-B	1.468	1.419	E3	3.3	97	0.00	10.20-10.40
33		AR1262-C	1.051	1.028	E3	2.2	98	0.00	10.73-10.93
34		AR1262-D	2.661	2.650	E3	0.4	100	0.00	11.44-11.64
35		AR1262-E	3.022	2.970	E3	1.7	98	0.00	12.12-12.32
36		AR1268-A		----------		NA	----------		
37		AR1268-B		----------		NA	----------		
38		AR1268-C		----------		NA	----------		
39		AR1268-D		----------		NA	----------		
40		AR1268-E		----------		NA	----------		
41		AR1016-A		----------		NA	----------		

8.9.28

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF189998.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42		AR1016-B			----------NA----------				
43		AR1016-C			----------NA----------				
44		AR1016-D			----------NA----------				
45		AR1016-E			----------NA----------				
46		AR1260-A			----------NA----------				
47		AR1260-B			----------NA----------				
48		AR1260-C			----------NA----------				
49		AR1260-D			----------NA----------				
50		AR1260-E			----------NA----------				
51	S	Decachlorobiphenyl	17.065	21.602	E3 -26.6#	125	0.00	14.52-14.66	
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	15.532	19.504	E3 -25.6#	124	0.00	3.99- 4.21	
2		AR1221-A			----------NA----------				
3		AR1221-B			----------NA----------				
4		AR1221-C			----------NA----------				
5		AR1221-D			----------NA----------				
6		AR1221-E			----------NA----------				
7		AR1232-A	485.271	521.854	-7.5	108	0.00	4.94- 5.14	
8		AR1232-B	347.640	363.787	-4.6	105	0.00	5.72- 5.92	
9		AR1232-C	727.510	745.390	-2.5	102	0.01	6.69- 6.89	
10		AR1232-D	357.139	384.516	-7.7	108	0.01	6.98- 7.18	
11		AR1232-E	185.034	190.583	-3.0	103	0.00	7.95- 8.15	
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	1.265	1.271	E3 -0.5	100	0.00	11.18-11.38	
32		AR1262-B	1.824	1.831	E3 -0.4	100	0.00	12.18-12.38	
33		AR1262-C	1.358	1.364	E3 -0.4	100	0.00	12.86-13.06	
34		AR1262-D	2.988	2.988	E3 0.0	100	0.00	13.44-13.64	
35		AR1262-E	3.461	3.469	E3 -0.2	100	0.00	14.24-14.44	
36		AR1268-A			----------NA----------				
37		AR1268-B			----------NA----------				
38		AR1268-C			----------NA----------				
39		AR1268-D			----------NA----------				
40		AR1268-E			----------NA----------				
41		AR1016-A			----------NA----------				
42		AR1016-B			----------NA----------				
43		AR1016-C			----------NA----------				
44		AR1016-D			----------NA----------				
45		AR1016-E			----------NA----------				
46		AR1260-A			----------NA----------				
47		AR1260-B			----------NA----------				

8.9.28

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF189998.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

48		AR1260-C			----------NA----------				
49		AR1260-D			----------NA----------				
50		AR1260-E			----------NA----------				
51	S	Decachlorobiphenyl	19.092	22.857	E3 -19.7	125	0.00	16.97-17.09	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
EF189989.D PCB6451.M Thu Jun 13 10:07:08 2019 GCEF

8.9.28

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF189999.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GEF6451\EF189999.D\ECD1A.CH Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GEF6451\EF189999.D\ECD2B.CH
Acq On : 12 Jun 2019 9:40 pm Operator: rebeccak
Sample : icv6451-1000 Inst : gcef
Misc : op20406,GEF6451,15.0,,,10,1 Multiplr: 1.00
IntFile Signal #1: AUTOINT1.E IntFile Signal #2: .E

Method : C:\HPCHEM\1\METHODS\PCB6451.M (Chemstation Integrator)
Title : GC/ECD- PCB
Last Update : Thu Jun 13 09:56:33 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	12.755	14.864 E3	-16.5	117	0.00	3.30- 3.55
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	513.537	503.598	1.9	98	0.00	4.44- 4.64
13		AR1242-B	1.191	1.154 E3	3.1	97	0.00	5.28- 5.48
14		AR1242-C	455.780	446.054	2.1	98	0.00	5.53- 5.73
15		AR1242-D	456.925	447.133	2.1	98	0.00	6.28- 6.48
16		AR1242-E	634.698	584.179	8.0	92	0.01	7.24- 7.44
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	2.622	2.549 E3	2.8	97	0.00	12.11-12.31
37		AR1268-B	3.027	3.015 E3	0.4	100	0.00	12.21-12.41
38		AR1268-C	2.270	2.239 E3	1.4	99	0.00	12.62-12.82
39		AR1268-D	962.112	934.089	2.9	97	0.00	13.45-13.65
40		AR1268-E	6.153	6.126 E3	0.4	100	0.00	14.06-14.26
41		AR1016-A		----------NA----------				

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF189999.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42		AR1016-B			----------NA----------				
43		AR1016-C			----------NA----------				
44		AR1016-D			----------NA----------				
45		AR1016-E			----------NA----------				
46		AR1260-A			----------NA----------				
47		AR1260-B			----------NA----------				
48		AR1260-C			----------NA----------				
49		AR1260-D			----------NA----------				
50		AR1260-E			----------NA----------				
51	S	Decachlorobiphenyl	17.065	53.994	E3 -216.4#	312#	0.00	14.51-14.65	
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	15.532	18.240	E3 -17.4	116	0.00	4.00- 4.21	
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	612.511	606.354	1.0	99	0.00	5.72- 5.92	
13		AR1242-B	1.318	1.276	E3 3.2	97	0.00	6.68- 6.88	
14		AR1242-C	650.939	659.098	-1.3	101	0.00	6.96- 7.16	
15		AR1242-D	372.096	383.473	-3.1	103	0.00	7.94- 8.14	
16		AR1242-E	629.449	705.529	-12.1	112	0.01	8.92- 9.12	
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	3.185	3.113	E3 2.3	98	0.00	14.24-14.44	
37		AR1268-B	3.421	3.374	E3 1.4	99	0.00	14.35-14.55	
38		AR1268-C	2.593	2.540	E3 2.0	98	0.00	14.92-15.12	
39		AR1268-D	1.097	1.080	E3 1.5	98	0.00	15.60-15.80	
40		AR1268-E	6.806	6.861	E3 -0.8	101	0.00	16.33-16.53	
41		AR1016-A			----------NA----------				
42		AR1016-B			----------NA----------				
43		AR1016-C			----------NA----------				
44		AR1016-D			----------NA----------				
45		AR1016-E			----------NA----------				
46		AR1260-A			----------NA----------				
47		AR1260-B			----------NA----------				

8.9.29

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF189999.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

48		AR1260-C			----------NA----------			
49		AR1260-D			----------NA----------			
50		AR1260-E			----------NA----------			
51	S	Decachlorobiphenyl	19.092	58.513 E3	-206.5#	320#	0.00	16.96-17.09

(#) = Out of Range SPCC's out = 0 CCC's out = 0
EF189989.D PCB6451.M Thu Jun 13 10:07:10 2019 GCEF

8.9.29

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF190000.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GEF6451\EF190000.D\ECD1A.CH Vial: 17
Signal #2 : C:\HPCHEM\1\DATA\GEF6451\EF190000.D\ECD2B.CH
Acq On : 12 Jun 2019 10:05 pm Operator: rebeccak
Sample : icv6451-1000 Inst : gcef
Misc : op20406,GEF6451,15.0,,,10,1 Multiplr: 1.00
IntFile Signal #1: AUTOINT1.E IntFile Signal #2: .E

Method : C:\HPCHEM\1\METHODS\PCB6451.M (Chemstation Integrator)
Title : GC/ECD- PCB
Last Update : Thu Jun 13 09:56:33 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	12.755	14.995 E3	-17.6	118	0.00	3.30- 3.55
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	257.889	241.681	6.3	94	0.00	4.44- 4.64
18		AR1248-B	755.981	736.963	2.5	97	0.01	5.30- 5.50
19		AR1248-C	733.763	746.576	-1.7	102	0.00	5.88- 6.08
20		AR1248-D	677.051	715.423	-5.7	106	0.00	6.28- 6.48
21		AR1248-E	582.376	634.731	-9.0	109	0.00	6.46- 6.66
22		AR1248-F	879.798	943.412	-7.2	107	0.01	7.22- 7.42
23		AR1248-G	1.031	1.158 E3	-12.3	112	0.00	7.63- 7.83
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		----------NA----------				

8.9.30

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF190000.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42		AR1016-B			----------NA----------				
43		AR1016-C			----------NA----------				
44		AR1016-D			----------NA----------				
45		AR1016-E			----------NA----------				
46		AR1260-A			----------NA----------				
47		AR1260-B			----------NA----------				
48		AR1260-C			----------NA----------				
49		AR1260-D			----------NA----------				
50		AR1260-E			----------NA----------				
51	S	Decachlorobiphenyl	17.065	22.002	E3 -28.9#	127	0.02	14.52-14.66	
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	15.532	19.360	E3 -24.6#	123	0.00	4.00- 4.21	
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	315.275	296.051	6.1	94	0.00	5.72- 5.92	
18		AR1248-B	786.359	750.567	4.6	95	0.01	6.70- 6.90	
19		AR1248-C	493.641	509.252	-3.2	103	0.00	7.35- 7.55	
20		AR1248-D	561.772	614.989	-9.5	109	0.00	7.94- 8.14	
21		AR1248-E	755.285	813.240	-7.7	108	0.00	8.22- 8.42	
22		AR1248-F	965.905	1055.300	-9.3	109	0.01	8.91- 9.11	
23		AR1248-G	1.038	1.145	E3 -10.3	110	0.02	9.43- 9.63	
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			----------NA----------				
42		AR1016-B			----------NA----------				
43		AR1016-C			----------NA----------				
44		AR1016-D			----------NA----------				
45		AR1016-E			----------NA----------				
46		AR1260-A			----------NA----------				
47		AR1260-B			----------NA----------				

8.9.30

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF190000.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

48		AR1260-C			----------NA----------				
49		AR1260-D			----------NA----------				
50		AR1260-E			----------NA----------				
51	S	Decachlorobiphenyl	19.092	22.549	E3 -18.1	123	0.01	16.97-17.10	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
EF189989.D PCB6451.M Thu Jun 13 10:08:25 2019 GCEF

8.9.30

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF190002.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GEF6451\EF190002.D\ECD1A.CH Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GEF6451\EF190002.D\ECD2B.CH
Acq On : 13 Jun 2019 9:30 am Operator: rebeccak
Sample : icv6451-1000 Inst : gcef
Misc : op20406,GEF6451,15.0,,,10,1 Multiplr: 1.00
IntFile Signal #1: AUTOINT1.E IntFile Signal #2: .E

Method : C:\HPCHEM\1\METHODS\PCB6451.M (Chemstation Integrator)
Title : GC/ECD- PCB
Last Update : Thu Jun 13 09:56:33 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	12.755	18.882 E3	-48.0#	148	0.00	3.29- 3.54
2	AR1221-A	126.752	138.961	-9.6	110	0.00	2.63- 2.83
3	AR1221-B	187.682	187.304	0.2	100	0.00	3.58- 3.78
4	AR1221-C	622.482	613.378	1.5	99	0.00	3.87- 4.07
5	AR1221-D	61.510	51.110	16.9	83	0.01	4.45- 4.65
6	AR1221-E	151.503	139.464	7.9	92	0.03	4.80- 5.00
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	646.453	679.317	-5.1	105	0.01	7.02- 7.22
25	AR1254-B	806.322	841.463	-4.4	104	0.01	7.56- 7.76
26	AR1254-C	586.064	601.331	-2.6	103	0.01	8.13- 8.33
27	AR1254-D	1.145	1.227 E3	-7.2	107	0.02	8.39- 8.59
28	AR1254-E	1.078	1.035 E3	4.0	96	0.03	9.05- 9.25
29	AR1254-F	960.272	1083.408	-12.8	113	0.01	9.36- 9.56
30	AR1254-G	1.153	1.256 E3	-8.9	109	0.02	9.98-10.18
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		----------NA----------				

8.9.31

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF190002.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42		AR1016-B			----------NA----------				
43		AR1016-C			----------NA----------				
44		AR1016-D			----------NA----------				
45		AR1016-E			----------NA----------				
46		AR1260-A			----------NA----------				
47		AR1260-B			----------NA----------				
48		AR1260-C			----------NA----------				
49		AR1260-D			----------NA----------				
50		AR1260-E			----------NA----------				
51	S	Decachlorobiphenyl	17.065	24.449	E3 -43.3#	141	0.02	14.53-14.67	
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	15.532	22.022	E3 -41.8#	140	0.00	3.99- 4.21	
2		AR1221-A	153.834	164.372	-6.9	107	0.00	3.26- 3.46	
3		AR1221-B	226.165	228.438	-1.0	101	0.00	4.55- 4.75	
4		AR1221-C	635.678	649.618	-2.2	102	0.00	4.94- 5.14	
5		AR1221-D	94.089	77.042	18.1	82	0.00	5.74- 5.94	
6		AR1221-E	84.007	69.318	17.5	83	0.05	6.02- 6.22	
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	1.188	1.279	E3 -7.7	108	0.01	8.84- 9.04	
25		AR1254-B	940.833	1054.429	-12.1	112	0.01	9.26- 9.46	
26		AR1254-C	646.026	739.952	-14.5	115	0.02	10.04-10.24	
27		AR1254-D	1.370	1.573	E3 -14.8	115	0.02	10.30-10.50	
28		AR1254-E	1.107	1.192	E3 -7.7	108	0.03	10.86-11.06	
29		AR1254-F	923.393	1025.834	-11.1	111	0.02	11.54-11.74	
30		AR1254-G	1.417	1.651	E3 -16.5	116	0.02	12.02-12.22	
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			----------NA----------				
42		AR1016-B			----------NA----------				
43		AR1016-C			----------NA----------				
44		AR1016-D			----------NA----------				
45		AR1016-E			----------NA----------				
46		AR1260-A			----------NA----------				
47		AR1260-B			----------NA----------				

8.9.31

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GEF6451-ICV6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF190002.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

48		AR1260-C			----------NA----------			
49		AR1260-D			----------NA----------			
50		AR1260-E			----------NA----------			
51	S	Decachlorobiphenyl	19.092	25.991 E3	-36.1#	142	0.02	16.98-17.10

(#) = Out of Range SPCC's out = 0 CCC's out = 0
EF189989.D PCB6451.M Thu Jun 13 10:07:13 2019 GCEF

8.9.31

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GEF6455-CC6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF190092.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GEF6454\EF190092.D\ECD1A.CH Vial: 25
Signal #2 : C:\HPCHEM\1\DATA\GEF6454\EF190092.D\ECD2B.CH
Acq On : 19 Jun 2019 9:30 am Operator: tianweir
Sample : cc6451-500 Inst : gcef
Misc : op21081,GEF6455,1.0,,,10,1 Multiplr: 1.00
IntFile Signal #1: AUTOINT1.E IntFile Signal #2: .E

Method : C:\HPCHEM\1\METHODS\PCB6451.M (Chemstation Integrator)
Title : GC/ECD- PCB
Last Update : Tue Jun 18 13:15:38 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	12.755	13.734 E3	-7.7	111	0.00	3.30- 3.55
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	348.222	353.584	-1.5	102	-0.01	3.89- 4.08

8.9.32

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GEF6455-CC6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF190092.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42		AR1016-B	619.743	685.584		-10.6	108	-0.02	4.48- 4.60
43		AR1016-C	1.450	1.569	E3	-8.2	106	-0.03	5.36- 5.43
44		AR1016-D	542.403	619.824		-14.3	112	-0.02	5.60- 5.66
45		AR1016-E	540.345	620.375		-14.8	115	-0.02	6.35- 6.41
46		AR1260-A	1.353	1.539	E3	-13.7	112	-0.03	10.01-10.15
47		AR1260-B	995.144	1106.791		-11.2	111	-0.03	10.23-10.37
48		AR1260-C	801.438	861.143		-7.4	108	-0.03	10.77-10.91
49		AR1260-D	2.151	2.445	E3	-13.7	111	-0.03	11.48-11.60
50		AR1260-E	2.064	2.322	E3	-12.5	112	-0.02	12.16-12.29
51	S	Decachlorobiphenyl	17.065	19.306	E3	-13.1	111	-0.02	14.53-14.67
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	15.532	17.226	E3	-10.9	111	0.00	4.00- 4.22
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	377.630	439.076		-16.3	114	0.00	5.00- 5.12
42		AR1016-B	725.531	847.553		-16.8	112	-0.01	5.80- 5.86
43		AR1016-C	1.575	1.749	E3	-11.0	106	-0.01	6.77- 6.83
44		AR1016-D	737.373	955.752		-29.6#	121	-0.01	7.05- 7.11
45		AR1016-E	452.921	525.246		-16.0	113	-0.01	8.01- 8.08
46		AR1260-A	1.694	1.930	E3	-13.9	111	-0.02	12.06-12.18
47		AR1260-B	1.204	1.444	E3	-19.9	115	-0.02	12.23-12.35

8.9.32

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GEF6455-CC6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF190092.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

48		AR1260-C	1032.375	1187.370		-15.0	111	-0.02	12.91-13.04
49		AR1260-D	2.531	2.844	E3	-12.4	110	-0.02	13.49-13.62
50		AR1260-E	2.450	2.765	E3	-12.9	111	-0.02	14.35-14.48
51	S	Decachlorobiphenyl	19.092	19.407	E3	-1.6	103	-0.01	16.99-17.11

(#) = Out of Range SPCC's out = 0 CCC's out = 0
EF189988.D PCB6451.M Wed Jun 19 09:52:36 2019 GCEF

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GEF6455-CC6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF190103.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GEF6454\EF190103.D\ECD1A.CH Vial: 35
Signal #2 : C:\HPCHEM\1\DATA\GEF6454\EF190103.D\ECD2B.CH
Acq On : 19 Jun 2019 2:41 pm Operator: tianweir
Sample : cc6451-1000 Inst : gcef
Misc : op21056,GEF6455,1000,,,5,1 Multiplr: 1.00
IntFile Signal #1: AUTOINT1.E IntFile Signal #2: .E

Method : C:\HPCHEM\1\METHODS\PCB6451.M (Chemstation Integrator)
Title : GC/ECD- PCB
Last Update : Wed Jun 19 15:00:59 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	12.755	13.868 E3	-8.7	109	0.00	3.30- 3.55
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	348.222	348.067	0.0	101	0.00	3.90- 4.08

8.9.33

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GEF6455-CC6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF190103.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42		AR1016-B	619.743	655.000		-5.7	107	0.00	4.48- 4.61
43		AR1016-C	1.450	1.475	E3	-1.7	102	0.00	5.36- 5.43
44		AR1016-D	542.403	591.346		-9.0	109	0.00	5.61- 5.67
45		AR1016-E	540.345	602.887		-11.6	109	0.00	6.36- 6.42
46		AR1260-A	1.353	1.460	E3	-7.9	107	0.01	10.02-10.16
47		AR1260-B	995.144	1082.373		-8.8	106	0.00	10.24-10.38
48		AR1260-C	801.438	824.509		-2.9	106	0.00	10.77-10.91
49		AR1260-D	2.151	2.476	E3	-15.1	113	0.01	11.49-11.61
50		AR1260-E	2.064	2.285	E3	-10.7	109	0.00	12.16-12.30
51	S	Decachlorobiphenyl	17.065	19.667	E3	-15.2	114	0.00	14.53-14.67
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	15.532	17.017	E3	-9.6	108	0.00	4.00- 4.22
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	377.630	423.313		-12.1	109	0.00	5.00- 5.12
42		AR1016-B	725.531	795.125		-9.6	109	0.00	5.80- 5.86
43		AR1016-C	1.575	1.639	E3	-4.1	102	0.00	6.77- 6.83
44		AR1016-D	737.373	919.138		-24.7#	120	0.00	7.05- 7.11
45		AR1016-E	452.921	503.690		-11.2	108	0.00	8.02- 8.09
46		AR1260-A	1.694	1.903	E3	-12.3	109	0.00	12.06-12.18
47		AR1260-B	1.204	1.422	E3	-18.1	116	0.00	12.23-12.35

8.9.33

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GEF6455-CC6451
Account: NOREASCA NOREAS, Inc. **Lab FileID:** EF190103.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

48		AR1260-C	1032.375	1172.630		-13.6	112	0.00	12.91-13.04
49		AR1260-D	2.531	2.867	E3	-13.3	113	0.00	13.49-13.62
50		AR1260-E	2.450	2.835	E3	-15.7	114	0.01	14.36-14.49
51	S	Decachlorobiphenyl	19.092	20.155	E3	-5.6	110	0.00	16.98-17.11

(#) = Out of Range SPCC's out = 0 CCC's out = 0
EF190092.D PCB6451.M Wed Jun 19 15:01:54 2019 GCEF

8.9.33

8

Initial Calibration Summary

Job Number: JC89914 **Sample:** GXX6720-ICC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436622.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 : PCB6720.M
Title :
Last Update : Wed Jun 19 15:55:45 2019
Response Via : Initial Calibration

Calibration Files
50 =XX2436626.D 250 =XX2436620.D 500 =XX2436621.D
1000 =XX2436622.D 2000 =XX2436623.D 3000 =XX2436624.D

	Compound	50	250	500	1000	2000	3000	Avg		%RSD
1) S	Tetrachloro-m...	1.459	1.230	1.223	1.197	1.227	1.269	1.267	E7	7.63
2)	AR1221-A				9.548			9.548	E4	0.00
3)	AR1221-B				1.469			1.469	E5	0.00
4)	AR1221-C				4.395			4.395	E5	0.00
5)	AR1221-D				6.770			6.770	E4	0.00
6)	AR1221-E				8.819			8.819	E4	0.00
7)	AR1232-A				3.042			3.042	E5	0.00
8)	AR1232-B				2.173			2.173	E5	0.00
9)	AR1232-C				4.481			4.481	E5	0.00
10)	AR1232-D				1.660			1.660	E5	0.00
11)	AR1232-E				1.635			1.635	E5	0.00
12)	AR1242-A				3.771			3.771	E5	0.00
13)	AR1242-B				8.326			8.326	E5	0.00
14)	AR1242-C				3.056			3.056	E5	0.00
15)	AR1242-D				3.196			3.196	E5	0.00
16)	AR1242-E				2.701			2.701	E5	0.00
17)	AR1248-A				1.865			1.865	E5	0.00
18)	AR1248-B				4.586			4.586	E5	0.00
19)	AR1248-C				4.813			4.813	E5	0.00
20)	AR1248-D				4.800			4.800	E5	0.00
21)	AR1248-E				2.410			2.410	E5	0.00
22)	AR1248-F				4.317			4.317	E5	0.00
23)	AR1248-G				3.408			3.408	E5	0.00
24)	AR1254-A				3.572			3.572	E5	0.00
25)	AR1254-B				6.496			6.496	E5	0.00
26)	AR1254-C				4.098			4.098	E5	0.00
27)	AR1254-D				7.082			7.082	E5	0.00
28)	AR1254-E				4.493			4.493	E5	0.00
29)	AR1254-F				4.960			4.960	E5	0.00
30)	AR1254-G				7.099			7.099	E5	0.00
31)	AR1262-A				5.653			5.653	E5	0.00
32)	AR1262-B				7.185			7.185	E5	0.00
33)	AR1262-C				6.685			6.685	E5	0.00
34)	AR1262-D				1.565			1.565	E6	0.00
35)	AR1262-E				1.739			1.739	E6	0.00
36)	AR1268-A				1.611			1.611	E6	0.00
37)	AR1268-B				1.843			1.843	E6	0.00
38)	AR1268-C				1.494			1.494	E6	0.00
39)	AR1268-D				6.038			6.038	E5	0.00
40)	AR1268-E				5.162			5.162	E6	0.00
41)	AR1016-A	3.089	2.718	2.640	2.512	2.489	2.437	2.647	E5	9.06
42)	AR1016-B	6.089	4.787	4.621	4.427	4.420	4.357	4.783	E5	13.78
43)	AR1016-C	1.314	1.036	1.017	1.004	1.024	1.026	1.070	E6	11.20
44)	AR1016-D	4.895	3.830	3.753	3.644	3.681	3.652	3.909	E5	12.48
45)	AR1016-E	5.177	4.065	3.901	3.818	3.852	3.840	4.109	E5	12.92
46)	AR1260-A	1.115	0.864	0.830	0.834	0.859	0.873	0.896	E6	12.13

Initial Calibration Summary

Job Number: JC89914 **Sample:** GXX6720-ICC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436622.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

47)		AR1260-B	6.092	4.657	4.503	4.474	4.557	4.599	4.814 E5	13.08
48)		AR1260-C	7.319	5.142	5.000	4.878	4.973	5.019	5.389 E5	17.62
49)		AR1260-D	1.436	1.260	1.226	1.242	1.296	1.307	1.295 E6	5.87
50)		AR1260-E	1.509	1.282	1.229	1.265	1.257	1.253	1.299 E6	8.02
51)	S	Decachlorobip...	1.524	1.200	1.196	1.165	1.151	1.138	1.229 E7	11.93

Signal #2 Calibration Files

50	=XX2436626.D	250	=XX2436620.D	500	=XX2436621.D
1000	=XX2436622.D	2000	=XX2436623.D	3000	=XX2436624.D

		Compound	50	250	500	1000	2000	3000	Avg	%RSD
1)	S	Tetrachloro-m...	1.001	0.968	0.966	0.960	0.986	0.976 E7		1.75
2)		AR1221-A			6.734			6.734 E4		0.00
3)		AR1221-B			1.087			1.087 E5		0.00
4)		AR1221-C			2.653			2.653 E5		0.00
5)		AR1221-D			5.323			5.323 E4		0.00
6)		AR1221-E			2.903			2.903 E4		0.00
7)		AR1232-A			2.070			2.070 E5		0.00
8)		AR1232-B			1.636			1.636 E5		0.00
9)		AR1232-C			3.445			3.445 E5		0.00
10)		AR1232-D			1.384			1.384 E5		0.00
11)		AR1232-E			9.523			9.523 E4		0.00
12)		AR1242-A			2.886			2.886 E5		0.00
13)		AR1242-B			6.447			6.447 E5		0.00
14)		AR1242-C			2.572			2.572 E5		0.00
15)		AR1242-D			1.886			1.886 E5		0.00
16)		AR1242-E			2.319			2.319 E5		0.00
17)		AR1248-A			1.486			1.486 E5		0.00
18)		AR1248-B			3.948			3.948 E5		0.00
19)		AR1248-C			2.191			2.191 E5		0.00
20)		AR1248-D			2.896			2.896 E5		0.00
21)		AR1248-E			3.558			3.558 E5		0.00
22)		AR1248-F			3.881			3.881 E5		0.00
23)		AR1248-G			3.467			3.467 E5		0.00
24)		AR1254-A			3.600			3.600 E5		0.00
25)		AR1254-B			3.905			3.905 E5		0.00
26)		AR1254-C			3.160			3.160 E5		0.00
27)		AR1254-D			6.592			6.592 E5		0.00
28)		AR1254-E			4.416			4.416 E5		0.00
29)		AR1254-F			4.638			4.638 E5		0.00
30)		AR1254-G			5.963			5.963 E5		0.00
31)		AR1262-A			4.696			4.696 E5		0.00
32)		AR1262-B			7.311			7.311 E5		0.00
33)		AR1262-C			5.884			5.884 E5		0.00
34)		AR1262-D			1.438			1.438 E6		0.00
35)		AR1262-E			1.553			1.553 E6		0.00
36)		AR1268-A			1.682			1.682 E6		0.00
37)		AR1268-B			1.610			1.610 E6		0.00
38)		AR1268-C			1.382			1.382 E6		0.00
39)		AR1268-D			5.366			5.366 E5		0.00
40)		AR1268-E			4.071			4.071 E6		0.00
41)		AR1016-A	2.210	1.736	1.713	1.654	1.627	1.589	1.755 E5	13.07
42)		AR1016-B	4.753	3.657	3.559	3.434	3.406	3.365	3.696 E5	14.31
43)		AR1016-C	1.024	0.803	0.788	0.774	0.789	0.792	0.828 E6	11.62
44)		AR1016-D	3.941	3.153	3.108	3.007	3.077	3.072	3.226 E5	10.95
45)		AR1016-E	3.081	2.347	2.314	2.241	2.274	2.277	2.422 E5	13.40
46)		AR1260-A	8.630	7.171	7.009	7.068	7.206	7.288	7.395 E5	8.29
47)		AR1260-B	6.027	4.703	4.653	4.667	4.702	4.775	4.921 E5	11.04
48)		AR1260-C	5.611	4.549	4.478	4.484	4.559	4.620	4.717 E5	9.36

8.9.34

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Initial Calibration Summary

Job Number: JC89914 **Sample:** GXX6720-ICC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436622.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

49)		AR1260-D	1.427	1.162	1.137	1.159	1.179	1.188	1.209 E6	8.96
50)		AR1260-E	1.361	1.105	1.097	1.105	1.121	1.131	1.153 E6	8.90
51)	S	Decachlorobip...	1.100	0.844	0.831	0.827	0.834	0.843	0.880 E7	12.27

(#) = Out of Range

PCB6720.M Wed Jun 19 16:35:46 2019

8.9.34

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GXX6720-ICV6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436630.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6720\
Data File : XX2436630.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 19 Jun 2019 3:06 pm
Operator : tianweir
Sample : icv6720-1000
Misc : op21068,gxx6720,15.0,,,10,1
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 19 15:58:18 2019
Quant Method : C:\msdchem\1\METHODS\PCB6720.M
Quant Title :
QLast Update : Wed Jun 19 15:55:45 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	12.675	12.976 E6	-2.4	108	0.00
41		AR1016-A	264.745	252.950 E3	4.5	101	0.00
42		AR1016-B	478.345	455.105 E3	4.9	103	0.00
43		AR1016-C	1.070	1.022 E6	4.5	102	0.00
44		AR1016-D	390.943	370.918 E3	5.1	102	0.00
45		AR1016-E	410.890	383.257 E3	6.7	100	0.00
46		AR1260-A	0.896	0.850 E6	5.1	102	0.00
47		AR1260-B	481.370	461.233 E3	4.2	103	0.00
48		AR1260-C	538.855	496.717 E3	7.8	102	0.00
49		AR1260-D	1.295	1.278 E6	1.3	103	0.00
50		AR1260-E	1.299	1.226 E6	5.6	97	0.00
51	S	Decachlorobiphenyl	12.291	12.999 E6	-5.8	112	0.00

Signal #2

1	S	Tetrachloro-m-xylene	9.763	10.159 E6	-4.1	105	0.00
41		AR1016-A	175.509	168.431 E3	4.0	102	0.00
42		AR1016-B	369.554	347.863 E3	5.9	101	0.00
43		AR1016-C	0.828	0.788 E6	4.8	102	0.00
44		AR1016-D	322.650	310.381 E3	3.8	103	0.00
45		AR1016-E	242.237	225.883 E3	6.8	101	0.00
46		AR1260-A	739.514	721.729 E3	2.4	102	0.00
47		AR1260-B	492.115	483.659 E3	1.7	104	0.00
48		AR1260-C	471.689	456.472 E3	3.2	102	0.00
49		AR1260-D	1.209	1.173 E6	3.0	101	0.00
50		AR1260-E	1.153	1.091 E6	5.4	99	0.00
51	S	Decachlorobiphenyl	8.799	9.221 E6	-4.8	111	0.00

Initial Calibration Verification

Job Number: JC89914 **Sample:** GXX6720-ICV6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436630.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

PCB6720.M Wed Jun 19 16:34:51 2019

8.9.35

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Initial Calibration Verification

Job Number: JC89914 **Sample:** GXX6720-ICV6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436631.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6720\
Data File : XX2436631.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 19 Jun 2019 3:24 pm
Operator : tianweir
Sample : icv6720-1000
Misc : op21068,gxx6720,15.0,,,10,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 19 15:57:34 2019
Quant Method : C:\msdchem\1\METHODS\PCB6720.M
Quant Title :
QLast Update : Wed Jun 19 15:55:45 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	12.675	16.291 E6	-28.5#	136	0.00
2		AR1221-A	95.483	97.000 E3	-1.6	102	0.00
3		AR1221-B	146.932	136.514 E3	7.1	93	0.00
4		AR1221-C	439.516	399.232 E3	9.2	91	0.00
5		AR1221-D	67.701	56.851 E3	16.0	84	0.00
6		AR1221-E	88.194	72.092 E3	18.3	82	0.00
24		AR1254-A	357.183	365.097 E3	-2.2	102	0.00
25		AR1254-B	649.594	661.877 E3	-1.9	102	0.00
26		AR1254-C	409.819	407.898 E3	0.5	100	0.00
27		AR1254-D	708.219	712.309 E3	-0.6	101	0.00
28		AR1254-E	449.313	446.553 E3	0.6	99	0.00
29		AR1254-F	495.966	505.090 E3	-1.8	102	0.00
30		AR1254-G	709.885	720.741 E3	-1.5	102	0.00
51	S	Decachlorobiphenyl	12.291	15.346 E6	-24.9#	132	0.00

Signal #2

1	S	Tetrachloro-m-xylene	9.763	12.297 E6	-26.0#	127	0.00
2		AR1221-A	67.342	71.400 E3	-6.0	106	0.00
3		AR1221-B	108.718	101.937 E3	6.2	94	0.00
4		AR1221-C	265.276	245.798 E3	7.3	93	0.00
5		AR1221-D	53.228	43.892 E3	17.5	82	0.00
6		AR1221-E	29.028	30.257 E3	-4.2	104	0.00
24		AR1254-A	359.991	361.035 E3	-0.3	100	0.00
25		AR1254-B	390.539	390.530 E3	0.0	100	0.00
26		AR1254-C	315.980	312.010 E3	1.3	99	0.00
27		AR1254-D	659.194	663.198 E3	-0.6	101	0.00
28		AR1254-E	441.642	441.364 E3	0.1	100	0.00
29		AR1254-F	463.842	462.480 E3	0.3	100	0.00
30		AR1254-G	596.290	609.203 E3	-2.2	102	0.00

Initial Calibration Verification

Job Number: JC89914 **Sample:** GXX6720-ICV6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436631.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

51	S	Decachlorobiphenyl	8.799	10.974 E6	-24.7#	133	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

PCB6720.M Wed Jun 19 16:34:52 2019

Initial Calibration Verification

Job Number: JC89914 **Sample:** GXX6720-ICV6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436632.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6720\
Data File : XX2436632.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 19 Jun 2019 3:43 pm
Operator : tianweir
Sample : icv6720-1000
Misc : op21068,gxx6720,15.0,,,10,1
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 19 16:09:30 2019
Quant Method : C:\msdchem\1\METHODS\PCB6720.M
Quant Title :
QLast Update : Wed Jun 19 15:55:45 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	12.675	14.605 E6	-15.2	122	0.00
7		AR1232-A	304.159	329.001 E3	-8.2	108	0.00
8		AR1232-B	217.304	218.444 E3	-0.5	101	0.00
9		AR1232-C	448.089	450.474 E3	-0.5	101	0.00
10		AR1232-D	166.022	166.890 E3	-0.5	101	0.00
11		AR1232-E	163.546	164.221 E3	-0.4	100	0.00
31		AR1262-A	565.325	534.585 E3	5.4	95	0.00
32		AR1262-B	718.492	682.912 E3	5.0	95	0.00
33		AR1262-C	668.544	633.645 E3	5.2	95	0.00
34		AR1262-D	1.565	1.490 E6	4.8	95	0.00
35		AR1262-E	1.739	1.663 E6	4.4	96	0.00
51	S	Decachlorobiphenyl	12.291	14.338 E6	-16.7	123	0.00

Signal #2

1	S	Tetrachloro-m-xylene	9.763	11.360 E6	-16.4	118	0.00
7		AR1232-A	207.008	210.565 E3	-1.7	102	0.00
8		AR1232-B	163.602	166.362 E3	-1.7	102	0.00
9		AR1232-C	344.457	348.967 E3	-1.3	101	0.00
10		AR1232-D	138.397	140.175 E3	-1.3	101	0.00
11		AR1232-E	95.233	96.107 E3	-0.9	101	0.00
31		AR1262-A	469.594	454.053 E3	3.3	97	0.00
32		AR1262-B	731.067	705.821 E3	3.5	97	0.00
33		AR1262-C	588.404	569.788 E3	3.2	97	0.00
34		AR1262-D	1.438	1.386 E6	3.6	96	0.00
35		AR1262-E	1.553	1.513 E6	2.6	97	0.00
51	S	Decachlorobiphenyl	8.799	10.308 E6	-17.1	125	0.00

Initial Calibration Verification

Job Number: JC89914 **Sample:** GXX6720-ICV6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436632.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

PCB6720.M Wed Jun 19 16:34:54 2019

8.9.37

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Initial Calibration Verification

Job Number: JC89914 **Sample:** GXX6720-ICV6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436633.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6720\
Data File : XX2436633.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 19 Jun 2019 4:01 pm
Operator : tianweir
Sample : icv6720-1000
Misc : op21068,gxx6720,15.0,,,10,1
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 19 16:33:45 2019
Quant Method : C:\msdchem\1\METHODS\PCB6720.M
Quant Title :
QLast Update : Wed Jun 19 15:55:45 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	12.675	14.372 E6	-13.4	120	0.00
12		AR1242-A	377.072	367.183 E3	2.6	97	0.00
13		AR1242-B	832.554	808.910 E3	2.8	97	0.00
14		AR1242-C	305.579	295.573 E3	3.3	97	0.00
15		AR1242-D	319.569	311.039 E3	2.7	97	0.00
16		AR1242-E	270.077	260.987 E3	3.4	97	0.00
36		AR1268-A	1.611	1.549 E6	3.8	96	0.00
37		AR1268-B	1.843	1.781 E6	3.4	97	0.00
38		AR1268-C	1.494	1.441 E6	3.5	96	0.00
39		AR1268-D	603.839	570.107 E3	5.6	94	0.00
40		AR1268-E	5.162	4.957 E6	4.0	96	0.00
51	S	Decachlorobiphenyl	12.291	39.348 E6	-220.1#	338#	0.00

Signal #2

1	S	Tetrachloro-m-xylene	9.763	11.311 E6	-15.9	117	0.00
12		AR1242-A	288.587	280.024 E3	3.0	97	0.00
13		AR1242-B	644.682	624.324 E3	3.2	97	0.00
14		AR1242-C	257.164	249.763 E3	2.9	97	0.00
15		AR1242-D	188.607	182.960 E3	3.0	97	0.00
16		AR1242-E	231.910	223.565 E3	3.6	96	0.00
36		AR1268-A	1.682	1.627 E6	3.3	97	0.00
37		AR1268-B	1.610	1.562 E6	3.0	97	0.00
38		AR1268-C	1.382	1.339 E6	3.1	97	0.00
39		AR1268-D	536.607	511.519 E3	4.7	95	0.00
40		AR1268-E	4.071	3.938 E6	3.3	97	0.00
51	S	Decachlorobiphenyl	8.799	27.968 E6	-217.9#	338#	0.00

Initial Calibration Verification

Job Number: JC89914 **Sample:** GXX6720-ICV6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436633.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

PCB6720.M Wed Jun 19 16:34:55 2019

8.9.38

8

Initial Calibration Verification

Job Number: JC89914 **Sample:** GXX6720-ICV6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436634.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6720\
Data File : XX2436634.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 19 Jun 2019 4:20 pm
Operator : tianweir
Sample : icv6720-1000
Misc : op21068,gxx6720,15.0,,,10,1
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 19 16:34:25 2019
Quant Method : C:\msdchem\1\METHODS\PCB6720.M
Quant Title :
QLast Update : Wed Jun 19 15:55:45 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	12.675	14.424 E6	-13.8	121	0.00
17		AR1248-A	186.493	170.053 E3	8.8	91	0.00
18		AR1248-B	458.552	444.248 E3	3.1	97	0.00
19		AR1248-C	481.308	497.332 E3	-3.3	103	0.00
20		AR1248-D	480.033	495.586 E3	-3.2	103	0.00
21		AR1248-E	240.986	253.415 E3	-5.2	105	0.00
22		AR1248-F	431.676	458.395 E3	-6.2	106	0.00
23		AR1248-G	340.765	358.962 E3	-5.3	105	0.00
51	S	Decachlorobiphenyl	12.291	14.289 E6	-16.3	123	0.00
Signal #2							
1	S	Tetrachloro-m-xylene	9.763	11.679 E6	-19.6	121	0.00
17		AR1248-A	148.598	134.914 E3	9.2	91	0.00
18		AR1248-B	394.795	381.612 E3	3.3	97	0.00
19		AR1248-C	219.094	225.149 E3	-2.8	103	0.00
20		AR1248-D	289.561	299.055 E3	-3.3	103	0.00
21		AR1248-E	355.831	360.317 E3	-1.3	101	0.00
22		AR1248-F	388.148	410.813 E3	-5.8	106	0.00
23		AR1248-G	346.705	369.850 E3	-6.7	107	0.00
51	S	Decachlorobiphenyl	8.799	10.239 E6	-16.4	124	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

PCB6720.M Wed Jun 19 16:34:57 2019

8.9.39

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GXX6721-CC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436636.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\sa...\xx2436636.d\ECD1A.CH Vial: 21
Signal #2 : C:\msdchem\1\data\sarah\gxx6721\xx2436636.d\ECD2B.CH
Acq On : 19 Jun 2019 4:55 pm Operator: tianweir
Sample : CC6720-500 Inst : HP G1530A
Misc : op21068,gxx6721,15.0,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\pcb6720.m (ChemStation Integrator)
Title :
Last Update : Wed Jun 19 22:20:48 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	12.675	12.875 E6	-1.6	105	0.00	3.15- 3.21
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	264.745	275.025 E3	-3.9	104	0.00	3.55- 3.61

8.9.40

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GXX6721-CC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436636.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42		AR1016-B	478.345	485.524	E3	-1.5	105	0.00	3.97- 4.03
43		AR1016-C	1.070	1.064	E6	0.6	105	0.00	4.55- 4.61
44		AR1016-D	390.943	394.457	E3	-0.9	105	0.00	4.72- 4.78
45		AR1016-E	410.890	414.132	E3	-0.8	106	0.00	5.24- 5.31
46		AR1260-A	0.896	0.851	E6	5.0	102	0.00	7.66- 7.72
47		AR1260-B	481.370	478.070	E3	0.7	106	0.00	7.82- 7.88
48		AR1260-C	538.855	502.763	E3	6.7	101	0.00	8.16- 8.23
49		AR1260-D	1.295	1.303	E6	-0.6	106	0.00	8.60- 8.66
50		AR1260-E	1.299	1.287	E6	0.9	105	0.04	9.05- 9.11
51	S	Decachlorobiphenyl	12.291	12.774	E6	-3.9	107	0.00	10.56-10.63
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	9.763	10.216	E6	-4.6	106	0.00	3.96- 4.02
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	175.509	183.260	E3	-4.4	107	0.00	4.65- 4.71
42		AR1016-B	369.554	371.440	E3	-0.5	104	0.00	5.23- 5.29
43		AR1016-C	0.828	0.821	E6	0.8	104	0.00	5.88- 5.94
44		AR1016-D	322.650	328.264	E3	-1.7	106	0.00	6.08- 6.14
45		AR1016-E	242.237	241.945	E3	0.1	105	0.00	6.75- 6.81
46		AR1260-A	739.514	748.392	E3	-1.2	107	0.00	9.39- 9.45
47		AR1260-B	492.115	510.431	E3	-3.7	110	0.00	9.50- 9.56

8.9.40

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GXX6721-CC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436636.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

48		AR1260-C	471.689	487.359	E3	-3.3	109	0.00	9.94-10.00
49		AR1260-D	1.209	1.198	E6	0.9	105	0.00	10.29-10.35
50		AR1260-E	1.153	1.217	E6	-5.6	111	0.00	10.84-10.90
51	S	Decachlorobiphenyl	8.799	8.712	E6	1.0	105	0.00	12.53-12.59

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX2436621.D pcb6720.m Wed Jun 19 22:23:49 2019

8.9.40

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GXX6721-CC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436646.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\sa...\xx2436646.d\ECD1A.CH Vial: 27
Signal #2 : C:\msdchem\1\data\sarah\gxx6721\xx2436646.d\ECD2B.CH
Acq On : 19 Jun 2019 8:18 pm Operator: tianweir
Sample : cc6720-1000 Inst : HP G1530A
Misc : op21101,gxx6721,1000,,,5,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\pcb6720.m (ChemStation Integrator)
Title :
Last Update : Wed Jun 19 22:20:48 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	12.675	12.665 E6	0.1	106	0.00	3.15- 3.21
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	264.745	260.434 E3	1.6	104	0.00	3.55- 3.61

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GXX6721-CC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436646.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

42		AR1016-B	478.345	451.449	E3	5.6	102	0.00	3.98- 4.04
43		AR1016-C	1.070	1.023	E6	4.4	102	0.00	4.55- 4.61
44		AR1016-D	390.943	377.156	E3	3.5	103	0.00	4.72- 4.78
45		AR1016-E	410.890	390.602	E3	4.9	102	0.00	5.24- 5.31
46		AR1260-A	0.896	0.937	E6	-4.6	112	0.00	7.66- 7.72
47		AR1260-B	481.370	582.295	E3	-21.0#	130	0.00	7.82- 7.88
48		AR1260-C	538.855	528.427	E3	1.9	108	0.00	8.16- 8.23
49		AR1260-D	1.295	1.363	E6	-5.3	110	0.00	8.60- 8.66
50		AR1260-E	1.299	1.311	E6	-0.9	104	0.00	9.00- 9.06
51	S	Decachlorobiphenyl	12.291	11.755	E6	4.4	101	0.00	10.55-10.62
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	9.763	10.110	E6	-3.6	105	0.00	3.97- 4.03
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	175.509	173.390	E3	1.2	105	0.00	4.65- 4.71
42		AR1016-B	369.554	356.932	E3	3.4	104	0.00	5.23- 5.29
43		AR1016-C	0.828	0.811	E6	2.1	105	0.00	5.88- 5.94
44		AR1016-D	322.650	317.854	E3	1.5	106	0.00	6.08- 6.14
45		AR1016-E	242.237	234.245	E3	3.3	105	0.00	6.75- 6.81
46		AR1260-A	739.514	720.094	E3	2.6	102	0.00	9.38- 9.44
47		AR1260-B	492.115	477.750	E3	2.9	102	0.00	9.50- 9.56

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GXX6721-CC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436646.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

48		AR1260-C	471.689	460.530	E3	2.4	103	0.00	9.94-10.00
49		AR1260-D	1.209	1.175	E6	2.8	101	0.00	10.29-10.35
50		AR1260-E	1.153	1.116	E6	3.2	101	0.00	10.84-10.90
51	S	Decachlorobiphenyl	8.799	7.985	E6	9.3	97	0.00	12.52-12.58

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX2436622.D pcb6720.m Wed Jun 19 22:32:29 2019

8.9.41

8

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GXX6722-CC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436686.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6722\
Data File : XX2436686.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Jun 2019 9:56 am
Operator : christp
Sample : cc6720-1000
Misc : op21057,gxx6722,300,,,2,1
ALS Vial : 53 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 20 10:20:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\PCB6720.M
Quant Title :
QLast Update : Wed Jun 19 15:55:45 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	12.675	13.451 E6	-6.1	112	0.00
41		AR1016-A	264.745	280.365 E3	-5.9	112	0.00
42		AR1016-B	478.345	488.661 E3	-2.2	110	-0.02
43		AR1016-C	1.070	1.115 E6	-4.2	111	-0.02
44		AR1016-D	390.943	410.259 E3	-4.9	113	-0.02
45		AR1016-E	410.890	428.942 E3	-4.4	112	-0.02
46		AR1260-A	0.896	0.953 E6	-6.4	114	-0.02
47		AR1260-B	481.370	510.839 E3	-6.1	114	-0.02
48		AR1260-C	538.855	548.072 E3	-1.7	112	-0.02
49		AR1260-D	1.295	1.458 E6	-12.6	117	-0.02
50		AR1260-E	1.299	1.384 E6	-6.5	109	-0.02
51	S	Decachlorobiphenyl	12.291	13.131 E6	-6.8	113	-0.02

Signal #2

1	S	Tetrachloro-m-xylene	9.763	10.493 E6	-7.5	109	0.00
41		AR1016-A	175.509	179.056 E3	-2.0	108	0.00
42		AR1016-B	369.554	372.457 E3	-0.8	108	0.00
43		AR1016-C	0.828	0.853 E6	-3.0	110	0.00
44		AR1016-D	322.650	339.489 E3	-5.2	113	0.00
45		AR1016-E	242.237	253.427 E3	-4.6	113	0.00
46		AR1260-A	739.514	780.274 E3	-5.5	110	0.00
47		AR1260-B	492.115	532.690 E3	-8.2	114	0.00
48		AR1260-C	471.689	514.299 E3	-9.0	115	0.00
49		AR1260-D	1.209	1.301 E6	-7.6	112	0.00
50		AR1260-E	1.153	1.239 E6	-7.5	112	0.00
51	S	Decachlorobiphenyl	8.799	9.122 E6	-3.7	110	0.00

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GXX6722-CC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436686.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

PCB6720.M Thu Jun 20 10:23:37 2019

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GXX6722-CC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436688.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6722\
Data File : XX2436688.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Jun 2019 12:57 pm
Operator : tianweir
Sample : cc6720-1000
Misc : op21057,gxx6722,300,,,2,1
ALS Vial : 53 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 20 15:55:20 2019
Quant Method : C:\msdchem\1\METHODS\PCB6720.M
Quant Title :
QLast Update : Wed Jun 19 15:55:45 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	12.675	13.568 E6	-7.0	113	0.00
41		AR1016-A	264.745	280.437 E3	-5.9	112	0.00
42		AR1016-B	478.345	494.686 E3	-3.4	112	-0.02
43		AR1016-C	1.070	1.118 E6	-4.5	111	-0.02
44		AR1016-D	390.943	412.749 E3	-5.6	113	-0.02
45		AR1016-E	410.890	434.569 E3	-5.8	114	-0.02
46		AR1260-A	0.896	0.960 E6	-7.1	115	-0.03
47		AR1260-B	481.370	524.659 E3	-9.0	117	-0.03
48		AR1260-C	538.855	558.047 E3	-3.6	114	-0.03
49		AR1260-D	1.295	1.483 E6	-14.5	119	-0.03
50		AR1260-E	1.299	1.437 E6	-10.6	114	-0.03
51	S	Decachlorobiphenyl	12.291	13.288 E6	-8.1	114	-0.03

Signal #2

1	S	Tetrachloro-m-xylene	9.763	10.720 E6	-9.8	111	0.00
41		AR1016-A	175.509	184.839 E3	-5.3	112	0.00
42		AR1016-B	369.554	381.761 E3	-3.3	111	0.00
43		AR1016-C	0.828	0.874 E6	-5.6	113	0.00
44		AR1016-D	322.650	350.737 E3	-8.7	117	0.00
45		AR1016-E	242.237	264.631 E3	-9.2	118	0.00
46		AR1260-A	739.514	809.782 E3	-9.5	115	0.00
47		AR1260-B	492.115	546.732 E3	-11.1	117	0.00
48		AR1260-C	471.689	535.182 E3	-13.5	119	0.00
49		AR1260-D	1.209	1.326 E6	-9.7	114	0.00
50		AR1260-E	1.153	1.265 E6	-9.7	114	-0.04
51	S	Decachlorobiphenyl	8.799	9.335 E6	-6.1	113	0.00

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GXX6722-CC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436688.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

PCB6720.M Fri Jun 21 09:43:34 2019

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GXX6722-CC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436696.D
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6722\
Data File : XX2436696.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Jun 2019 5:00 pm
Operator : tianweir
Sample : cc6720-500
Misc : op21057,gxx6722,300,,,2,1
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 21 09:42:24 2019
Quant Method : C:\msdchem\1\METHODS\PCB6720.M
Quant Title :
QLast Update : Wed Jun 19 15:55:45 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	12.675	13.841 E6	-9.2	113	0.00
41		AR1016-A	264.745	306.767 E3	-15.9	116	0.00
42		AR1016-B	478.345	540.421 E3	-13.0	117	-0.02
43		AR1016-C	1.070	1.190 E6	-11.2	117	-0.02
44		AR1016-D	390.943	443.941 E3	-13.6	118	-0.02
45		AR1016-E	410.890	466.959 E3	-13.6	120	-0.02
46		AR1260-A	0.896	1.009 E6	-12.6	122	-0.02
47		AR1260-B	481.370	563.023 E3	-17.0	125	-0.02
48		AR1260-C	538.855	596.219 E3	-10.6	119	-0.02
49		AR1260-D	1.295	1.545 E6	-19.3	126	-0.02
50		AR1260-E	1.299	1.541 E6	-18.6	125	-0.02
51	S	Decachlorobiphenyl	12.291	14.422 E6	-17.3	121	-0.02

Signal #2

1	S	Tetrachloro-m-xylene	9.763	10.852 E6	-11.2	112	0.00
41		AR1016-A	175.509	196.277 E3	-11.8	115	0.00
42		AR1016-B	369.554	406.186 E3	-9.9	114	0.00
43		AR1016-C	0.828	0.901 E6	-8.8	114	0.00
44		AR1016-D	322.650	361.019 E3	-11.9	116	0.00
45		AR1016-E	242.237	269.735 E3	-11.4	117	0.00
46		AR1260-A	739.514	828.535 E3	-12.0	118	0.00
47		AR1260-B	492.115	537.734 E3	-9.3	116	0.00
48		AR1260-C	471.689	539.457 E3	-14.4	120	0.00
49		AR1260-D	1.209	1.315 E6	-8.8	116	0.00
50		AR1260-E	1.153	1.328 E6	-15.2	121	0.00
51	S	Decachlorobiphenyl	8.799	9.870 E6	-12.2	119	0.00

Continuing Calibration Summary

Job Number: JC89914 **Sample:** GXX6722-CC6720
Account: NOREASCA NOREAS, Inc. **Lab FileID:** XX2436696.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

PCB6720.M Fri Jun 21 09:42:35 2019

8.9.44

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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: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H8061819S1.CSV Date Analyzed: 06/18/19 Methods: SW846 7471B
Analyst: EAL Run ID: MA46938
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:28	MA46938-STD1	1		B=1.0399e-004, C=-1.5617e-002, Rho=0.9994692
12:29	MA46938-STD2	1		STDB
12:30	MA46938-STD3	1		STDC
12:32	MA46938-STD4	1		STDD
12:33	MA46938-STD5	1		STDE
12:35	MA46938-STD6	1		STDF
12:45	MA46938-ICV1	1		
12:46	MA46938-ICB1	1		
12:48	MA46938-CCV1	1		
12:50	MA46938-CCB1	1		
12:51	MA46938-CRI1	1		
12:55	MP15749-MB1	1		
12:57	MP15749-B1	1		
12:58	MP15749-S1	1		
13:00	MP15749-S2	1		
13:01	JC89914-9	1		
13:03	JC89914-10	1		
13:04	JC89914-11	1		
13:06	JC89914-12	1		
---------->	Last reportable sample/prep for job JC89914			
13:08	MA46938-CCV2	1		
13:09	MA46938-CCB2	1		
13:11	MP15750-MB1	1		
13:12	MP15750-B1	1		
13:13	MP15750-S1	1		
13:15	MP15750-S2	1		
13:17	JC89886-5	1		(sample used for QC only; not part of login JC89914)
13:19	ZZZZZZ	1		
13:20	ZZZZZZ	1		
13:22	ZZZZZZ	1		
13:23	ZZZZZZ	1		
13:24	MA46938-CCV3	1		
13:26	MA46938-CCB3	1		
13:28	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H8061819S1.CSV Date Analyzed: 06/18/19 Methods: SW846 7471B
Analyst: EAL Run ID: MA46938
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:29	ZZZZZZ	1		
13:30	ZZZZZZ	1		
13:32	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:35	ZZZZZZ	1		
13:36	ZZZZZZ	1		
13:37	ZZZZZZ	1		
13:39	ZZZZZZ	1		
13:40	MA46938-CCV4	1		
13:42	MA46938-CCB4	1		
13:44	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:46	ZZZZZZ	1		
13:48	ZZZZZZ	1		
13:49	MP15751-MB1	1		
13:50	MP15751-B1	1		
13:52	MP15751-S1	1		
13:53	MP15751-S2	1		
13:55	JC89950-1A	1		(sample used for QC only; not part of login JC89914)
13:57	MA46938-CCV5	1		
13:58	MA46938-CCB5	1		
14:00	ZZZZZZ	1		
14:01	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:04	ZZZZZZ	1		
14:06	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:09	ZZZZZZ	1		
14:11	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:14	MA46938-CCV6	1		
14:15	MA46938-CCB6	1		
14:17	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H8061819S1.CSV Date Analyzed: 06/18/19 Methods: SW846 7471B
Analyst: EAL Run ID: MA46938
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:18	ZZZZZZ	1		
14:20	ZZZZZZ	1		
14:21	ZZZZZZ	1		
14:23	ZZZZZZ	1		
14:26	MA46938-CRI2	1		
14:27	MA46938-CCV7	1		
14:30	MA46938-CCB7	1		

----------> Last reportable CCB for job JC89914
Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H8061819S1.CSV Date Analyzed: 06/18/19 Methods: SW846 7471B
Analyst: EAL Run ID: MA46938
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
12:45	MA46938-ICV1	1	X	
12:46	MA46938-ICB1	1	X	
12:48	MA46938-CCV1	1	X	
12:50	MA46938-CCB1	1	X	
12:51	MA46938-CRI1	1	X	
12:55	MP15749-MB1	1	X	
12:57	MP15749-B1	1	X	
12:58	MP15749-S1	1	X	
13:00	MP15749-S2	1	X	
13:01	JC89914-9	1	X	
13:03	JC89914-10	1	X	
13:04	JC89914-11	1	X	
13:06	JC89914-12	1	X	
13:08	MA46938-CCV2	1	X	
13:09	MA46938-CCB2	1	X	
13:11	MP15750-MB1	1	X	
13:12	MP15750-B1	1	X	
13:13	MP15750-S1	1	X	
13:15	MP15750-S2	1	X	
13:17	JC89886-5	1	X	(a)
13:19	ZZZZZZ	1		
13:20	ZZZZZZ	1		
13:22	ZZZZZZ	1		
13:23	ZZZZZZ	1		
13:24	MA46938-CCV3	1	X	
13:26	MA46938-CCB3	1	X	
13:28	ZZZZZZ	1		
13:29	ZZZZZZ	1		
13:30	ZZZZZZ	1		
13:32	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:35	ZZZZZZ	1		
13:36	ZZZZZZ	1		
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H8061819S1.CSV Date Analyzed: 06/18/19 Methods: SW846 7471B
Analyst: EAL Run ID: MA46938
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
13:37	ZZZZZZ	1		
13:39	ZZZZZZ	1		
13:40	MA46938-CCV4	1	X	
13:42	MA46938-CCB4	1	X	
13:44	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:46	ZZZZZZ	1		
13:48	ZZZZZZ	1		
13:49	MP15751-MB1	1	X	
13:50	MP15751-B1	1	X	
13:52	MP15751-S1	1	X	
13:53	MP15751-S2	1	X	
13:55	JC89950-1A	1	X	(a)
13:57	MA46938-CCV5	1	X	
13:58	MA46938-CCB5	1	X	
14:00	ZZZZZZ	1		
14:01	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:04	ZZZZZZ	1		
14:06	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:09	ZZZZZZ	1		
14:11	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:14	MA46938-CCV6	1	X	
14:15	MA46938-CCB6	1	X	
14:17	ZZZZZZ	1		
14:18	ZZZZZZ	1		
14:20	ZZZZZZ	1		
14:21	ZZZZZZ	1		
14:23	ZZZZZZ	1		
14:26	MA46938-CRI2	1	X	
14:27	MA46938-CCV7	1	X	
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H8061819S1.CSV Date Analyzed: 06/18/19 Methods: SW846 7471B
Analyst: EAL Run ID: MA46938
Parameters: Hg

Time	Sample Description	Element: Dilution	H g
14:30	MA46938-CCB7	1	X

(a) Sample used for QC only; not part of login JC89914.

Element: H
g

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H8061819S1.CSV Date Analyzed: 06/18/19 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA46938 Units: ug/l

Time:			12:46		12:50		13:09		13:26	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.014	-0.0486	<0.20	-0.0187	<0.20	-0.0402	<0.20	0.00540	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H8061819S1.CSV Date Analyzed: 06/18/19 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA46938 Units: ug/l

Time:			13:42		13:58		14:15		14:30	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.014	-0.0518	<0.20	-0.0157	<0.20	-0.0343	<0.20	0.00970	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H8061819S1.CSV Date Analyzed: 06/18/19 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA46938 Units: ug/l

Time:		12:45			12:48			13:08	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.13	104.3	2.5	2.38	95.2	2.5	2.36	94.4

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H8061819S1.CSV Date Analyzed: 06/18/19 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA46938 Units: ug/l

Time:		13:24			13:40			13:57	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.35	94.0	2.5	2.34	93.6	2.5	2.33	93.2

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H8061819S1.CSV Date Analyzed: 06/18/19 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA46938 Units: ug/l

Time:		14:14			14:27	
Sample ID:	CCV	CCV6		CCV	CCV7	
Metal	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.36	94.4	2.5	2.31	92.4

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: H8061819S1.CSV Date Analyzed: 06/18/19 Methods: SW846 7471B
QC Limits: 70 to 130 % Recovery Run ID: MA46938 Units: ug/l

Time:			12:51		14:26	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.178	89.0	0.171	85.5

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:50	MA46951-STD1	1		STDA
10:55	MA46951-STD2	1		STDB
11:00	ZZZZZZ	1		
11:05	ZZZZZZ	1		
11:11	MA46951-ICV1	1		
11:16	MA46951-ICB1	1		
11:21	MA46951-CCV1	1		
11:26	MA46951-CCB1	1		
11:32	ZZZZZZ	1		
11:37	MA46951-CRID1	1		
11:42	MA46951-ICSA1	1		
11:48	MA46951-ICSAB1	1		
11:53	MA46951-HSTD1	1		
11:59	MA46951-HSTD2	1		
12:05	ZZZZZZ	1		
12:10	ZZZZZZ	1		
12:15	ZZZZZZ	1		
12:21	MA46951-CCV2	1		
12:26	MA46951-CCB2	1		
12:31	MA46951-CRI1	1		
12:36	MA46951-CRID2	1		
12:42	MA46951-CRI2	1		
12:47	MA46951-CCV3	1		
12:52	MA46951-CCB3	1		
12:58	MP15743-MB1	1		
13:03	MP15655-B1	1		
13:08	MP15743-B1	1		
13:13	MP15743-S1	1		
13:19	MP15743-S2	1		
13:24	JC89739-5	1		(sample used for QC only; not part of login JC89914)
13:30	MP15743-SD1	5		
13:35	MP15743-PS1	1		
13:40	MA46951-CCV4	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:45	MA46951-CCB4	1		
13:51	MP15683-MB1	1		
13:56	ZZZZZZ	1		
13:56	MP15683-B1	1		
14:01	ZZZZZZ	1		
14:06	ZZZZZZ	1		
14:11	ZZZZZZ	1		
14:17	ZZZZZZ	10		
14:22	MP15743-S1	3		
14:27	MP15743-S2	3		
14:32	MA46951-CCV5	1		
14:37	MA46951-CCB5	1		
14:43	JC89739-5	3		(sample used for QC only; not part of login JC89914)
14:48	MP15743-SD1	15		
14:53	MP15743-PS1	3		
14:58	MP15743-S1	10		
15:04	MP15743-S2	10		
15:09	JC89739-5	10		(sample used for QC only; not part of login JC89914)
15:14	MP15743-SD1	50		
15:19	MP15743-PS1	10		
15:25	MA46951-CCV6	1		
15:30	MA46951-CCB6	1		
15:35	ZZZZZZ	1		
15:40	MA46951-CCV7	1		
15:45	MA46951-CCB7	1		
15:51	ZZZZZZ	1		
15:56	ZZZZZZ	1		
16:02	ZZZZZZ	1		
16:07	ZZZZZZ	1		
16:12	ZZZZZZ	1		
16:18	ZZZZZZ	1		
16:23	ZZZZZZ	1		
16:29	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:34	ZZZZZZ	1		
16:39	MA46951-CCV8	1		
16:44	MA46951-CCB8	1		
16:50	ZZZZZZ	1		
16:55	ZZZZZZ	3		
17:00	ZZZZZZ	10		
17:05	ZZZZZZ	3		
17:11	ZZZZZZ	3		
17:16	ZZZZZZ	3		
17:21	ZZZZZZ	3		
17:26	ZZZZZZ	3		
17:31	ZZZZZZ	3		
17:37	MA46951-CCV9	1		
17:42	MA46951-CCB9	1		
17:47	MA46951-CCV10	1		
17:52	MA46951-CCB10	1		
17:57	MA46951-CCV11	1		
18:02	MA46951-CCB11	1		
18:08	ZZZZZZ	3		
18:13	ZZZZZZ	3		
18:18	ZZZZZZ	3		
18:23	ZZZZZZ	3		
18:29	ZZZZZZ	3		
18:34	ZZZZZZ	3		
18:39	ZZZZZZ	3		
18:44	ZZZZZZ	3		
18:50	JC89914-9	1		
18:55	JC89914-10	1		
19:00	MA46951-CCV12	1		
19:05	MA46951-CCB12	1		
19:10	JC89914-11	1		
19:15	JC89914-12	1		
19:21	JC89914-9	3		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	19:26	ZZZZZZ	3		
	19:31	JC89914-11	3		
	19:36	JC89914-12	3		
----------->		Last reportable sample/prep for job JC89914			
	19:42	MP15655-MB1	1		
	19:47	MP15655-S1	3		
	19:52	MP15655-S2	3		
	19:57	MA46951-CCV13	1		
	20:02	MA46951-CCB13	1		
----------->		Last reportable CCB for job JC89914			
	20:07	JC89576-6	3		(sample used for QC only; not part of login JC89914)
	20:13	MP15655-SD1	15		
	20:18	MP15655-PS1	3		
	20:23	ZZZZZZ	3		
	20:28	ZZZZZZ	3		
	20:33	ZZZZZZ	3		
	20:39	ZZZZZZ	3		
	20:44	ZZZZZZ	3		
	20:49	ZZZZZZ	3		
	20:54	MA46951-CCV14	1		
	20:59	MA46951-CCB14	1		
	21:05	ZZZZZZ	3		
	21:10	ZZZZZZ	3		
	21:15	ZZZZZZ	3		
	21:20	ZZZZZZ	3		
	21:26	ZZZZZZ	3		
	21:31	ZZZZZZ	3		
	21:36	ZZZZZZ	3		
	21:42	ZZZZZZ	3		
	21:47	MP15683-S1	1		
	21:52	MP15683-S2	1		
	21:57	MA46951-CCV15	1		
	22:03	MA46951-CCB15	1		
	22:08	JC89745-4	1		(sample used for QC only; not part of login JC89914)
	22:13	MP15683-SD1	5		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:18	MP15683-PS1	1		
22:24	MP15683-S3	1		
22:29	MP15683-S4	1		
22:35	JC89745-6	1		(sample used for QC only; not part of login JC89914)
22:40	MP15683-SD2	5		
22:45	MP15683-PS2	1		
22:51	ZZZZZZ	1		
22:56	ZZZZZZ	1		
23:01	MA46951-CCV16	1		
23:06	MA46951-CCB16	1		
23:11	ZZZZZZ	1		
23:17	ZZZZZZ	1		
23:22	ZZZZZZ	1		
23:27	ZZZZZZ	1		
23:33	ZZZZZZ	1		
23:38	ZZZZZZ	1		
23:44	ZZZZZZ	1		
23:49	ZZZZZZ	1		
23:54	MA46951-CCV17	1		
23:59	MA46951-CCB17	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Element: Dilution	As	Ba	Be	Cd	Cr	Cu	Pb	Mn	Ni	Se	Ag	Zn	
11:00	ZZZZZZ	1													
11:05	ZZZZZZ	1													
11:11	MA46951-ICV1	1	X	X	X	X	X	X	X	X	X	X	X	X	
11:16	MA46951-ICB1	1	X	X	X	X	X	X	X	X	X	X	X	X	
11:21	MA46951-CCV1	1	X	X	X	X	X	X	X	X	X	X	X	X	
11:26	MA46951-CCB1	1	X	X	X	X	X	X	X	X	X	X	X	X	
11:32	ZZZZZZ	1													
11:37	MA46951-CRID1	1													
11:42	MA46951-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X	X	
11:48	MA46951-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X	X	
11:53	MA46951-HSTD1	1	X	X	X	X	X	X	X	X	X	X	X	X	
11:59	MA46951-HSTD2	1	X	X	X	X	X	X	X	X	X	X	X	X	
12:05	ZZZZZZ	1													
12:10	ZZZZZZ	1													
12:15	ZZZZZZ	1													
12:21	MA46951-CCV2	1	X	X	X	X	X	X	X	X	X	X	X	X	
12:26	MA46951-CCB2	1	X	X	X	X	X	X	X	X	X	X	X	X	
12:31	MA46951-CRI1	1													
12:36	MA46951-CRID2	1	X	X	X	X	X	X	X	X	X	X	X	X	
12:42	MA46951-CRI2	1	X	X	X	X	X	X	X	X	X	X	X	X	
12:47	MA46951-CCV3	1	X	X	X	X	X	X	X	X	X	X	X	X	
12:52	MA46951-CCB3	1	X	X	X	X	X	X	X	X	X	X	X	X	
12:58	MP15743-MB1	1	X	X	X	X	X	X	X	X	X	X	X	X	
13:03	MP15655-B1	1							X						
13:08	MP15743-B1	1	X	X	X	X	X	X	X	X	X	X	X	X	
13:13	MP15743-S1	1	X	X	X	X	X				X			X	
13:19	MP15743-S2	1	X	X	X	X	X				X			X	
13:24	JC89739-5	1	X												(a)
13:30	MP15743-SD1	5	X	X	X	X	X				X			X	
13:35	MP15743-PS1	1	X	X	X	X	X				X			X	
13:40	MA46951-CCV4	1	X	X	X	X	X	X	X	X	X	X	X	X	
13:45	MA46951-CCB4	1	X	X	X	X	X	X	X	X	X	X	X	X	
13:51	MP15683-MB1	1	X						X	X					
		Element:	As	Ba	Be	Cd	Cr	Cu	Pb	Mn	Ni	Se	Ag	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Element: Dilution	As	Ba	Be	Cd	Cr	Cu	Pb	Mn	Ni	Se	Ag	Zn	
13:56	ZZZZZZ	1													
13:56	MP15683-B1	1	X						X	X					
14:01	ZZZZZZ	1													
14:06	ZZZZZZ	1													
14:11	ZZZZZZ	1													
14:17	ZZZZZZ	10													
14:22	MP15743-S1	3						X	X	X		X	X		
14:27	MP15743-S2	3						X	X	X		X	X		
14:32	MA46951-CCV5	1	X	X	X	X	X	X	X	X	X	X	X	X	
14:37	MA46951-CCB5	1	X	X	X	X	X	X	X	X	X	X	X	X	
14:43	JC89739-5	3													(a)
14:48	MP15743-SD1	15						X	X	X		X	X		
14:53	MP15743-PS1	3						X	X	X		X	X		
14:58	MP15743-S1	10													
15:04	MP15743-S2	10													
15:09	JC89739-5	10													(a)
15:14	MP15743-SD1	50													
15:19	MP15743-PS1	10													
15:25	MA46951-CCV6	1	X	X	X	X	X	X	X	X	X	X	X	X	
15:30	MA46951-CCB6	1	X	X	X	X	X	X	X	X	X	X	X	X	
15:35	ZZZZZZ	1													
15:40	MA46951-CCV7	1	X	X	X	X	X	X	X	X	X	X	X	X	
15:45	MA46951-CCB7	1	X	X	X	X	X	X	X	X	X	X	X	X	
15:51	ZZZZZZ	1													
15:56	ZZZZZZ	1													
16:02	ZZZZZZ	1													
16:07	ZZZZZZ	1													
16:12	ZZZZZZ	1													
16:18	ZZZZZZ	1													
16:23	ZZZZZZ	1													
16:29	ZZZZZZ	1													
16:34	ZZZZZZ	1													
16:39	MA46951-CCV8	1	X	X	X	X	X	X	X	X	X	X	X	X	
		Element:	As	Ba	Be	Cd	Cr	Cu	Pb	Mn	Ni	Se	Ag	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Dilution	Element:	As	Ba	Be	Cd	Cr	Cu	Pb	Mn	Ni	Se	Ag	Zn
16:44	MA46951-CCB8	1		X	X	X	X	X	X	X	X	X	X	X	X
16:50	ZZZZZZ	1													
16:55	ZZZZZZ	3													
17:00	ZZZZZZ	10													
17:05	ZZZZZZ	3													
17:11	ZZZZZZ	3													
17:16	ZZZZZZ	3													
17:21	ZZZZZZ	3													
17:26	ZZZZZZ	3													
17:31	ZZZZZZ	3													
17:37	MA46951-CCV9	1		X	X	X	X	X	X	X	X	X	X	X	X
17:42	MA46951-CCB9	1		X	X	X	X	X	X	X	X	X	X	X	X
17:47	MA46951-CCV10	1		X	X	X	X	X	X	X	X	X	X	X	X
17:52	MA46951-CCB10	1		X	X	X	X	X	X	X	X	X	X	X	X
17:57	MA46951-CCV11	1		X	X	X	X	X	X	X	X	X	X	X	X
18:02	MA46951-CCB11	1		X	X	X	X	X	X	X	X	X	X	X	X
18:08	ZZZZZZ	3													
18:13	ZZZZZZ	3													
18:18	ZZZZZZ	3													
18:23	ZZZZZZ	3													
18:29	ZZZZZZ	3													
18:34	ZZZZZZ	3													
18:39	ZZZZZZ	3													
18:44	ZZZZZZ	3													
18:50	JC89914-9	1		X	X	X	X	X	X	X	X	X	X	X	X
18:55	JC89914-10	1		X	X	X	X	X	X	X	X	X	X	X	X
19:00	MA46951-CCV12	1		X	X	X	X	X	X	X	X	X	X	X	X
19:05	MA46951-CCB12	1		X	X	X	X	X	X	X	X	X	X	X	X
19:10	JC89914-11	1		X	X	X	X	X	X	X	X	X	X	X	X
19:15	JC89914-12	1		X	X	X	X	X	X	X	X	X	X	X	X
19:21	JC89914-9	3													
19:26	ZZZZZZ	3													
19:31	JC89914-11	3													
			Element:	As	Ba	Be	Cd	Cr	Cu	Pb	Mn	Ni	Se	Ag	Zn

REPORTED ELEMENTS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Element: Dilution	As	Ba	Be	Cd	Cr	Cu	Pb	Mn	Ni	Se	Ag	Zn	
19:36	JC89914-12	3													
19:42	MP15655-MB1	1							X						
19:47	MP15655-S1	3							X						
19:52	MP15655-S2	3							X						
19:57	MA46951-CCV13	1	X	X	X	X	X	X	X	X	X	X	X	X	
20:02	MA46951-CCB13	1	X	X	X	X	X	X	X	X	X	X	X	X	
20:07	JC89576-6	3							X						(a)
20:13	MP15655-SD1	15							X						
20:18	MP15655-PS1	3							X						
20:23	ZZZZZZ	3													
20:28	ZZZZZZ	3													
20:33	ZZZZZZ	3													
20:39	ZZZZZZ	3													
20:44	ZZZZZZ	3													
20:49	ZZZZZZ	3													
20:54	MA46951-CCV14	1	X	X	X	X	X	X	X	X	X	X	X	X	
20:59	MA46951-CCB14	1	X	X	X	X	X	X	X	X	X	X	X	X	
21:05	ZZZZZZ	3													
21:10	ZZZZZZ	3													
21:15	ZZZZZZ	3													
21:20	ZZZZZZ	3													
21:26	ZZZZZZ	3													
21:31	ZZZZZZ	3													
21:36	ZZZZZZ	3													
21:42	ZZZZZZ	3													
21:47	MP15683-S1	1	X						X	X					
21:52	MP15683-S2	1	X						X	X					
21:57	MA46951-CCV15	1	X	X	X	X	X	X	X	X	X	X	X	X	
22:03	MA46951-CCB15	1	X	X	X	X	X	X	X	X	X	X	X	X	
22:08	JC89745-4	1													(a)
22:13	MP15683-SD1	5	X						X	X					
22:18	MP15683-PS1	1	X						X	X					
22:24	MP15683-S3	1	X						X	X					
		Element:	As	Ba	Be	Cd	Cr	Cu	Pb	Mn	Ni	Se	Ag	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Element: Dilution	As	Ba	Be	Cd	Cr	Cu	Pb	Mn	Ni	Se	Ag	Zn	
22:29	MP15683-S4	1	X						X	X					
22:35	JC89745-6	1													(a)
22:40	MP15683-SD2	5	X						X	X					
22:45	MP15683-PS2	1	X						X	X					
22:51	ZZZZZZ	1													
22:56	ZZZZZZ	1													
23:01	MA46951-CCV16	1	X	X	X	X	X	X	X	X	X	X	X	X	
23:06	MA46951-CCB16	1	X	X	X	X	X	X	X	X	X	X	X	X	
23:11	ZZZZZZ	1													
23:17	ZZZZZZ	1													
23:22	ZZZZZZ	1													
23:27	ZZZZZZ	1													
23:33	ZZZZZZ	1													
23:38	ZZZZZZ	1													
23:44	ZZZZZZ	1													
23:49	ZZZZZZ	1													
23:54	MA46951-CCV17	1	X	X	X	X	X	X	X	X	X	X	X	X	
23:59	MA46951-CCB17	1	X	X	X	X	X	X	X	X	X	X	X	X	

(a) Sample used for QC only; not part of login JC89914.

Element:	As	Ba	Be	Cd	Cr	Cu	Pb	Mn	Ni	Se	Ag	Zn

INTERNAL STANDARD SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
10:50	MA46951-STD1	4811 R	194050 R	28756 R	8114 R
10:55	MA46951-STD2	4545	183630	28771	7158
11:00	ZZZZZZ	4598	183370	28339	7291
11:05	ZZZZZZ	4716	191220	28630	8006
11:11	MA46951-ICV1	4583	182210	29292	7303
11:16	MA46951-ICB1	4648	188210	28482	7870
11:21	MA46951-CCV1	4572	184350	28597	7281
11:26	MA46951-CCB1	4699	188990	28732	7938
11:32	ZZZZZZ	999999 !	189520	28507	7821
11:37	MA46951-CRID1	No results reported for the elements associated with this internal standard.			
11:42	MA46951-ICSA1	4156	168060	27527	6395
11:48	MA46951-ICSAB1	4178	167580	27632	6443
11:53	MA46951-HSTD1	4504	183900	28793	7674
11:59	MA46951-HSTD2	4171	169990	27576	6405
12:05	ZZZZZZ	4497	180150	27940	7764
12:10	ZZZZZZ	4485	185970	28064	7758
12:15	ZZZZZZ	4585	185610	27935	7781
12:21	MA46951-CCV2	4463	182330	28308	7128
12:26	MA46951-CCB2	4598	185540	28146	7810
12:31	MA46951-CRI1	No results reported for the elements associated with this internal standard.			
12:36	MA46951-CRID2	4542	184630	27749	7695
12:42	MA46951-CRI2	4520	181130	27643	7598
12:47	MA46951-CCV3	4448	179790	27887	7114
12:52	MA46951-CCB3	4578	185890	27995	7764
12:58	MP15743-MB1	4570	185700	28308	7758
13:03	MP15655-B1	4417	180040	28303	7200
13:08	MP15743-B1	4462	180950	28338	7237
13:13	MP15743-S1	4543	181180	29522	7087
13:19	MP15743-S2	4535	178980	29368	7111
13:24	JC89739-5	4632	189730	29383	7309
13:30	MP15743-SD1	4576	184340	28523	7497
13:35	MP15743-PS1	4539	184920	29452	7191
13:40	MA46951-CCV4	4413	178640	27709	7038

INTERNAL STANDARD SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:45	MA46951-CCB4	4560	183300	27625	7734
13:51	MP15683-MB1	4529	180860	27833	7698
13:56	ZZZZZZ	4429	181720	28378	7169
13:56	MP15683-B1	4429	181720	28378	7169
14:01	ZZZZZZ	4582	184900	28327	7763
14:06	ZZZZZZ	4463	180170	28237	7229
14:11	ZZZZZZ	4539	188820	27673	7724
14:17	ZZZZZZ	4574	185410	27912	7535
14:22	MP15743-S1	4544	179580	28237	7219
14:27	MP15743-S2	4510	182580	28367	7210
14:32	MA46951-CCV5	4381	176070	27938	7010
14:37	MA46951-CCB5	4533	177000	27823	7671
14:43	JC89739-5	4564	182090	28449	7367
14:48	MP15743-SD1	4570	183600	27933	7537
14:53	MP15743-PS1	4483	181630	28043	7229
14:58	MP15743-S1	4525	181310	27914	7401
15:04	MP15743-S2	4533	179960	28081	7409
15:09	JC89739-5	4565	180500	28008	7497
15:14	MP15743-SD1	4509	181220	27721	7588
15:19	MP15743-PS1	4531	179510	28033	7437
15:25	MA46951-CCV6	4415	179930	28419	7035
15:30	MA46951-CCB6	4532	183910	27810	7656
15:35	ZZZZZZ	4520	182770	27793	7628
15:40	MA46951-CCV7	4383	176050	27740	7016
15:45	MA46951-CCB7	4515	178290	27602	7650
15:51	ZZZZZZ	4552	184330	27960	7685
15:56	ZZZZZZ	4497	183320	27886	7600
16:02	ZZZZZZ	4645	173350	29442	6897
16:07	ZZZZZZ	4499	180470	27791	7621
16:12	ZZZZZZ	4477	181140	27674	7557
16:18	ZZZZZZ	4102	169720	26938	6579
16:23	ZZZZZZ	4476	177820	27778	7608
16:29	ZZZZZZ	4465	180360	27670	7656

INTERNAL STANDARD SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:34	ZZZZZZ	4501	182020	27921	7610
16:39	MA46951-CCV8	4372	175790	27825	6975
16:44	MA46951-CCB8	4527	181280	27885	7700
16:50	ZZZZZZ	4557	179910	29885	7223
16:55	ZZZZZZ	4482	178470	29238	7306
17:00	ZZZZZZ	4528	179830	28282	7487
17:05	ZZZZZZ	4485	178590	28667	7351
17:11	ZZZZZZ	4549	182080	28780	7339
17:16	ZZZZZZ	4546	183730	29023	7354
17:21	ZZZZZZ	4539	177490	28831	7376
17:26	ZZZZZZ	4460	177300	28445	7195
17:31	ZZZZZZ	4558	182130	28789	7354
17:37	MA46951-CCV9	4390	174600	27980	7029
17:42	MA46951-CCB9	4533	175360	27919	7706
17:47	MA46951-CCV10	4453	174670	27878	7118
17:52	MA46951-CCB10	4520	179980	27915	7691
17:57	MA46951-CCV11	4378	175550	28039	7028
18:02	MA46951-CCB11	4560	180710	27941	7733
18:08	ZZZZZZ	4553	182160	28491	7348
18:13	ZZZZZZ	4564	182140	28243	7362
18:18	ZZZZZZ	4584	188520	28628	7345
18:23	ZZZZZZ	4520	177650	28386	7300
18:29	ZZZZZZ	4443	178880	27961	7171
18:34	ZZZZZZ	4460	172060	27184	7195
18:39	ZZZZZZ	4443	171340	27827	7228
18:44	ZZZZZZ	4543	181420	28288	7278
18:50	JC89914-9	4594	183840	28695	7190
18:55	JC89914-10	4527	188160	28382	7233
19:00	MA46951-CCV12	4366	175460	27346	6964
19:05	MA46951-CCB12	4477	181790	27177	7578
19:10	JC89914-11	4636	182310	28472	7266
19:15	JC89914-12	4606	172790	28602	7213
19:21	JC89914-9	4549	181830	27918	7371

INTERNAL STANDARD SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
19:26	ZZZZZZ	4514	182660	27859	7405
19:31	JC89914-11	4541	175760	28030	7330
19:36	JC89914-12	4540	173180	27987	7362
19:42	MP15655-MB1	4526	180120	27575	7673
19:47	MP15655-S1	4460	178580	27547	7159
19:52	MP15655-S2	4447	177320	28086	7142
19:57	MA46951-CCV13	4401	176350	27174	7015
20:02	MA46951-CCB13	4497	182020	27472	7613
20:07	JC89576-6	4547	182380	27838	7375
20:13	MP15655-SD1	4533	184360	27581	7494
20:18	MP15655-PS1	4483	179170	27843	7237
20:23	ZZZZZZ	4512	179470	28294	7296
20:28	ZZZZZZ	4520	180960	27928	7322
20:33	ZZZZZZ	4562	182390	28262	7375
20:39	ZZZZZZ	4518	180410	28205	7293
20:44	ZZZZZZ	4456	176360	28001	7222
20:49	ZZZZZZ	4560	181150	28326	7360
20:54	MA46951-CCV14	4423	180310	27861	7055
20:59	MA46951-CCB14	4549	180950	27519	7695
21:05	ZZZZZZ	4570	184900	28525	7419
21:10	ZZZZZZ	4591	193020	28109	7408
21:15	ZZZZZZ	4526	177950	27612	7332
21:20	ZZZZZZ	4643	188530	28282	7485
21:26	ZZZZZZ	4599	187020	28028	7385
21:31	ZZZZZZ	4547	186520	28106	7301
21:36	ZZZZZZ	4616	187360	28152	7442
21:42	ZZZZZZ	4598	189090	28342	7396
21:47	MP15683-S1	4284	175180	27327	6689
21:52	MP15683-S2	4283	176530	27302	6690
21:57	MA46951-CCV15	4434	179120	27601	7052
22:03	MA46951-CCB15	4561	185320	27303	7698
22:08	JC89745-4	4242	174110	26936	6806
22:13	MP15683-SD1	4436	182250	27037	7339

INTERNAL STANDARD SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46951
Parameters: As,Ba,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:18	MP15683-PS1	4333	169120	27615	6783
22:24	MP15683-S3	4195	174390	27682	6612
22:29	MP15683-S4	4160	172500	26854	6561
22:35	JC89745-6	4208	173740	26738	6704
22:40	MP15683-SD2	4424	183600	27025	7300
22:45	MP15683-PS2	4391	178860	27657	6907
22:51	ZZZZZZ	4523	185770	27624	7645
22:56	ZZZZZZ	4532	188840	27461	7665
23:01	MA46951-CCV16	4469	181310	27825	7101
23:06	MA46951-CCB16	4571	187070	27420	7715
23:11	ZZZZZZ	4266	176360	27131	6852
23:17	ZZZZZZ	4289	177650	26815	6880
23:22	ZZZZZZ	4325	180400	27254	6953
23:27	ZZZZZZ	4276	177560	26835	6854
23:33	ZZZZZZ	4358	175990	26748	6928
23:38	ZZZZZZ	4436	183110	27632	7086
23:44	ZZZZZZ	4506	174070	28025	7248
23:49	ZZZZZZ	4693	191660	28330	7917
23:54	MA46951-CCV17	4576	186480	27932	7258
23:59	MA46951-CCB17	4667	193410	27717	7867

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
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: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < 1/2 RL Run ID: MA46951 Units: ug/l

Time: / Sample ID: / Metal	RL	IDL	LOD	11:16 ICB1 raw	final	11:26 CCB1 raw	final	12:26 CCB2 raw	final
Aluminum	200	14	100						
Antimony	6.0	1.3	5.0						
Arsenic	5.0	1.5	3.0	-0.600	<5.0	0.100	<5.0	0.100	<5.0
Barium	200	.3	100	0.200	<200	0.200	<200	0.500	<200
Beryllium	2.0	.1	1.0	0.100	<2.0	0.100	<2.0	0.300	<2.0
Bismuth	20	3.3	10						
Boron	200	.8	100						
Cadmium	3.0	.1	2.0	0.00	<3.0	0.00	<3.0	0.300	<3.0
Calcium	5000	2.3	200						
Chromium	10	.5	5.0	-0.100	<10	0.00	<10	0.200	<10
Cobalt	50	.4	10						
Copper	10	.8	8.0	0.500	<10	0.600	<10	0.900	<10
Iron	100	4.4	50						
Lead	5.0	1.1	3.0	0.500	<5.0	0.600	<5.0	0.500	<5.0
Lithium	50	4.4	20						
Magnesium	5000	14	500						
Manganese	15	.1	5.0	0.200	<15	0.100	<15	0.300	<15
Molybdenum	20	.7	8.0						
Nickel	10	.3	8.0	0.400	<10	0.200	<10	0.200	<10
Phosphorus	50	2.4	25						
Potassium	10000	140	500						
Selenium	10	1.8	8.0	0.500	<10	-0.700	<10	-1.80	<10
Silicon	200	2.2	150						
Silver	10	.5	4.0	0.100	<10	0.400	<10	0.100	<10
Sodium	10000	34	1000						
Strontium	10	.1	2.0						
Sulfur	100	9.8	50						
Thallium	10	1.3	5.0						
Tin	10	.9	8.0						
Titanium	10	.3	4.0						
Tungsten	100	3.9	50						
Vanadium	50	.3	4.0						
Zinc	20	1.3	10	0.200	<20	0.300	<20	0.400	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < 1/2 RL Run ID: MA46951 Units: ug/l

Time:				11:16		11:26		12:26	
Sample ID:				ICB1		CCB1		CCB2	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Zirconium	10	.2	5.0						

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < 1/2 RL Run ID: MA46951 Units: ug/l

Time:				12:52		13:45		14:37	
Sample ID:				CCB3		CCB4		CCB5	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Aluminum	200	14	100						
Antimony	6.0	1.3	5.0						
Arsenic	5.0	1.5	3.0	0.400	<5.0	-0.400	<5.0	-1.20	<5.0
Barium	200	.3	100	0.400	<200	0.300	<200	0.200	<200
Beryllium	2.0	.1	1.0	0.300	<2.0	0.100	<2.0	0.100	<2.0
Bismuth	20	3.3	10						
Boron	200	.8	100						
Cadmium	3.0	.1	2.0	0.100	<3.0	0.00	<3.0	0.00	<3.0
Calcium	5000	2.3	200						
Chromium	10	.5	5.0	0.100	<10	0.00	<10	0.00	<10
Cobalt	50	.4	10						
Copper	10	.8	8.0	-0.100	<10	-0.100	<10	0.400	<10
Iron	100	4.4	50						
Lead	5.0	1.1	3.0	0.100	<5.0	-0.200	<5.0	0.300	<5.0
Lithium	50	4.4	20						
Magnesium	5000	14	500						
Manganese	15	.1	5.0	-0.100	<15	0.00	<15	-0.100	<15
Molybdenum	20	.7	8.0						
Nickel	10	.3	8.0	-0.100	<10	0.100	<10	0.300	<10
Phosphorus	50	2.4	25						
Potassium	10000	140	500						
Selenium	10	1.8	8.0	-1.30	<10	-1.40	<10	-0.200	<10
Silicon	200	2.2	150						
Silver	10	.5	4.0	0.600	<10	0.00	<10	-0.100	<10
Sodium	10000	34	1000						
Strontium	10	.1	2.0						
Sulfur	100	9.8	50						
Thallium	10	1.3	5.0						
Tin	10	.9	8.0						
Titanium	10	.3	4.0						
Tungsten	100	3.9	50						
Vanadium	50	.3	4.0						
Zinc	20	1.3	10	-4.20	<20	-4.10	<20	-4.30	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < 1/2 RL Run ID: MA46951 Units: ug/l

Time:				12:52		13:45		14:37	
Sample ID:				CCB3		CCB4		CCB5	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Zirconium	10	.2	5.0						

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < 1/2 RL Run ID: MA46951 Units: ug/l

Time:				15:30		15:45		16:44	
Sample ID:				CCB6		CCB7		CCB8	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Aluminum	200	14	100						
Antimony	6.0	1.3	5.0						
Arsenic	5.0	1.5	3.0	-0.300	<5.0	-0.400	<5.0	-0.300	<5.0
Barium	200	.3	100	0.300	<200	0.200	<200	0.00	<200
Beryllium	2.0	.1	1.0	0.00	<2.0	-0.100	<2.0	-0.100	<2.0
Bismuth	20	3.3	10						
Boron	200	.8	100						
Cadmium	3.0	.1	2.0	-0.200	<3.0	-0.200	<3.0	0.00	<3.0
Calcium	5000	2.3	200						
Chromium	10	.5	5.0	-0.100	<10	-0.100	<10	-0.200	<10
Cobalt	50	.4	10						
Copper	10	.8	8.0	-0.400	<10	0.300	<10	0.100	<10
Iron	100	4.4	50						
Lead	5.0	1.1	3.0	0.500	<5.0	0.300	<5.0	0.00	<5.0
Lithium	50	4.4	20						
Magnesium	5000	14	500						
Manganese	15	.1	5.0	-0.200	<15	-0.200	<15	-0.200	<15
Molybdenum	20	.7	8.0						
Nickel	10	.3	8.0	0.100	<10	0.100	<10	0.100	<10
Phosphorus	50	2.4	25						
Potassium	10000	140	500						
Selenium	10	1.8	8.0	-1.60	<10	-1.40	<10	-1.50	<10
Silicon	200	2.2	150						
Silver	10	.5	4.0	0.100	<10	-0.200	<10	0.00	<10
Sodium	10000	34	1000						
Strontium	10	.1	2.0						
Sulfur	100	9.8	50						
Thallium	10	1.3	5.0						
Tin	10	.9	8.0						
Titanium	10	.3	4.0						
Tungsten	100	3.9	50						
Vanadium	50	.3	4.0						
Zinc	20	1.3	10	-4.40	<20	-4.20	<20	-4.20	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < 1/2 RL Run ID: MA46951 Units: ug/l

Time:				15:30		15:45		16:44	
Sample ID:				CCB6		CCB7		CCB8	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Zirconium	10	.2	5.0						

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < 1/2 RL Run ID: MA46951 Units: ug/l

Time:				17:42		17:52		18:02	
Sample ID:				CCB9		CCB10		CCB11	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Aluminum	200	14	100						
Antimony	6.0	1.3	5.0						
Arsenic	5.0	1.5	3.0	-1.00	<5.0	-0.700	<5.0	-1.70	<5.0
Barium	200	.3	100	0.100	<200	0.100	<200	0.200	<200
Beryllium	2.0	.1	1.0	0.00	<2.0	0.00	<2.0	0.00	<2.0
Bismuth	20	3.3	10						
Boron	200	.8	100						
Cadmium	3.0	.1	2.0	-0.100	<3.0	-0.100	<3.0	-0.100	<3.0
Calcium	5000	2.3	200						
Chromium	10	.5	5.0	-0.100	<10	0.00	<10	-0.100	<10
Cobalt	50	.4	10						
Copper	10	.8	8.0	0.400	<10	0.100	<10	0.00	<10
Iron	100	4.4	50						
Lead	5.0	1.1	3.0	0.400	<5.0	0.00	<5.0	0.600	<5.0
Lithium	50	4.4	20						
Magnesium	5000	14	500						
Manganese	15	.1	5.0	-0.200	<15	-0.200	<15	-0.300	<15
Molybdenum	20	.7	8.0						
Nickel	10	.3	8.0	0.200	<10	0.00	<10	0.00	<10
Phosphorus	50	2.4	25						
Potassium	10000	140	500						
Selenium	10	1.8	8.0	-0.900	<10	0.700	<10	-1.50	<10
Silicon	200	2.2	150						
Silver	10	.5	4.0	-0.200	<10	-0.200	<10	-0.300	<10
Sodium	10000	34	1000						
Strontium	10	.1	2.0						
Sulfur	100	9.8	50						
Thallium	10	1.3	5.0						
Tin	10	.9	8.0						
Titanium	10	.3	4.0						
Tungsten	100	3.9	50						
Vanadium	50	.3	4.0						
Zinc	20	1.3	10	-4.50	<20	-4.30	<20	-4.40	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < 1/2 RL Run ID: MA46951 Units: ug/l

Time:				17:42		17:52		18:02	
Sample ID:				CCB9		CCB10		CCB11	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Zirconium	10	.2	5.0						

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < 1/2 RL Run ID: MA46951 Units: ug/l

Time:				19:05		20:02	
Sample ID:				CCB12		CCB13	
Metal	RL	IDL	LOD	raw	final	raw	final
Aluminum	200	14	100				
Antimony	6.0	1.3	5.0				
Arsenic	5.0	1.5	3.0	-1.90	<5.0	-0.400	<5.0
Barium	200	.3	100	0.100	<200	0.00	<200
Beryllium	2.0	.1	1.0	-0.100	<2.0	-0.100	<2.0
Bismuth	20	3.3	10				
Boron	200	.8	100				
Cadmium	3.0	.1	2.0	0.00	<3.0	-0.200	<3.0
Calcium	5000	2.3	200				
Chromium	10	.5	5.0	0.00	<10	-0.100	<10
Cobalt	50	.4	10				
Copper	10	.8	8.0	-0.200	<10	-0.500	<10
Iron	100	4.4	50				
Lead	5.0	1.1	3.0	0.00	<5.0	-0.200	<5.0
Lithium	50	4.4	20				
Magnesium	5000	14	500				
Manganese	15	.1	5.0	-0.200	<15	-0.300	<15
Molybdenum	20	.7	8.0				
Nickel	10	.3	8.0	0.100	<10	0.200	<10
Phosphorus	50	2.4	25				
Potassium	10000	140	500				
Selenium	10	1.8	8.0	-0.900	<10	-1.50	<10
Silicon	200	2.2	150				
Silver	10	.5	4.0	0.100	<10	0.00	<10
Sodium	10000	34	1000				
Strontium	10	.1	2.0				
Sulfur	100	9.8	50				
Thallium	10	1.3	5.0				
Tin	10	.9	8.0				
Titanium	10	.3	4.0				
Tungsten	100	3.9	50				
Vanadium	50	.3	4.0				
Zinc	20	1.3	10	-4.40	<20	-4.40	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < 1/2 RL Run ID: MA46951 Units: ug/l

Time:				19:05		20:02	
Sample ID:				CCB12		CCB13	
Metal	RL	IDL	LOD	raw	final	raw	final
Zirconium	10	.2	5.0				

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46951 Units: ug/l

Time:		11:11			11:21			12:21	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2050	102.5	2000	2010	100.5	2000	2070	103.5
Barium	2000	2020	101.0	2000	2050	102.5	2000	2100	105.0
Beryllium	2000	2060	103.0	2000	2090	104.5	2000	2130	106.5
Bismuth									
Boron									
Cadmium	2000	2080	104.0	2000	2060	103.0	2000	2130	106.5
Calcium	anr								
Chromium	2000	2110	105.5*(a	2000	2060	103.0	2000	2100	105.0
Cobalt	anr								
Copper	2000	2080	104.0	2000	2040	102.0	2000	2080	104.0
Iron	anr								
Lead	2000	2070	103.5	2000	2060	103.0	2000	2110	105.5
Lithium	anr								
Magnesium	anr								
Manganese	2000	2190	109.5*(a	2000	2140	107.0	2000	2180	109.0
Molybdenum									
Nickel	2000	2070	103.5	2000	2060	103.0	2000	2110	105.5
Phosphorus									
Potassium	anr								
Selenium	2000	2050	102.5	2000	2030	101.5	2000	2080	104.0
Silicon									
Silver	250	259	103.6	250	254	101.6	250	259	103.6
Sodium	anr								
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	2000	2070	103.5	2000	2060	103.0	2000	2120	106.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46951 Units: ug/l

Time:		11:11			11:21			12:21	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested
(a) Within 90 to 110 percent limits required for SW846 6010. No EPA 200.7 samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46951 Units: ug/l

Time:		12:47			13:40			14:32	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2020	101.0	2000	2050	102.5	2000	1950	97.5
Barium	2000	2090	104.5	2000	2110	105.5	2000	1960	98.0
Beryllium	2000	2130	106.5	2000	2140	107.0	2000	2000	100.0
Bismuth									
Boron									
Cadmium	2000	2100	105.0	2000	2120	106.0	2000	2030	101.5
Calcium	anr								
Chromium	2000	2090	104.5	2000	2120	106.0	2000	2050	102.5
Cobalt	anr								
Copper	2000	2070	103.5	2000	2100	105.0	2000	2040	102.0
Iron	anr								
Lead	2000	2090	104.5	2000	2120	106.0	2000	2040	102.0
Lithium	anr								
Magnesium	anr								
Manganese	2000	2180	109.0	2000	2170	108.5	2000	2070	103.5
Molybdenum									
Nickel	2000	2080	104.0	2000	2120	106.0	2000	2030	101.5
Phosphorus									
Potassium	anr								
Selenium	2000	2050	102.5	2000	2100	105.0	2000	2010	100.5
Silicon									
Silver	250	262	104.8	250	265	106.0	250	257	102.8
Sodium	anr								
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	2000	2090	104.5	2000	2110	105.5	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46951 Units: ug/l

Time:		12:47			13:40			14:32	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46951 Units: ug/l

Time:		15:25			15:40			16:39	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2030	101.5	2000	1990	99.5	2000	2030	101.5
Barium	2000	2000	100.0	2000	2040	102.0	2000	2050	102.5
Beryllium	2000	2040	102.0	2000	2070	103.5	2000	2080	104.0
Bismuth									
Boron									
Cadmium	2000	2100	105.0	2000	2080	104.0	2000	2100	105.0
Calcium	anr								
Chromium	2000	2090	104.5	2000	2110	105.5	2000	2110	105.5
Cobalt	anr								
Copper	2000	2080	104.0	2000	2090	104.5	2000	2100	105.0
Iron	anr								
Lead	2000	2100	105.0	2000	2080	104.0	2000	2100	105.0
Lithium	anr								
Magnesium	anr								
Manganese	2000	2110	105.5	2000	2150	107.5	2000	2120	106.0
Molybdenum									
Nickel	2000	2090	104.5	2000	2070	103.5	2000	2090	104.5
Phosphorus									
Potassium	anr								
Selenium	2000	2090	104.5	2000	2040	102.0	2000	2080	104.0
Silicon									
Silver	250	263	105.2	250	264	105.6	250	263	105.2
Sodium	anr								
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	2000	2090	104.5	2000	2060	103.0	2000	2080	104.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46951 Units: ug/l

Time:		15:25			15:40			16:39	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46951 Units: ug/l

Time:		17:37			17:47			17:57	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2010	100.5	2000	1990	99.5	2000	2020	101.0
Barium	2000	2010	100.5	2000	2030	101.5	2000	2030	101.5
Beryllium	2000	2050	102.5	2000	2060	103.0	2000	2060	103.0
Bismuth									
Boron									
Cadmium	2000	2080	104.0	2000	2050	102.5	2000	2090	104.5
Calcium	anr								
Chromium	2000	2140	107.0	2000	2140	107.0	2000	2130	106.5
Cobalt	anr								
Copper	2000	2130	106.5	2000	2130	106.5	2000	2120	106.0
Iron	anr								
Lead	2000	2080	104.0	2000	2050	102.5	2000	2080	104.0
Lithium	anr								
Magnesium	anr								
Manganese	2000	2160	108.0	2000	2180	109.0	2000	2190	109.5
Molybdenum									
Nickel	2000	2070	103.5	2000	2050	102.5	2000	2080	104.0
Phosphorus									
Potassium	anr								
Selenium	2000	2070	103.5	2000	2040	102.0	2000	2070	103.5
Silicon									
Silver	250	268	107.2	250	268	107.2	250	267	106.8
Sodium	anr								
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	2000	2060	103.0	2000	2040	102.0	2000	2080	104.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46951 Units: ug/l

Time:		17:37			17:47			17:57	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46951 Units: ug/l

Time:		19:00			19:57	
Sample ID:	CCV	CCV12		CCV	CCV13	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	anr					
Antimony	anr					
Arsenic	2000	2020	101.0	2000	2010	100.5
Barium	2000	2070	103.5	2000	2070	103.5
Beryllium	2000	2100	105.0	2000	2100	105.0
Bismuth						
Boron						
Cadmium	2000	2100	105.0	2000	2090	104.5
Calcium	anr					
Chromium	2000	2110	105.5	2000	2110	105.5
Cobalt	anr					
Copper	2000	2110	105.5	2000	2100	105.0
Iron	anr					
Lead	2000	2100	105.0	2000	2090	104.5
Lithium	anr					
Magnesium	anr					
Manganese	2000	2110	105.5	2000	2110	105.5
Molybdenum						
Nickel	2000	2090	104.5	2000	2080	104.0
Phosphorus						
Potassium	anr					
Selenium	2000	2090	104.5	2000	2080	104.0
Silicon						
Silver	250	265	106.0	250	264	105.6
Sodium	anr					
Strontium						
Sulfur						
Thallium	anr					
Tin						
Titanium						
Tungsten						
Vanadium	anr					
Zinc	2000	2080	104.0	2000	2070	103.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46951 Units: ug/l

Time:		19:00			19:57	
Sample ID:	CCV	CCV12		CCV	CCV13	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46951 Units: ug/l

Time:		11:53			11:59	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony	anr					
Arsenic	8000	8130	101.6			
Barium	8000	8240	103.0			
Beryllium	8000	8370	104.6			
Bismuth						
Boron						
Cadmium	8000	8040	100.5			
Calcium						
Chromium	8000	8580	107.3			
Cobalt	anr					
Copper	8000	8240	103.0			
Iron						
Lead	8000	7950	99.4			
Lithium	anr					
Magnesium						
Manganese	8000	8480	106.0			
Molybdenum						
Nickel	8000	8190	102.4			
Phosphorus						
Potassium						
Selenium	8000	8310	103.9			
Silicon						
Silver	625	641	102.6			
Sodium						
Strontium						
Sulfur						
Thallium	anr					
Tin						
Titanium						
Tungsten						
Vanadium	anr					
Zinc	8000	8590	107.4			

HIGH STANDARD CHECK SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46951 Units: ug/l

Time:		11:53			11:59	
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: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46951 Units: ug/l

Time:				12:36		12:42	
Sample ID:	CRI	CRIA	CRID	CRID2		CRI2	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr			
Antimony	6.0	20	3.0				
Arsenic	8.0	20	3.0	2.60	86.7	7.90	98.8
Barium	200		4.0	4.40	110.0	216	108.0
Beryllium	2.0		1.0	0.900	90.0	2.00	100.0
Bismuth	20						
Boron	100		10				
Cadmium	3.0		1.0	1.00	100.0	3.30	110.0
Calcium	5000	2000	1000	anr			
Chromium	10		2.0	1.90	95.0	10.6	106.0
Cobalt	50		3.0	anr			
Copper	10		2.0			10.1	101.0
Iron	100	500					
Lead	3.0	20	2.5			3.20	106.7
Lithium	50						
Magnesium	5000	2000	100	anr			
Manganese	15		3.0	2.90	96.7	16.4	109.3
Molybdenum	20						
Nickel	10		4.0	4.10	102.5	10.6	106.0
Phosphorus	50						
Potassium	5000		2000	anr			
Selenium	10	20	5.0			10.4	104.0
Silicon	200						
Silver	5.0		2.0			5.70	114.0
Sodium	5000		1000	anr			
Strontium	10						
Sulfur	50						
Thallium	10		2.0	anr			
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	anr			
Zinc	20		10			17.9	89.5

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46951 Units: ug/l

Time:				12:36		12:42	
Sample ID:	CRI	CRIA	CRID	CRID2		CRI2	
Metal	True	True	True	Results	% Rec	Results	% Rec
Zirconium	10						

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46951 Units: ug/l

Time:			11:42		11:48	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	522000	104.4	513000	102.6
Antimony		1000	0.900		1010	101.0
Arsenic		1000	-0.300		1040	104.0
Barium		500	1.10		519	103.8
Beryllium		500	0.100		511	102.2
Bismuth		500	8.50		518	103.6
Boron		500	-0.900		490	98.0
Cadmium		1000	-0.400		1060	106.0
Calcium	400000	400000	391000	97.8	391000	97.8
Chromium		500	-0.300		488	97.6
Cobalt		500	0.300		484	96.8
Copper		500	0.200		525	105.0
Iron	200000	200000	195000	97.5	192000	96.0
Lead		1000	0.200		931	93.1
Lithium		500	1.80		533	106.6
Magnesium	500000	500000	532000	106.4	528000	105.6
Manganese		500	-0.100		522	104.4
Molybdenum		500	-3.10		480	96.0
Nickel		1000	0.200		977	97.7
Phosphorus		500	3.60		539	107.8
Potassium			25.1		52.8	
Selenium		1000	1.70		1050	105.0
Silicon		500	-82.8		417	83.4
Silver		1000	-0.600		1100	110.0
Sodium			-28.1		-32.2	
Strontium		500	-7.00*		520	104.0
Sulfur		500	6.90		502	100.4
Thallium		1000	0.300		962	96.2
Tin		500	-2.90		460	92.0
Titanium		500	-1.40		506	101.2
Tungsten		500	0.00		468	93.6
Vanadium		500	0.200		498	99.6
Zinc		1000	-3.20		948	94.8

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: SD061919M1L.ICP Date Analyzed: 06/19/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46951 Units: ug/l

Time:			11:42		11:48	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Zirconium		500	6.30*		534	106.8

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15743
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 06/18/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	49	1.3	7.9		
Antimony	2.0	.13	.4		
Arsenic	2.0	.15	.27	0.0098	<2.0
Barium	20	.029	1.9	0.11	<20
Beryllium	0.20	.0098	.078	-0.0098	<0.20
Bismuth	2.0	.32	.51		
Boron	9.8	.078	.15		
Cadmium	0.49	.0098	.069	-0.0098	<0.49
Calcium	490	.23	43		
Chromium	0.98	.049	.36	0.049	<0.98
Cobalt	4.9	.039	.27		
Copper	2.5	.078	.82	0.14	<2.5
Iron	49	.43	19		
Lead	2.0	.11	.4	0.029	<2.0
Lithium	4.9	.43	.9		
Magnesium	490	1.3	13		
Manganese	1.5	.0098	.4	0.059	<1.5
Molybdenum	2.0	.069	.31		
Nickel	3.9	.029	.34	0.039	<3.9
Potassium	980	13	31		
Selenium	2.0	.18	.64	-0.21	<2.0
Silicon	20	.22	10		
Silver	0.49	.049	.17	0.029	<0.49
Sodium	980	3.3	76		
Strontium	4.9	.0098	.18		
Sulfur	20	.96	9.2		
Thallium	0.98	.13	.57		
Tin	9.8	.088	3.7		
Titanium	0.98	.029	.33		
Tungsten	4.9	.38	1.7		
Vanadium	4.9	.029	.19		
Zinc	4.9	.13	2.3	0.93	<4.9
Zirconium	2.0	.02	.23		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15743 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 06/18/19

Metal	RL	IDL	MDL	MB raw	final

Associated samples MP15743: JC89914-9, JC89914-10, JC89914-11, JC89914-12

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: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15743
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 06/18/19

Metal	JC89739-5 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	anr				
Antimony	anr				
Arsenic	8.3	258	258	96.9	75-125
Barium	95.0	359	258	102.4	75-125
Beryllium	1.3	261	258	100.8	75-125
Bismuth					
Boron					
Cadmium	0.065	259	258	100.5	75-125
Calcium	anr				
Chromium	34.3	298	258	100.6	75-125
Cobalt	anr				
Copper	15.3	284	258	104.3	75-125
Iron	anr				
Lead	43.5	326	258	110.0	75-125
Lithium					
Magnesium	anr				
Manganese	883	1100	258	84.2	75-125
Molybdenum					
Nickel	35.7	288	258	97.9	75-125
Potassium	anr				
Selenium	0.0	258	258	99.7	75-125
Silicon					
Silver	0.0	33.8	32.2	104.9	75-125
Sodium	anr				
Strontium					
Sulfur					
Thallium	anr				
Tin					
Titanium					
Tungsten					
Vanadium	anr				
Zinc	120	356	258	96.2	75-125
Zirconium					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15743
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 06/18/19

Metal	JC89739-5 Original MS	Spikelot MPSPK2	% Rec	QC Limits

Associated samples MP15743: JC89914-9, JC89914-10, JC89914-11, JC89914-12

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: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15743
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 06/18/19

Metal	JC89739-5 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	8.3	266	266	97.0	3.1	20
Barium	95.0	367	266	102.4	2.2	20
Beryllium	1.3	271	266	101.5	3.8	20
Bismuth						
Boron						
Cadmium	0.065	268	266	100.9	3.4	20
Calcium	anr					
Chromium	34.3	309	266	101.7	3.6	20
Cobalt	anr					
Copper	15.3	291	266	103.8	2.4	20
Iron	anr					
Lead	43.5	340	266	112.0	4.2	20
Lithium						
Magnesium	anr					
Manganese	883	1100	266	81.7	0.0	20
Molybdenum						
Nickel	35.7	294	266	97.2	2.1	20
Potassium	anr					
Selenium	0.0	269	266	100.9	4.2	20
Silicon						
Silver	0.0	34.6	33.2	104.2	2.3	20
Sodium	anr					
Strontium						
Sulfur						
Thallium	anr					
Tin						
Titanium						
Tungsten						
Vanadium	anr					
Zinc	120	362	266	95.6	1.7	20
Zirconium						

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15743 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 06/18/19

	JC89739-5	Spikelot		MSD	QC
Metal	Original MSD	MPSPK2	% Rec	RPD	Limit

Associated samples MP15743: JC89914-9, JC89914-10, JC89914-11, JC89914-12

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: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15743
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 06/18/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	206	200	103.0	80-120
Barium	208	200	104.0	80-120
Beryllium	212	200	106.0	80-120
Bismuth				
Boron				
Cadmium	210	200	105.0	80-120
Calcium	anr			
Chromium	209	200	104.5	80-120
Cobalt	anr			
Copper	208	200	104.0	80-120
Iron	anr			
Lead	222	200	111.0	80-120
Lithium				
Magnesium	anr			
Manganese	217	200	108.5	80-120
Molybdenum				
Nickel	208	200	104.0	80-120
Potassium	anr			
Selenium	206	200	103.0	80-120
Silicon				
Silver	25.8	25	103.2	80-120
Sodium	anr			
Strontium				
Sulfur				
Thallium	anr			
Tin				
Titanium				
Tungsten				
Vanadium	anr			
Zinc	210	200	105.0	80-120
Zirconium				

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15743
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 06/18/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits

Associated samples MP15743: JC89914-9, JC89914-10, JC89914-11, JC89914-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15743
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 06/18/19

Metal	JC89739-5 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	63.8	59.9	6.1	0-10
Barium	730	692	5.1	0-10
Beryllium	10.2	9.70	4.3	0-10
Bismuth				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium	anr			
Chromium	297	274	7.9	0-10
Cobalt	anr			
Copper	118	125	2.5	0-10
Iron	anr			
Lead	335	343	2.4	0-10
Lithium				
Magnesium	anr			
Manganese	6780	6940	3.0	0-10
Molybdenum				
Nickel	275	277	5.9	0-10
Potassium	anr			
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium	anr			
Strontium				
Sulfur				
Thallium	anr			
Tin				
Titanium				
Tungsten				
Vanadium	anr			
Zinc	920	858	6.8	0-10
Zirconium				

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15743
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 06/18/19

	JC89739-5		QC
Metal	Original SDL 1:5	%DIF	Limits

Associated samples MP15743: JC89914-9, JC89914-10, JC89914-11, JC89914-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

POST DIGESTATE SPIKE SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15743
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 06/18/19

Metal	Sample ml	Final ml	JC89739-5 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic	19.25	20	63.8	61.4075	2173	0.2	200	2000	105.6	80-120
Barium	19.25	20	684.3	702.1438	2824	0.2	200	2000	106.1	80-120
Beryllium	19.25	20	9.3	8.95125	2205	0.2	200	2000	109.8	80-120
Bismuth										
Boron										
Cadmium	19.25	20			2208	0.2	200	2000	110.4	80-120
Calcium										
Chromium	19.25	20	297	285.8625	2394	0.2	200	2000	105.4	80-120
Cobalt										
Copper	19.25	20	127.9	123.1038	2400	0.2	200	2000	113.8	80-120
Iron										
Lead	19.25	20	334.5	321.9563	2529	0.2	200	2000	110.4	80-120
Lithium										
Magnesium										
Manganese	19.25	20	7152	6883.8	8800	0.2	200	2000	95.8	80-120
Molybdenum										
Nickel	19.25	20	274.6	283.5525	2391	0.2	200	2000	105.4	80-120
Potassium										
Selenium	19.25	20			2264	0.2	200	2000	113.2	80-120
Silicon										
Silver	19.25	20			283.1	0.25	20	250	113.2	80-120
Sodium										
Strontium										
Sulfur										
Thallium										
Tin										
Titanium										
Tungsten										
Vanadium										
Zinc	19.25	20	828	885.6925	2899	0.2	200	2000	100.7	80-120
Zirconium										

POST DIGESTATE SPIKE SUMMARY

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15743
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 06/18/19

Metal	Sample ml	Final ml	JC89739-5 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits

Associated samples MP15743: JC89914-9, JC89914-10, JC89914-11, JC89914-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15749 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 06/18/19

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0023	.015	-0.0035	<0.033

Associated samples MP15749: JC89914-9, JC89914-10, JC89914-11, JC89914-12

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: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15749
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 06/18/19

Metal	JC89914-9 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.029	0.33	0.327	92.0	80-120

Associated samples MP15749: JC89914-9, JC89914-10, JC89914-11, JC89914-12

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: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15749 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 06/18/19

Metal	JC89914-9 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.029	0.33	0.325	92.7	0.0	20

Associated samples MP15749: JC89914-9, JC89914-10, JC89914-11, JC89914-12

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: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

QC Batch ID: MP15749
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 06/18/19

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.33	0.333	99.0	80-120

Associated samples MP15749: JC89914-9, JC89914-10, JC89914-11, JC89914-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Instrument Detection Limits

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Instrument ID: LEEMANHG8 **Effective Date:** 05/02/19

Analyte	IDL ug/l
Mercury	.0137

The above applies to the following instrument runs:
MA46938

Instrument Detection Limits

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Instrument ID: SSTRACE4 **Effective Date:** 01/16/19

Analyte	IDL ug/l
Aluminum	13.7
Antimony	1.3
Arsenic	1.5
Barium	.3
Beryllium	.1
Bismuth	3.3
Boron	.8
Cadmium	.1
Calcium	2.3
Chromium	.5
Cobalt	.4
Copper	.8
Iron	4.4
Lead	1.1
Lithium	4.4
Magnesium	13.6
Manganese	.1
Molybdenum	.7
Nickel	.3
Phosphorus	2.4
Potassium	135.6
Selenium	1.8
Silicon	2.2
Silver	.5
Sodium	33.9
Sulfur	9.8
Strontium	.1
Thallium	1.3
Tin	.9
Titanium	.3
Tungsten	3.9
Vanadium	.3
Zinc	1.3
Zirconium	.2

The above applies to the following instrument runs:
MA46951

Instrument Linear Ranges

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Instrument ID: LEEMANHG8 **Effective Date:** 03/10/17

Analyte	Linear Range ug/l
Mercury	5

The above applies to the following instrument runs:
MA46938

Instrument Linear Ranges

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Instrument ID: SSTRACE4 **Effective Date:** 07/16/18

Analyte	Linear Range ug/l
Aluminum	300000
Antimony	8000
Arsenic	8000
Barium	8000
Beryllium	8000
Bismuth	8000
Boron	8000
Cadmium	8000
Calcium	200000
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:
MA46951

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: JC89914
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
Chromium, Hexavalent	GP21943/GN96835			mg/kg	40	36.2	90.5	80-120%
Chromium, Hexavalent	GP21943/GN96835	0.40	0.0	mg/kg	920.297	873	94.9	80-120%
Cyanide	GP21932/GN96700	0.24	0.0	mg/kg	2	2.14	107.0	90-110%

Associated Samples:
Batch GP21932: JC89914-9, JC89914-10, JC89914-11, JC89914-12
Batch GP21943: JC89914-9, JC89914-10, JC89914-11, JC89914-12
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC89914
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
Chromium, Hexavalent	GP21943/GN96835	JC89914-9	mg/kg	0.48	0.55	13.6	0-20%
Cyanide	GP21932/GN96700	JC90028-6	mg/kg	0.0	0.0	0.0	0-49%
Redox Potential Vs H2	GN96664	JC89475-1	mv	429	446	3.9	0-15%
Solids, Percent	GN96628	JC89881-2	%	70.2	68.7	2.2	0-5%
Solids, Percent	GN96630	JC89580-1	%	88.8	88.9	0.1	0-5%
pH	GN96665	JC89475-1	su	5.43	5.55	2.2	0-5%

Associated Samples:
Batch GN96628: JC89914-1, JC89914-2, JC89914-3, JC89914-4
Batch GN96630: JC89914-5, JC89914-6, JC89914-7, JC89914-8, JC89914-9, JC89914-10, JC89914-11, JC89914-12
Batch GN96664: JC89914-9, JC89914-10, JC89914-11, JC89914-12
Batch GN96665: JC89914-9, JC89914-10, JC89914-11, JC89914-12
Batch GP21932: JC89914-9, JC89914-10, JC89914-11, JC89914-12
Batch GP21943: JC89914-9, JC89914-10, JC89914-11, JC89914-12
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC89914
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
Chromium, Hexavalent	GP21943/GN96835	JC89914-9	mg/kg	0.48	45.5	35.1	76.1(a)	75-125%
Chromium, Hexavalent	GP21943/GN96835	JC89914-9	mg/kg	0.48	1300	1010	77.8(b)	75-125%
Cyanide	GP21932/GN96700	JC90028-6	mg/kg	0.0	2.17	2.2	101.4	75-125%

Associated Samples:
Batch GP21932: JC89914-9, JC89914-10, JC89914-11, JC89914-12
Batch GP21943: JC89914-9, JC89914-10, JC89914-11, JC89914-12
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Good recovery on soluble XCR matrix spike. Good recovery (97.4%) on the post-spike.
(b) Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: E062019W1.CN Date Analyzed: 06/20/19 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: BM Run ID: GN96700
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:27	GN96700-STD1	1		STDA
16:28	GN96700-STD2	1		STDB
16:30	GN96700-STD3	1		STDC
16:31	GN96700-STD4	1		STDD
16:33	GN96700-STD5	1		STDE
16:34	GN96700-STD6	1		STDF
16:35	GN96700-STD7	1		STDG
16:37	GN96700-ICV1	1		
16:38	GN96700-ICB1	1		
16:39	GN96700-CCV1	1		
16:41	GN96700-CCB1	1		
16:42	GP21932-MB1	1		
16:43	GP21932-B1	1		
16:45	GP21932-S1	1		
16:46	GP21932-S2	1		
16:48	GP21932-D1	1		
16:49	JC90028-6	1		(sample used for QC only; not part of login JC89914)
16:50	ZZZZZZ	1		
16:52	ZZZZZZ	1		
16:53	JC89913-3	1		(sample used for QC only; not part of login JC89914)
16:54	JC89914-9	1		
16:56	GN96700-CCV2	1		
16:57	GN96700-CCB2	1		
16:58	JC89914-10	1		
17:00	JC89914-11	1		
17:01	JC89914-12	1		
17:03	ZZZZZZ	1		
17:04	ZZZZZZ	1		
17:05	ZZZZZZ	1		
17:07	ZZZZZZ	1		
17:08	ZZZZZZ	1		
17:09	ZZZZZZ	1		
17:11	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: E062019W1.CN Date Analyzed: 06/20/19 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: BM Run ID: GN96700
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:12	GN96700-CCV3	1		
17:13	GN96700-CCB3	1		
17:15	ZZZZZZ	1		
17:16	GP21931-MB1	1		
17:17	GP21931-B1	1		
17:19	GP21931-S1	1		
17:20	GP21931-S2	1		
17:22	GP21931-D1	1		
17:23	JC89571-1	1		(sample used for QC only; not part of login JC89914)
17:24	JC89510-1	1		(sample used for QC only; not part of login JC89914)
17:26	ZZZZZZ	1		
17:27	ZZZZZZ	1		
17:28	GN96700-CCV4	1		
17:30	GN96700-CCB4	1		
17:31	ZZZZZZ	1		
17:32	ZZZZZZ	1		
17:34	ZZZZZZ	1		
17:35	ZZZZZZ	1		
17:36	ZZZZZZ	1		
17:38	ZZZZZZ	1		
17:39	ZZZZZZ	1		
17:41	ZZZZZZ	1		
17:42	GP21936-MB1	1		
17:43	GP21936-B1	1		
17:45	GN96700-CCV5	1		
17:46	GN96700-CCB5	1		
17:47	GP21936-S1	1		
17:49	GP21936-D1	1		
17:50	GP21936-LB1	1		
17:52	JC87423-6R	1		(sample used for QC only; not part of login JC89914)
17:55	GN96700-CCV6	1		
17:56	GN96700-CCB6	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC89914
Account: NOREASCA - NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

File ID: E062019W1.CN Date Analyzed: 06/20/19 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Run ID: GN96700 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN96700-ICV1	Cyanide	0.313	0.010	0.0041	.3	104.3	90-110
GN96700-ICB1	Cyanide	0.0041 U	0.010	0.0041			
GN96700-CCV1	Cyanide	0.422	0.010	0.0041	.4	105.5	90-110
GN96700-CCB1	Cyanide	0.0041 U	0.010	0.0041			
GN96700-CCV2	Cyanide	0.416	0.010	0.0041	.4	104.0	90-110
GN96700-CCB2	Cyanide	0.0041 U	0.010	0.0041			
GN96700-CCV3	Cyanide	0.415	0.010	0.0041	.4	103.8	90-110
GN96700-CCB3	Cyanide	0.0041 U	0.010	0.0041			
GN96700-CCV4	Cyanide	0.416	0.010	0.0041	.4	104.0	90-110
GN96700-CCB4	Cyanide	0.0041 U	0.010	0.0041			
GN96700-CCV5	Cyanide	0.415	0.010	0.0041	.4	103.8	90-110
GN96700-CCB5	Cyanide	0.0041 U	0.010	0.0041			
GN96700-CCV6	Cyanide	0.417	0.010	0.0041	.4	104.3	90-110
GN96700-CCB6	Cyanide	0.0041 U	0.010	0.0041			

(!) Outside of QC limits

Percent Solids Raw Data Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: JC89914-1 **Analyzed:** 19-JUN-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: NWIRP-S1-WC-CF-027

Wet Weight (Total)	28.02	g
Tare Weight	19.22	g
Dry Weight (Total)	27.17	g
Solids, Percent	90.3	%

Sample: JC89914-2 **Analyzed:** 19-JUN-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: NWIRP-S1-WC-CF-028

Wet Weight (Total)	33.75	g
Tare Weight	25.33	g
Dry Weight (Total)	32.99	g
Solids, Percent	91	%

Sample: JC89914-3 **Analyzed:** 19-JUN-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: NWIRP-S1-WC-CF-029

Wet Weight (Total)	29.3	g
Tare Weight	19.75	g
Dry Weight (Total)	28.38	g
Solids, Percent	90.4	%

Sample: JC89914-4 **Analyzed:** 19-JUN-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: NWIRP-S1-WC-CF-030

Wet Weight (Total)	29.78	g
Tare Weight	20.05	g
Dry Weight (Total)	28.73	g
Solids, Percent	89.2	%

Sample: JC89914-5 **Analyzed:** 19-JUN-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: NWIRP-S1-WC-CF-031

Wet Weight (Total)	35.85	g
Tare Weight	27.48	g
Dry Weight (Total)	35.01	g
Solids, Percent	90	%

Sample: JC89914-6 **Analyzed:** 19-JUN-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: NWIRP-S1-WC-CF-032

Wet Weight (Total)	34.64	g
Tare Weight	25.73	g
Dry Weight (Total)	33.7	g
Solids, Percent	89.5	%

Percent Solids Raw Data Summary

Job Number: JC89914
Account: NOREASCA NOREAS, Inc.
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Sample: JC89914-7 **Analyzed:** 19-JUN-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: NWIRP-S1-WC-CF-033

Wet Weight (Total)	31.21	g
Tare Weight	23.13	g
Dry Weight (Total)	30.48	g
Solids, Percent	91	%

Sample: JC89914-8 **Analyzed:** 19-JUN-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: NWIRP-S1-WC-CF-034

Wet Weight (Total)	34.56	g
Tare Weight	25.41	g
Dry Weight (Total)	33.59	g
Solids, Percent	89.4	%

Sample: JC89914-9 **Analyzed:** 19-JUN-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: NWIRP-S1-WC-CF-035

Wet Weight (Total)	35.98	g
Tare Weight	27.78	g
Dry Weight (Total)	35.2	g
Solids, Percent	90.5	%

Sample: JC89914-10 **Analyzed:** 19-JUN-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: NWIRP-S1-WC-CF-036

Wet Weight (Total)	33.33	g
Tare Weight	24.4	g
Dry Weight (Total)	32.62	g
Solids, Percent	92	%

Sample: JC89914-11 **Analyzed:** 19-JUN-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: NWIRP-S1-WC-CF-037

Wet Weight (Total)	36.03	g
Tare Weight	26.55	g
Dry Weight (Total)	34.78	g
Solids, Percent	86.8	%

Sample: JC89914-12 **Analyzed:** 19-JUN-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: NWIRP-S1-WC-CF-038

Wet Weight (Total)	33.76	g
Tare Weight	24.6	g
Dry Weight (Total)	32.83	g
Solids, Percent	89.8	%

Sample Summary

NOREAS, Inc.

Job No: JC89914

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC89914-1	06/14/19	11:00	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-027
JC89914-2	06/14/19	11:05	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-028
JC89914-3	06/14/19	11:10	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-029
JC89914-4	06/14/19	11:15	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-030
JC89914-5	06/14/19	11:20	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-031
JC89914-6	06/14/19	11:21	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-032
JC89914-7	06/14/19	11:24	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-033
JC89914-8	06/14/19	11:30	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-034
JC89914-9	06/14/19	11:33	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-035
JC89914-10	06/14/19	11:38	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-036
JC89914-11	06/14/19	11:43	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-037
JC89914-12	06/14/19	11:50	NS	06/14/19	SO	Soil	NWIRP-S1-WC-CF-038

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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-027
Lab Sample ID: JC89914-1 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 90.3
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	1C165384.D	1	06/19/19 11:12	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	7.0 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	5.9 U	7.9	5.9	3.2	ug/kg	
71-43-2	Benzene	0.36 U	0.40	0.36	0.36	ug/kg	
78-93-3	2-Butanone (MEK)	5.9 U	7.9	5.9	3.0	ug/kg	
104-51-8	n-Butylbenzene	1.2 U	1.6	1.2	0.32	ug/kg	
135-98-8	sec-Butylbenzene	1.2 U	1.6	1.2	0.34	ug/kg	
98-06-6	tert-Butylbenzene	0.79 U	1.6	0.79	0.40	ug/kg	
56-23-5	Carbon tetrachloride	0.79 U	1.6	0.79	0.49	ug/kg	
108-90-7	Chlorobenzene	1.2 U	1.6	1.2	0.36	ug/kg	
67-66-3	Chloroform	0.79 U	1.6	0.79	0.39	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.59 U	0.79	0.59	0.43	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.59 U	0.79	0.59	0.39	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.59 U	0.79	0.59	0.39	ug/kg	
75-34-3	1,1-Dichloroethane	0.59 U	0.79	0.59	0.39	ug/kg	
107-06-2	1,2-Dichloroethane	0.59 U	0.79	0.59	0.37	ug/kg	
75-35-4	1,1-Dichloroethene	0.59 U	0.79	0.59	0.52	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.71 U	0.79	0.71	0.66	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.59 U	0.79	0.59	0.48	ug/kg	
123-91-1	1,4-Dioxane	79 U	99	79	29	ug/kg	
100-41-4	Ethylbenzene	0.59 U	0.79	0.59	0.44	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.40 U	0.79	0.40	0.37	ug/kg	
75-09-2	Methylene chloride	2.4 U	4.0	2.4	0.79	ug/kg	
103-65-1	n-Propylbenzene	0.79 U	1.6	0.79	0.37	ug/kg	
127-18-4	Tetrachloroethene	0.79 U	1.6	0.79	0.46	ug/kg	
108-88-3	Toluene	0.59 U	0.79	0.59	0.42	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.79 U	1.6	0.79	0.38	ug/kg	
79-01-6	Trichloroethene	0.63 U	0.79	0.63	0.60	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.79 U	1.6	0.79	0.50	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.79 U	1.6	0.79	0.34	ug/kg	
75-01-4	Vinyl chloride	0.79 U	1.6	0.79	0.38	ug/kg	
	m,p-Xylene	0.75 U	0.79	0.75	0.71	ug/kg	
95-47-6	o-Xylene	0.59 U	0.79	0.59	0.46	ug/kg	
1330-20-7	Xylene (total)	0.59 U	0.79	0.59	0.46	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-CF-027		
Lab Sample ID:	JC89914-1	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	90.3
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		75-127%
17060-07-0	1,2-Dichloroethane-D4	112%		75-130%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	99%		79-127%

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-CF-028
Lab Sample ID: JC89914-2 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 91.0
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	1C165385.D	1	06/19/19 11:39	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.8 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	6.1 U	8.1	6.1	3.2	ug/kg	
71-43-2	Benzene	0.37 U	0.40	0.37	0.37	ug/kg	
78-93-3	2-Butanone (MEK)	6.1 U	8.1	6.1	3.0	ug/kg	
104-51-8	n-Butylbenzene	1.2 U	1.6	1.2	0.33	ug/kg	
135-98-8	sec-Butylbenzene	1.2 U	1.6	1.2	0.35	ug/kg	
98-06-6	tert-Butylbenzene	0.81 U	1.6	0.81	0.40	ug/kg	
56-23-5	Carbon tetrachloride	0.81 U	1.6	0.81	0.50	ug/kg	
108-90-7	Chlorobenzene	1.2 U	1.6	1.2	0.37	ug/kg	
67-66-3	Chloroform	0.81 U	1.6	0.81	0.40	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.61 U	0.81	0.61	0.44	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.61 U	0.81	0.61	0.40	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.61 U	0.81	0.61	0.40	ug/kg	
75-34-3	1,1-Dichloroethane	0.61 U	0.81	0.61	0.40	ug/kg	
107-06-2	1,2-Dichloroethane	0.61 U	0.81	0.61	0.38	ug/kg	
75-35-4	1,1-Dichloroethene	0.61 U	0.81	0.61	0.53	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.73 U	0.81	0.73	0.68	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.61 U	0.81	0.61	0.49	ug/kg	
123-91-1	1,4-Dioxane	81 U	100	81	29	ug/kg	
100-41-4	Ethylbenzene	0.61 U	0.81	0.61	0.45	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.40 U	0.81	0.40	0.38	ug/kg	
75-09-2	Methylene chloride	2.4 U	4.0	2.4	0.80	ug/kg	
103-65-1	n-Propylbenzene	0.81 U	1.6	0.81	0.38	ug/kg	
127-18-4	Tetrachloroethene	0.81 U	1.6	0.81	0.47	ug/kg	
108-88-3	Toluene	0.61 U	0.81	0.61	0.42	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.81 U	1.6	0.81	0.39	ug/kg	
79-01-6	Trichloroethene	0.65 U	0.81	0.65	0.62	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.81 U	1.6	0.81	0.51	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.81 U	1.6	0.81	0.35	ug/kg	
75-01-4	Vinyl chloride	0.81 U	1.6	0.81	0.39	ug/kg	
	m,p-Xylene	0.77 U	0.81	0.77	0.72	ug/kg	
95-47-6	o-Xylene	0.61 U	0.81	0.61	0.47	ug/kg	
1330-20-7	Xylene (total)	0.61 U	0.81	0.61	0.47	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-CF-028		
Lab Sample ID:	JC89914-2	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	91.0
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		75-127%
17060-07-0	1,2-Dichloroethane-D4	112%		75-130%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	100%		79-127%

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-CF-029
Lab Sample ID: JC89914-3 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 90.4
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	1C165386.D	1	06/19/19 12:05	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.1 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	8.1	9.1	6.8	3.6	ug/kg	J
71-43-2	Benzene	0.41 U	0.45	0.41	0.41	ug/kg	
78-93-3	2-Butanone (MEK)	6.8 U	9.1	6.8	3.4	ug/kg	
104-51-8	n-Butylbenzene	1.4 U	1.8	1.4	0.37	ug/kg	
135-98-8	sec-Butylbenzene	1.4 U	1.8	1.4	0.39	ug/kg	
98-06-6	tert-Butylbenzene	0.91 U	1.8	0.91	0.45	ug/kg	
56-23-5	Carbon tetrachloride	0.91 U	1.8	0.91	0.56	ug/kg	
108-90-7	Chlorobenzene	1.4 U	1.8	1.4	0.42	ug/kg	
67-66-3	Chloroform	0.91 U	1.8	0.91	0.44	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.68 U	0.91	0.68	0.50	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.68 U	0.91	0.68	0.45	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.68 U	0.91	0.68	0.45	ug/kg	
75-34-3	1,1-Dichloroethane	0.68 U	0.91	0.68	0.45	ug/kg	
107-06-2	1,2-Dichloroethane	0.68 U	0.91	0.68	0.43	ug/kg	
75-35-4	1,1-Dichloroethene	0.68 U	0.91	0.68	0.59	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.82 U	0.91	0.82	0.76	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.68 U	0.91	0.68	0.55	ug/kg	
123-91-1	1,4-Dioxane	91 U	110	91	33	ug/kg	
100-41-4	Ethylbenzene	0.68 U	0.91	0.68	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.45 U	0.91	0.45	0.43	ug/kg	
75-09-2	Methylene chloride	2.7 U	4.5	2.7	0.90	ug/kg	
103-65-1	n-Propylbenzene	0.91 U	1.8	0.91	0.43	ug/kg	
127-18-4	Tetrachloroethene	0.91 U	1.8	0.91	0.53	ug/kg	
108-88-3	Toluene	0.68 U	0.91	0.68	0.48	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.91 U	1.8	0.91	0.44	ug/kg	
79-01-6	Trichloroethene	0.73 U	0.91	0.73	0.69	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.91 U	1.8	0.91	0.58	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.91 U	1.8	0.91	0.39	ug/kg	
75-01-4	Vinyl chloride	0.91 U	1.8	0.91	0.44	ug/kg	
	m,p-Xylene	0.86 U	0.91	0.86	0.81	ug/kg	
95-47-6	o-Xylene	0.68 U	0.91	0.68	0.53	ug/kg	
1330-20-7	Xylene (total)	0.68 U	0.91	0.68	0.53	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-CF-029		
Lab Sample ID:	JC89914-3	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	90.4
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		75-127%
17060-07-0	1,2-Dichloroethane-D4	111%		75-130%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	97%		79-127%

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-CF-030
Lab Sample ID: JC89914-4 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 89.2
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	1C165387.D	1	06/19/19 12:32	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.8 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	6.2 U	8.2	6.2	3.3	ug/kg	
71-43-2	Benzene	0.38 U	0.41	0.38	0.38	ug/kg	
78-93-3	2-Butanone (MEK)	6.2 U	8.2	6.2	3.1	ug/kg	
104-51-8	n-Butylbenzene	1.2 U	1.6	1.2	0.34	ug/kg	
135-98-8	sec-Butylbenzene	1.2 U	1.6	1.2	0.35	ug/kg	
98-06-6	tert-Butylbenzene	0.82 U	1.6	0.82	0.41	ug/kg	
56-23-5	Carbon tetrachloride	0.82 U	1.6	0.82	0.51	ug/kg	
108-90-7	Chlorobenzene	1.2 U	1.6	1.2	0.38	ug/kg	
67-66-3	Chloroform	0.82 U	1.6	0.82	0.40	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.62 U	0.82	0.62	0.45	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.62 U	0.82	0.62	0.41	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.62 U	0.82	0.62	0.41	ug/kg	
75-34-3	1,1-Dichloroethane	0.62 U	0.82	0.62	0.41	ug/kg	
107-06-2	1,2-Dichloroethane	0.62 U	0.82	0.62	0.39	ug/kg	
75-35-4	1,1-Dichloroethene	0.62 U	0.82	0.62	0.54	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.74 U	0.82	0.74	0.69	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.62 U	0.82	0.62	0.50	ug/kg	
123-91-1	1,4-Dioxane	82 U	100	82	30	ug/kg	
100-41-4	Ethylbenzene	0.62 U	0.82	0.62	0.46	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.41 U	0.82	0.41	0.39	ug/kg	
75-09-2	Methylene chloride	2.5 U	4.1	2.5	0.82	ug/kg	
103-65-1	n-Propylbenzene	0.82 U	1.6	0.82	0.39	ug/kg	
127-18-4	Tetrachloroethene	0.82 U	1.6	0.82	0.48	ug/kg	
108-88-3	Toluene	0.62 U	0.82	0.62	0.43	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.82 U	1.6	0.82	0.40	ug/kg	
79-01-6	Trichloroethene	0.66 U	0.82	0.66	0.63	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.82 U	1.6	0.82	0.52	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.82 U	1.6	0.82	0.36	ug/kg	
75-01-4	Vinyl chloride	0.82 U	1.6	0.82	0.40	ug/kg	
	m,p-Xylene	0.78 U	0.82	0.78	0.74	ug/kg	
95-47-6	o-Xylene	0.62 U	0.82	0.62	0.48	ug/kg	
1330-20-7	Xylene (total)	0.62 U	0.82	0.62	0.48	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-CF-030		
Lab Sample ID:	JC89914-4	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	89.2
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		75-127%
17060-07-0	1,2-Dichloroethane-D4	112%		75-130%
2037-26-5	Toluene-D8	106%		80-120%
460-00-4	4-Bromofluorobenzene	101%		79-127%

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-CF-031
Lab Sample ID: JC89914-5 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 90.0
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	1C165388.D	1	06/19/19 12:58	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.7 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	6.2 U	8.3	6.2	3.3	ug/kg	
71-43-2	Benzene	0.38 U	0.41	0.38	0.38	ug/kg	
78-93-3	2-Butanone (MEK)	6.2 U	8.3	6.2	3.1	ug/kg	
104-51-8	n-Butylbenzene	1.2 U	1.7	1.2	0.34	ug/kg	
135-98-8	sec-Butylbenzene	1.2 U	1.7	1.2	0.35	ug/kg	
98-06-6	tert-Butylbenzene	0.83 U	1.7	0.83	0.41	ug/kg	
56-23-5	Carbon tetrachloride	0.83 U	1.7	0.83	0.51	ug/kg	
108-90-7	Chlorobenzene	1.2 U	1.7	1.2	0.38	ug/kg	
67-66-3	Chloroform	0.83 U	1.7	0.83	0.41	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.62 U	0.83	0.62	0.45	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.62 U	0.83	0.62	0.41	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.62 U	0.83	0.62	0.41	ug/kg	
75-34-3	1,1-Dichloroethane	0.62 U	0.83	0.62	0.41	ug/kg	
107-06-2	1,2-Dichloroethane	0.62 U	0.83	0.62	0.39	ug/kg	
75-35-4	1,1-Dichloroethene	0.62 U	0.83	0.62	0.54	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.75 U	0.83	0.75	0.70	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.62 U	0.83	0.62	0.51	ug/kg	
123-91-1	1,4-Dioxane	83 U	100	83	30	ug/kg	
100-41-4	Ethylbenzene	0.62 U	0.83	0.62	0.46	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.41 U	0.83	0.41	0.39	ug/kg	
75-09-2	Methylene chloride	2.5 U	4.1	2.5	0.82	ug/kg	
103-65-1	n-Propylbenzene	0.83 U	1.7	0.83	0.39	ug/kg	
127-18-4	Tetrachloroethene	0.83 U	1.7	0.83	0.48	ug/kg	
108-88-3	Toluene	0.62 U	0.83	0.62	0.44	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.83 U	1.7	0.83	0.40	ug/kg	
79-01-6	Trichloroethene	0.66 U	0.83	0.66	0.63	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.83 U	1.7	0.83	0.53	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.83 U	1.7	0.83	0.36	ug/kg	
75-01-4	Vinyl chloride	0.83 U	1.7	0.83	0.40	ug/kg	
	m,p-Xylene	0.79 U	0.83	0.79	0.74	ug/kg	
95-47-6	o-Xylene	0.62 U	0.83	0.62	0.48	ug/kg	
1330-20-7	Xylene (total)	0.62 U	0.83	0.62	0.48	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-CF-031		
Lab Sample ID:	JC89914-5	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	90.0
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		75-127%
17060-07-0	1,2-Dichloroethane-D4	113%		75-130%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	96%		79-127%

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-CF-032
Lab Sample ID: JC89914-6 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 89.5
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	1C165389.D	1	06/19/19 13:25	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.8 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	6.2 U	8.2	6.2	3.3	ug/kg	
71-43-2	Benzene	0.38 U	0.41	0.38	0.37	ug/kg	
78-93-3	2-Butanone (MEK)	6.2 U	8.2	6.2	3.1	ug/kg	
104-51-8	n-Butylbenzene	1.2 U	1.6	1.2	0.33	ug/kg	
135-98-8	sec-Butylbenzene	1.2 U	1.6	1.2	0.35	ug/kg	
98-06-6	tert-Butylbenzene	0.82 U	1.6	0.82	0.41	ug/kg	
56-23-5	Carbon tetrachloride	0.82 U	1.6	0.82	0.51	ug/kg	
108-90-7	Chlorobenzene	1.2 U	1.6	1.2	0.38	ug/kg	
67-66-3	Chloroform	0.82 U	1.6	0.82	0.40	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.62 U	0.82	0.62	0.45	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.62 U	0.82	0.62	0.41	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.62 U	0.82	0.62	0.41	ug/kg	
75-34-3	1,1-Dichloroethane	0.62 U	0.82	0.62	0.41	ug/kg	
107-06-2	1,2-Dichloroethane	0.62 U	0.82	0.62	0.39	ug/kg	
75-35-4	1,1-Dichloroethene	0.62 U	0.82	0.62	0.54	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.74 U	0.82	0.74	0.69	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.62 U	0.82	0.62	0.50	ug/kg	
123-91-1	1,4-Dioxane	82 U	100	82	30	ug/kg	
100-41-4	Ethylbenzene	0.62 U	0.82	0.62	0.45	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.41 U	0.82	0.41	0.39	ug/kg	
75-09-2	Methylene chloride	2.5 U	4.1	2.5	0.82	ug/kg	
103-65-1	n-Propylbenzene	0.82 U	1.6	0.82	0.39	ug/kg	
127-18-4	Tetrachloroethene	0.82 U	1.6	0.82	0.48	ug/kg	
108-88-3	Toluene	0.62 U	0.82	0.62	0.43	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.82 U	1.6	0.82	0.40	ug/kg	
79-01-6	Trichloroethene	0.66 U	0.82	0.66	0.63	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.82 U	1.6	0.82	0.52	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.82 U	1.6	0.82	0.35	ug/kg	
75-01-4	Vinyl chloride	0.82 U	1.6	0.82	0.40	ug/kg	
	m,p-Xylene	0.78 U	0.82	0.78	0.74	ug/kg	
95-47-6	o-Xylene	0.62 U	0.82	0.62	0.48	ug/kg	
1330-20-7	Xylene (total)	0.62 U	0.82	0.62	0.48	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-CF-032		
Lab Sample ID:	JC89914-6	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	89.5
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		75-127%
17060-07-0	1,2-Dichloroethane-D4	111%		75-130%
2037-26-5	Toluene-D8	104%		80-120%
460-00-4	4-Bromofluorobenzene	97%		79-127%

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-CF-033
Lab Sample ID: JC89914-7 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 91.0
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	1C165390.D	1	06/19/19 13:52	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.8 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	6.1 U	8.1	6.1	3.2	ug/kg	
71-43-2	Benzene	0.37 U	0.40	0.37	0.37	ug/kg	
78-93-3	2-Butanone (MEK)	6.1 U	8.1	6.1	3.0	ug/kg	
104-51-8	n-Butylbenzene	1.2 U	1.6	1.2	0.33	ug/kg	
135-98-8	sec-Butylbenzene	1.2 U	1.6	1.2	0.35	ug/kg	
98-06-6	tert-Butylbenzene	0.81 U	1.6	0.81	0.40	ug/kg	
56-23-5	Carbon tetrachloride	0.81 U	1.6	0.81	0.50	ug/kg	
108-90-7	Chlorobenzene	1.2 U	1.6	1.2	0.37	ug/kg	
67-66-3	Chloroform	0.81 U	1.6	0.81	0.40	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.61 U	0.81	0.61	0.44	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.61 U	0.81	0.61	0.40	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.61 U	0.81	0.61	0.40	ug/kg	
75-34-3	1,1-Dichloroethane	0.61 U	0.81	0.61	0.40	ug/kg	
107-06-2	1,2-Dichloroethane	0.61 U	0.81	0.61	0.38	ug/kg	
75-35-4	1,1-Dichloroethene	0.61 U	0.81	0.61	0.53	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.73 U	0.81	0.73	0.68	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.61 U	0.81	0.61	0.49	ug/kg	
123-91-1	1,4-Dioxane	81 U	100	81	29	ug/kg	
100-41-4	Ethylbenzene	0.61 U	0.81	0.61	0.45	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.40 U	0.81	0.40	0.38	ug/kg	
75-09-2	Methylene chloride	2.4 U	4.0	2.4	0.80	ug/kg	
103-65-1	n-Propylbenzene	0.81 U	1.6	0.81	0.38	ug/kg	
127-18-4	Tetrachloroethene	0.81 U	1.6	0.81	0.47	ug/kg	
108-88-3	Toluene	0.61 U	0.81	0.61	0.42	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.81 U	1.6	0.81	0.39	ug/kg	
79-01-6	Trichloroethene	0.65 U	0.81	0.65	0.62	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.81 U	1.6	0.81	0.51	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.81 U	1.6	0.81	0.35	ug/kg	
75-01-4	Vinyl chloride	0.81 U	1.6	0.81	0.39	ug/kg	
	m,p-Xylene	0.77 U	0.81	0.77	0.72	ug/kg	
95-47-6	o-Xylene	0.61 U	0.81	0.61	0.47	ug/kg	
1330-20-7	Xylene (total)	0.61 U	0.81	0.61	0.47	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-CF-033		
Lab Sample ID:	JC89914-7	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	91.0
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		75-127%
17060-07-0	1,2-Dichloroethane-D4	113%		75-130%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	100%		79-127%

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-CF-034
Lab Sample ID: JC89914-8 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8260C **Percent Solids:** 89.4
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	1C165391.D	1	06/19/19 14:18	PS	n/a	n/a	V1C7250
Run #2							

	Initial Weight
Run #1	6.7 g
Run #2	

VOA Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	8.1	8.3	6.3	3.3	ug/kg	J
71-43-2	Benzene	0.38 U	0.42	0.38	0.38	ug/kg	
78-93-3	2-Butanone (MEK)	6.3 U	8.3	6.3	3.1	ug/kg	
104-51-8	n-Butylbenzene	1.3 U	1.7	1.3	0.34	ug/kg	
135-98-8	sec-Butylbenzene	1.3 U	1.7	1.3	0.36	ug/kg	
98-06-6	tert-Butylbenzene	0.83 U	1.7	0.83	0.42	ug/kg	
56-23-5	Carbon tetrachloride	0.83 U	1.7	0.83	0.52	ug/kg	
108-90-7	Chlorobenzene	1.3 U	1.7	1.3	0.38	ug/kg	
67-66-3	Chloroform	0.83 U	1.7	0.83	0.41	ug/kg	
95-50-1	1,2-Dichlorobenzene	0.63 U	0.83	0.63	0.46	ug/kg	
541-73-1	1,3-Dichlorobenzene	0.63 U	0.83	0.63	0.41	ug/kg	
106-46-7	1,4-Dichlorobenzene	0.63 U	0.83	0.63	0.41	ug/kg	
75-34-3	1,1-Dichloroethane	0.63 U	0.83	0.63	0.41	ug/kg	
107-06-2	1,2-Dichloroethane	0.63 U	0.83	0.63	0.39	ug/kg	
75-35-4	1,1-Dichloroethene	0.63 U	0.83	0.63	0.55	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.75 U	0.83	0.75	0.70	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.63 U	0.83	0.63	0.51	ug/kg	
123-91-1	1,4-Dioxane	83 U	100	83	30	ug/kg	
100-41-4	Ethylbenzene	0.63 U	0.83	0.63	0.46	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.42 U	0.83	0.42	0.39	ug/kg	
75-09-2	Methylene chloride	2.5 U	4.2	2.5	0.83	ug/kg	
103-65-1	n-Propylbenzene	0.83 U	1.7	0.83	0.39	ug/kg	
127-18-4	Tetrachloroethene	0.83 U	1.7	0.83	0.48	ug/kg	
108-88-3	Toluene	0.63 U	0.83	0.63	0.44	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.83 U	1.7	0.83	0.40	ug/kg	
79-01-6	Trichloroethene	0.67 U	0.83	0.67	0.64	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.83 U	1.7	0.83	0.53	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	0.83 U	1.7	0.83	0.36	ug/kg	
75-01-4	Vinyl chloride	0.83 U	1.7	0.83	0.40	ug/kg	
	m,p-Xylene	0.79 U	0.83	0.79	0.75	ug/kg	
95-47-6	o-Xylene	0.63 U	0.83	0.63	0.49	ug/kg	
1330-20-7	Xylene (total)	0.63 U	0.83	0.63	0.49	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-CF-034		
Lab Sample ID:	JC89914-8	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
Method:	SW846 8260C	**Percent Solids:**	89.4
Project:	Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage		

VOA Soil Cleanup Objectives Priority List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		75-127%
17060-07-0	1,2-Dichloroethane-D4	114%		75-130%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	95%		79-127%

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-CF-035
Lab Sample ID: JC89914-9 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D SW846 3546 **Percent Solids:** 90.5
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	Z138892.D	1	06/19/19 19:01	AR	06/19/19 09:00	OP21103	EZ6837
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
95-48-7	2-Methylphenol	37 U	73	37	23	ug/kg	
	3&4-Methylphenol	37 U	73	37	30	ug/kg	
87-86-5	Pentachlorophenol	91 U	150	91	34	ug/kg	
108-95-2	Phenol	37 U	73	37	19	ug/kg	
83-32-9	Acenaphthene	18 U	37	18	13	ug/kg	
208-96-8	Acenaphthylene	27 U	37	27	19	ug/kg	
120-12-7	Anthracene	34.1	37	27	22	ug/kg	J
56-55-3	Benzo(a)anthracene	225	37	18	10	ug/kg	
50-32-8	Benzo(a)pyrene	210	37	18	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	263	37	18	16	ug/kg	
191-24-2	Benzo(g,h,i)perylene	148	37	27	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	87.5	37	18	17	ug/kg	
218-01-9	Chrysene	213	37	18	12	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	42.0	37	18	16	ug/kg	
132-64-9	Dibenzofuran	18 U	73	18	15	ug/kg	
206-44-0	Fluoranthene	261	37	18	16	ug/kg	
86-73-7	Fluorene	27 U	37	27	17	ug/kg	
118-74-1	Hexachlorobenzene	18 U	73	18	9.3	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	141	37	18	17	ug/kg	
91-20-3	Naphthalene	18 U	37	18	10	ug/kg	
85-01-8	Phenanthrene	85.4	37	18	12	ug/kg	
129-00-0	Pyrene	313	37	18	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	56%		23-115%
4165-62-2	Phenol-d5	58%		27-114%
118-79-6	2,4,6-Tribromophenol	75%		19-152%
4165-60-0	Nitrobenzene-d5	64%		26-134%
321-60-8	2-Fluorobiphenyl	61%		39-124%
1718-51-0	Terphenyl-d14	85%		36-134%

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-CF-035
Lab Sample ID: JC89914-9 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D BY SIM SW846 3546 **Percent Solids:** 90.5
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]	3P77876.D	1	07/08/19 23:49	CS	07/05/19 16:30	OP21387	E3P3646
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
123-91-1	1,4-Dioxane	1.8 U	3.6	1.8	0.89	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		10-146%
321-60-8	2-Fluorobiphenyl	61%		46-115%
1718-51-0	Terphenyl-d14	81%		10-170%

(a) Sample extracted outside the holding time.

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-CF-035
Lab Sample ID: JC89914-9 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8151A SW846 3546 **Percent Solids:** 90.5
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	3G123416.D	1	06/18/19 17:19	VDT	06/18/19 09:30	OP21084	G3G4329
Run #2							

	Initial Weight	Final Volume
Run #1	15.6 g	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
93-72-1	2,4,5-TP (Silvex)	3.4 U	3.5	3.4	3.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	49%		10-159%
19719-28-9	2,4-DCAA	52%		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-CF-035
Lab Sample ID: JC89914-9 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8081B SW846 3546 **Percent Solids:** 90.5
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	1G153582.D	1	06/19/19 11:18	MH	06/19/19 05:45	OP21102	G1G4959
Run #2							

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

Pesticides, Soil Cleanup Objectives

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
309-00-2	Aldrin	0.67 U	0.70	0.67	0.58	ug/kg	
319-84-6	alpha-BHC	0.67 U	0.70	0.67	0.57	ug/kg	
319-85-7	beta-BHC	0.67 U	0.70	0.67	0.64	ug/kg	
319-86-8	delta-BHC	0.69 U	0.70	0.69	0.68	ug/kg	
58-89-9	gamma-BHC (Lindane)	0.63 U	0.70	0.63	0.52	ug/kg	
5103-71-9	alpha-Chlordane [a]	3.0	0.70	0.67	0.57	ug/kg	
60-57-1	Dieldrin	0.87	0.70	0.53	0.48	ug/kg	
72-54-8	4,4'-DDD	0.67 U	0.70	0.67	0.65	ug/kg	
72-55-9	4,4'-DDE [a]	0.73	0.70	0.67	0.62	ug/kg	
50-29-3	4,4'-DDT	1.2	0.70	0.67	0.62	ug/kg	
72-20-8	Endrin	0.63 U	0.70	0.63	0.55	ug/kg	
1031-07-8	Endosulfan sulfate	0.63 U	0.70	0.63	0.55	ug/kg	
959-98-8	Endosulfan-I	0.53 U	0.70	0.53	0.41	ug/kg	
33213-65-9	Endosulfan-II	0.53 U	0.70	0.53	0.44	ug/kg	
76-44-8	Heptachlor	0.63 U	0.70	0.63	0.61	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	72%		25-135%
877-09-8	Tetrachloro-m-xylene	72%		25-135%
2051-24-3	Decachlorobiphenyl	68%		10-156%
2051-24-3	Decachlorobiphenyl	104%		10-156%

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

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-CF-035
Lab Sample ID: JC89914-9 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8082A SW846 3546 **Percent Solids:** 90.5
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	XX2436690.D	1	06/20/19 14:00	CP	06/19/19 05:45	OP21101	GXX6722
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	28 U	35	28	16	ug/kg	
11104-28-2	Aroclor 1221	28 U	35	28	22	ug/kg	
11141-16-5	Aroclor 1232	28 U	35	28	22	ug/kg	
53469-21-9	Aroclor 1242	28 U	35	28	14	ug/kg	
12672-29-6	Aroclor 1248	33 U	35	33	31	ug/kg	
11097-69-1	Aroclor 1254	28 U	35	28	19	ug/kg	
11096-82-5	Aroclor 1260	28 U	35	28	15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	83%		31-146%
877-09-8	Tetrachloro-m-xylene	89%		31-146%
2051-24-3	Decachlorobiphenyl	82%		17-164%
2051-24-3	Decachlorobiphenyl	94%		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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-035
Lab Sample ID: JC89914-9 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Percent Solids: 90.5
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	4.8	2.3	0.56	0.32	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Barium	28.0	23	11	2.2	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.38	0.23	0.11	0.090	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Cadmium	0.23 U	0.56	0.23	0.079	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Chromium	13.6	1.1	0.56	0.42	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Copper	10.5	2.8	1.1	0.95	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Lead	28.9	2.3	0.56	0.46	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Manganese	134	1.7	1.1	0.46	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Mercury	0.029 J	0.034	0.026	0.015	mg/kg	1	06/18/19	06/18/19	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.9	4.5	0.45	0.39	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Selenium	0.90 U	2.3	0.90	0.73	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Silver	0.26 J	0.56	0.45	0.19	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Zinc	29.1	5.6	4.5	2.6	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA46938
(2) Instrument QC Batch: MA46951
(3) Prep QC Batch: MP15743
(4) Prep QC Batch: MP15749

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

Report of Analysis

Client Sample ID:	NWIRP-S1-WC-CF-035		
Lab Sample ID:	JC89914-9	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
		Percent Solids:	90.5
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
Chromium, Hexavalent	0.48	0.44	0.39	0.35	mg/kg	1	06/25/19 17:03	NV	SW846 3060A/7196A
Chromium, Trivalent [a]	13.1	1.5	0.95	0.77	mg/kg	1	06/25/19 17:03	NV	SW846 6010/7196A M
Cyanide	0.18 U	0.24	0.18	0.12	mg/kg	1	06/20/19 16:54	BM	SW846 9012B/LACHAT
Redox Potential Vs H2	403				mv	1	06/20/19 10:37	MS	ASTM D1498-76M
Solids, Percent	90.5				%	1	06/19/19 14:30	BG	SM2540 G 18TH ED MOD
pH	6.23				su	1	06/20/19 10:38	MS	SW846 9045D

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-036
Lab Sample ID: JC89914-10 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D SW846 3546 **Percent Solids:** 92.0
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	Z138890.D	1	06/19/19 18:07	AR	06/19/19 09:00	OP21103	EZ6837
Run #2							

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

ABN Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
95-48-7	2-Methylphenol	36 U	72	36	23	ug/kg	
	3&4-Methylphenol	36 U	72	36	30	ug/kg	
87-86-5	Pentachlorophenol	90 U	140	90	34	ug/kg	
108-95-2	Phenol	36 U	72	36	19	ug/kg	
83-32-9	Acenaphthene	42.9	36	18	12	ug/kg	
208-96-8	Acenaphthylene	27 U	36	27	18	ug/kg	
120-12-7	Anthracene	97.1	36	27	22	ug/kg	
56-55-3	Benzo(a)anthracene	359	36	18	10	ug/kg	
50-32-8	Benzo(a)pyrene	306	36	18	16	ug/kg	
205-99-2	Benzo(b)fluoranthene	381	36	18	16	ug/kg	
191-24-2	Benzo(g,h,i)perylene	221	36	27	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	130	36	18	17	ug/kg	
218-01-9	Chrysene	339	36	18	11	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	55.9	36	18	16	ug/kg	
132-64-9	Dibenzofuran	21.9	72	18	15	ug/kg	J
206-44-0	Fluoranthene	592	36	18	16	ug/kg	
86-73-7	Fluorene	36.7	36	27	17	ug/kg	
118-74-1	Hexachlorobenzene	18 U	72	18	9.1	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	212	36	18	17	ug/kg	
91-20-3	Naphthalene	20.4	36	18	10	ug/kg	J
85-01-8	Phenanthrene	333	36	18	12	ug/kg	
129-00-0	Pyrene	642	36	18	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	56%		23-115%
4165-62-2	Phenol-d5	58%		27-114%
118-79-6	2,4,6-Tribromophenol	73%		19-152%
4165-60-0	Nitrobenzene-d5	62%		26-134%
321-60-8	2-Fluorobiphenyl	59%		39-124%
1718-51-0	Terphenyl-d14	93%		36-134%

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-CF-036
Lab Sample ID: JC89914-10 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D BY SIM SW846 3546 **Percent Solids:** 92.0
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]	3P77877.D	1	07/09/19 00:10	CS	07/05/19 16:30	OP21387	E3P3646
Run #2							

	Initial Weight	Final Volume
Run #1	31.8 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
123-91-1	1,4-Dioxane	1.7 U	3.4	1.7	0.83	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		10-146%
321-60-8	2-Fluorobiphenyl	64%		46-115%
1718-51-0	Terphenyl-d14	82%		10-170%

(a) Sample extracted outside the holding time.

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-CF-036
Lab Sample ID: JC89914-10 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8151A SW846 3546 **Percent Solids:** 92.0
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	3G123417.D	1	06/18/19 17:47	VDT	06/18/19 09:30	OP21084	G3G4329
Run #2							

	Initial Weight	Final Volume
Run #1	16.3 g	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
93-72-1	2,4,5-TP (Silvex)	3.2 U	3.3	3.2	3.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	26%		10-159%
19719-28-9	2,4-DCAA	28%		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-CF-036
Lab Sample ID: JC89914-10 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8081B SW846 3546 **Percent Solids:** 92.0
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	1G153583.D	1	06/19/19 11:36	MH	06/19/19 05:45	OP21102	G1G4959
Run #2							

	Initial Weight	Final Volume
Run #1	16.1 g	10.0 ml
Run #2		

Pesticides, Soil Cleanup Objectives

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
309-00-2	Aldrin	0.64 U	0.68	0.64	0.56	ug/kg	
319-84-6	alpha-BHC	0.64 U	0.68	0.64	0.55	ug/kg	
319-85-7	beta-BHC	0.64 U	0.68	0.64	0.61	ug/kg	
319-86-8	delta-BHC	0.66 U	0.68	0.66	0.65	ug/kg	
58-89-9	gamma-BHC (Lindane)	0.61 U	0.68	0.61	0.50	ug/kg	
5103-71-9	alpha-Chlordane	4.9	0.68	0.64	0.54	ug/kg	
60-57-1	Dieldrin	1.8	0.68	0.51	0.46	ug/kg	
72-54-8	4,4'-DDD	5.3	0.68	0.64	0.62	ug/kg	
72-55-9	4,4'-DDE	3.4	0.68	0.64	0.59	ug/kg	
50-29-3	4,4'-DDT	9.0	0.68	0.64	0.60	ug/kg	
72-20-8	Endrin	0.61 U	0.68	0.61	0.52	ug/kg	
1031-07-8	Endosulfan sulfate	0.61 U	0.68	0.61	0.53	ug/kg	
959-98-8	Endosulfan-I	0.51 U	0.68	0.51	0.39	ug/kg	
33213-65-9	Endosulfan-II	0.51 U	0.68	0.51	0.42	ug/kg	
76-44-8	Heptachlor	0.80	0.68	0.61	0.58	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	67%		25-135%
877-09-8	Tetrachloro-m-xylene	68%		25-135%
2051-24-3	Decachlorobiphenyl	59%		10-156%
2051-24-3	Decachlorobiphenyl	109%		10-156%

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-CF-036
Lab Sample ID: JC89914-10 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8082A SW846 3546 **Percent Solids:** 92.0
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	XX2436691.D	1	06/20/19 14:18	CP	06/19/19 05:45	OP21101	GXX6722
Run #2							

	Initial Weight	Final Volume
Run #1	16.1 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	22	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	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	78%		31-146%
877-09-8	Tetrachloro-m-xylene	84%		31-146%
2051-24-3	Decachlorobiphenyl	79%		17-164%
2051-24-3	Decachlorobiphenyl	89%		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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-036
Lab Sample ID: JC89914-10 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Percent Solids: 92.0
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	3.1	2.2	0.56	0.31	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Barium	15.4 J	22	11	2.2	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.22	0.22	0.11	0.090	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Cadmium	0.22 U	0.56	0.22	0.078	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Chromium	8.5	1.1	0.56	0.41	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Copper	5.2	2.8	1.1	0.94	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Lead	10.3	2.2	0.56	0.46	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Manganese	74.4	1.7	1.1	0.46	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Mercury	0.048	0.031	0.023	0.013	mg/kg	1	06/18/19	06/18/19	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	4.6	4.5	0.45	0.39	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Selenium	0.90 U	2.2	0.90	0.73	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Silver	0.45 U	0.56	0.45	0.19	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Zinc	13.0	5.6	4.5	2.6	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA46938
(2) Instrument QC Batch: MA46951
(3) Prep QC Batch: MP15743
(4) Prep QC Batch: MP15749

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

Report of Analysis

Client Sample ID:	NWIRP-S1-WC-CF-036		
Lab Sample ID:	JC89914-10	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
		Percent Solids:	92.0
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
Chromium, Hexavalent	0.43	0.43	0.38	0.34	mg/kg	1	06/25/19 17:07	NV	SW846 3060A/7196A
Chromium, Trivalent [a]	8.1	1.5	0.94	0.75	mg/kg	1	06/25/19 17:07	NV	SW846 6010/7196A M
Cyanide	0.19 U	0.25	0.19	0.13	mg/kg	1	06/20/19 16:58	BM	SW846 9012B/LACHAT
Redox Potential Vs H2	391				mv	1	06/20/19 10:43	MS	ASTM D1498-76M
Solids, Percent	92				%	1	06/19/19 14:30	BG	SM2540 G 18TH ED MOD
pH	6.82				su	1	06/20/19 10:44	MS	SW846 9045D

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-037
Lab Sample ID: JC89914-11 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D SW846 3546 **Percent Solids:** 86.8
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	Z138891.D	1	06/19/19 18:34	AR	06/19/19 09:00	OP21103	EZ6837
Run #2							

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

ABN Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
95-48-7	2-Methylphenol	38 U	77	38	24	ug/kg	
	3&4-Methylphenol	38 U	77	38	31	ug/kg	
87-86-5	Pentachlorophenol	96 U	150	96	36	ug/kg	
108-95-2	Phenol	38 U	77	38	20	ug/kg	
83-32-9	Acenaphthene	31.9	38	19	13	ug/kg	J
208-96-8	Acenaphthylene	29 U	38	29	19	ug/kg	
120-12-7	Anthracene	104	38	29	23	ug/kg	
56-55-3	Benzo(a)anthracene	432	38	19	11	ug/kg	
50-32-8	Benzo(a)pyrene	413	38	19	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	486	38	19	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	291	38	29	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	177	38	19	18	ug/kg	
218-01-9	Chrysene	394	38	19	12	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	82.4	38	19	17	ug/kg	
132-64-9	Dibenzofuran	19 U	77	19	16	ug/kg	
206-44-0	Fluoranthene	657	38	19	17	ug/kg	
86-73-7	Fluorene	30.7	38	29	18	ug/kg	J
118-74-1	Hexachlorobenzene	19 U	77	19	9.7	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	291	38	19	18	ug/kg	
91-20-3	Naphthalene	19 U	38	19	11	ug/kg	
85-01-8	Phenanthrene	325	38	19	13	ug/kg	
129-00-0	Pyrene	767	38	19	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	56%		23-115%
4165-62-2	Phenol-d5	59%		27-114%
118-79-6	2,4,6-Tribromophenol	75%		19-152%
4165-60-0	Nitrobenzene-d5	63%		26-134%
321-60-8	2-Fluorobiphenyl	59%		39-124%
1718-51-0	Terphenyl-d14	95%		36-134%

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-CF-037
Lab Sample ID: JC89914-11 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D BY SIM SW846 3546 **Percent Solids:** 86.8
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]	3P77878.D	1	07/09/19 00:31	CS	07/05/19 16:30	OP21387	E3P3646
Run #2							

	Initial Weight	Final Volume
Run #1	31.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
123-91-1	1,4-Dioxane	1.8 U	3.7	1.8	0.90	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		10-146%
321-60-8	2-Fluorobiphenyl	66%		46-115%
1718-51-0	Terphenyl-d14	83%		10-170%

(a) Sample extracted outside the holding time.

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-CF-037
Lab Sample ID: JC89914-11 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8151A SW846 3546 **Percent Solids:** 86.8
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	3G123418.D	1	06/18/19 18:15	VDT	06/18/19 09:30	OP21084	G3G4329
Run #2							

	Initial Weight	Final Volume
Run #1	16.1 g	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
93-72-1	2,4,5-TP (Silvex)	3.4 U	3.6	3.4	3.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	47%		10-159%
19719-28-9	2,4-DCAA	42%		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-CF-037
Lab Sample ID: JC89914-11 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8081B SW846 3546 **Percent Solids:** 86.8
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	1G153584.D	1	06/19/19 11:55	MH	06/19/19 05:45	OP21102	G1G4959
Run #2							

	Initial Weight	Final Volume
Run #1	16.0 g	10.0 ml
Run #2		

Pesticides, Soil Cleanup Objectives

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
309-00-2	Aldrin	0.68 U	0.72	0.68	0.59	ug/kg	
319-84-6	alpha-BHC	0.68 U	0.72	0.68	0.59	ug/kg	
319-85-7	beta-BHC	0.68 U	0.72	0.68	0.65	ug/kg	
319-86-8	delta-BHC	0.71 U	0.72	0.71	0.69	ug/kg	
58-89-9	gamma-BHC (Lindane)	0.65 U	0.72	0.65	0.53	ug/kg	
5103-71-9	alpha-Chlordane	5.0	0.72	0.68	0.58	ug/kg	
60-57-1	Dieldrin	2.0	0.72	0.54	0.49	ug/kg	
72-54-8	4,4'-DDD	7.3	0.72	0.68	0.66	ug/kg	
72-55-9	4,4'-DDE [a]	2.6	0.72	0.68	0.63	ug/kg	
50-29-3	4,4'-DDT	7.5	0.72	0.68	0.64	ug/kg	
72-20-8	Endrin	0.65 U	0.72	0.65	0.56	ug/kg	
1031-07-8	Endosulfan sulfate	0.65 U	0.72	0.65	0.56	ug/kg	
959-98-8	Endosulfan-I	0.54 U	0.72	0.54	0.41	ug/kg	
33213-65-9	Endosulfan-II	0.54 U	0.72	0.54	0.45	ug/kg	
76-44-8	Heptachlor	0.76	0.72	0.65	0.62	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	59%		25-135%
877-09-8	Tetrachloro-m-xylene	59%		25-135%
2051-24-3	Decachlorobiphenyl	52%		10-156%
2051-24-3	Decachlorobiphenyl	105%		10-156%

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

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-CF-037
Lab Sample ID: JC89914-11 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8082A SW846 3546 **Percent Solids:** 86.8
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	XX2436692.D	1	06/20/19 14:36	CP	06/19/19 05:45	OP21101	GXX6722
Run #2							

	Initial Weight	Final Volume
Run #1	16.0 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
12674-11-2	Aroclor 1016	29 U	36	29	17	ug/kg	
11104-28-2	Aroclor 1221	29 U	36	29	22	ug/kg	
11141-16-5	Aroclor 1232	29 U	36	29	23	ug/kg	
53469-21-9	Aroclor 1242	29 U	36	29	15	ug/kg	
12672-29-6	Aroclor 1248	34 U	36	34	32	ug/kg	
11097-69-1	Aroclor 1254	29 U	36	29	19	ug/kg	
11096-82-5	Aroclor 1260	29 U	36	29	15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	70%		31-146%
877-09-8	Tetrachloro-m-xylene	74%		31-146%
2051-24-3	Decachlorobiphenyl	71%		17-164%
2051-24-3	Decachlorobiphenyl	79%		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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-037
Lab Sample ID: JC89914-11 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Percent Solids: 86.8
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	5.7	2.3	0.58	0.33	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Barium	32.9	23	12	2.2	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.51	0.23	0.12	0.093	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Cadmium	0.23 U	0.58	0.23	0.081	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Chromium	19.1	1.2	0.58	0.43	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Copper	10.7	2.9	1.2	0.98	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Lead	16.3	2.3	0.58	0.48	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Manganese	176	1.7	1.2	0.48	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Mercury	0.047	0.031	0.023	0.014	mg/kg	1	06/18/19	06/18/19	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	10.7	4.7	0.47	0.41	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Selenium	0.93 U	2.3	0.93	0.76	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Silver	0.47 U	0.58	0.47	0.20	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Zinc	27.0	5.8	4.7	2.7	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA46938
(2) Instrument QC Batch: MA46951
(3) Prep QC Batch: MP15743
(4) Prep QC Batch: MP15749

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

Report of Analysis

Client Sample ID:	NWIRP-S1-WC-CF-037		
Lab Sample ID:	JC89914-11	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
		Percent Solids:	86.8
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
Chromium, Hexavalent	0.61	0.46	0.40	0.37	mg/kg	1	06/25/19 17:07	NV	SW846 3060A/7196A
Chromium, Trivalent [a]	18.5	1.7	0.98	0.80	mg/kg	1	06/25/19 17:07	NV	SW846 6010/7196A M
Cyanide	0.19 U	0.25	0.19	0.12	mg/kg	1	06/20/19 17:00	BM	SW846 9012B/LACHAT
Redox Potential Vs H2	378				mv	1	06/20/19 10:50	MS	ASTM D1498-76M
Solids, Percent	86.8				%	1	06/19/19 14:30	BG	SM2540 G 18TH ED MOD
pH	7.16				su	1	06/20/19 10:52	MS	SW846 9045D

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-038
Lab Sample ID: JC89914-12 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D SW846 3546 **Percent Solids:** 89.8
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	Z138889.D	1	06/19/19 17:40	AR	06/19/19 09:00	OP21103	EZ6837
Run #2							

	Initial Weight	Final Volume
Run #1	30.6 g	1.0 ml
Run #2		

ABN Soil Cleanup Objectives Priority List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
95-48-7	2-Methylphenol	36 U	73	36	23	ug/kg	
	3&4-Methylphenol	36 U	73	36	30	ug/kg	
87-86-5	Pentachlorophenol	91 U	150	91	34	ug/kg	
108-95-2	Phenol	36 U	73	36	19	ug/kg	
83-32-9	Acenaphthene	18 U	36	18	13	ug/kg	
208-96-8	Acenaphthylene	27 U	36	27	18	ug/kg	
120-12-7	Anthracene	27 U	36	27	22	ug/kg	
56-55-3	Benzo(a)anthracene	137	36	18	10	ug/kg	
50-32-8	Benzo(a)pyrene	122	36	18	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	150	36	18	16	ug/kg	
191-24-2	Benzo(g,h,i)perylene	82.8	36	27	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	58.1	36	18	17	ug/kg	
218-01-9	Chrysene	126	36	18	11	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	25.9	36	18	16	ug/kg	J
132-64-9	Dibenzofuran	18 U	73	18	15	ug/kg	
206-44-0	Fluoranthene	184	36	18	16	ug/kg	
86-73-7	Fluorene	27 U	36	27	17	ug/kg	
118-74-1	Hexachlorobenzene	18 U	73	18	9.2	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	36	18	17	ug/kg	
91-20-3	Naphthalene	18 U	36	18	10	ug/kg	
85-01-8	Phenanthrene	55.1	36	18	12	ug/kg	
129-00-0	Pyrene	224	36	18	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	64%		23-115%
4165-62-2	Phenol-d5	66%		27-114%
118-79-6	2,4,6-Tribromophenol	73%		19-152%
4165-60-0	Nitrobenzene-d5	69%		26-134%
321-60-8	2-Fluorobiphenyl	63%		39-124%
1718-51-0	Terphenyl-d14	95%		36-134%

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-CF-038
Lab Sample ID: JC89914-12 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8270D BY SIM SW846 3546 **Percent Solids:** 89.8
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]	3P77875.D	1	07/08/19 23:28	CS	07/05/19 16:30	OP21387	E3P3646
Run #2							

	Initial Weight	Final Volume
Run #1	30.8 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
123-91-1	1,4-Dioxane	1.8 U	3.6	1.8	0.88	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		10-146%
321-60-8	2-Fluorobiphenyl	52%		46-115%
1718-51-0	Terphenyl-d14	66%		10-170%

(a) Sample extracted outside the holding time.

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-CF-038
Lab Sample ID: JC89914-12 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8151A SW846 3546 **Percent Solids:** 89.8
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	3G123419.D	1	06/18/19 18:44	VDT	06/18/19 09:30	OP21084	G3G4329
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
93-72-1	2,4,5-TP (Silvex)	3.5 U	3.6	3.5	3.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	38%		10-159%
19719-28-9	2,4-DCAA	38%		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-CF-038
Lab Sample ID: JC89914-12 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8081B SW846 3546 **Percent Solids:** 89.8
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	1G153585.D	1	06/19/19 12:13	MH	06/19/19 05:45	OP21102	G1G4959
Run #2							

	Initial Weight	Final Volume
Run #1	16.2 g	10.0 ml
Run #2		

Pesticides, Soil Cleanup Objectives

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
309-00-2	Aldrin	0.65 U	0.69	0.65	0.57	ug/kg	
319-84-6	alpha-BHC	0.65 U	0.69	0.65	0.56	ug/kg	
319-85-7	beta-BHC	0.65 U	0.69	0.65	0.62	ug/kg	
319-86-8	delta-BHC	0.67 U	0.69	0.67	0.66	ug/kg	
58-89-9	gamma-BHC (Lindane)	0.62 U	0.69	0.62	0.51	ug/kg	
5103-71-9	alpha-Chlordane	2.8	0.69	0.65	0.55	ug/kg	
60-57-1	Dieldrin	0.68	0.69	0.52	0.47	ug/kg	J
72-54-8	4,4'-DDD	0.65 U	0.69	0.65	0.63	ug/kg	
72-55-9	4,4'-DDE	0.65 U	0.69	0.65	0.60	ug/kg	
50-29-3	4,4'-DDT	1.3	0.69	0.65	0.61	ug/kg	
72-20-8	Endrin	0.62 U	0.69	0.62	0.53	ug/kg	
1031-07-8	Endosulfan sulfate	0.62 U	0.69	0.62	0.54	ug/kg	
959-98-8	Endosulfan-I	0.52 U	0.69	0.52	0.40	ug/kg	
33213-65-9	Endosulfan-II	0.52 U	0.69	0.52	0.43	ug/kg	
76-44-8	Heptachlor	0.62 U	0.69	0.62	0.59	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	72%		25-135%
877-09-8	Tetrachloro-m-xylene	72%		25-135%
2051-24-3	Decachlorobiphenyl	67%		10-156%
2051-24-3	Decachlorobiphenyl	94%		10-156%

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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-CF-038
Lab Sample ID: JC89914-12 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Method: SW846 8082A SW846 3546 **Percent Solids:** 89.8
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	XX2436693.D	1	06/20/19 14:55	CP	06/19/19 05:45	OP21101	GXX6722
Run #2							

	Initial Weight	Final Volume
Run #1	16.2 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	22	ug/kg	
53469-21-9	Aroclor 1242	27 U	34	27	14	ug/kg	
12672-29-6	Aroclor 1248	32 U	34	32	31	ug/kg	
11097-69-1	Aroclor 1254	27 U	34	27	18	ug/kg	
11096-82-5	Aroclor 1260	27 U	34	27	15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	79%		31-146%
877-09-8	Tetrachloro-m-xylene	83%		31-146%
2051-24-3	Decachlorobiphenyl	72%		17-164%
2051-24-3	Decachlorobiphenyl	81%		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

Report of Analysis

Client Sample ID: NWIRP-S1-WC-CF-038
Lab Sample ID: JC89914-12 **Date Sampled:** 06/14/19
Matrix: SO - Soil **Date Received:** 06/14/19
Percent Solids: 89.8
Project: Site 1-Fmr Drum Marshalling Area Naval Weapons Industrial Reserve Plant Bethpage

Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	4.4	2.2	0.56	0.31	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Barium	27.2	22	11	2.1	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.38	0.22	0.11	0.089	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Cadmium	0.22 U	0.56	0.22	0.078	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Chromium	14.2	1.1	0.56	0.41	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Copper	10.9	2.8	1.1	0.94	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Lead	28.7	2.2	0.56	0.46	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Manganese	131	1.7	1.1	0.46	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Mercury	0.029 J	0.035	0.026	0.015	mg/kg	1	06/18/19	06/18/19	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.9	4.5	0.45	0.39	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Selenium	0.89 U	2.2	0.89	0.72	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Silver	0.45 U	0.56	0.45	0.19	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]
Zinc	27.7	5.6	4.5	2.6	mg/kg	1	06/18/19	06/19/19	GT	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA46938
(2) Instrument QC Batch: MA46951
(3) Prep QC Batch: MP15743
(4) Prep QC Batch: MP15749

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

Report of Analysis

Client Sample ID:	NWIRP-S1-WC-CF-038		
Lab Sample ID:	JC89914-12	**Date Sampled:**	06/14/19
Matrix:	SO - Soil	**Date Received:**	06/14/19
		Percent Solids:	89.8
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
Chromium, Hexavalent	0.88	0.45	0.39	0.35	mg/kg	1	06/25/19 17:07	NV	SW846 3060A/7196A
Chromium, Trivalent [a]	13.3	1.6	0.95	0.76	mg/kg	1	06/25/19 17:07	NV	SW846 6010/7196A M
Cyanide	0.19 U	0.26	0.19	0.13	mg/kg	1	06/20/19 17:01	BM	SW846 9012B/LACHAT
Redox Potential Vs H2	374				mv	1	06/20/19 10:54	MS	ASTM D1498-76M
Solids, Percent	89.8				%	1	06/19/19 14:30	BG	SM2540 G 18TH ED MOD
pH	6.79				su	1	06/20/19 10:54	MS	SW846 9045D

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

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

50
SCL

JC89914

CHAIN-OF-CUSTODY RECORD

COC Number: 501164-20190614
Subcontract Services Agreement: TBD

NCREAS

APTIM

KD1-03619-104

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	***Fill Material Samples***
F6147 / 501164	Natasha Kelley Sullivan (410)529-7598
NAVY	Monica L. Smeal E.I.T.

								Analysis Desired: Volatiles SW-846 5035A/8260B	1,4-dioxane and SVOC SW-846 8270D	Total PCBs SW-846 8082A	Pesticides SW-846 8081B	Herbicides 8151A	Metals - ICP SW846 6010C/7471A	Cyanide SW-846 9012B	Cr6 and Cr3						
1	NWIRP-S1-WC-CF-027	06/14/19	1100		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 60 ml glass jar, none	X														
2	NWIRP-S1-WC-CF-028	06/14/19	1105		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X														
3	NWIRP-S1-WC-CF-029	06/14/19	1110		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X														
4	NWIRP-S1-WC-CF-030	06/14/19	1115		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X														
5	NWIRP-S1-WC-CF-031	06/14/19	1120		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X														
6	NWIRP-S1-WC-CF-032	06/14/19	1121		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X														
7	NWIRP-S1-WC-CF-033	06/14/19	1124		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X														
8	NWIRP-S1-WC-CF-034	06/14/19	1130		X	Soil - Common Backfill	3 X Terra Core Kit – (2- H20/1-MeOH) 1 x 2 oz glass jar, none	X														
9	NWIRP-S1-WC-CF-035	06/14/19	1133		X	Soil - Common Backfill	2 x 8 oz glass jar, none		X	X	X	X	X	X	X							
10	NWIRP-S1-WC-CF-036	06/14/19	1138		X	Soil - Common Backfill	2 x 8 oz glass jar, none		X	X	X	X	X	X	X							
11	NWIRP-S1-WC-CF-037	06/14/19	1143		X	Soil - Common Backfill	2 x 8 oz glass jar, none		X	X	X	X	X	X	X							
12	NWIRP-S1-WC-CF-038	06/14/19	1150		X	Soil - Common Backfill	2 x 8 oz glass jar, none		X	X	X	X	X	X	X							

Initial Assessment 3A/bm

Label Verification_____

P54
14A4
4969

***** See attached list for SPECIFIC COMPOUNDS***

(please run most appopriate method to meet the action level requirements .

Turnaround Time Required: ☐ 14 Day TAT

Sampled By: McCutcheon, Sean, APTIM

	Transfers Relinquished By	Date	Time	Transfers Accepted By	Date	Time
1	Sampler's Signature					
2		6/14/19	1445		6/14/19	1948
3		6/14/19	1845		6/14/19	1845
4						

Report Format: *Full Report*
Deliverables: EDD Excel+NIRIS
Fax results to Natasha Sullivan (410) 529-7599

Bottle # KD1-03619-(03)

3-4oz
5-8oz

SGS Sample Receipt Summary

Job Number: JC89914 **Client:** NOREAS-CB&I JV (NCBI) **Project:** BACKFILL - BETHPAGE, NY

Date / Time Received: 6/14/2019 6:45:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.4); Cooler 2: (3.5);

Cooler Temps (Corrected) °C: Cooler 1: (2.4); Cooler 2: (2.5);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	2		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 206717 pH 12+: 208717 Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

JC89914: Chain of Custody
Page 2 of 2