



# NPDES Pretreatment Compliance Sampling Inspection Report

Thomas Electronics

208 Davis Parkway  
Clyde, New York 14433

NPDES Permit: NYP080230

Inspection Date: September 26, 2023

**Report Prepared by:**

**THUAN TRAN** Digitally signed by THUAN TRAN  
Date: 2023.12.12 16:30:08 -05'00'

---

Thuan Tran, Physical Scientist

**Report Approved by:**

**PHILIP COCUZZA** Digitally signed by PHILIP  
COCUZZA  
Date: 2023.12.13 14:14:59 -05'00'

---

Phil Cocuzza, Chief  
Monitoring Operations Section

## 1.0 OBJECTIVE

On September 26, 2023, the United States Environmental Protection Agency (USEPA) conducted a Pretreatment Compliance Sampling Inspection (CSI) at Thomas Electronics in Clyde, New York (NY). The objective of the Pretreatment CSI was to gather information necessary to determine if the pretreated effluent from Thomas Electronics is in compliance with the requirements and limitations set forth in the Federal Categorical Electrical and Electronic Components Point Source Category Subpart C – Cathode Ray Tube Subcategory under 40 CFR Part 469.34, the Federal General Pretreatment Standards for Existing and New Sources of Pollution under 40 CFR Part 403, and their Industrial User Permit; ISUP-001. The Industrial User Permit, issued by the Village of Clyde, was effective on December 01, 2022, and expired on November 30, 2023.

## 2.0 KEY PARTICIPANTS

Listed below are key inspection participants and contact information, grouped by organization.

U.S. Environmental Protection Agency  
Thuan Tran, Lead Inspector  
732-321-4455, email: [tran.thuan@epa.gov](mailto:tran.thuan@epa.gov)  
Molly Hillenbrand, Life Scientist

Thomas Electronics  
Corey Hall, Facility Manager  
315-286-5541 (mobile), email: [corey.hall@thomaselectronics.com](mailto:corey.hall@thomaselectronics.com)  
Abe Hurtic, Process Engineer

## 3.0 FACILITY DESCRIPTION

### 3.1 General Information

Thomas Electronics is located on 208 Davis Parkway in Clyde, New York. The facility is a manufacturer of cathode ray tubes, which are used in the monochromatic displays for the defense, aerospace, and medical industries. There are three buildings on the property. Manufacturing operations began in 1975 in Building #1 and continue to the present day. Building #2 is used for wiring and assembly operations. Building #3 is a warehouse which has been used for storage since 2001. There are 90 employees that work one 9-hour shift (7:00 am to 4:30 pm), Monday to Friday, with every other Friday off. Thomas Electronics is categorized under Standard Industrial Classification (SIC) 3671– Electron Tubes and the North American Industry Classification System (NAICS) 334419 – Other Electronic Manufacturing.

### 3.2 Process Information

Thomas Electronics uses city water. Sanitary water usage is drained to the City of Clyde Sewer Collection System. For manufacturing operation, the city water is treated through a Reverse Osmosis (RO) System, followed by a Ultraviolet (UV) Sterilization Unit, followed by Ion Exchange System to produce deionized water at the Point-of-Use (POU).

The Cathode Ray Tube (CRT) glass bulbs come into the receiving area and are conveyed to the dirty washing station. The bulbs are washed with a 3% hydrofluoric acid solution, rinsed with city water, and then rinsed with deionized water. Some bulbs undergo an ultrasonic vibration cleaning to remove stubborn residuals. The glass bulbs move to the grinding/buffering/polishing station before the face and base are attached. The CRT bulb with base is cleaned and rinsed with DI water. A phosphors coating is applied onto the inside surface of the bulb, then moved into the oven to be baked to lock the phosphors onto the surface. A lacquer film is applied on the backside of the bulb after the bulbs come out of the oven. After drying, a graphite-based coating is applied to the bulb. The bulb is placed into a vacuum, where aluminum is vaporized onto the lacquer film. The bulb is moved into a furnace and baked to harden binders and remove organics. A sparkler is used to check for defect in the phosphors the following day.

An electron gun is inserted by fusing the base of the bulb to the face plate using frit tape. At the exhaust station, a turbomolecular pump is used to create a vacuum. A “getter flash” is used to maintain the vacuum inside the CRT. After sparking and degaussing, the cathode is activated by aging.

The finished CRTs are sent as a kit to be wire and assemble in Building #2. The assembled product is tested for alignment. The product is then sent to the Clean Room for final lamination with silicone. The finished product is tested to simulate variations in temperature and altitude. After final inspection, the CRT is transferred to the packaging area for shipment.

Process wastewater is generated from dirty, ultrasonic, grinding, buffering, and polishing wash stations, as well as cleaning wash with RO rinse, coating wash, lacquer water, and welding wash.

Process wastewater is directed into the floor drain then flows into the Collection Pit. A pH probe is positioned in the Collection Pit to monitor the pH of the incoming wastewater. Depending on the pH, the pH probe communicates with the dosimeter to either add muriatic acid or sodium hydroxide. A high-low level sensor monitors the level of wastewater in the Collection Pit. As the pit fills up, the high-level sensor is triggered to pump the wastewater to Settling Tank #1 until the low-level sensor is triggered to shut-off the pump. The effluent from Settling Tank #1 is pumped to Settling Tank #2 for additional retention time. The effluent from Settling Tank #2 passes through a sequence of cartridge filters from 50-micron down to 5-micron. The effluent is further treated through two (2) sets of 2 Cylindrical Ion Exchange Tanks. The effluent emerges from the ion exchange tanks is filtered through a 1-micron cartridge filter. The pretreated effluent discharges into the monitoring location (Sample Box), where it comingles with the RO reject water. A pH probe monitors the pH of the pretreated effluent in the Sample Box before continuing to the sewer collection system.

The settling solids from Settling Tanks #1 and #2 are removed and collected in a 55-gallon drum twice a year. The liquid is allowed to evaporate from the drum. The

concentrated solids are disposed of as hazardous waste.

### 3.3 Facility Self-Monitoring Information

Thomas Electronics contracts Pace Analytical Services, LLC to collect and analyze the parameters in 40 CFR Part 469.34 and their Industrial User Permit. The parameters are Metals (Cadmium, Chromium, Lead, Mercury & Zinc), Fluoride, pH, Temperature, Oil & Grease, and Total Toxic Organics (TTO). TTO consists of Volatile Organic Compounds (VOCs) and Semi-Volatile Organic Compounds (SVOCs). Pace Analytical Services, LLC. is located on 575 Broad Hollow Road, Millville, New York.

## **4.0 EPA SAMPLING/INSPECTION ACTIVITIES**

### 4.1 Sampling Activities

An ISCO automatic composite sampler was programmed to take 32 sample aliquots during the 8-hour sampling event from the monitoring location. The 8-hour composite sample was collected and analyzed for Metals (Cd, Cr, Pb, Zn & Hg) and Fluoride. Grab-Composite samples were collected for Semi-Volatile Organic Compounds (SVOCs). Grab samples were collected for Volatile Organic Compounds (VOCs) and Total Petroleum Hydrocarbons (TPH). The four (4) sets of VOCs grab samples were composited in the laboratory.

In addition, on-site grab samples were collected and analyzed for pH, Temperature, and Total Residual Chlorine (TRC)

All sample containers, preservation techniques and holding times were in accordance with USEPA requirements specified in 40 CFR Part 136. Signed and dated custody seals were placed across the lids and along the sides of the sample containers. The custody sealed sample containers were placed inside plastic sample bags and sealed. All samples were transported on ice to the USEPA Laboratory in Edison, New Jersey for analysis.

Flow monitoring data were provided by the facility representative.

Split samples were collected and given to the facility representative.

### 4.2 Inspection Activities

A Pretreatment CSI at Thomas Electronics was conducted on September 26, 2023. The inspectors met with Cory Hall; Facility Manager, and Abe Hurtic; Process Engineer. Inspector's credentials were presented, and business cards were provided during the opening conference. The facility representatives were explained that the purpose of the inspection with supporting on-site activities was to determine if the facility is in compliance with the Federal Electrical and Electronic Components Point Source Category Subpart C – Cathode Ray Tube Subcategory under 40 CFR Part 469.34, the Federal General Pretreatment Regulations for Existing and New Sources of Pollution under 40 CFR Part 403, and their Industrial User Permit.

The on-site supporting activities consist of collecting samples of the pretreated discharge from the On-Site Industrial WWTP, observing and evaluating the monitoring location, observing and evaluating the On-Site Industrial WWTP, observing and evaluating the flow monitoring devices, taking a tour of the CRT Manufacturing Operation, observing where process wastewater is generated within the CRT Manufacturing Process, and interviewing the facility's representatives.

During the closing conference, the facility representatives were briefed on the inspection activities. On-site sample results and concerns observed during the inspection were communicated to the facility representatives.

4.3 Deviations and/or Environmental Conditions

Compliance samples were collected from the monitoring location. The discharged effluent from the On-Site Industrial WWTP into the monitoring location was intermittent throughout the workday. Furthermore, the RO reject water was observed discharging continuously into the monitoring location.

**5.0 ANALYTICAL RESULTS**

**Thomas Electronics – Pretreated Discharge to the Village of Clyde WWTP  
 Inspection Date: September 26, 2023**

Pollutants	Units	40CFR469.34		SIU Permit	EPA Results
		Maximum for any 1 day	Mo. avg. shall not exceed	Daily Maximum	
Fluoride	mg/L	35.0	18.0	35 (18-Mo. avg.)	40
Cadmium, T	mg/L	0.06	0.03	0.06 (0.001 lbs/d)	U
Chromium, T	mg/L	0.65	0.30	0.65 (0.017 lbs/d)	U
Lead, T	mg/L	1.12	0.41	1.12 (0.07 lbs/d)	0.093
Zinc, T	mg/L	1.38	0.56	1.38 (0.09 lbs/d)	0.090
Mercury	mg/L	----	----	700 (0.70 ug/l)	U
TTO:	mg/L	1.58	----	----	U
VOAs	----	----	----	----	U
NVOAs	----	----	----	----	UJ
pH	SU	>= 5.0		5.0 - 10	8.15
TPH	mg/L	shall not be in amount to cause interference or pass through.		<=100	U
Temperature	°C	<= 40°C		<= 65 (150°F)	19
Flow	GPD	----		Metered	2,514
TRC	mg/L	Per Sample Collection		----	0.15

Notes: U- The analyte was not detected at or above the Reporting Limit.  
 J- The identification of the analyte is acceptable; the reported value is an estimate.

## 6.0 FINDINGS

### 6.1 Sampling Result Findings

The EPA analytical results obtained during this inspection show the following parameter(s) as being outside of the acceptable limits:

6.1.1 According to 40 CFR Part 469.34 and the Industrial User Permit, the daily maximum for any 1 day/daily maximum for fluoride is 35 milligrams per liter (mg/L). The analytical result for fluoride was determined to be 40 mg/L.

### 6.2 Inspection Findings

In addition to the analytical data, an inspection of the facility operation was conducted as discussed in Section 4.2 above. During the inspection, the following observations were noted which may contravene the requirements of the permit or the applicable regulations:

6.2.1 RO reject water was continuously discharging into the monitoring location while the On-Site Industrial WWPT discharged effluent was intermittent. As a result, compliance samples collected at the monitoring location was not representative of the On-Site Industrial WWTP discharge. According to the Industrial User Permit, Part 1 B., it states, “*Effluent from this outfall consist of wastewater from the following operations (Glass fritting, Defritting, Bulb washing/rewashing, Bulb screening & Bulb lacquering).*” In 40 CFR Part 403.7(b)(2)(i) - Representative data; quality and quantity, it states, “*The data shall be representative of the yearly and seasonal conditions to which the POTW is subjected for each pollutant for which a discharge limit revision is proposed.*” Furthermore, 40 CFR Part 403.12(b)(5)(ii) states, “.... *The sample shall be representative of daily operations.*”

## 7.0 ATTACHMENTS

**Attachment #1.** An overview site plan shows Thomas Electronics facilities and property.

**Attachment #2.** CRT Manufacturing Operation is performed in Building #1.

**Attachment #3.** Process flow of CRT production is between Building #1 and Building #2.

**Attachment #5.** Process wastewater is pretreated by the On-Site Pretreatment System.

**Attachment #5.** Samples were submitted to the USEPA-R2 Laboratory on 09/27/23.

**Attachment #6.** USEPA Analytical Data Package was received on 10/17/23.

## 8.0 PHOTOGRAPHS

**Photo #1.** Compliance samples were collected from the monitoring location (Sample Box).

**Photo #2.** RO backwash was discharging continuously into the Sample Box.

**Photo #3.** A close-up photo shows no discharge from the Pretreatment System (grey pipe) .

## **7.0 Attachments**

**Attachment #1.** An overview site layout shows Thomas Electronics facilities and property.

8

7

6

5

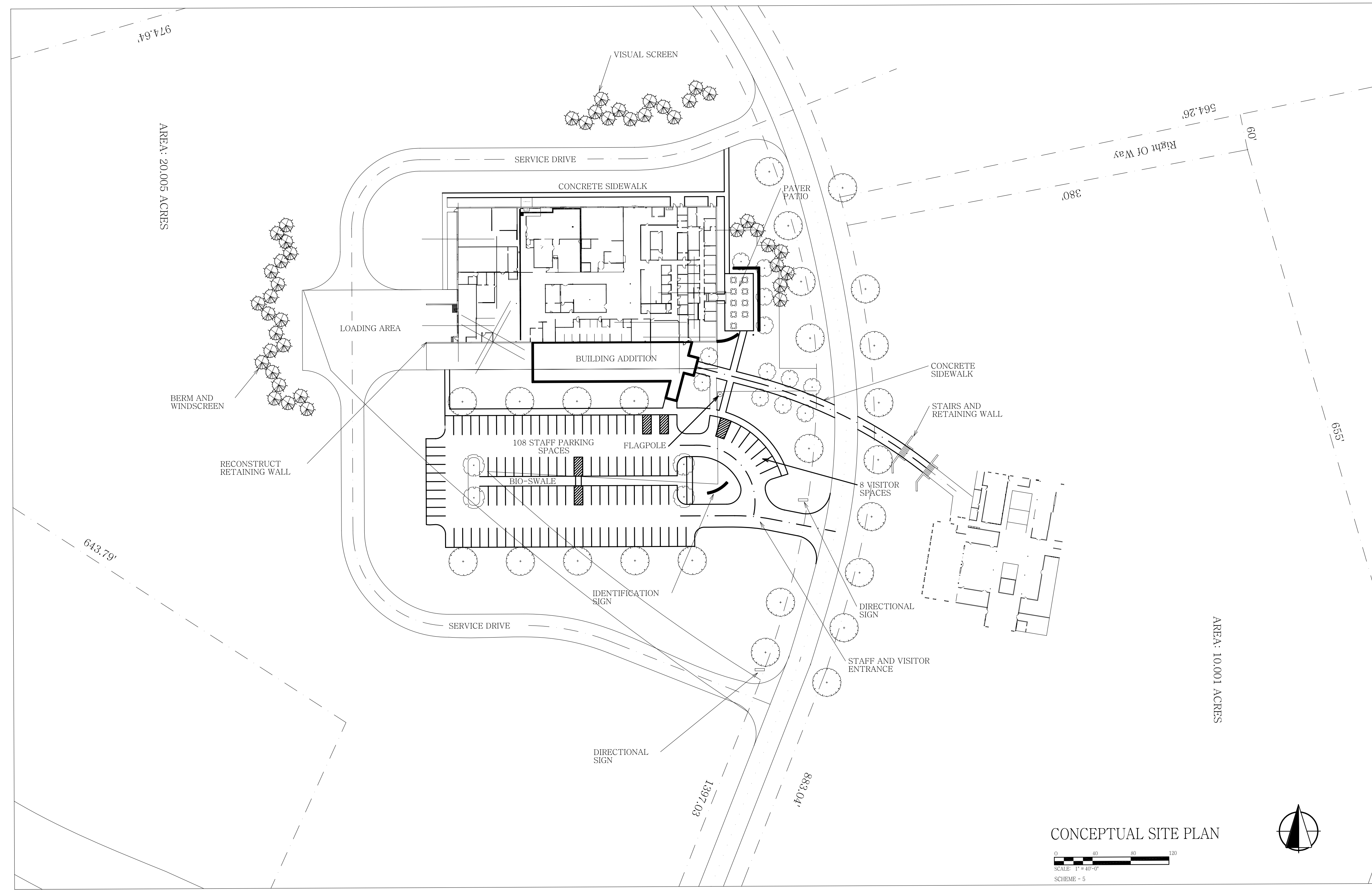
4

3

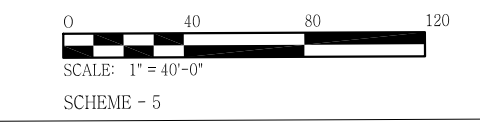
2

1

REVISIONS						
ZONE	REV.	DESCRIPTION	ISSUED	DRAFTED	DATE	APPROV.



CONCEPTUAL SITE PLAN

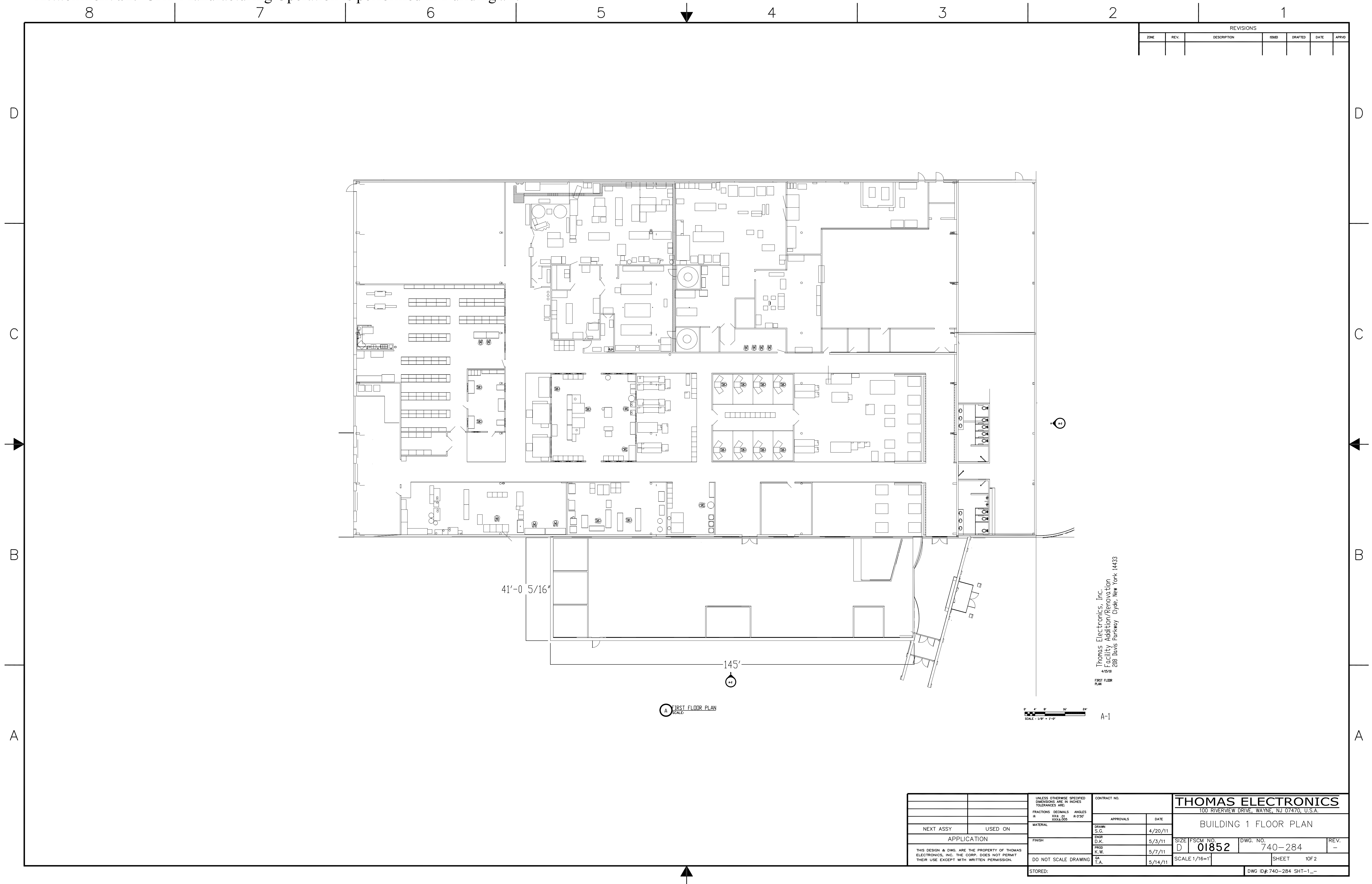


D  
C  
B  
A

D  
C  
B  
A

NEXT ASSY		USED ON		APPLICATION		<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:</small> <small>FRACTIONS DECIMALS ANGLES</small> <small>1/16 0.001 0.030</small>		CONTRACT NO. APPROVALS DATE S.G. 4/20/11 ENR 5/3/11 D.K. PROD K.W. 5/7/11 OR T.A. 5/14/11		<b>THOMAS ELECTRONICS</b> 100 RIVERVIEW DRIVE, WAYNE, NJ 07470, U.S.A. SITE PLAN	
<small>THIS DESIGN &amp; DWG. ARE THE PROPERTY OF THOMAS ELECTRONICS, INC. THE CORP. DOES NOT PERMIT THEIR USE EXCEPT WITH WRITTEN PERMISSION.</small>						DO NOT SCALE DRAWING	SCALE NONE	SHEET 10F1	DWG. NO. 740-285	REV. -	DWG ID#: 740-285_

Attachment #2. CRT Manufacturing Operation is performed in Building #1.



REVISIONS						
ZONE	REV.	DESCRIPTION	ISSUED	DRAFTED	DATE	APPROV.

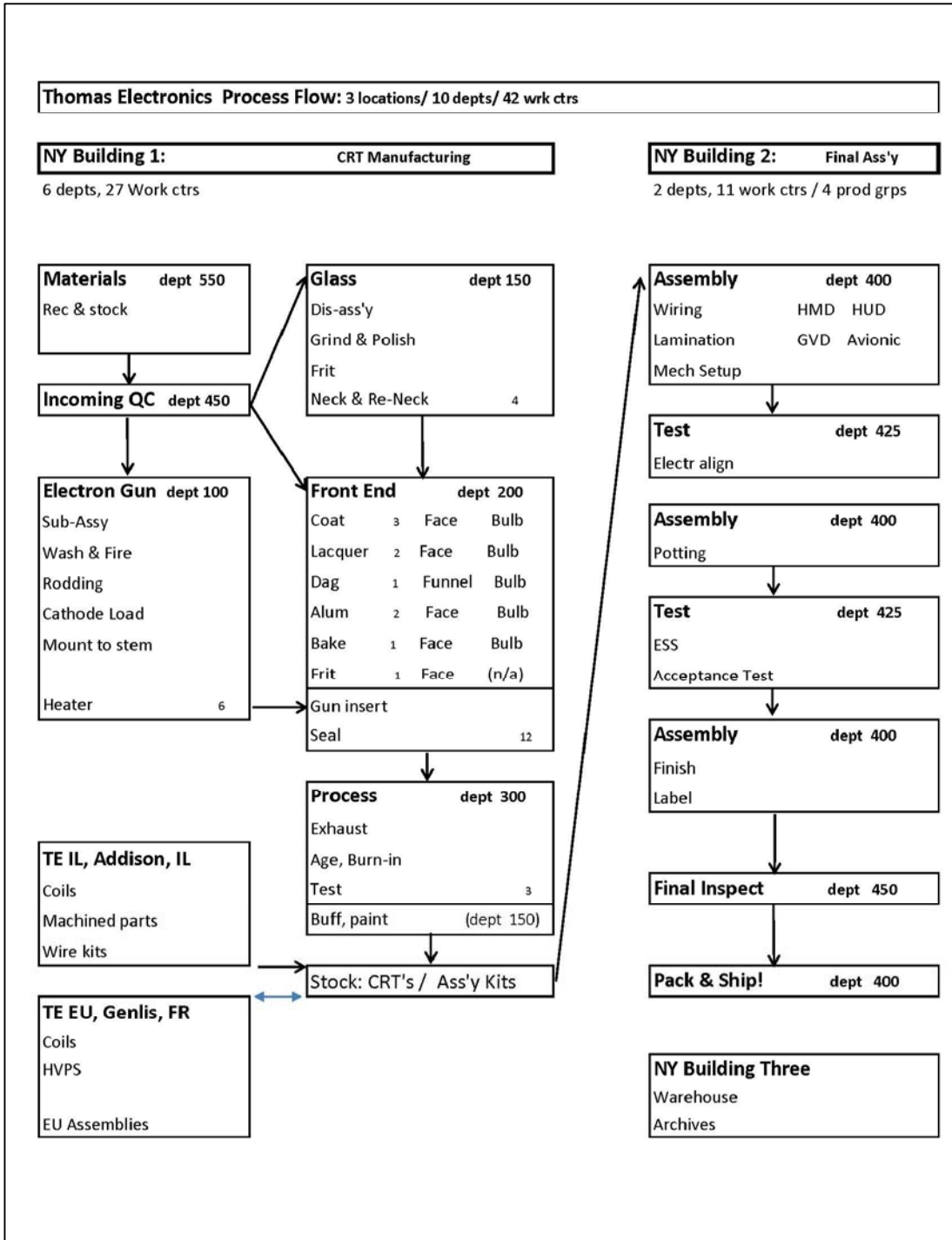
Thomas Electronics, Inc.  
 Facility Addition/Renovation  
 208 Davis Parkway Clyde, New York 14433

A-1

NEXT ASSY		USED ON		APPLICATION		<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:</small> <small>FRACTIONS DECIMALS ANGLES</small> <small>± 1/16" ± 0.01" ± 0.30"</small> <small>XXX/1000</small>		CONTRACT NO. APPROVALS DATE 4/20/11		<b>THOMAS ELECTRONICS</b> 100 RIVERVIEW DRIVE, WAYNE, NJ 07470, U.S.A. <b>BUILDING 1 FLOOR PLAN</b>		
<small>THIS DESIGN &amp; DWG. ARE THE PROPERTY OF THOMAS ELECTRONICS, INC. THE CORP. DOES NOT PERMIT THEIR USE EXCEPT WITH WRITTEN PERMISSION.</small>		MATERIAL FINISH DO NOT SCALE DRAWING STORED:		ENGR D.K. 5/3/11		PROD K.W. 5/7/11		T.A. 5/14/11		SIZE D 01852	DWG. NO. 740-284	REV. -
SCALE 1/16"=1'										SHEET 10F2		
DWG ID#: 740-284 SHT-1_L_-												

**Attachment #3.** CRT Process is performed in Building #1. Wiring & Assembly are performed in Building #2.

USED ON	REVISIONS				
	REV.	ECN NO.	ENGINEER	DATE	DRAFTED
	-				



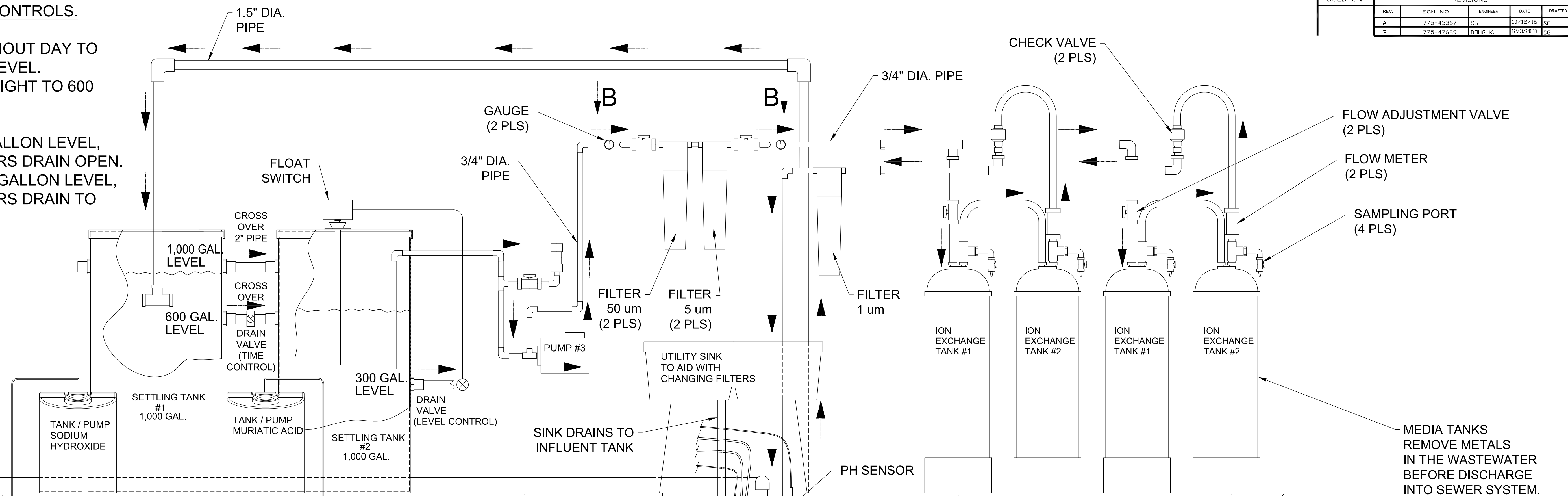
THIS DESIGN & DWG. ARE THE PROPERTY OF THOMAS ELECTRONICS, INC. THE CORP. DOES NOT PERMIT THEIR USE EXCEPT WITH WRITTEN PERMISSION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:  DECIMALS    ANGLES XX±           ± XXX±	NAME	DATE	<b>THOMAS ELECTRONICS</b> 208 DAVIS PARKWAY, CLYDE, NY 14433 USA			
	DRAWN BY Doug Ketchum	1/23/23				
MATERIAL	CHECKED BY		THOMAS ELECTRONICS PROCESS FLOW			
	ENGR APPR. K.B.	1/31/23				
FINISH	PROD APPR. D.K.	1/31/23	SIZE <b>A</b>	CAGE CODE <b>4U430</b>	DWG. NO. 740-289	REV. -
	QA APPR. K.W.	1/31/23	SCALE NONE	SHEET 1 OF 1		

**SETTLING TANK FLOW CONTROLS.**

**TANK 1: FILLS THROUGHOUT DAY TO 1,000 GALLON LEVEL. DRAINS EACH NIGHT TO 600 GALLON LEVEL.**

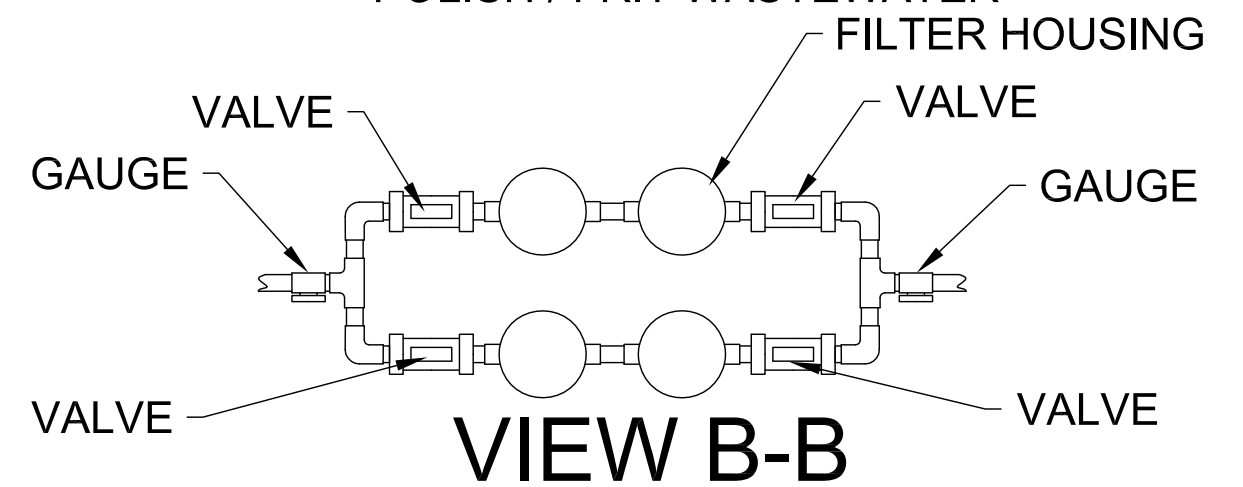
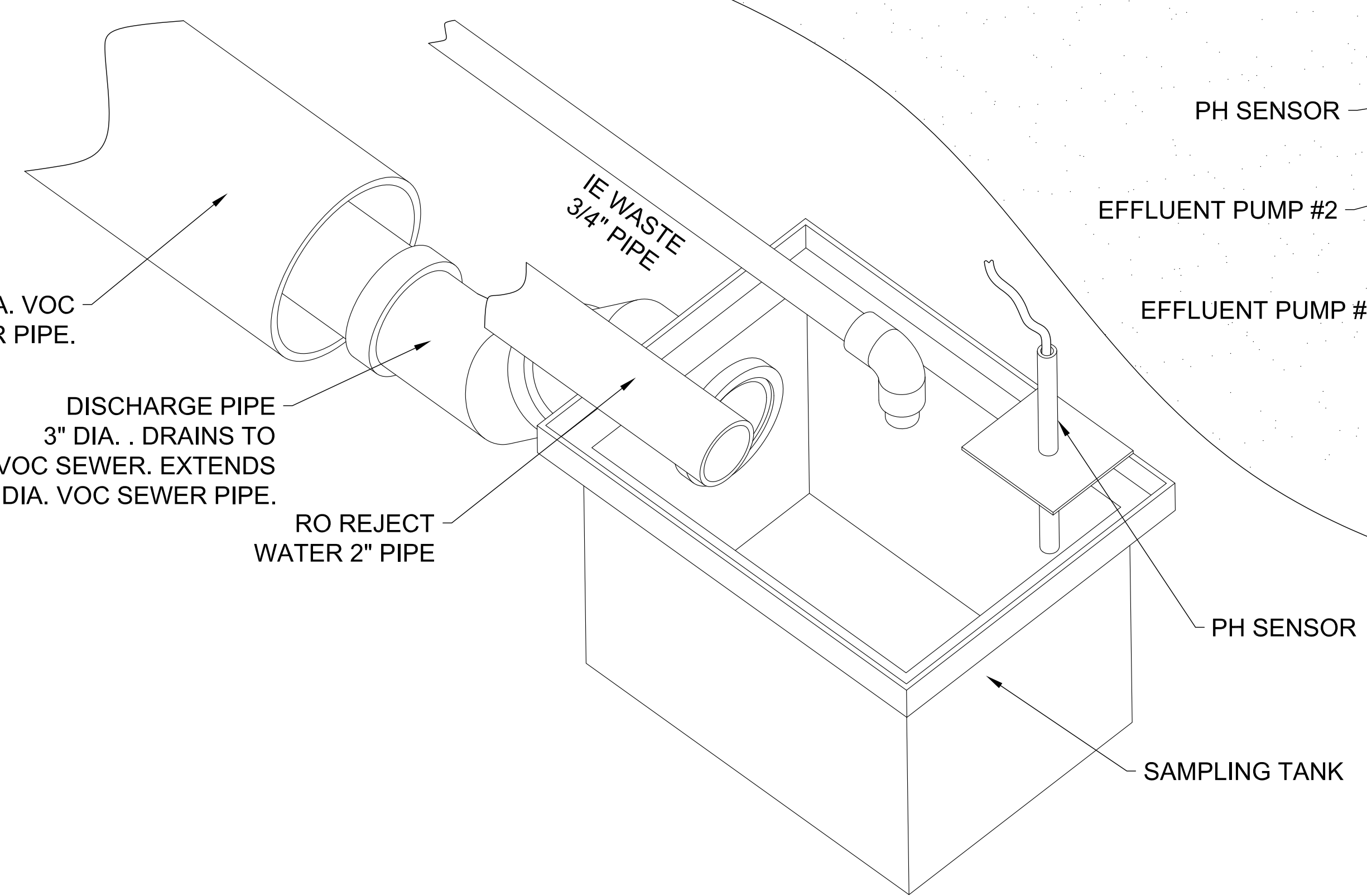
**TANK 2: FILLS TO 500 GALLON LEVEL, WHICH TRIGGERS DRAIN OPEN. DRAINS TO 300 GALLON LEVEL, WHICH TRIGGERS DRAIN TO CLOSE**



USED ON		REVISIONS			
REV.	ECN NO.	ENGINEER	DATE	DRAWN	
A	775-43367	SG	10/12/16	SG	
B	775-47669	DDUG K.	12/3/2020	SG	

CLEAN ROOM COATING / LACQUER WASTEWATER

6" DIA. VOC SEWER PIPE.  
DISCHARGE PIPE 3" DIA. DRAINS TO VOC SEWER. EXTENDS 8" INTO 6" DIA. VOC SEWER PIPE.  
RO REJECT WATER 2" PIPE



PRE-FILTERS ARE A PAIR OF 50 AND 10 MICRON IN PARALLEL. GAUGES ON ENDS TO ASSESS WHEN FILTER CARTRIDGES BECOME CLOGGED.

ITEM	QUANTITY	SUPPLIER	SUPPLIER P/N
Influent tank - 42" round x 48" tall 275 gallons	1	US Plastics	4165
Settling tanks - 1,000 GAL	2	US Plastics	15617
Sampling tank - 14"L x 10"W x 10"D	1	US Plastics	6299
Effluent pump	2	Goulds	WE 0311M
Centrifugal pump #2 - 1/2 hp	1	McMaster Carr	8249K81
Check Valves, 3/4" PVC	2	McMaster Carr	46835K33
Check Valves, 1-1/2" PVC	2	US Plastics	18507
Filter Housing, 20"	5	McMaster Carr	9979173
50 um Filter Cartridge (TE 603-828-04)	2	Westco	MPO-5020-25D
5 um Filter Cartridge (TE 603-828-01)	2	Westco	MPO-520-25D
1 um Filter Cartridge (TE 603-828-03)	1	Westco	MBN-120
Dual Level switch (for centrifugal pump cycling)	1	McMaster Carr	5267K44
High Level alarm ( for 3rd settling tank)	1	McMaster Carr	9232T11
PH/ORP Controller	2	McMaster Carr	11305T66
PH Sensor	2	McMaster Carr	14775T94
0-10 GPM Flow meter	2	McMaster Carr	4161A11
2 compartment sink - Mustee model 26F	1	Lowe's	700110
ION Exchange Tank	4	Evoqua	W5PWXSUCU030F5WVD
Pressure Gauge, 0- 60 psi	2	McMaster Carr	3846K431
Chemical tank 26 gallon	2	ProMinent	1001490
Diaphragm pump	2	ProMinent	BT4B0413PVT2000U010000
Mixer 1/4 hp, 1725 rpm, 36" SS shaft	1	ProMinent	7814592
Differential pressure switch	1	McMaster Carr	40945K81

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:		NAME	DATE	THOMAS ELECTRONICS	
DECIMALS	ANGLES	DRAWN BY		208 DAVIS PARKWAY, CLYDE, NY 14433 USA	
XXX	±	SG	5/4/16	ION EXCHANGE SYSTEM	
MATERIAL		INITIATED BY		SIZE	CAGE CODE
		T.A.	5/4/16	D	4U430
		ENGR. APPR.		DWG. NO.	741-001
		DV	5/17/16	REV.	B
		PROD. APPR.		SCALE	NONE
		SC	5/17/16	SHEET 1 OF 1	
		QA APPR.			
		KW	5/17/16		

THIS DESIGN & DWG. ARE THE PROPERTY OF THOMAS ELECTRONICS, INC. THE CORP. DOES NOT PERMIT THEIR USE EXCEPT WITH WRITTEN PERMISSION.

US EPA REGION 2 LABORATORY  
CHAIN OF CUSTODY/ FIELD DATA FORM

SURVEY NAME & LOCALITY Thomas Electronics

PROJECT LEADER Thuan Tran

PROGRAM: SF  :

SITE ID \_\_\_\_\_

OPERABLE UNIT \_\_\_\_\_

PROGRAM RESULTS CODE \_\_\_\_\_

Decision Unit Code Y206 RCRA  D210 RCRA ENF  D307 NPDES  B304 SDWA  C215 AM  B224 CAA  A305

TSCA  L306 OD  B253 FIFRA  CRIMINAL ENF

LAB ID/ FIELD ID	CONTAINERS # OF	MATRIX	CHECK IF SPLIT SAMPLE	DESCRIPTION & INSTRUCTIONS INCLUDING LOCATION, ESTIMATED CONCENTRATIONS, SPECIAL REPORTING LIMITS, SPECIAL TEST REQUIREMENTS & ALIQUOTING	Res CL Checked	Preservative (circle)	Collection Time (24hr clock)		Collection Date mm/dd/yy
							Begin	End	
Outfall 003 - Comp	3	B	<input checked="" type="checkbox"/>	1, 250-ml plastic bottle: Metals*: 8-Hr Comp	<input type="checkbox"/>	2309020-01 02	8:27AM	4:12PM	9/26/2023
		B	<input checked="" type="checkbox"/>	1, 125-ml plastic bottle: Fluoride: 8-Hr Comp	<input type="checkbox"/>		8:27AM	4:12PM	9/26/2023
		B	<input checked="" type="checkbox"/>	1, 250-ml plastic bottle: Mercury: 8-Hr Comp	<input type="checkbox"/>		8:27AM	4:12PM	9/26/2023
Outfall 003 - Grab-Comp	3	B	<input checked="" type="checkbox"/>	3, 1-L amber jars: NVOAs*: Grab-Comp	<input type="checkbox"/>	-02 04	8:55AM	3:50PM	9/26/2023
Outfall 003	15	B	<input checked="" type="checkbox"/>	3, 1-L WM clear jars: Petroleum Hydrocarbons, T: Grab	<input type="checkbox"/>	-03 03		3:50PM	9/26/2023
		B	<input checked="" type="checkbox"/>	3, 40-ml glass vials: VOAs*: Grab #1	<input type="checkbox"/>	-04 04		8:55AM	9/26/2023
		B	<input checked="" type="checkbox"/>	3, 40-ml glass vials: VOAs*: Grab #2	<input type="checkbox"/>	-05 04		11:00AM	9/26/2023
		B	<input checked="" type="checkbox"/>	3, 40-ml glass vials: VOAs*: Grab #3	<input type="checkbox"/>	-06 04		1:45PM	9/26/2023
		B	<input checked="" type="checkbox"/>	3, 40-ml glass vials: VOAs*: Grab #4	<input type="checkbox"/>	-07 04		3:50PM	9/26/2023
TRIP BLANK	3	A	<input type="checkbox"/>	3, 40-ml glass vials: VOAs: Grab	<input type="checkbox"/>	-09 04		9:45AM	9/25/2023

COMMENTS & SPECIAL REQUIREMENTS:

Notes: Metals\*: Cd, Cr, Pb & Zn

NVOAs\*: Bis(2-ethylhexyl)phthalate

VOAs\* Grab #1-Grab #4 to be laboratory composite

: 1,1,1 chloroform, trichloroethane, methylene chloride, toluene & trichloroethylene

TRC: 0.15 mg/l

Preservative Added & Checked  
 0=ice 7=FAS  
 1=H2SO4 pH<2 8=ZnAc  
 2=HNO3 pH<2 9=NaOH pH>12  
 3=HCl pH<2 10=NH4Cl  
 4=Na2S2O3  
 5=NaOH pH>9  
 6=Ascorbic Acid

Time	Date
2:30PM	9/27/2023

Matrix:  
 A=aqueous F=multiphasic  
 B=aqueous (chlorinated) G=solvent  
 C=soil H=biota  
 D=sediment I=oil  
 E=sludge J=other

Survey Complete? Y  N

Relinquished By: Thuan Tran	Person Assuming Responsibility for Sample(s): Thuan Tan	2:30PM	9/27/2023
Relinquished By:	Received By: <i>[Signature]</i>	14:36	9/27/23
Relinquished By:	Received By:		
Relinquished By:	Received By:		

Direct from sampling, chilling & analyzed 9/27/23



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Region 2 Laboratory  
2890 Woodbridge Avenue  
Edison , New Jersey 08837  
732-906-6886 Phone  
732-906-6165 Fax**

October 17, 2023

Thuan Tran  
Monitoring & Assessment Branch  
LSASD/MAB  
Edison, NJ 08837

RE: Thomas Electronics - 2309020

Enclosed are the results of analyses for samples received by the laboratory on 09/27/2023. The signature below reflects the laboratory's approval of the reported results. If you have any questions concerning this report, please refer to Project Number 2309020 and contact the laboratory.

Sincerely,

A handwritten signature in black ink, appearing to read "John R. Bourbon".

John R. Bourbon  
Chief, LSASD/LB



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**Project Narrative:**

The National Environmental Laboratory Accreditation Conference Institute (TNI) is a voluntary environmental laboratory accreditation association of State and Federal agencies. TNI established and promoted a National Environmental Laboratory Accreditation Program (NELAP) that provides a uniform set of standards for the generation of environmental data that are of known and defensible quality. The EPA Region 2 Laboratory is NELAP accredited. The Laboratory tests that are accredited have met all the requirements established under the TNI Standards.

Condition Comments

None

Comment(s):

The "Sample Analysis Date and Time" is included in the results section for any analyte with a prescribed holding time of 72 hours or less.

SVOA analysis: All of the compounds are qualified mostly due to poor surrogate recovery or the MS MSD pair not meeting the %RSD criteria.

Data Qualifier(s):

- U- The analyte was not detected at or above the Reporting Limit.
- J- The identification of the analyte is acceptable; the reported value is an estimate.
- K- The identification of the analyte is acceptable; the reported value may be biased high.
- L- The identification of the analyte is acceptable; the reported value may be biased low.
- NJ- There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification. The reported value is an estimate.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

Reporting Limit(s):

The Laboratory was able to achieve the standard laboratory reporting limits, where applicable, for each analyte requested except for the following analyte(s):

NVOA GCMS

The reporting level of 5.00 ug/L was raised to 10 ug/L for the following analyte(s):

2-Nitrophenol, Pentachlorophenol

for the following samples:

2309020-02

The reporting level of 5.00 ug/L was raised to 30 ug/L for the following analyte(s):

2,4-Dinitrophenol, 4,6-Dinitro-2-Methylphenol

for the following samples:

2309020-02

**SUMMARY REPORT FOR SAMPLES**

Field ID	Laboratory ID	Matrix	Date Sampled	Date Received
Outfall 003 - Comp	2309020-01	Aqueous	09/26/2023 16:12	09/27/2023 14:36
Outfall 003 - Grab-Comp	2309020-02	Aqueous	09/26/2023 15:50	09/27/2023 14:36
Outfall 003	2309020-03	Aqueous	09/26/2023 15:50	09/27/2023 14:36
Outfall 003 -Lab Comosite - Grab#1 to	2309020-08	Aqueous	09/27/2023 00:00	09/27/2023 14:36
TRIP BLANK	2309020-09	Aqueous	09/25/2023 09:45	09/27/2023 14:36



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**SUMMARY REPORT FOR METHODS**

<b>Analysis</b>	<b>Method</b>	<b>Certification</b>	<b>Matrix</b>
624.1 VOA EPA-NPDES	EPA 624.1 SOP C-89 Rev 3.7	NELAP	Aqueous
625.1 SVOA NPDES	EPA 625.1 SOP C-90 Rev 3.9	NELAP	Aqueous
Fluoride	EPA 300.0 SOP C-94 Rev 2.8	NELAP	Aqueous
Mercury	EPA 245.1 SOP C-110 Rev 2.8	NELAP	Aqueous
Metals ICP TAL NPDES/DW	EPA 200.7 SOP C-109 Rev 3.7	NELAP	Aqueous
Petroleum Hydrocarbons, Tot.	EPA 1664A SOP C-126 Rev 1.7	NELAP	Aqueous



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**  
**Project: Thomas Electronics - 2309020**  
**Project Number: 2309020**

Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	-------	----------------------------

**Field ID: Outfall 003 - Comp**

**Sample ID: 2309020-01**

**Metals ICP**

Cadmium	---	U	3.00	ug/L	B309146	
Chromium	---	U	5.00	ug/L	B309146	
Lead	92.6		8.00	ug/L	B309146	
Zinc	90.3		20.0	ug/L	B309146	

**Mercury CVAA**

Mercury	---	U	0.050	ug/L	B310050	
---------	-----	---	-------	------	---------	--

**Sanitary**

Fluoride	40.0		0.500	mg/L	B310002	
----------	------	--	-------	------	---------	--

**Field ID: Outfall 003 - Grab-Comp**

**Sample ID: 2309020-02**

**NVOA GCMS**

Acenaphthene	---	U L	5.15	ug/L	B310011	
Acenaphthylene	---	U L	5.15	ug/L	B310011	
Anthracene	---	U J	5.15	ug/L	B310011	
Benzo(A)Anthracene	---	U J	5.15	ug/L	B310011	
Benzo(A)Pyrene	---	U J	5.15	ug/L	B310011	
Benzo(B)Fluoranthene	---	U J	5.15	ug/L	B310011	
Benzo(G,H,I)Perylene	---	U J	5.15	ug/L	B310011	
Benzo(K)Fluoranthene	---	U J	5.15	ug/L	B310011	
Chrysene	---	U J	5.15	ug/L	B310011	
Dibenzo(A,H)Anthracene	---	U J	5.15	ug/L	B310011	
Fluoranthene	---	U J	5.15	ug/L	B310011	
Fluorene	---	U J	5.15	ug/L	B310011	
Indeno(1,2,3-Cd)Pyrene	---	U J	5.15	ug/L	B310011	
Naphthalene	---	U J	2.06	ug/L	B310011	
Phenanthrene	---	U J	5.15	ug/L	B310011	
1,2,4-Trichlorobenzene	---	U J	5.15	ug/L	B310011	
2,4,6-Trichlorophenol	---	U J	5.15	ug/L	B310011	
2,4-Dichlorophenol	---	U J	5.15	ug/L	B310011	
2,4-Dimethylphenol	---	U L	5.15	ug/L	B310011	



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory

Final Report

Project: Thomas Electronics - 2309020

Project Number: 2309020

Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	-------	----------------------------

Field ID: Outfall 003 - Grab-Comp

Sample ID: 2309020-02

NVOA GCMS

2,4-Dinitrotoluene	---	U J	5.15	ug/L	B310011	
2,6-Dinitrotoluene	---	U J	5.15	ug/L	B310011	
2,4-Dinitrophenol	---	U J	30.9	ug/L	B310011	
2-Chloronaphthalene	---	U J	5.15	ug/L	B310011	
2-Chlorophenol	---	U J	5.15	ug/L	B310011	
2-Nitrophenol	---	U J	10.3	ug/L	B310011	
3,3'- Dichlorobenzidine	---	U L	5.15	ug/L	B310011	
4,6-Dinitro-2-Methylphenol	---	U J	30.9	ug/L	B310011	
4-Bromophenyl-Phenylether	---	U J	5.15	ug/L	B310011	
4-Chloro-3-Methylphenol	---	U J	5.15	ug/L	B310011	
4-Chlorophenyl-Phenylether	---	U J	5.15	ug/L	B310011	
4-Nitrophenol	---	U J	5.15	ug/L	B310011	
Bis(-2-Chloroethoxy)Methane	---	U J	5.15	ug/L	B310011	
Bis(2-Chloroethyl)Ether	---	U J	5.15	ug/L	B310011	
Bis(2-Chloroisopropyl)Ether	---	U J	5.15	ug/L	B310011	
Bis(2-Ethylhexyl)Phthalate	---	U J	5.15	ug/L	B310011	
Butylbenzylphthalate	---	U J	5.15	ug/L	B310011	
Azobenzene	---	U J	5.15	ug/L	B310011	
Diethylphthalate	---	U J	5.15	ug/L	B310011	
Dimethyl Phthalate	---	U L	2.06	ug/L	B310011	
Di-N-Butyl Phthalate	---	U J	5.15	ug/L	B310011	
Di-N-Octyl Phthalate	---	U J	5.15	ug/L	B310011	
Hexachlorobenzene	---	U J	5.15	ug/L	B310011	
Hexachlorobutadiene	---	U J	2.06	ug/L	B310011	
Hexachlorocyclopentadiene	---	U J	5.15	ug/L	B310011	
Hexachloroethane	---	U J	2.06	ug/L	B310011	
Isophorone	---	U J	5.15	ug/L	B310011	
Nitrobenzene	---	U J	5.15	ug/L	B310011	
N-Nitrosodimethylamine	---	U L	5.15	ug/L	B310011	



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	-------	----------------------------

**Field ID: Outfall 003 - Grab-Comp**

**Sample ID: 2309020-02**

**NVOA GCMS**

N-Nitroso-Di-N-Propylamine	---	U J	5.15	ug/L	B310011	
N-Nitrosodiphenylamine	---	U J	5.15	ug/L	B310011	
Pentachlorophenol	---	U J	10.3	ug/L	B310011	
Phenol	---	U J	2.06	ug/L	B310011	
Pyrene	---	U J	5.15	ug/L	B310011	

**Field ID: Outfall 003**

**Sample ID: 2309020-03**

**GC**

Petroleum Hydrocarbons, Tot.	---	U	6.33	mg/L	B310062	
------------------------------	-----	---	------	------	---------	--

**Field ID: Outfall 003 -Lab Comosite - Grab#1 to #4**

**Sample ID: 2309020-08**

**VOA GCMS**

Chloromethane	---	U	5.00	ug/L	B309136	
Vinyl Chloride	---	U	5.00	ug/L	B309136	
Bromomethane	---	U	5.00	ug/L	B309136	
Chloroethane	---	U	5.00	ug/L	B309136	
Trichlorofluoromethane	---	U	5.00	ug/L	B309136	
1,1-Dichloroethene	---	U	5.00	ug/L	B309136	
Methylene Chloride	---	U	5.00	ug/L	B309136	
Acrylonitrile	---	U	5.00	ug/L	B309136	
trans-1,2-Dichloroethene	---	U	5.00	ug/L	B309136	
1,1-Dichloroethane	---	U	5.00	ug/L	B309136	
Chloroform	12.5		5.00	ug/L	B309136	
1,1,1-Trichloroethane	---	U	5.00	ug/L	B309136	
Carbon Tetrachloride	---	U	5.00	ug/L	B309136	
1,2-Dichloroethane	---	U	5.00	ug/L	B309136	
Benzene	---	U	5.00	ug/L	B309136	
Trichloroethene	---	U	5.00	ug/L	B309136	
1,2-Dichloropropane	---	U	5.00	ug/L	B309136	
Bromodichloromethane	---	U	5.00	ug/L	B309136	



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory

Final Report

Project: Thomas Electronics - 2309020

Project Number: 2309020

Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	-------	----------------------------

Field ID: Outfall 003 -Lab Comosite - Grab#1 to #4

Sample ID: 2309020-08

VOA GCMS

cis-1,3-Dichloropropene	---	U L	5.00	ug/L	B309136	
Toluene	---	U	5.00	ug/L	B309136	
trans-1,3-Dichloropropene	---	U	5.00	ug/L	B309136	
1,1,2-Trichloroethane	---	U	5.00	ug/L	B309136	
Tetrachloroethene	---	U	5.00	ug/L	B309136	
Dibromochloromethane	---	U	5.00	ug/L	B309136	
Chlorobenzene	---	U	5.00	ug/L	B309136	
Ethylbenzene	---	U	5.00	ug/L	B309136	
Bromoform	---	U	5.00	ug/L	B309136	
1,1,2,2-Tetrachloroethane	---	U	5.00	ug/L	B309136	
1,3-Dichlorobenzene	---	U	5.00	ug/L	B309136	
1,4-Dichlorobenzene	---	U	5.00	ug/L	B309136	
1,2-Dichlorobenzene	---	U	5.00	ug/L	B309136	

Field ID: TRIP BLANK

Sample ID: 2309020-09

VOA GCMS

Chloromethane	---	U	5.00	ug/L	B309136	
Vinyl Chloride	---	U	5.00	ug/L	B309136	
Bromomethane	---	U	5.00	ug/L	B309136	
Chloroethane	---	U	5.00	ug/L	B309136	
Trichlorofluoromethane	---	U	5.00	ug/L	B309136	
1,1-Dichloroethene	---	U	5.00	ug/L	B309136	
Methylene Chloride	---	U	5.00	ug/L	B309136	
Acrylonitrile	---	U	5.00	ug/L	B309136	
trans-1,2-Dichloroethene	---	U	5.00	ug/L	B309136	
1,1-Dichloroethane	---	U	5.00	ug/L	B309136	
Chloroform	---	U	5.00	ug/L	B309136	
1,1,1-Trichloroethane	---	U	5.00	ug/L	B309136	
Carbon Tetrachloride	---	U	5.00	ug/L	B309136	
1,2-Dichloroethane	---	U	5.00	ug/L	B309136	



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	-------	----------------------------

**Field ID: TRIP BLANK**

**Sample ID: 2309020-09**

**VOA GCMS**

Benzene	---	U	5.00	ug/L	B309136	
Trichloroethene	---	U	5.00	ug/L	B309136	
1,2-Dichloropropane	---	U	5.00	ug/L	B309136	
Bromodichloromethane	---	U	5.00	ug/L	B309136	
cis-1,3-Dichloropropene	---	U	5.00	ug/L	B309136	
Toluene	---	U	5.00	ug/L	B309136	
trans-1,3-Dichloropropene	---	U	5.00	ug/L	B309136	
1,1,2-Trichloroethane	---	U	5.00	ug/L	B309136	
Tetrachloroethene	---	U	5.00	ug/L	B309136	
Dibromochloromethane	---	U	5.00	ug/L	B309136	
Chlorobenzene	---	U	5.00	ug/L	B309136	
Ethylbenzene	---	U	5.00	ug/L	B309136	
Bromoform	---	U	5.00	ug/L	B309136	
1,1,1,2-Tetrachloroethane	---	U	5.00	ug/L	B309136	
1,3-Dichlorobenzene	---	U	5.00	ug/L	B309136	
1,4-Dichlorobenzene	---	U	5.00	ug/L	B309136	
1,2-Dichlorobenzene	---	U	5.00	ug/L	B309136	



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**VOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B309136**

**Blank (B309136-BLK1)**

Chloromethane	--- U	5.00	ug/L						
Vinyl Chloride	--- U	5.00	ug/L						
Bromomethane	--- U	5.00	ug/L						
Chloroethane	--- U	5.00	ug/L						
Trichlorofluoromethane	--- U	5.00	ug/L						
1,1-Dichloroethene	--- U	5.00	ug/L						
Methylene Chloride	--- U	5.00	ug/L						
Acrylonitrile	--- U	5.00	ug/L						
trans-1,2-Dichloroethene	--- U	5.00	ug/L						
1,1-Dichloroethane	--- U	5.00	ug/L						
Chloroform	--- U	5.00	ug/L						
1,1,1-Trichloroethane	--- U	5.00	ug/L						
Carbon Tetrachloride	--- U	5.00	ug/L						
1,2-Dichloroethane	--- U	5.00	ug/L						
Benzene	--- U	5.00	ug/L						
Trichloroethene	--- U	5.00	ug/L						
1,2-Dichloropropane	--- U	5.00	ug/L						
Bromodichloromethane	--- U	5.00	ug/L						
cis-1,3-Dichloropropene	--- U	5.00	ug/L						
Toluene	--- U	5.00	ug/L						
trans-1,3-Dichloropropene	--- U	5.00	ug/L						
1,1,2-Trichloroethane	--- U	5.00	ug/L						
Tetrachloroethene	--- U	5.00	ug/L						
Dibromochloromethane	--- U	5.00	ug/L						
Chlorobenzene	--- U	5.00	ug/L						
Ethylbenzene	--- U	5.00	ug/L						
Bromoform	--- U	5.00	ug/L						
1,1,2,2-Tetrachloroethane	--- U	5.00	ug/L						
1,3-Dichlorobenzene	--- U	5.00	ug/L						
1,4-Dichlorobenzene	--- U	5.00	ug/L						
1,2-Dichlorobenzene	--- U	5.00	ug/L						
<i>Surrogate: 1,4-Difluorobenzene</i>	<i>101</i>		<i>ug/L</i>	<i>100.0</i>		<i>101</i>	<i>60-140</i>		
<i>Surrogate: 2-Bromo-1-Chloropropane</i>	<i>105</i>		<i>ug/L</i>	<i>100.0</i>		<i>105</i>	<i>60-140</i>		
<i>Surrogate: 1,4-Dichlorobutane</i>	<i>107</i>		<i>ug/L</i>	<i>100.0</i>		<i>107</i>	<i>60-140</i>		

U.S.E.P.A Region 2 Laboratory

**NOTE:** The results recorded in this report relate only to the samples as received on the date and at the time noted  
Reported: 10/17/2023



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**VOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch B309136</b>									
<b>LCS (B309136-BS1)</b>									
Chloromethane	51.2	5.00	ug/L	50.00		102	19-205		
Vinyl Chloride	46.4	5.00	ug/L	50.00		92.8	5-195		
Bromomethane	45.7	5.00	ug/L	50.00		91.5	15-185		
Chloroethane	51.6	5.00	ug/L	50.00		103	40-160		
Trichlorofluoromethane	52.8	5.00	ug/L	50.00		106	50-150		
1,1-Dichloroethene	54.4	5.00	ug/L	50.00		109	50-150		
Methylene Chloride	55.4	5.00	ug/L	50.00		111	60-140		
Acrylonitrile	62.6	5.00	ug/L	50.00		125	60-140		
trans-1,2-Dichloroethene	57.6	5.00	ug/L	50.00		115	70-130		
1,1-Dichloroethane	56.2	5.00	ug/L	50.00		112	70-130		
Chloroform	55.7	5.00	ug/L	50.00		111	70-135		
1,1,1-Trichloroethane	57.1	5.00	ug/L	50.00		114	70-130		
Carbon Tetrachloride	55.5	5.00	ug/L	50.00		111	70-130		
1,2-Dichloroethane	55.7	5.00	ug/L	50.00		111	70-130		
Benzene	56.7	5.00	ug/L	50.00		113	65-135		
Trichloroethene	55.7	5.00	ug/L	50.00		111	65-135		
1,2-Dichloropropane	57.1	5.00	ug/L	50.00		114	35-165		
Bromodichloromethane	56.0	5.00	ug/L	50.00		112	65-135		
cis-1,3-Dichloropropene	56.5	5.00	ug/L	50.00		113	25-175		
Toluene	56.4	5.00	ug/L	50.00		113	70-130		
trans-1,3-Dichloropropene	59.8	5.00	ug/L	50.00		120	50-150		
1,1,2-Trichloroethane	53.9	5.00	ug/L	50.00		108	70-130		
Tetrachloroethene	52.6	5.00	ug/L	50.00		105	70-130		
Dibromochloromethane	55.4	5.00	ug/L	50.00		111	70-135		
Chlorobenzene	54.4	5.00	ug/L	50.00		109	65-135		
Ethylbenzene	57.4	5.00	ug/L	50.00		115	60-140		
Bromoform	55.1	5.00	ug/L	50.00		110	70-130		
1,1,2,2-Tetrachloroethane	57.3	5.00	ug/L	50.00		115	60-140		
1,3-Dichlorobenzene	53.6	5.00	ug/L	50.00		107	70-130		
1,4-Dichlorobenzene	52.6	5.00	ug/L	50.00		105	65-135		
1,2-Dichlorobenzene	53.2	5.00	ug/L	50.00		106	65-135		
<i>Surrogate: 1,4-Difluorobenzene</i>	<i>99.0</i>		<i>ug/L</i>	<i>100.0</i>		<i>99.0</i>	<i>60-140</i>		
<i>Surrogate: 2-Bromo-1-Chloropropane</i>	<i>106</i>		<i>ug/L</i>	<i>100.0</i>		<i>106</i>	<i>60-140</i>		
<i>Surrogate: 1,4-Dichlorobutane</i>	<i>110</i>		<i>ug/L</i>	<i>100.0</i>		<i>110</i>	<i>60-140</i>		



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**VOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch B309136</b>									
<b>LCS Dup (B309136-BSD1)</b>									
Chloromethane	48.2	5.00	ug/L	50.00		96.5	19-205	6.05	20
Vinyl Chloride	43.0	5.00	ug/L	50.00		86.1	5-195	7.49	20
Bromomethane	44.5	5.00	ug/L	50.00		89.0	15-185	2.73	20
Chloroethane	49.0	5.00	ug/L	50.00		98.1	40-160	5.18	20
Trichlorofluoromethane	50.1	5.00	ug/L	50.00		100	50-150	5.21	20
1,1-Dichloroethene	51.6	5.00	ug/L	50.00		103	50-150	5.42	20
Methylene Chloride	53.6	5.00	ug/L	50.00		107	60-140	3.36	20
Acrylonitrile	62.0	5.00	ug/L	50.00		124	60-140	0.979	20
trans-1,2-Dichloroethene	55.0	5.00	ug/L	50.00		110	70-130	4.58	20
1,1-Dichloroethane	53.5	5.00	ug/L	50.00		107	70-130	4.96	20
Chloroform	52.9	5.00	ug/L	50.00		106	70-135	5.17	20
1,1,1-Trichloroethane	53.7	5.00	ug/L	50.00		107	70-130	6.03	20
Carbon Tetrachloride	52.0	5.00	ug/L	50.00		104	70-130	6.54	20
1,2-Dichloroethane	54.7	5.00	ug/L	50.00		109	70-130	1.78	20
Benzene	53.2	5.00	ug/L	50.00		106	65-135	6.37	20
Trichloroethene	53.0	5.00	ug/L	50.00		106	65-135	5.08	20
1,2-Dichloropropane	54.2	5.00	ug/L	50.00		108	35-165	5.12	20
Bromodichloromethane	53.5	5.00	ug/L	50.00		107	65-135	4.67	20
cis-1,3-Dichloropropene	53.7	5.00	ug/L	50.00		107	25-175	5.15	20
Toluene	52.4	5.00	ug/L	50.00		105	70-130	7.35	20
trans-1,3-Dichloropropene	56.7	5.00	ug/L	50.00		113	50-150	5.22	20
1,1,2-Trichloroethane	52.8	5.00	ug/L	50.00		106	70-130	2.06	20
Tetrachloroethene	50.0	5.00	ug/L	50.00		100	70-130	5.09	20
Dibromochloromethane	53.6	5.00	ug/L	50.00		107	70-135	3.21	20
Chlorobenzene	51.7	5.00	ug/L	50.00		103	65-135	5.04	20
Ethylbenzene	54.5	5.00	ug/L	50.00		109	60-140	5.15	20
Bromoform	54.5	5.00	ug/L	50.00		109	70-130	0.986	20
1,1,2,2-Tetrachloroethane	55.1	5.00	ug/L	50.00		110	60-140	3.79	20
1,3-Dichlorobenzene	51.4	5.00	ug/L	50.00		103	70-130	4.21	20
1,4-Dichlorobenzene	50.9	5.00	ug/L	50.00		102	65-135	3.29	20
1,2-Dichlorobenzene	51.9	5.00	ug/L	50.00		104	65-135	2.49	20
<i>Surrogate: 1,4-Difluorobenzene</i>	<i>97.8</i>		<i>ug/L</i>	<i>100.0</i>		<i>97.8</i>	<i>60-140</i>		
<i>Surrogate: 2-Bromo-1-Chloropropane</i>	<i>103</i>		<i>ug/L</i>	<i>100.0</i>		<i>103</i>	<i>60-140</i>		
<i>Surrogate: 1,4-Dichlorobutane</i>	<i>109</i>		<i>ug/L</i>	<i>100.0</i>		<i>109</i>	<i>60-140</i>		



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**VOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B309136**

**Matrix Spike (B309136-MS1)**

**Source: 2309020-08**

Chloromethane	49.6	5.00	ug/L	50.00	ND	99.1	19-273		
Vinyl Chloride	49.7	5.00	ug/L	50.00	ND	99.4	49-251		
Bromomethane	33.3	5.00	ug/L	50.00	ND	66.6	21-242		
Chloroethane	55.2	5.00	ug/L	50.00	ND	110	14-230		
Trichlorofluoromethane	53.7	5.00	ug/L	50.00	ND	107	17-181		
1,1-Dichloroethene	52.8	5.00	ug/L	50.00	ND	106	52-234		
Methylene Chloride	55.0	5.00	ug/L	50.00	ND	110	69-221		
Acrylonitrile	57.9	5.00	ug/L	50.00	ND	116	40-160		
trans-1,2-Dichloroethene	53.5	5.00	ug/L	50.00	ND	107	54-156		
1,1-Dichloroethane	55.6	5.00	ug/L	50.00	ND	111	59-155		
Chloroform	66.7	5.00	ug/L	50.00	12.5	108	51-138		
1,1,1-Trichloroethane	54.9	5.00	ug/L	50.00	ND	110	52-162		
Carbon Tetrachloride	55.0	5.00	ug/L	50.00	ND	110	70-140		
1,2-Dichloroethane	54.0	5.00	ug/L	50.00	ND	108	49-155		
Benzene	54.5	5.00	ug/L	50.00	ND	109	37-151		
Trichloroethene	54.1	5.00	ug/L	50.00	ND	108	70-157		
1,2-Dichloropropane	55.2	5.00	ug/L	50.00	ND	110	74-210		
Bromodichloromethane	55.2	5.00	ug/L	50.00	ND	110	35-155		
cis-1,3-Dichloropropene	40.3	5.00	ug/L	50.00	ND	80.6	80-227		
Toluene	53.5	5.00	ug/L	50.00	ND	107	47-150		
trans-1,3-Dichloropropene	48.4	5.00	ug/L	50.00	ND	96.8	17-183		
1,1,2-Trichloroethane	52.8	5.00	ug/L	50.00	ND	106	52-150		
Tetrachloroethene	51.7	5.00	ug/L	50.00	ND	103	64-148		
Dibromochloromethane	53.1	5.00	ug/L	50.00	ND	106	53-149		
Chlorobenzene	52.8	5.00	ug/L	50.00	ND	106	37-160		
Ethylbenzene	54.8	5.00	ug/L	50.00	ND	110	37-162		
Bromoform	53.0	5.00	ug/L	50.00	ND	106	45-169		
1,1,2,2-Tetrachloroethane	56.2	5.00	ug/L	50.00	ND	112	46-157		
1,3-Dichlorobenzene	52.6	5.00	ug/L	50.00	ND	105	59-156		
1,4-Dichlorobenzene	52.1	5.00	ug/L	50.00	ND	104	18-190		
1,2-Dichlorobenzene	52.6	5.00	ug/L	50.00	ND	105	18-190		
<i>Surrogate: 1,4-Difluorobenzene</i>	<i>98.2</i>		<i>ug/L</i>	<i>100.0</i>		<i>98.2</i>	<i>60-140</i>		
<i>Surrogate: 2-Bromo-1-Chloropropane</i>	<i>104</i>		<i>ug/L</i>	<i>100.0</i>		<i>104</i>	<i>60-140</i>		
<i>Surrogate: 1,4-Dichlorobutane</i>	<i>110</i>		<i>ug/L</i>	<i>100.0</i>		<i>110</i>	<i>60-140</i>		



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**VOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B309136**

**Matrix Spike (B309136-MS2)**

**Source: 2309043-09**

Chloromethane	46.7	5.00	ug/L	50.00	ND	93.4	19-273		
Vinyl Chloride	49.3	5.00	ug/L	50.00	ND	98.6	49-251		
Bromomethane	8.96	5.00	ug/L	50.00	ND	17.9	21-242		
Chloroethane	53.4	5.00	ug/L	50.00	ND	107	14-230		
Trichlorofluoromethane	54.4	5.00	ug/L	50.00	ND	109	17-181		
1,1-Dichloroethene	53.3	5.00	ug/L	50.00	ND	107	52-234		
Methylene Chloride	55.2	5.00	ug/L	50.00	ND	110	69-221		
Acrylonitrile	58.8	5.00	ug/L	50.00	ND	118	40-160		
trans-1,2-Dichloroethene	52.3	5.00	ug/L	50.00	ND	105	54-156		
1,1-Dichloroethane	55.3	5.00	ug/L	50.00	ND	111	59-155		
Chloroform	54.4	5.00	ug/L	50.00	ND	109	51-138		
1,1,1-Trichloroethane	54.6	5.00	ug/L	50.00	ND	109	52-162		
Carbon Tetrachloride	54.0	5.00	ug/L	50.00	ND	108	70-140		
1,2-Dichloroethane	53.4	5.00	ug/L	50.00	ND	107	49-155		
Benzene	55.0	5.00	ug/L	50.00	ND	110	37-151		
Trichloroethene	54.7	5.00	ug/L	50.00	ND	109	70-157		
1,2-Dichloropropane	54.7	5.00	ug/L	50.00	ND	109	74-210		
Bromodichloromethane	54.6	5.00	ug/L	50.00	ND	109	35-155		
cis-1,3-Dichloropropene	15.2	5.00	ug/L	50.00	ND	30.5	80-227		
Toluene	54.2	5.00	ug/L	50.00	ND	108	47-150		
trans-1,3-Dichloropropene	35.1	5.00	ug/L	50.00	ND	70.1	17-183		
1,1,2-Trichloroethane	53.0	5.00	ug/L	50.00	ND	106	52-150		
Tetrachloroethene	52.0	5.00	ug/L	50.00	ND	104	64-148		
Dibromochloromethane	54.5	5.00	ug/L	50.00	ND	109	53-149		
Chlorobenzene	52.2	5.00	ug/L	50.00	ND	104	37-160		
Ethylbenzene	54.5	5.00	ug/L	50.00	ND	109	37-162		
Bromoform	54.1	5.00	ug/L	50.00	ND	108	45-169		
1,1,2,2-Tetrachloroethane	55.5	5.00	ug/L	50.00	ND	111	46-157		
1,3-Dichlorobenzene	52.3	5.00	ug/L	50.00	ND	105	59-156		
1,4-Dichlorobenzene	52.4	5.00	ug/L	50.00	ND	105	18-190		
1,2-Dichlorobenzene	52.3	5.00	ug/L	50.00	ND	105	18-190		
<i>Surrogate: 1,4-Difluorobenzene</i>	<i>99.3</i>		<i>ug/L</i>	<i>100.0</i>		<i>99.3</i>	<i>60-140</i>		
<i>Surrogate: 2-Bromo-1-Chloropropane</i>	<i>106</i>		<i>ug/L</i>	<i>100.0</i>		<i>106</i>	<i>60-140</i>		
<i>Surrogate: 1,4-Dichlorobutane</i>	<i>111</i>		<i>ug/L</i>	<i>100.0</i>		<i>111</i>	<i>60-140</i>		



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**VOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B309136**

**Matrix Spike Dup (B309136-MSD1)**

**Source: 2309020-08**

Chloromethane	45.2	5.00	ug/L	50.00	ND	90.4	19-273	9.18	28
Vinyl Chloride	44.6	5.00	ug/L	50.00	ND	89.1	49-251	10.9	28
Bromomethane	26.6	5.00	ug/L	50.00	ND	53.1	21-242	22.6	28
Chloroethane	49.6	5.00	ug/L	50.00	ND	99.3	14-230	10.5	28
Trichlorofluoromethane	48.7	5.00	ug/L	50.00	ND	97.4	17-181	9.75	28
1,1-Dichloroethene	47.8	5.00	ug/L	50.00	ND	95.7	52-234	9.76	28
Methylene Chloride	50.4	5.00	ug/L	50.00	ND	101	69-221	8.69	28
Acrylonitrile	55.4	5.00	ug/L	50.00	ND	111	40-160	4.34	28
trans-1,2-Dichloroethene	49.5	5.00	ug/L	50.00	ND	99.0	54-156	7.84	28
1,1-Dichloroethane	50.6	5.00	ug/L	50.00	ND	101	59-155	9.51	28
Chloroform	60.7	5.00	ug/L	50.00	12.5	96.5	51-138	11.7	28
1,1,1-Trichloroethane	50.4	5.00	ug/L	50.00	ND	101	52-162	8.63	28
Carbon Tetrachloride	49.6	5.00	ug/L	50.00	ND	99.2	70-140	10.3	28
1,2-Dichloroethane	50.3	5.00	ug/L	50.00	ND	101	49-155	6.98	28
Benzene	50.6	5.00	ug/L	50.00	ND	101	37-151	7.50	28
Trichloroethene	49.8	5.00	ug/L	50.00	ND	99.6	70-157	8.32	28
1,2-Dichloropropane	51.1	5.00	ug/L	50.00	ND	102	74-210	7.56	28
Bromodichloromethane	52.0	5.00	ug/L	50.00	ND	104	35-155	6.14	28
cis-1,3-Dichloropropene	34.0	5.00	ug/L	50.00	ND	68.0	80-227	16.9	28
Toluene	49.7	5.00	ug/L	50.00	ND	99.3	47-150	7.42	28
trans-1,3-Dichloropropene	43.9	5.00	ug/L	50.00	ND	87.9	17-183	9.64	28
1,1,2-Trichloroethane	49.7	5.00	ug/L	50.00	ND	99.4	52-150	6.01	28
Tetrachloroethene	47.6	5.00	ug/L	50.00	ND	95.3	64-148	8.23	28
Dibromochloromethane	49.6	5.00	ug/L	50.00	ND	99.2	53-149	6.72	28
Chlorobenzene	49.0	5.00	ug/L	50.00	ND	98.0	37-160	7.46	28
Ethylbenzene	50.9	5.00	ug/L	50.00	ND	102	37-162	7.27	28
Bromoform	50.3	5.00	ug/L	50.00	ND	101	45-169	5.24	28
1,1,2,2-Tetrachloroethane	53.4	5.00	ug/L	50.00	ND	107	46-157	5.05	28
1,3-Dichlorobenzene	49.1	5.00	ug/L	50.00	ND	98.1	59-156	6.93	28
1,4-Dichlorobenzene	49.2	5.00	ug/L	50.00	ND	98.4	18-190	5.71	28
1,2-Dichlorobenzene	49.3	5.00	ug/L	50.00	ND	98.5	18-190	6.60	28
<i>Surrogate: 1,4-Difluorobenzene</i>	<i>99.3</i>		<i>ug/L</i>	<i>100.0</i>		<i>99.3</i>	<i>60-140</i>		
<i>Surrogate: 2-Bromo-1-Chloropropane</i>	<i>104</i>		<i>ug/L</i>	<i>100.0</i>		<i>104</i>	<i>60-140</i>		
<i>Surrogate: 1,4-Dichlorobutane</i>	<i>110</i>		<i>ug/L</i>	<i>100.0</i>		<i>110</i>	<i>60-140</i>		



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**VOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B309136**

**Matrix Spike Dup (B309136-MSD2)**

**Source: 2309043-09**

Chloromethane	45.3	5.00	ug/L	50.00	ND	90.6	19-273	3.02	28
Vinyl Chloride	47.7	5.00	ug/L	50.00	ND	95.5	49-251	3.19	28
Bromomethane	6.04	5.00	ug/L	50.00	ND	12.1	21-242	38.9	28
Chloroethane	54.4	5.00	ug/L	50.00	ND	109	14-230	1.87	28
Trichlorofluoromethane	53.5	5.00	ug/L	50.00	ND	107	17-181	1.69	28
1,1-Dichloroethene	53.3	5.00	ug/L	50.00	ND	107	52-234	0.0188	28
Methylene Chloride	53.9	5.00	ug/L	50.00	ND	108	69-221	2.49	28
Acrylonitrile	57.7	5.00	ug/L	50.00	ND	115	40-160	1.90	28
trans-1,2-Dichloroethene	52.5	5.00	ug/L	50.00	ND	105	54-156	0.324	28
1,1-Dichloroethane	53.6	5.00	ug/L	50.00	ND	107	59-155	3.12	28
Chloroform	53.5	5.00	ug/L	50.00	ND	107	51-138	1.54	28
1,1,1-Trichloroethane	54.0	5.00	ug/L	50.00	ND	108	52-162	1.16	28
Carbon Tetrachloride	53.5	5.00	ug/L	50.00	ND	107	70-140	0.967	28
1,2-Dichloroethane	52.6	5.00	ug/L	50.00	ND	105	49-155	1.51	28
Benzene	54.6	5.00	ug/L	50.00	ND	109	37-151	0.657	28
Trichloroethene	54.0	5.00	ug/L	50.00	ND	108	70-157	1.16	28
1,2-Dichloropropane	54.4	5.00	ug/L	50.00	ND	109	74-210	0.476	28
Bromodichloromethane	54.3	5.00	ug/L	50.00	ND	109	35-155	0.477	28
cis-1,3-Dichloropropene	9.68	5.00	ug/L	50.00	ND	19.4	80-227	44.6	28
Toluene	53.4	5.00	ug/L	50.00	ND	107	47-150	1.60	28
trans-1,3-Dichloropropene	29.9	5.00	ug/L	50.00	ND	59.8	17-183	15.9	28
1,1,2-Trichloroethane	51.9	5.00	ug/L	50.00	ND	104	52-150	2.17	28
Tetrachloroethene	51.1	5.00	ug/L	50.00	ND	102	64-148	1.73	28
Dibromochloromethane	53.2	5.00	ug/L	50.00	ND	106	53-149	2.28	28
Chlorobenzene	52.0	5.00	ug/L	50.00	ND	104	37-160	0.230	28
Ethylbenzene	53.8	5.00	ug/L	50.00	ND	108	37-162	1.29	28
Bromoform	53.1	5.00	ug/L	50.00	ND	106	45-169	1.88	28
1,1,2,2-Tetrachloroethane	54.2	5.00	ug/L	50.00	ND	108	46-157	2.41	28
1,3-Dichlorobenzene	52.0	5.00	ug/L	50.00	ND	104	59-156	0.479	28
1,4-Dichlorobenzene	51.8	5.00	ug/L	50.00	ND	104	18-190	1.13	28
1,2-Dichlorobenzene	52.2	5.00	ug/L	50.00	ND	104	18-190	0.191	28
<i>Surrogate: 1,4-Difluorobenzene</i>	<i>99.8</i>		<i>ug/L</i>	<i>100.0</i>		<i>99.8</i>	<i>60-140</i>		
<i>Surrogate: 2-Bromo-1-Chloropropane</i>	<i>105</i>		<i>ug/L</i>	<i>100.0</i>		<i>105</i>	<i>60-140</i>		
<i>Surrogate: 1,4-Dichlorobutane</i>	<i>110</i>		<i>ug/L</i>	<i>100.0</i>		<i>110</i>	<i>60-140</i>		



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**NVOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B310011**

**Blank (B310011-BLK1)**

Acenaphthene	--- U	5.00	ug/L						
Acenaphthylene	--- U	5.00	ug/L						
Anthracene	--- U	5.00	ug/L						
Benzo(A)Anthracene	--- U	5.00	ug/L						
Benzo(A)Pyrene	--- U	5.00	ug/L						
Benzo(B)Fluoranthene	--- U	5.00	ug/L						
Benzo(G,H,I)Perylene	--- U	5.00	ug/L						
Benzo(K)Fluoranthene	--- U	5.00	ug/L						
Chrysene	--- U	5.00	ug/L						
Dibenzo(A,H)Anthracene	--- U	5.00	ug/L						
Fluoranthene	--- U	5.00	ug/L						
Fluorene	--- U	5.00	ug/L						
Indeno(1,2,3-Cd)Pyrene	--- U	5.00	ug/L						
Naphthalene	--- U	5.00	ug/L						
Phenanthrene	--- U	5.00	ug/L						
1,2,4-Trichlorobenzene	--- U	5.00	ug/L						
2,4,6-Trichlorophenol	--- U	5.00	ug/L						
2,4-Dichlorophenol	--- U	5.00	ug/L						
2,4-Dimethylphenol	--- U	5.00	ug/L						
2,4-Dinitrotoluene	--- U	5.00	ug/L						
2,6-Dinitrotoluene	--- U	5.00	ug/L						
2,4-Dinitrophenol	--- U	5.00	ug/L						
2-Chloronaphthalene	--- U	5.00	ug/L						
2-Chlorophenol	--- U	5.00	ug/L						
2-Nitrophenol	--- U	5.00	ug/L						
3,3'- Dichlorobenzidine	--- U	5.00	ug/L						
4,6-Dinitro-2-Methylphenol	--- U	5.00	ug/L						
4-Bromophenyl-Phenylether	--- U	5.00	ug/L						
4-Chloro-3-Methylphenol	--- U	5.00	ug/L						
4-Chlorophenyl-Phenylether	--- U	5.00	ug/L						
4-Nitrophenol	--- U	5.00	ug/L						
Bis(-2-Chloroethoxy)Methane	--- U	5.00	ug/L						
Bis(2-Chloroethyl)Ether	--- U	5.00	ug/L						
Bis(2-Chloroisopropyl)Ether	--- U	5.00	ug/L						
Bis(2-Ethylhexyl)Phthalate	--- U	5.00	ug/L						

U.S.E.P.A Region 2 Laboratory

**NOTE:** The results recorded in this report relate only to the samples as received on the date and at the time noted  
Reported: 10/17/2023



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**NVOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B310011**

**Blank (B310011-BLK1)**

Butylbenzylphthalate	--- U	5.00	ug/L						
Azobenzene	--- U	5.00	ug/L						
Diethylphthalate	--- U	5.00	ug/L						
Dimethyl Phthalate	--- U	5.00	ug/L						
Di-N-Butyl Phthalate	--- U	5.00	ug/L						
Di-N-Octyl Phthalate	--- U	5.00	ug/L						
Hexachlorobenzene	--- U	5.00	ug/L						
Hexachlorobutadiene	--- U	2.00	ug/L						
Hexachlorocyclopentadiene	--- U	5.00	ug/L						
Hexachloroethane	--- U	5.00	ug/L						
Isophorone	--- U	5.00	ug/L						
Nitrobenzene	--- U	5.00	ug/L						
N-Nitrosodimethylamine	--- U	5.00	ug/L						
N-Nitroso-Di-N-Propylamine	--- U	5.00	ug/L						
N-Nitrosodiphenylamine	--- U	5.00	ug/L						
Pentachlorophenol	--- U	5.00	ug/L						
Phenol	--- U	2.00	ug/L						
Pyrene	--- U	5.00	ug/L						

<i>Surrogate: 2-Fluoroaniline</i>	<i>ND</i>		ug/L	<i>50.00</i>		<i>45.7</i>	<i>60-140</i>		
<i>Surrogate: Phenol-D6</i>	<i>ND</i>		ug/L	<i>50.00</i>		<i>21.5</i>	<i>60-140</i>		
<i>Surrogate: Naphthalene-D8</i>	<i>ND</i>		ug/L	<i>50.00</i>		<i>41.5</i>	<i>60-140</i>		
<i>Surrogate: 1-Fluoronaphthalene</i>	<i>ND</i>		ug/L	<i>50.00</i>		<i>40.2</i>	<i>60-140</i>		
<i>Surrogate: 2,4-Dibromophenol</i>	<i>ND</i>		ug/L	<i>50.00</i>		<i>13.6</i>	<i>60-140</i>		
<i>Surrogate: Anthracene-D10</i>	<i>32.2</i>		ug/L	<i>50.00</i>		<i>64.4</i>	<i>60-140</i>		
<i>Surrogate: Chrysene-D12</i>	<i>32.6</i>		ug/L	<i>50.00</i>		<i>65.2</i>	<i>60-140</i>		

**LCS (B310011-BS1)**

Acenaphthene	39.8	5.00	ug/L	50.00		79.5	47-145		
Acenaphthylene	37.6	5.00	ug/L	50.00		75.2	33-145		
Anthracene	43.3	5.00	ug/L	50.00		86.6	27-133		
Benzo(A)Anthracene	45.2	5.00	ug/L	50.00		90.4	33-143		
Benzo(A)Pyrene	46.3	5.00	ug/L	50.00		92.5	17-163		
Benzo(B)Fluoranthene	47.3	5.00	ug/L	50.00		94.7	24-159		
Benzo(G,H,I)Perylene	50.3	5.00	ug/L	50.00		101	35-219		
Benzo(K)Fluoranthene	47.4	5.00	ug/L	50.00		94.8	11-162		

U.S.E.P.A Region 2 Laboratory

NOTE: The results recorded in this report relate only to the samples as received on the date and at the time noted  
 Reported: 10/17/2023



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**NVOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch B310011</b>									
<b>LCS (B310011-BS1)</b>									
Chrysene	44.7	5.00	ug/L	50.00		89.4	17-168		
Dibenzo(A,H)Anthracene	47.8	5.00	ug/L	50.00		95.6	33-227		
Fluoranthene	44.2	5.00	ug/L	50.00		88.4	26-137		
Fluorene	42.1	5.00	ug/L	50.00		84.3	59-121		
Indeno(1,2,3-Cd)Pyrene	50.5	5.00	ug/L	50.00		101	39-171		
Naphthalene	36.3	5.00	ug/L	50.00		72.7	21-133		
Phenanthrene	44.0	5.00	ug/L	50.00		88.0	54-120		
1,2,4-Trichlorobenzene	33.1	5.00	ug/L	50.00		66.1	44-142		
2,4,6-Trichlorophenol	30.0	5.00	ug/L	50.00		59.9	37-144		
2,4-Dichlorophenol	35.3	5.00	ug/L	50.00		70.6	39-135		
2,4-Dimethylphenol	40.7	5.00	ug/L	50.00		81.4	32-120		
2,4-Dinitrotoluene	46.9	5.00	ug/L	50.00		93.8	39-139		
2,6-Dinitrotoluene	45.1	5.00	ug/L	50.00		90.2	50-158		
2,4-Dinitrophenol	4.37	5.00	ug/L	50.00		8.74	21-191		
2-Chloronaphthalene	38.0	5.00	ug/L	50.00		76.0	60-120		
2-Chlorophenol	35.1	5.00	ug/L	50.00		70.1	23-134		
2-Nitrophenol	3.61	5.00	ug/L	50.00		7.22	29-182		
3,3'- Dichlorobenzidine	50.8	5.00	ug/L	50.00		102	38-262		
4,6-Dinitro-2-Methylphenol	27.4	5.00	ug/L	50.00		54.8	17-181		
4-Bromophenyl-Phenylether	43.6	5.00	ug/L	50.00		87.2	53-127		
4-Chloro-3-Methylphenol	41.3	5.00	ug/L	50.00		82.7	22-147		
4-Chlorophenyl-Phenylether	41.9	5.00	ug/L	50.00		83.8	25-158		
4-Nitrophenol	16.0	5.00	ug/L	50.00		32.1	9-132		
Bis(-2-Chloroethoxy)Methane	38.5	5.00	ug/L	50.00		77.1	33-184		
Bis(2-Chloroethyl)Ether	36.6	5.00	ug/L	50.00		73.2	12-158		
Bis(2-Chloroisopropyl)Ether	35.1	5.00	ug/L	50.00		70.2	36-166		
Bis(2-Ethylhexyl)Phthalate	52.2	5.00	ug/L	50.00		104	8-158		
Butylbenzylphthalate	44.9	5.00	ug/L	50.00		89.8	38-152		
Azobenzene	45.2	5.00	ug/L	50.00		90.5	60-115		
Diethylphthalate	44.3	5.00	ug/L	50.00		88.6	31-114		
Dimethyl Phthalate	38.9	5.00	ug/L	50.00		77.7	28-120		
Di-N-Butyl Phthalate	47.2	5.00	ug/L	50.00		94.5	1-120		
Di-N-Octyl Phthalate	50.7	5.00	ug/L	50.00		101	4-146		
Hexachlorobenzene	43.0	5.00	ug/L	50.00		86.0	35-152		
Hexachlorobutadiene	32.8	2.00	ug/L	50.00		65.5	24-120		

U.S.E.P.A Region 2 Laboratory

**NOTE:** The results recorded in this report relate only to the samples as received on the date and at the time noted  
 Reported: 10/17/2023



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**NVOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B310011**

**LCS (B310011-BS1)**

Hexachlorocyclopentadiene	34.3	5.00	ug/L	50.00		68.6	15-76		
Hexachloroethane	31.2	5.00	ug/L	50.00		62.5	40-120		
Isophorone	44.4	5.00	ug/L	50.00		88.8	21-196		
Nitrobenzene	40.5	5.00	ug/L	50.00		81.0	35-180		
N-Nitrosodimethylamine	25.2	5.00	ug/L	50.00		50.5	17-127		
N-Nitroso-Di-N-Propylamine	40.5	5.00	ug/L	50.00		81.0	43-230		
N-Nitrosodiphenylamine	52.4	5.00	ug/L	50.00		105	79-139		
Pentachlorophenol	--- U	5.00	ug/L	50.00			14-176		
Phenol	17.1	2.00	ug/L	50.00		34.2	5-120		
Pyrene	43.3	5.00	ug/L	50.00		86.6	52-120		
<i>Surrogate: 2-Fluoroaniline</i>	<i>32.4</i>		<i>ug/L</i>	<i>50.00</i>		<i>64.7</i>	<i>60-140</i>		
<i>Surrogate: Phenol-D6</i>	<i>14.9</i>		<i>ug/L</i>	<i>50.00</i>		<i>29.8</i>	<i>60-140</i>		
<i>Surrogate: Naphthalene-D8</i>	<i>31.5</i>		<i>ug/L</i>	<i>50.00</i>		<i>62.9</i>	<i>60-140</i>		
<i>Surrogate: 1-Fluoronaphthalene</i>	<i>30.9</i>		<i>ug/L</i>	<i>50.00</i>		<i>61.9</i>	<i>60-140</i>		
<i>Surrogate: 2,4-Dibromophenol</i>	<i>32.8</i>		<i>ug/L</i>	<i>50.00</i>		<i>65.6</i>	<i>60-140</i>		
<i>Surrogate: Anthracene-D10</i>	<i>40.3</i>		<i>ug/L</i>	<i>50.00</i>		<i>80.6</i>	<i>60-140</i>		
<i>Surrogate: Chrysene-D12</i>	<i>40.0</i>		<i>ug/L</i>	<i>50.00</i>		<i>79.9</i>	<i>60-140</i>		

**LCS Dup (B310011-BSD1)**

Acenaphthene	39.3	5.00	ug/L	50.00		78.6	47-145	1.16	30
Acenaphthylene	36.7	5.00	ug/L	50.00		73.4	33-145	2.34	30
Anthracene	45.5	5.00	ug/L	50.00		91.0	27-133	4.91	30
Benzo(A)Anthracene	46.7	5.00	ug/L	50.00		93.3	33-143	3.22	30
Benzo(A)Pyrene	47.2	5.00	ug/L	50.00		94.4	17-163	1.97	30
Benzo(B)Fluoranthene	50.0	5.00	ug/L	50.00		100	24-159	5.47	30
Benzo(G,H,I)Perylene	50.9	5.00	ug/L	50.00		102	35-219	1.23	30
Benzo(K)Fluoranthene	47.9	5.00	ug/L	50.00		95.8	11-162	1.05	30
Chrysene	45.6	5.00	ug/L	50.00		91.1	17-168	1.91	30
Dibenzo(A,H)Anthracene	49.0	5.00	ug/L	50.00		97.9	33-227	2.46	30
Fluoranthene	44.7	5.00	ug/L	50.00		89.3	26-137	1.08	30
Fluorene	47.7	5.00	ug/L	50.00		95.4	59-121	12.4	30
Indeno(1,2,3-Cd)Pyrene	52.3	5.00	ug/L	50.00		105	39-171	3.44	30
Naphthalene	35.1	5.00	ug/L	50.00		70.3	21-133	3.36	30
Phenanthrene	46.6	5.00	ug/L	50.00		93.2	54-120	5.74	30
1,2,4-Trichlorobenzene	31.5	5.00	ug/L	50.00		63.0	44-142	4.86	30

U.S.E.P.A Region 2 Laboratory

**NOTE:** The results recorded in this report relate only to the samples as received on the date and at the time noted  
 Reported: 10/17/2023



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**NVOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch B310011</b>									
<b>LCS Dup (B310011-BSD1)</b>									
2,4,6-Trichlorophenol	31.0	5.00	ug/L	50.00		62.1	37-144	3.51	30
2,4-Dichlorophenol	36.6	5.00	ug/L	50.00		73.2	39-135	3.64	30
2,4-Dimethylphenol	36.7	5.00	ug/L	50.00		73.3	32-120	10.4	30
2,4-Dinitrotoluene	51.7	5.00	ug/L	50.00		103	39-139	9.69	30
2,6-Dinitrotoluene	43.6	5.00	ug/L	50.00		87.3	50-158	3.36	30
2,4-Dinitrophenol	3.01	5.00	ug/L	50.00		6.02	21-191	36.9	30
2-Chloronaphthalene	36.9	5.00	ug/L	50.00		73.8	60-120	2.83	30
2-Chlorophenol	36.8	5.00	ug/L	50.00		73.7	23-134	4.95	30
2-Nitrophenol	6.52	5.00	ug/L	50.00		13.0	29-182	57.5	30
3,3'- Dichlorobenzidine	52.0	5.00	ug/L	50.00		104	38-262	2.20	30
4,6-Dinitro-2-Methylphenol	25.2	5.00	ug/L	50.00		50.3	17-181	8.41	30
4-Bromophenyl-Phenylether	47.7	5.00	ug/L	50.00		95.5	53-127	9.09	30
4-Chloro-3-Methylphenol	42.1	5.00	ug/L	50.00		84.3	22-147	1.94	30
4-Chlorophenyl-Phenylether	47.9	5.00	ug/L	50.00		95.8	25-158	13.3	30
4-Nitrophenol	13.1	5.00	ug/L	50.00		26.3	9-132	19.8	30
Bis(-2-Chloroethoxy)Methane	39.3	5.00	ug/L	50.00		78.6	33-184	1.93	30
Bis(2-Chloroethyl)Ether	37.8	5.00	ug/L	50.00		75.6	12-158	3.23	30
Bis(2-Chloroisopropyl)Ether	35.9	5.00	ug/L	50.00		71.9	36-166	2.28	30
Bis(2-Ethylhexyl)Phthalate	53.8	5.00	ug/L	50.00		108	8-158	2.91	30
Butylbenzylphthalate	46.2	5.00	ug/L	50.00		92.4	38-152	2.83	30
Azobenzene	49.4	5.00	ug/L	50.00		98.9	60-115	8.87	30
Diethylphthalate	47.1	5.00	ug/L	50.00		94.1	31-114	6.06	30
Dimethyl Phthalate	34.2	5.00	ug/L	50.00		68.5	28-120	12.7	30
Di-N-Butyl Phthalate	48.0	5.00	ug/L	50.00		96.0	1-120	1.60	30
Di-N-Octyl Phthalate	52.1	5.00	ug/L	50.00		104	4-146	2.67	30
Hexachlorobenzene	45.7	5.00	ug/L	50.00		91.5	35-152	6.13	30
Hexachlorobutadiene	30.2	2.00	ug/L	50.00		60.3	24-120	8.26	30
Hexachlorocyclopentadiene	30.1	5.00	ug/L	50.00		60.1	15-76	13.1	30
Hexachloroethane	29.8	5.00	ug/L	50.00		59.6	40-120	4.75	30
Isophorone	45.8	5.00	ug/L	50.00		91.7	21-196	3.21	30
Nitrobenzene	39.8	5.00	ug/L	50.00		79.6	35-180	1.74	30
N-Nitrosodimethylamine	27.1	5.00	ug/L	50.00		54.1	17-127	7.00	30
N-Nitroso-Di-N-Propylamine	41.3	5.00	ug/L	50.00		82.6	43-230	1.93	30
N-Nitrosodiphenylamine	57.2	5.00	ug/L	50.00		114	79-139	8.85	30
Pentachlorophenol	--- U	5.00	ug/L	50.00			14-176		30

U.S.E.P.A Region 2 Laboratory

**NOTE:** The results recorded in this report relate only to the samples as received on the date and at the time noted  
 Reported: 10/17/2023



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**NVOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B310011**

**LCS Dup (B310011-BSD1)**

Phenol	18.4	2.00	ug/L	50.00		36.8	5-120	7.26	30
Pyrene	44.2	5.00	ug/L	50.00		88.4	52-120	2.10	30
<i>Surrogate: 2-Fluoroaniline</i>	<i>33.9</i>		<i>ug/L</i>	<i>50.00</i>		<i>67.9</i>	<i>60-140</i>		
<i>Surrogate: Phenol-D6</i>	<i>16.1</i>		<i>ug/L</i>	<i>50.00</i>		<i>32.2</i>	<i>60-140</i>		
<i>Surrogate: Naphthalene-D8</i>	<i>30.6</i>		<i>ug/L</i>	<i>50.00</i>		<i>61.1</i>	<i>60-140</i>		
<i>Surrogate: 1-Fluoronaphthalene</i>	<i>30.2</i>		<i>ug/L</i>	<i>50.00</i>		<i>60.5</i>	<i>60-140</i>		
<i>Surrogate: 2,4-Dibromophenol</i>	<i>33.1</i>		<i>ug/L</i>	<i>50.00</i>		<i>66.3</i>	<i>60-140</i>		
<i>Surrogate: Anthracene-D10</i>	<i>42.1</i>		<i>ug/L</i>	<i>50.00</i>		<i>84.2</i>	<i>60-140</i>		
<i>Surrogate: Chrysene-D12</i>	<i>40.9</i>		<i>ug/L</i>	<i>50.00</i>		<i>81.7</i>	<i>60-140</i>		

**Matrix Spike (B310011-MS1)**

**Source: 2309020-02**

Acenaphthene	33.3	5.05	ug/L	50.51	ND	66.0	47-145		
Acenaphthylene	33.1	5.05	ug/L	50.51	ND	65.5	33-145		
Anthracene	35.5	5.05	ug/L	50.51	ND	70.2	27-133		
Benzo(A)Anthracene	38.6	5.05	ug/L	50.51	ND	76.5	33-143		
Benzo(A)Pyrene	38.0	5.05	ug/L	50.51	ND	75.3	17-163		
Benzo(B)Fluoranthene	37.9	5.05	ug/L	50.51	ND	75.0	24-159		
Benzo(G,H,I)Perylene	35.2	5.05	ug/L	50.51	ND	69.7	35-219		
Benzo(K)Fluoranthene	38.2	5.05	ug/L	50.51	ND	75.7	11-162		
Chrysene	38.5	5.05	ug/L	50.51	ND	76.3	17-168		
Dibenzo(A,H)Anthracene	35.8	5.05	ug/L	50.51	ND	70.8	33-227		
Fluoranthene	35.6	5.05	ug/L	50.51	ND	70.5	26-137		
Fluorene	36.7	5.05	ug/L	50.51	ND	72.6	59-121		
Indeno(1,2,3-Cd)Pyrene	36.7	5.05	ug/L	50.51	ND	72.8	39-171		
Naphthalene	22.5	5.05	ug/L	50.51	ND	44.6	21-133		
Phenanthrene	36.3	5.05	ug/L	50.51	ND	71.8	54-120		
1,2,4-Trichlorobenzene	20.2	5.05	ug/L	50.51	ND	40.1	44-142		
2,4,6-Trichlorophenol	27.2	5.05	ug/L	50.51	ND	53.9	37-144		
2,4-Dichlorophenol	26.2	5.05	ug/L	50.51	ND	51.9	39-135		
2,4-Dimethylphenol	24.2	5.05	ug/L	50.51	ND	48.0	32-120		
2,4-Dinitrotoluene	37.3	5.05	ug/L	50.51	ND	73.9	39-139		
2,6-Dinitrotoluene	35.0	5.05	ug/L	50.51	ND	69.3	50-158		
2,4-Dinitrophenol	9.92	5.05	ug/L	50.51	ND	19.6	21-191		
2-Chloronaphthalene	29.6	5.05	ug/L	50.51	ND	58.6	60-120		
2-Chlorophenol	20.9	5.05	ug/L	50.51	ND	41.4	23-134		

U.S.E.P.A Region 2 Laboratory

**NOTE:** The results recorded in this report relate only to the samples as received on the date and at the time noted  
Reported: 10/17/2023



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**NVOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B310011**

**Matrix Spike (B310011-MS1)**

**Source: 2309020-02**

2-Nitrophenol	--- U	5.05	ug/L	50.51	ND		29-182		
3,3'- Dichlorobenzidine	38.0	5.05	ug/L	50.51	ND	75.3	38-262		
4,6-Dinitro-2-Methylphenol	24.2	5.05	ug/L	50.51	ND	47.9	17-181		
4-Bromophenyl-Phenylether	37.6	5.05	ug/L	50.51	ND	74.4	53-127		
4-Chloro-3-Methylphenol	34.8	5.05	ug/L	50.51	ND	69.0	22-147		
4-Chlorophenyl-Phenylether	36.9	5.05	ug/L	50.51	ND	73.0	25-158		
4-Nitrophenol	13.4	5.05	ug/L	50.51	ND	26.5	9-132		
Bis(-2-Chloroethoxy)Methane	28.2	5.05	ug/L	50.51	ND	55.8	33-184		
Bis(2-Chloroethyl)Ether	22.7	5.05	ug/L	50.51	ND	44.9	12-158		
Bis(2-Chloroisopropyl)Ether	23.1	5.05	ug/L	50.51	ND	45.8	36-166		
Bis(2-Ethylhexyl)Phthalate	43.9	5.05	ug/L	50.51	ND	87.0	8-158		
Butylbenzylphthalate	37.5	5.05	ug/L	50.51	ND	74.2	38-152		
Azobenzene	39.1	5.05	ug/L	50.51	ND	77.3	61-106		
Diethylphthalate	37.7	5.05	ug/L	50.51	ND	74.6	31-114		
Dimethyl Phthalate	34.3	5.05	ug/L	50.51	ND	68.0	28-120		
Di-N-Butyl Phthalate	38.4	5.05	ug/L	50.51	ND	76.1	1-120		
Di-N-Octyl Phthalate	42.3	5.05	ug/L	50.51	ND	83.7	4-146		
Hexachlorobenzene	35.5	5.05	ug/L	50.51	ND	70.3	35-152		
Hexachlorobutadiene	18.8	2.02	ug/L	50.51	ND	37.2	24-120		
Hexachlorocyclopentadiene	16.4	5.05	ug/L	50.51	ND	32.4	15-76		
Hexachloroethane	15.9	5.05	ug/L	50.51	ND	31.4	40-120		
Isophorone	33.4	5.05	ug/L	50.51	ND	66.0	21-196		
Nitrobenzene	26.5	5.05	ug/L	50.51	ND	52.4	35-180		
N-Nitrosodimethylamine	15.6	5.05	ug/L	50.51	ND	30.9	17-127		
N-Nitroso-Di-N-Propylamine	30.3	5.05	ug/L	50.51	ND	59.9	43-230		
N-Nitrosodiphenylamine	36.9	5.05	ug/L	50.51	ND	73.0	79-139		
Pentachlorophenol	9.28	5.05	ug/L	50.51	ND	18.4	14-176		
Phenol	12.4	2.02	ug/L	50.51	ND	24.5	5-120		
Pyrene	35.1	5.05	ug/L	50.51	ND	69.5	52-120		
<i>Surrogate: 2-Fluoroaniline</i>	<i>20.0</i>		ug/L	<i>50.51</i>		<i>39.6</i>	<i>60-140</i>		
<i>Surrogate: Phenol-D6</i>	<i>10.8</i>		ug/L	<i>50.51</i>		<i>21.3</i>	<i>60-140</i>		
<i>Surrogate: Naphthalene-D8</i>	<i>21.9</i>		ug/L	<i>50.51</i>		<i>43.3</i>	<i>60-140</i>		
<i>Surrogate: 1-Fluoronaphthalene</i>	<i>21.3</i>		ug/L	<i>50.51</i>		<i>42.1</i>	<i>60-140</i>		
<i>Surrogate: 2,4-Dibromophenol</i>	<i>28.7</i>		ug/L	<i>50.51</i>		<i>56.7</i>	<i>60-140</i>		
<i>Surrogate: Anthracene-D10</i>	<i>33.0</i>		ug/L	<i>50.51</i>		<i>65.4</i>	<i>60-140</i>		

U.S.E.P.A Region 2 Laboratory

**NOTE:** The results recorded in this report relate only to the samples as received on the date and at the time noted  
 Reported: 10/17/2023



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**NVOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B310011**

**Matrix Spike (B310011-MS1)**

**Source: 2309020-02**

<i>Surrogate: Chrysene-D12</i>	34.0		ug/L	50.51		67.4	60-140		
--------------------------------	------	--	------	-------	--	------	--------	--	--

**Matrix Spike (B310011-MS2)**

**Source: 2309043-01**

Acenaphthene	38.3	5.56	ug/L	55.56	ND	68.9	47-145		
Acenaphthylene	37.9	5.56	ug/L	55.56	ND	68.2	33-145		
Anthracene	45.4	5.56	ug/L	55.56	ND	81.8	27-133		
Benzo(A)Anthracene	45.6	5.56	ug/L	55.56	ND	82.0	33-143		
Benzo(A)Pyrene	49.3	5.56	ug/L	55.56	ND	88.7	17-163		
Benzo(B)Fluoranthene	47.3	5.56	ug/L	55.56	ND	85.1	24-159		
Benzo(G,H,I)Perylene	51.2	5.56	ug/L	55.56	ND	92.2	35-219		
Benzo(K)Fluoranthene	49.0	5.56	ug/L	55.56	ND	88.2	11-162		
Chrysene	45.6	5.56	ug/L	55.56	ND	82.0	17-168		
Dibenzo(A,H)Anthracene	50.9	5.56	ug/L	55.56	ND	91.7	33-227		
Fluoranthene	44.9	5.56	ug/L	55.56	ND	80.8	26-137		
Fluorene	46.0	5.56	ug/L	55.56	ND	82.8	59-121		
Indeno(1,2,3-Cd)Pyrene	54.1	5.56	ug/L	55.56	ND	97.3	39-171		
Naphthalene	28.7	5.56	ug/L	55.56	ND	51.7	21-133		
Phenanthrene	47.0	5.56	ug/L	55.56	ND	84.6	54-120		
1,2,4-Trichlorobenzene	26.2	5.56	ug/L	55.56	ND	47.2	44-142		
2,4,6-Trichlorophenol	38.1	5.56	ug/L	55.56	ND	68.6	37-144		
2,4-Dichlorophenol	34.2	5.56	ug/L	55.56	ND	61.5	39-135		
2,4-Dimethylphenol	32.1	5.56	ug/L	55.56	ND	57.8	32-120		
2,4-Dinitrotoluene	50.8	5.56	ug/L	55.56	ND	91.4	39-139		
2,6-Dinitrotoluene	41.4	5.56	ug/L	55.56	ND	74.6	50-158		
2,4-Dinitrophenol	22.2	5.56	ug/L	55.56	ND	39.9	21-191		
2-Chloronaphthalene	34.9	5.56	ug/L	55.56	ND	62.8	60-120		
2-Chlorophenol	28.4	5.56	ug/L	55.56	ND	51.1	23-134		
2-Nitrophenol	7.80	5.56	ug/L	55.56	ND	14.0	29-182		
3,3'- Dichlorobenzidine	41.2	5.56	ug/L	55.56	ND	74.1	38-262		
4,6-Dinitro-2-Methylphenol	40.9	5.56	ug/L	55.56	ND	73.6	17-181		
4-Bromophenyl-Phenylether	47.6	5.56	ug/L	55.56	ND	85.6	53-127		
4-Chloro-3-Methylphenol	41.7	5.56	ug/L	55.56	ND	75.1	22-147		
4-Chlorophenyl-Phenylether	45.7	5.56	ug/L	55.56	ND	82.3	25-158		
4-Nitrophenol	20.5	5.56	ug/L	55.56	ND	36.8	9-132		
Bis(-2-Chloroethoxy)Methane	34.4	5.56	ug/L	55.56	ND	61.9	33-184		

U.S.E.P.A Region 2 Laboratory

**NOTE:** The results recorded in this report relate only to the samples as received on the date and at the time noted  
 Reported: 10/17/2023



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**NVOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B310011**

**Matrix Spike (B310011-MS2)**

**Source: 2309043-01**

Bis(2-Chloroethyl)Ether	30.6	5.56	ug/L	55.56	ND	55.0	12-158		
Bis(2-Chloroisopropyl)Ether	31.6	5.56	ug/L	55.56	ND	57.0	36-166		
Bis(2-Ethylhexyl)Phthalate	54.1	5.56	ug/L	55.56	ND	97.4	8-158		
Butylbenzylphthalate	48.1	5.56	ug/L	55.56	ND	86.6	38-152		
Azobenzene	48.5	5.56	ug/L	55.56	ND	87.3	61-106		
Diethylphthalate	46.7	5.56	ug/L	55.56	ND	84.1	31-114		
Dimethyl Phthalate	33.3	5.56	ug/L	55.56	ND	60.0	28-120		
Di-N-Butyl Phthalate	50.0	5.56	ug/L	55.56	ND	90.0	1-120		
Di-N-Octyl Phthalate	54.6	5.56	ug/L	55.56	ND	98.3	4-146		
Hexachlorobenzene	47.3	5.56	ug/L	55.56	ND	85.1	35-152		
Hexachlorobutadiene	25.2	2.22	ug/L	55.56	ND	45.4	24-120		
Hexachlorocyclopentadiene	21.8	5.56	ug/L	55.56	ND	39.2	15-76		
Hexachloroethane	21.1	5.56	ug/L	55.56	ND	38.0	40-120		
Isophorone	39.8	5.56	ug/L	55.56	ND	71.6	21-196		
Nitrobenzene	33.2	5.56	ug/L	55.56	ND	59.7	35-180		
N-Nitrosodimethylamine	20.5	5.56	ug/L	55.56	ND	36.9	17-127		
N-Nitroso-Di-N-Propylamine	36.9	5.56	ug/L	55.56	ND	66.4	43-230		
N-Nitrosodiphenylamine	48.1	5.56	ug/L	55.56	ND	86.7	79-139		
Pentachlorophenol	23.0	5.56	ug/L	55.56	ND	41.5	14-176		
Phenol	15.5	2.22	ug/L	55.56	ND	27.9	5-120		
Pyrene	44.2	5.56	ug/L	55.56	ND	79.6	52-120		
<i>Surrogate: 2-Fluoroaniline</i>	<i>25.9</i>		<i>ug/L</i>	<i>55.56</i>		<i>46.7</i>	<i>60-140</i>		
<i>Surrogate: Phenol-D6</i>	<i>13.5</i>		<i>ug/L</i>	<i>55.56</i>		<i>24.3</i>	<i>60-140</i>		
<i>Surrogate: Naphthalene-D8</i>	<i>27.5</i>		<i>ug/L</i>	<i>55.56</i>		<i>49.6</i>	<i>60-140</i>		
<i>Surrogate: 1-Fluoronaphthalene</i>	<i>27.3</i>		<i>ug/L</i>	<i>55.56</i>		<i>49.2</i>	<i>60-140</i>		
<i>Surrogate: 2,4-Dibromophenol</i>	<i>34.6</i>		<i>ug/L</i>	<i>55.56</i>		<i>62.4</i>	<i>60-140</i>		
<i>Surrogate: Anthracene-D10</i>	<i>42.9</i>		<i>ug/L</i>	<i>55.56</i>		<i>77.2</i>	<i>60-140</i>		
<i>Surrogate: Chrysene-D12</i>	<i>40.4</i>		<i>ug/L</i>	<i>55.56</i>		<i>72.8</i>	<i>60-140</i>		



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**NVOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B310011**

**Matrix Spike Dup (B310011-MSD1)**

**Source: 2309020-02**

Acenaphthene	41.6	5.05	ug/L	50.51	ND	82.3	47-145	22.0	24
Acenaphthylene	42.0	5.05	ug/L	50.51	ND	83.1	33-145	23.7	24
Anthracene	48.2	5.05	ug/L	50.51	ND	95.4	27-133	30.4	24
Benzo(A)Anthracene	50.6	5.05	ug/L	50.51	ND	100	33-143	26.7	24
Benzo(A)Pyrene	51.5	5.05	ug/L	50.51	ND	102	17-163	30.1	24
Benzo(B)Fluoranthene	50.8	5.05	ug/L	50.51	ND	101	24-159	29.2	24
Benzo(G,H,I)Perylene	49.4	5.05	ug/L	50.51	ND	97.9	35-219	33.7	24
Benzo(K)Fluoranthene	51.8	5.05	ug/L	50.51	ND	102	11-162	30.0	24
Chrysene	50.1	5.05	ug/L	50.51	ND	99.2	17-168	26.2	24
Dibenzo(A,H)Anthracene	50.0	5.05	ug/L	50.51	ND	99.0	33-227	33.1	24
Fluoranthene	48.4	5.05	ug/L	50.51	ND	95.7	26-137	30.4	24
Fluorene	51.2	5.05	ug/L	50.51	ND	101	59-121	33.0	24
Indeno(1,2,3-Cd)Pyrene	52.8	5.05	ug/L	50.51	ND	105	39-171	35.8	24
Naphthalene	33.5	5.05	ug/L	50.51	ND	66.2	21-133	39.0	24
Phenanthrene	50.2	5.05	ug/L	50.51	ND	99.4	54-120	32.2	24
1,2,4-Trichlorobenzene	28.7	5.05	ug/L	50.51	ND	56.9	44-142	34.8	24
2,4,6-Trichlorophenol	39.4	5.05	ug/L	50.51	ND	78.0	37-144	36.5	24
2,4-Dichlorophenol	38.7	5.05	ug/L	50.51	ND	76.7	39-135	38.5	24
2,4-Dimethylphenol	28.7	5.05	ug/L	50.51	ND	56.8	32-120	16.8	24
2,4-Dinitrotoluene	55.8	5.05	ug/L	50.51	ND	111	39-139	39.8	24
2,6-Dinitrotoluene	45.4	5.05	ug/L	50.51	ND	89.9	50-158	25.9	24
2,4-Dinitrophenol	18.0	5.05	ug/L	50.51	ND	35.6	21-191	57.8	24
2-Chloronaphthalene	39.3	5.05	ug/L	50.51	ND	77.8	60-120	28.2	24
2-Chlorophenol	28.3	5.05	ug/L	50.51	ND	55.9	23-134	29.9	24
2-Nitrophenol	10.6	5.05	ug/L	50.51	ND	21.0	29-182		24
3,3'- Dichlorobenzidine	45.2	5.05	ug/L	50.51	ND	89.5	38-262	17.2	24
4,6-Dinitro-2-Methylphenol	39.0	5.05	ug/L	50.51	ND	77.2	17-181	46.8	24
4-Bromophenyl-Phenylether	50.9	5.05	ug/L	50.51	ND	101	53-127	30.0	24
4-Chloro-3-Methylphenol	45.1	5.05	ug/L	50.51	ND	89.3	22-147	25.7	24
4-Chlorophenyl-Phenylether	50.4	5.05	ug/L	50.51	ND	99.8	25-158	31.0	24
4-Nitrophenol	18.2	5.05	ug/L	50.51	ND	36.0	9-132	30.4	24
Bis(-2-Chloroethoxy)Methane	42.5	5.05	ug/L	50.51	ND	84.1	33-184	40.5	24
Bis(2-Chloroethyl)Ether	32.3	5.05	ug/L	50.51	ND	64.0	12-158	35.0	24
Bis(2-Chloroisopropyl)Ether	35.1	5.05	ug/L	50.51	ND	69.4	36-166	41.1	24
Bis(2-Ethylhexyl)Phthalate	57.8	5.05	ug/L	50.51	ND	114	8-158	27.3	24

U.S.E.P.A Region 2 Laboratory

**NOTE:** The results recorded in this report relate only to the samples as received on the date and at the time noted

Reported: 10/17/2023



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**NVOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B310011**

**Matrix Spike Dup (B310011-MSD1)**

**Source: 2309020-02**

Butylbenzylphthalate	50.8	5.05	ug/L	50.51	ND	101	38-152	30.2	24
Azobenzene	53.5	5.05	ug/L	50.51	ND	106	61-106	31.2	24
Diethylphthalate	52.0	5.05	ug/L	50.51	ND	103	31-114	32.0	24
Dimethyl Phthalate	41.6	5.05	ug/L	50.51	ND	82.4	28-120	19.2	24
Di-N-Butyl Phthalate	51.8	5.05	ug/L	50.51	ND	103	1-120	29.6	24
Di-N-Octyl Phthalate	57.1	5.05	ug/L	50.51	ND	113	4-146	29.8	24
Hexachlorobenzene	49.3	5.05	ug/L	50.51	ND	97.5	35-152	32.4	24
Hexachlorobutadiene	25.9	2.02	ug/L	50.51	ND	51.3	24-120	31.9	24
Hexachlorocyclopentadiene	24.5	5.05	ug/L	50.51	ND	48.5	15-76	39.8	24
Hexachloroethane	17.0	5.05	ug/L	50.51	ND	33.7	40-120	6.88	24
Isophorone	46.9	5.05	ug/L	50.51	ND	92.9	21-196	33.8	24
Nitrobenzene	39.9	5.05	ug/L	50.51	ND	79.0	35-180	40.4	24
N-Nitrosodimethylamine	17.0	5.05	ug/L	50.51	ND	33.6	17-127	8.43	24
N-Nitroso-Di-N-Propylamine	45.1	5.05	ug/L	50.51	ND	89.2	43-230	39.3	24
N-Nitrosodiphenylamine	51.1	5.05	ug/L	50.51	ND	101	79-139	32.4	24
Pentachlorophenol	19.2	5.05	ug/L	50.51	ND	37.9	14-176	69.5	24
Phenol	17.4	2.02	ug/L	50.51	ND	34.5	5-120	33.6	24
Pyrene	47.5	5.05	ug/L	50.51	ND	94.0	52-120	29.9	24
<i>Surrogate: 2-Fluoroaniline</i>	25.8		ug/L	50.51		51.1	60-140		
<i>Surrogate: Phenol-D6</i>	15.1		ug/L	50.51		29.8	60-140		
<i>Surrogate: Naphthalene-D8</i>	32.4		ug/L	50.51		64.1	60-140		
<i>Surrogate: 1-Fluoronaphthalene</i>	31.3		ug/L	50.51		62.0	60-140		
<i>Surrogate: 2,4-Dibromophenol</i>	37.5		ug/L	50.51		74.3	60-140		
<i>Surrogate: Anthracene-D10</i>	46.4		ug/L	50.51		92.0	60-140		
<i>Surrogate: Chrysene-D12</i>	45.8		ug/L	50.51		90.7	60-140		

**Matrix Spike Dup (B310011-MSD2)**

**Source: 2309043-01**

Acenaphthene	36.5	5.62	ug/L	56.18	ND	65.0	47-145	4.83	24
Acenaphthylene	36.3	5.62	ug/L	56.18	ND	64.7	33-145	4.09	24
Anthracene	48.1	5.62	ug/L	56.18	ND	85.7	27-133	5.77	24
Benzo(A)Anthracene	49.1	5.62	ug/L	56.18	ND	87.4	33-143	7.44	24
Benzo(A)Pyrene	49.8	5.62	ug/L	56.18	ND	88.6	17-163	1.05	24
Benzo(B)Fluoranthene	49.6	5.62	ug/L	56.18	ND	88.3	24-159	4.74	24
Benzo(G,H,I)Perylene	49.1	5.62	ug/L	56.18	ND	87.4	35-219	4.27	24
Benzo(K)Fluoranthene	50.6	5.62	ug/L	56.18	ND	90.1	11-162	3.34	24

U.S.E.P.A Region 2 Laboratory

**NOTE:** The results recorded in this report relate only to the samples as received on the date and at the time noted  
 Reported: 10/17/2023



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**NVOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B310011**

**Matrix Spike Dup (B310011-MSD2)**

**Source: 2309043-01**

Chrysene	49.3	5.62	ug/L	56.18	ND	87.8	17-168	7.90	24
Dibenzo(A,H)Anthracene	49.2	5.62	ug/L	56.18	ND	87.5	33-227	3.50	24
Fluoranthene	46.1	5.62	ug/L	56.18	ND	82.0	26-137	2.59	24
Fluorene	50.3	5.62	ug/L	56.18	ND	89.6	59-121	8.91	24
Indeno(1,2,3-Cd)Pyrene	50.2	5.62	ug/L	56.18	ND	89.3	39-171	7.43	24
Naphthalene	25.6	5.62	ug/L	56.18	ND	45.6	21-133	11.4	24
Phenanthrene	50.1	5.62	ug/L	56.18	ND	89.3	54-120	6.52	24
1,2,4-Trichlorobenzene	22.6	5.62	ug/L	56.18	ND	40.3	44-142	14.7	24
2,4,6-Trichlorophenol	37.8	5.62	ug/L	56.18	ND	67.2	37-144	0.915	24
2,4-Dichlorophenol	33.1	5.62	ug/L	56.18	ND	58.9	39-135	3.24	24
2,4-Dimethylphenol	25.7	5.62	ug/L	56.18	ND	45.8	32-120	22.2	24
2,4-Dinitrotoluene	56.6	5.62	ug/L	56.18	ND	101	39-139	10.8	24
2,6-Dinitrotoluene	42.1	5.62	ug/L	56.18	ND	74.9	50-158	1.57	24
2,4-Dinitrophenol	22.3	5.62	ug/L	56.18	ND	39.6	21-191	0.363	24
2-Chloronaphthalene	32.6	5.62	ug/L	56.18	ND	58.0	60-120	6.96	24
2-Chlorophenol	24.0	5.62	ug/L	56.18	ND	42.7	23-134	16.7	24
2-Nitrophenol	8.39	5.62	ug/L	56.18	ND	14.9	29-182	7.33	24
3,3'- Dichlorobenzidine	41.1	5.62	ug/L	56.18	ND	73.2	38-262	0.159	24
4,6-Dinitro-2-Methylphenol	44.0	5.62	ug/L	56.18	ND	78.2	17-181	7.28	24
4-Bromophenyl-Phenylether	51.7	5.62	ug/L	56.18	ND	92.1	53-127	8.36	24
4-Chloro-3-Methylphenol	41.6	5.62	ug/L	56.18	ND	74.0	22-147	0.331	24
4-Chlorophenyl-Phenylether	50.2	5.62	ug/L	56.18	ND	89.3	25-158	9.37	24
4-Nitrophenol	20.4	5.62	ug/L	56.18	ND	36.4	9-132	0.0299	24
Bis(-2-Chloroethoxy)Methane	33.1	5.62	ug/L	56.18	ND	59.0	33-184	3.68	24
Bis(2-Chloroethyl)Ether	25.2	5.62	ug/L	56.18	ND	44.9	12-158	19.1	24
Bis(2-Chloroisopropyl)Ether	27.6	5.62	ug/L	56.18	ND	49.2	36-166	13.6	24
Bis(2-Ethylhexyl)Phthalate	59.2	5.62	ug/L	56.18	ND	105	8-158	8.97	24
Butylbenzylphthalate	47.6	5.62	ug/L	56.18	ND	84.7	38-152	1.05	24
Azobenzene	52.4	5.62	ug/L	56.18	ND	93.2	61-106	7.65	24
Diethylphthalate	51.2	5.62	ug/L	56.18	ND	91.2	31-114	9.20	24
Dimethyl Phthalate	31.7	5.62	ug/L	56.18	ND	56.5	28-120	4.93	24
Di-N-Butyl Phthalate	51.7	5.62	ug/L	56.18	ND	92.1	1-120	3.38	24
Di-N-Octyl Phthalate	59.8	5.62	ug/L	56.18	ND	106	4-146	9.01	24
Hexachlorobenzene	50.5	5.62	ug/L	56.18	ND	89.8	35-152	6.56	24
Hexachlorobutadiene	21.0	2.25	ug/L	56.18	ND	37.3	24-120	18.3	24

U.S.E.P.A Region 2 Laboratory

**NOTE:** The results recorded in this report relate only to the samples as received on the date and at the time noted  
Reported: 10/17/2023



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**NVOA GCMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B310011**

**Matrix Spike Dup (B310011-MSD2)**

**Source: 2309043-01**

Hexachlorocyclopentadiene	17.7	5.62	ug/L	56.18	ND	31.6	15-76	20.5	24
Hexachloroethane	15.6	5.62	ug/L	56.18	ND	27.8	40-120	29.9	24
Isophorone	39.0	5.62	ug/L	56.18	ND	69.4	21-196	1.95	24
Nitrobenzene	29.4	5.62	ug/L	56.18	ND	52.4	35-180	11.9	24
N-Nitrosodimethylamine	16.4	5.62	ug/L	56.18	ND	29.2	17-127	22.1	24
N-Nitroso-Di-N-Propylamine	35.7	5.62	ug/L	56.18	ND	63.5	43-230	3.35	24
N-Nitrosodiphenylamine	52.3	5.62	ug/L	56.18	ND	93.0	79-139	8.22	24
Pentachlorophenol	25.2	5.62	ug/L	56.18	ND	44.9	14-176	9.12	24
Phenol	14.7	2.25	ug/L	56.18	ND	26.1	5-120	5.69	24
Pyrene	45.2	5.62	ug/L	56.18	ND	80.5	52-120	2.29	24
<i>Surrogate: 2-Fluoroaniline</i>	<i>21.0</i>		<i>ug/L</i>	<i>56.18</i>		<i>37.4</i>	<i>60-140</i>		
<i>Surrogate: Phenol-D6</i>	<i>13.0</i>		<i>ug/L</i>	<i>56.18</i>		<i>23.2</i>	<i>60-140</i>		
<i>Surrogate: Naphthalene-D8</i>	<i>24.9</i>		<i>ug/L</i>	<i>56.18</i>		<i>44.3</i>	<i>60-140</i>		
<i>Surrogate: 1-Fluoronaphthalene</i>	<i>24.4</i>		<i>ug/L</i>	<i>56.18</i>		<i>43.4</i>	<i>60-140</i>		
<i>Surrogate: 2,4-Dibromophenol</i>	<i>34.2</i>		<i>ug/L</i>	<i>56.18</i>		<i>60.9</i>	<i>60-140</i>		
<i>Surrogate: Anthracene-D10</i>	<i>45.3</i>		<i>ug/L</i>	<i>56.18</i>		<i>80.6</i>	<i>60-140</i>		
<i>Surrogate: Chrysene-D12</i>	<i>43.9</i>		<i>ug/L</i>	<i>56.18</i>		<i>78.1</i>	<i>60-140</i>		



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**GC - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch B310062</b>									
<b>Blank (B310062-BLK1)</b>									
Petroleum Hydrocarbons, Tot.	--- U	5.00	mg/L						
<b>LCS (B310062-BS1)</b>									
Petroleum Hydrocarbons, Tot.	37.1	5.00	mg/L	40.00		93	64-132		
<b>LCS Dup (B310062-BSD1)</b>									
Petroleum Hydrocarbons, Tot.	35.4	5.00	mg/L	40.00		88	64-132	5	20
<b>Matrix Spike (B310062-MS1) Source: 2309020-03</b>									
Petroleum Hydrocarbons, Tot.	58.0	6.17	mg/L	49.38	0.506	116	64-132		
<b>Matrix Spike (B310062-MS2) Source: 2309043-03</b>									
Petroleum Hydrocarbons, Tot.	51.2	5.81	mg/L	46.51	4.32	101	64-132		



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**Metals ICP - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B309146**

**Blank (B309146-BLK1)**

Arsenic	--- U	8.00	ug/L						
Barium	--- U	100	ug/L						
Cadmium	--- U	3.00	ug/L						
Chromium	--- U	5.00	ug/L						
Copper	--- U	10.0	ug/L						
Lead	--- U	8.00	ug/L						
Nickel	--- U	20.0	ug/L						
Selenium	--- U	20.0	ug/L						
Silver	--- U	5.00	ug/L						
Zinc	--- U	20.0	ug/L						

**LCS (B309146-BS1)**

Arsenic	199	8.00	ug/L	200.0		99.7	85-115		
Barium	202	100	ug/L	200.0		101	85-115		
Cadmium	198	3.00	ug/L	200.0		99.2	85-115		
Chromium	199	5.00	ug/L	200.0		99.7	85-115		
Copper	197	10.0	ug/L	200.0		98.3	85-115		
Lead	201	8.00	ug/L	200.0		100	85-115		
Nickel	200	20.0	ug/L	200.0		99.9	85-115		
Selenium	199	20.0	ug/L	200.0		99.4	85-115		
Silver	200	5.00	ug/L	200.0		99.8	85-115		
Zinc	204	20.0	ug/L	200.0		102	85-115		

**LCS Dup (B309146-BSD1)**

Arsenic	198	8.00	ug/L	200.0		99.2	85-115	0.503	20
Barium	202	100	ug/L	200.0		101	85-115	0.0397	20
Cadmium	198	3.00	ug/L	200.0		99.2	85-115	0.0151	20
Chromium	199	5.00	ug/L	200.0		99.6	85-115	0.0903	20
Copper	196	10.0	ug/L	200.0		98.2	85-115	0.0763	20
Lead	201	8.00	ug/L	200.0		101	85-115	0.214	20
Nickel	200	20.0	ug/L	200.0		100	85-115	0.0550	20
Selenium	199	20.0	ug/L	200.0		99.4	85-115	0.0855	20
Silver	200	5.00	ug/L	200.0		99.9	85-115	0.0952	20
Zinc	204	20.0	ug/L	200.0		102	85-115	0.0734	20



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**Metals ICP - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

**Batch B309146**

**Matrix Spike (B309146-MS1)**

**Source: 2309020-01**

Cadmium	201	3.00	ug/L	200.0	0.750	100	80-120		
Chromium	200	5.00	ug/L	200.0	ND	100	80-120		
Lead	295	8.00	ug/L	200.0	92.6	101	80-120		
Zinc	302	20.0	ug/L	200.0	90.3	106	80-120		

**Matrix Spike (B309146-MS2)**

**Source: 2309043-08**

Arsenic	205	8.00	ug/L	200.0	ND	103	80-120		
Barium	340	100	ug/L	200.0	142	98.9	80-120		
Cadmium	195	3.00	ug/L	200.0	ND	97.5	80-120		
Chromium	201	5.00	ug/L	200.0	2.34	99.2	80-120		
Copper	277	10.0	ug/L	200.0	78.8	99.2	80-120		
Lead	198	8.00	ug/L	200.0	ND	98.8	80-120		
Nickel	194	20.0	ug/L	200.0	2.83	95.8	80-120		
Selenium	201	20.0	ug/L	200.0	ND	101	80-120		
Silver	200	5.00	ug/L	200.0	ND	100	80-120		
Zinc	219	20.0	ug/L	200.0	19.7	99.7	80-120		

**Matrix Spike Dup (B309146-MSD1)**

**Source: 2309020-01**

Cadmium	201	15.0	ug/L	200.0	ND	100	80-120	0.0796	10
Chromium	195	25.0	ug/L	200.0	ND	97.6	80-120	2.44	10
Lead	294	40.0	ug/L	200.0	92.6	101	80-120	0.258	10
Zinc	299	100	ug/L	200.0	90.3	104	80-120	1.15	10

**Matrix Spike Dup (B309146-MSD2)**

**Source: 2309043-08**

Arsenic	204	40.0	ug/L	200.0	ND	102	80-120	0.773	10
Barium	337	500	ug/L	200.0	142	97.6	80-120	0.753	10
Cadmium	197	15.0	ug/L	200.0	ND	98.4	80-120	1.01	10
Chromium	199	25.0	ug/L	200.0	ND	99.6	80-120	0.740	10
Copper	271	50.0	ug/L	200.0	78.8	96.2	80-120	2.21	10
Lead	198	40.0	ug/L	200.0	ND	98.9	80-120	0.0708	10
Nickel	196	100	ug/L	200.0	ND	98.0	80-120	0.856	10
Selenium	205	100	ug/L	200.0	ND	103	80-120	2.05	10
Silver	197	25.0	ug/L	200.0	ND	98.5	80-120	1.72	10
Zinc	220	100	ug/L	200.0	19.7	100	80-120	0.442	10





**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 2 Laboratory**

**Final Report**

**Project: Thomas Electronics - 2309020**

**Project Number: 2309020**

**Sanitary - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch B310002</b>									
<b>Blank (B310002-BLK1)</b>									
Fluoride	--- U	0.0500	mg/L						
<b>Blank (B310002-BLK2)</b>									
Fluoride	--- U	0.0500	mg/L						
<b>LCS (B310002-BS1)</b>									
Fluoride	4.46	0.0500	mg/L	4.860		92	90-110		
<b>LCS Dup (B310002-BSD1)</b>									
Fluoride	4.50	0.0500	mg/L	4.860		93	90-110	0.9	20
<b>Matrix Spike (B310002-MS1) Source: 2309020-01</b>									
Fluoride	40.5	0.500	mg/L	2.000	40.0	25	90-110		
<b>Matrix Spike (B310002-MS2) Source: 2309043-08</b>									
Fluoride	2.38	0.0500	mg/L	2.000	0.550	92	90-110		

## **8.0 Photographs**

Photo #1. Compliance samples were collected from the monitoring location (Sample Box).



Photo #2. RO backwash was discharging continuously into the Sample Box.



Photo #3. Discharge of pretreated effluent was intermittent into the Sample Box (grey pipe).

