Report

This report includes information that the facility has claimed as 'Confidential Business Information' which the company believes is a trade secret or privileged or confidential commercial or financial information. That information has been redacted.

EPA United States Environmental Protection Agency

Region 6 - Enforcement & Compliance Assurance Division

INSPECTION REPORT

Inspection Date(s):	May 05, 2022	
Media Program:	Resource Conservation and Recovery Act	
Regulatory Program(s)	Large Quantity Generator, Treatment Storage and Disposal Facility	
Company Name:	**Denka Performance Elastomer, LLC.**	
Facility Name:	**Pontchartrain Site**	
Facility Physical Location:	560 Highway 44	
(city, state, zip code)	LaPlace, LA 70068	
Mailing address:		
(city, state, zip code)		
County/Parish:	St. John the Baptists Parish	
Facility Phone Number		
Facility Contact:	Christopher Meyers	Sr. Consultant
	Christopher-meyers@denka-pe.com	
FRS Number:	110067396669	
Identification/Permit Number:	LAR000009415	
Media Identifier Number:	See above	
NAICS:	325110, 325212, 325199	
SIC:	2822, 2869	

Personnel participating in inspection:		
John Penland	USEPA Region 6 - ECAD	Sr. RCRA Inspector
Christopher Meyers	Denka Performance Elastomer, LLC.	Sr. SHE Consultant
Cory Green	Denka Performance Elastomer, LLC.	Sr. SHE Consultant
Patrick Walsh	Denka Performance Elastomer, LLC.	SHE/PSM Manager
David Bordelon	USEPA START	
Derrick Cobb	USEPA START	
Jose Ojeda	USEPA START	
Jeff Wright	USEPA START	
Luke Murray	USEPA START	

EPA Lead Inspector Signature/Date	JOHN PENLAND Digitally signed by JOHN PENLAND DN: c=US, o=U.S. Government, ou=Environmental Protection Agency, cn=JOHN PENLAND, 0.9.2342.19200300.100.1.1=68001003655750 Date: 2022.07.19 12:28:39 -05'00'	
	John Penland – Sr. RCRA Inspector	Date
Supervisor Signature/Date	JEFFREY YURK Digitally signed by JEFFREY YURK Date: 2022.07.19 12:48:26 -05'00'	
	Jeff Yurk – RCRA Enforcement Section Chief	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

On May 5, 2022, I, John Penland, conducted an onsite inspection of the Denka Performance Elastomers, LLC. Manufacturing facility located in LaPlace, St. John the Baptist Parish, Louisiana (Denka). I was accompanied on this inspection by members of the Superfund Technical Assistance and Response Team (START) who were engaged to collect samples. This inspection is a follow-up to the April 18-21, 2022, Resource Conservation and Recovery Act (RCRA) inspection where initial concerns were raised about the generation and management of the waste generated from the strainers associated with the batch reactor vessels (kettles) located in the Polymer Unit (Poly-kettle Strainer Waste; also known as: waste neoprene; neoprene popcorn; or waste coag). This inspection focused on observation of the facility's standard operating procedures specific to the management of the Poly-kettle Strainer Waste and sample collection of air, liquid, and solid media associated with or impacted by the Poly-kettle Strainer Waste generation and management procedures.

This report serves as documentation of all onsite activities and observations during this inspection of the Denka facility. Photographs and video recordings taken during the inspection to document onsite observations are included as Attachment 1. A summary of all areas of concern identified during this inspection is provided in Section IV. Unless otherwise specified, the statements cited in this report reflect those claims made by facility personnel to me or documents reviewed by me during this inspection.

Facility Description

Denka has notified as a large quantity generator of hazardous waste and was issued the EPA identification number LAR000009415. Denka is a treatment, storage, and disposal facility and operates under the requirements of RCRA permit LAR000009415-OP-1 issued by the Louisiana Department of Environmental Quality.

Denka has been the focus of multiple inspections under the Clean Air Act, Resource Conservation and Recovery Act, and Clean Water Act. For a more complete description of the facility's units and operations refer to the report documenting the April 18-21, 2022, RCRA inspection. This inspection report is focused on the generation and management of the Poly-kettle Strainer Waste described below.

Poly-kettle Strainer Waste

Neoprene "popcorn" is partially reacted neoprene generated from the auto-polymerization of chloroprene. It is created in the neoprene reactors in the Polymer Unit at Denka and separated from the neoprene emulsion product by a canister filter, referred to as a "strainer." Denka personnel remove this material, now referred to in this report as Poly-kettle Strainer Waste, and transfer it to the Outside Brine Pit. The Outside Brine Pit at Denka is an inground tank used for the accumulation, stabilization, and storage of the Poly-kettle Strainer Waste from the Polymer Building. [redacted]

[redacted] Denka's written hazard descriptions of these materials indicate that the Poly-kettle Strainer Waste may meet the definitions for the hazardous waste characteristics of reactivity and ignitability.

Section II - OBSERVATIONS

I conducted the onsite inspection during the normal business hours of May 5, 2022, beginning at 0930 hours Central Time. During this inspection, the facility was in the process of winding down operations in preparation for a facility-wide turnaround. However, Denka was still conducting normal operations in the Polymer Unit. Denka was notified of this inspection through their counsel Bracewell, LLP on April 29, 2022, and again through their counsel on May 4, 2022. The April 29, 2022, notification provided a basic list of planned samples and offered Denka the opportunity to prepare containers for the collection of split samples.

I began this inspection with an initial briefing where I presented my credentials to Mr. Patrick Walsh, Mr. Cory Green, and Mr. Chris Meyer and informed them that I was there under the authority of section 3007 of RCRA and Condition II.E.8 of RCRA permit LAR000009415-OP-1 to conduct a follow-up inspection of the Denka facility. I explained that the purpose of this inspection was to collect information and samples related to the generation and management of the Poly-kettle Strainer Waste. I also informed them that EPA is assessing this material as a solid waste and potentially a hazardous waste. This concern was previously identified during the April 18-21, 2022, inspection.

In furtherance of this inquiry, I asked whether Denka considered the Poly-kettle Strainer Waste to be a solid waste based on the definition of "abandoned" in 40 CFR 261.2. Cory Green acknowledged that the solid waste definition could apply. Patrick Walsh asserted that Denka had previously sold the stabilized Poly-kettle Strainer Waste for its commercial value, though it does not currently do so. I explained the D001 flammable solids definition as discussed in 40 CFR 261.21(a)(2) and the associated Background Information Document and asked whether that characteristic could apply since the Poly-kettle Strainer Waste had been previously described by the Polymer Unit Production Manager as a self-heating material. Cory Green disputed that the material would ignite or burn vigorously since the material is wet as generated. I explained the D003 reactivity definition in 40 CFR 261.23(a)(1), the associated Background Information Document, and its link with the property of auto-polymerization. Both Patrick Walsh and Cory Green acknowledged that auto-polymerization is an attribute of the Poly-kettle Strainer Waste.

During the opening meeting, I also requested and received the following documents marked as Confidential:

1) PK Pump Out and Strainer Cleaning Operation
2) Clearing Unstripped Emulsion Storage Tank for Cleaning
3) Engineering Drawings of the Outside Brine Pit
4) Raw Materials Characteristics and Hazards

5) Emergency Stabilizer Make-up.

These documents are included as Attachments 2 through 6. In addition, according to Chris Meyers, following the completion of the April 18-21, 2022, inspection, additional information concerning the amount of residual chloroprene present in the Poly-kettle Strainer Waste was located and provided as part of the response to the records request originating from EPA during the April 18-21, 2022, inspection. Those records are included in the report documenting that April 18-21, 2022, inspection.

David Bordelon, an employee of Weston Solutions, LLC. and the team lead for a sampling team activated under the START contract for EPA, arrived at approximately 1200hours Central Time. Following his introduction and at approximately 1230hours Central Time we conducted our initial reconnaissance of the planned sample collection area and equipment staging location. We departed the facility for lunch and a separate planning discussion at approximately 1300hours. When we returned to the facility at approximately 1415hours, we briefed the rest of START sampling team who had arrived in the interim. After staging our sampling equipment and donning personal protective equipment (PPE), the START team initiated sample collection at approximately 1530hours. A detailed sampling report describing the collection and analysis of the samples has been prepared by the START contractors and is included as Attachment 7. This report from the START contractors also includes the final analytical results for the collected samples which are discussed in the next section.

During the Poly-kettle Strainer Cleaning operation, the Denka employee removing the Poly-kettle Strainer Waste from the strainer was wearing an air-purifying respirator as required by Denka's SOP. However, the sampling team observed and documented multiple Denka personnel observing the operation without any respiratory protection.

Following the conclusion of sampling activities, we returned to the Denka offices where I summarized the activities listed above to Denka representatives and their counsel who attended via video call. This meeting and the inspection concluded at approximately 1830hours.

Section III - FOLLOW-UP

<u>Sample Result Summary</u>

Sample DR-S-BP-05052022-01

This grab sample is of Poly-kettle Strainer Waste which was being removed from the Outside Brine Pit following an unknown period of stabilization. According to Denka operators, the material we sampled is typical of the stabilized Poly-kettle Strainer Waste normally shipped offsite for disposal. Residual chloroprene is present in this sample at 1,080 mg/kg.

Sample DR-L-LB-05052022-01 and Field Duplicate DR-L-LB-05052022-02

This grab sample and its field duplicate are of liquid collected from the Outside Brine Pit as found prior to the addition of the Poly-kettle Strainer Waste observed during the inspection.

Chloroprene is present in the sample at 62.8 mg/L and the field duplicate at 64.1 mg/L before the addition of the Poly-kettle Strainer Waste.

Sample DR-L-LA-05052022-01

This grab sample is of liquid collected from the Outside Brine Pit approximately 10 minutes after the addition of the Poly-kettle Strainer Waste observed during the inspection. The chloroprene concentration in this sample is 341 mg/L. The increase in the chloroprene concentration of this sample over the concentration of Sample DR-L-LB-05052022-01 is interpreted to represent the release of chloroprene from the Poly-kettle Strainer Waste to the liquid in the Outside Brine Pit where it will continue to evaporate.

Sample DR-A-BK-0502022-01

This approximately 30-minute, 6-liter air sample was collected at the polymer kettle strainer approximately 30 minutes before the Poly-kettle Strainer Waste generating procedure. This sample serves as the background reading for the waste generating process inside the Polymer building. The reported chloroprene concentration is 1,050 µg/m^3.

Sample DR-A-KP-05052022-01

This approximately 30-minute, 6-liter air sample was collected at the polymer kettle strainer during the Poly-kettle Strainer Waste generating procedure. The concentration of chloroprene in this sample is interpreted to be dependent on the concentration of chloroprene released during the opening of the strainer and the evaporation of the chloroprene from the Poly-kettle Strainer Waste. Since this sample remained at the strainer following the removal of the waste, a difference between the measurement for this sample and sample DR-A-KT-05052022-01 would illustrate the impact of direct volatilization of chloroprene from the Poly-kettle Strainer Waste. The reported chloroprene concentration in this sample is 193,000 µg/m^3.

Sample DR-A-KT-05052022-01

This approximately 30-minute, 6-liter air sample, was started at the Poly-kettle Strainer, alongside sample DR-A-KP-05052022-01 during waste generation and traveled with the Poly-kettle Strainer Waste to the Outside Brine Pit. The concentration of chloroprene in this sample is interpreted to be dependent on the concentration of chloroprene released during the opening of the screen, the evaporation of the chloroprene from the Poly-kettle Strainer Waste, and the transport and dumping of that waste into the Outside Brine Pit. Since this sample remained near the waste throughout the process, the concentration of chloroprene in this sample is expected to be dependent on the volatilization of chloroprene from the waste during the strainer cleaning and disposal process. The reported Chloroprene concentration in this sample is 243,000 µg/m^3.

Samples DR-A-KD-05052022-01 and DR-A-KD-05052022-02

These approximately 30-minute, 6-liter air samples were collected approximately 20 feet from the Poly-kettle Strainer during the waste generating procedure. These are collocated samples serving the same purpose of a field duplicate in this context. These samples indicate the presence of

chloroprene in the air at a downflow location from the strainer. The concentration in these samples is interpreted to be dependent on the concentration of chloroprene released during the opening of the strainer, the volatilization of the chloroprene from the Poly-kettle Strainer Waste, and the rate of dispersion of chloroprene vapor. The reported chloroprene concentration in sample DR-A-05052022-01 is 19,000 µg/m^3 and in sample DR-A005052022-02 is 18,400 µg/m^3.

Sample DR-A-PU

This approximately 30-minute, 6-liter air sample was collected between the Polymer building and the Outside Brine Pit during the Poly-kettle Strainer Waste generation and Outside Brine Pit addition. This sample location was originally intended to measure the release of chloroprene from the Poly-kettle Strainer Waste during its addition to the Outside Brine Pit. However, this sample was collected 15 feet away from the Outside Brine Pit. Due to this distance and chloroprene's rate of dispersion, this sample does not serve its intended purpose. The reported chloroprene concentration in this sample is 4,390 µg/m^3.

Sample DR-A-BU

This approximately 30-minute, 6-liter air sample was collected from a location immediately adjacent to the Outside Brine Pit, on the upwind edge, during the removal of stabilized Poly-kettle Strainer Waste from the Outside Brine Pit by Denka's employees using an excavator. The concentration of chloroprene in this sample is interpreted to be dependent on the volatilization of chloroprene from the Outside Brine Pit during the removal. The reported chloroprene concentration in this sample is 10,200 µg/m^3.

Sample DR-A-BD

This approximately 30-minute, 6-liter sample was collected from a location 20 feet from the Outside Brine Pit, on the downwind side, during the removal of stabilized Poly-kettle Strainer Waste. The concentration of chloroprene in this sample is interpreted to be dependent on the volatilization of chloroprene from the Outside Brine Pit during the removal activity and the rate of dispersion of chloroprene vapors in the air. The reported chloroprene concentration in this sample is 969 µg/m^3.

Section IV – AREAS OF CONCERN

<u>Generation and Management of the Poly-kettle Strainer Waste</u>

Based on its management and the written hazard descriptions provided by Denka, the Poly-kettle Strainer Waste may be a hazardous waste demonstrating the characteristics of ignitability and reactivity. Chloroprene is a Volatile Organic Compound present in this waste at its point of generation and is capable of being released to this environment through evaporation if not properly contained.

Based on the results for air samples taken during the Poly-kettle Strainer Waste generating procedure, the waste is being released to the air during this procedure as evidenced by the increase in chloroprene concentrations.

Based on the results for liquid samples DR-L-LB-05052022-01 and DR-L-LA-05052022-01, Poly-kettle Strainer Waste is introducing chloroprene to the Outside Brine Pit which is not designed to

contain Volatile Organic Compounds. Therefore, the Poly-kettle Strainer Waste is being released to the air as it evaporates from the Outside Brine Pit.

Based on the results for air samples taken during the removal of stabilized Poly-kettle Strainer Waste from the Outside Brine Pit, Poly-kettle Strainer Waste is being released to the air during this process.

Based on the results for solid sample DR-S-BP-05052022-02 the stabilized Poly-kettle Strainer Waste has concentrations of chloroprene that require additional containment measures to prevent release to the environment. The Roll-off container used for the accumulation of this waste is not designed to prevent releases of Volatile Organic Compounds. Since the chloroprene component of the Poly-kettle Strainer Waste is a volatile organic compound, it will evaporate and be released from the roll-off container during storage.

Respiratory Protection of Facility Personnel

The Raw Materials Chemicals and Hazards document presented to me by the facility describes Chloroprene (CD) as a "a toxic material with an AEL (Acceptable Exposure Limit) for CD in air of .2 ppm. Rubber gloves and coverall goggles are required for valving, and a full-face respirator is required when handling CD liquid or when the presence of CD vapor is possible." The SOP for the Poly-kettle Strainer Waste generating operation requires personnel to wear an air-purifying respirator during the process.

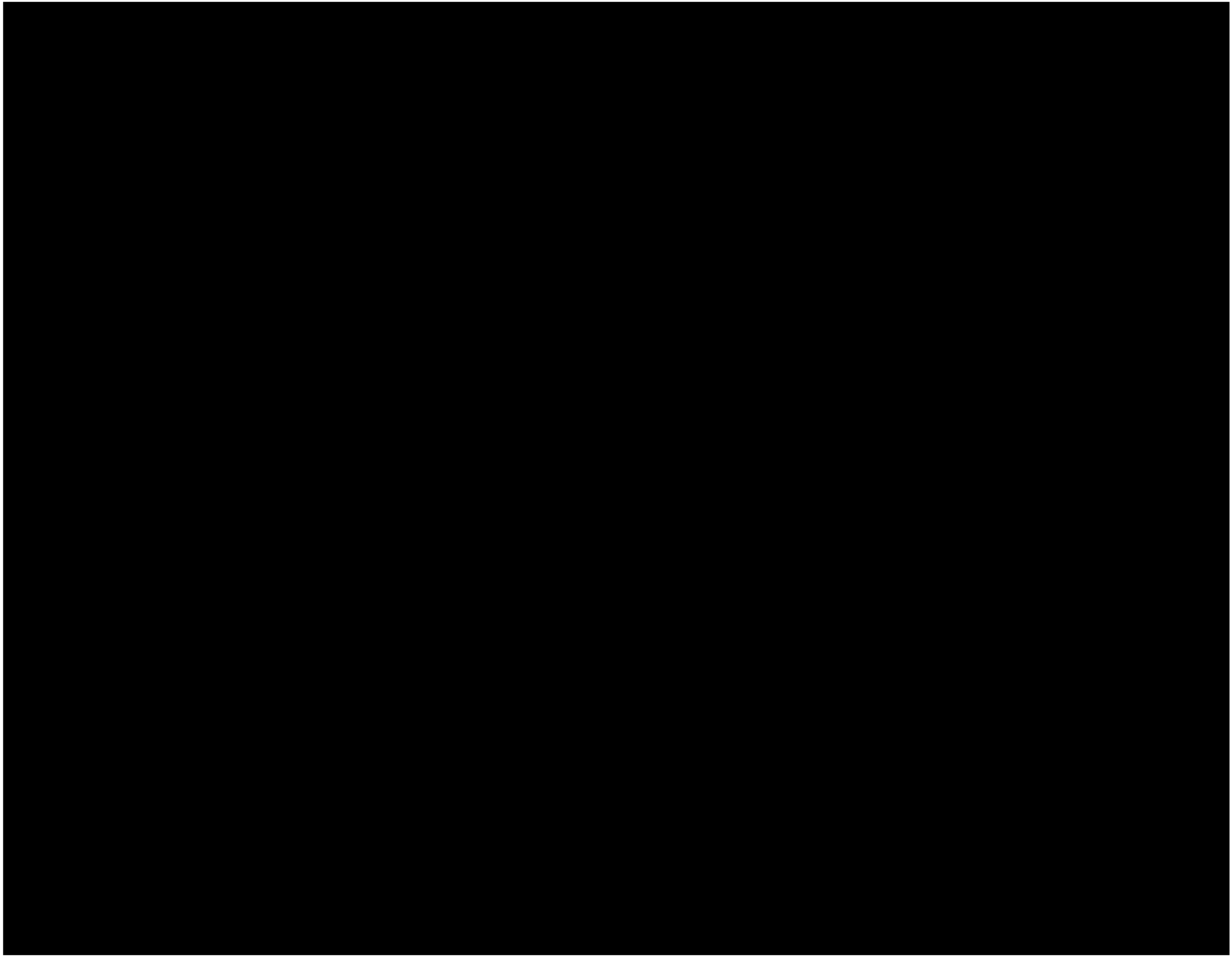
During this inspection, the sampling team observed and documented multiple Denka personnel without any respiratory protection during the Poly-kettle Strainer cleaning operation. Based on the results for the air samples collected during this inspection, the chloroprene concentration inside the Polymer Building was greater than the AEL described in the facility's documents during normal operations even prior to the Poly-kettle Strainer cleaning operation.

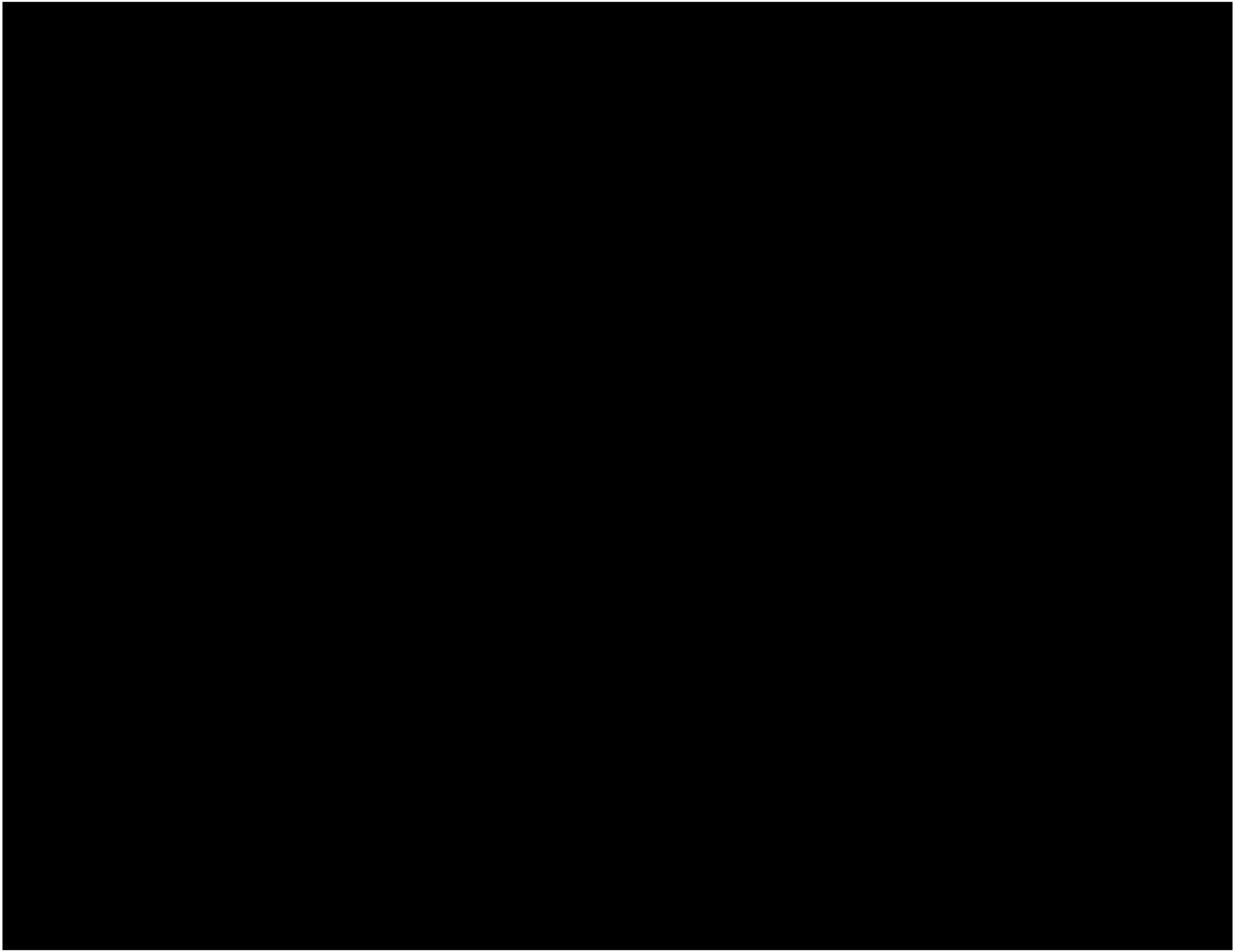
A full-face air-purifying respirator has an assigned protection factor of 50, which means that a chloroprene concentration above 10ppmv would exceed the AEL calculated for this type of respiratory protection. The concentration of chloroprene sampled during the strainer cleaning operation exceeded 50ppmv.

Section V – LIST OF ATTACHMENTS

Attachment 1 – Photo and Video Log (CBI)
Attachment 2 – PK Pump Out and Strainer Cleaning Operation (CBI)
Attachment 3 – Clearing Unstripped Emulsion Storage Tank for Cleaning (CBI)
Attachment 4 – Engineering Drawings of the Outside Brine Pit (CBI)
Attachment 5 – Raw Materials Characteristics and Hazards (CBI)
Attachment 6 – Emergency Stabilizer Make-up (CBI)
Attachment 7 – START Technical Support Report for ECAD - Denka Enforcement Multimedia Sampling
Attachment 8 – Daily Activity Summary for May 5, 2022 – FY2022 Denka Sampling Investigation

Attachment 1





PRODUCED IN NATIVE FORMAT

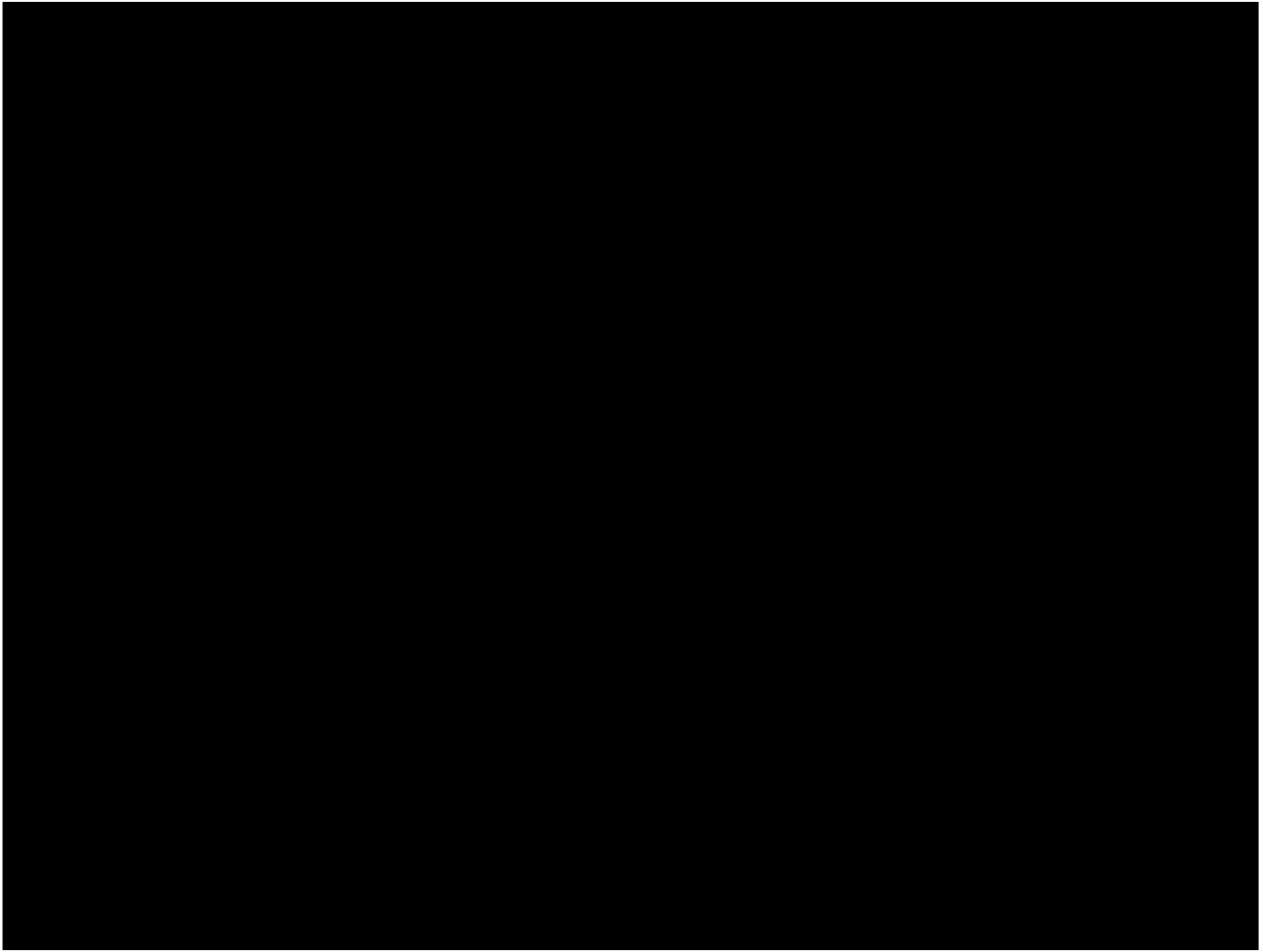
DSCN0622.MOV

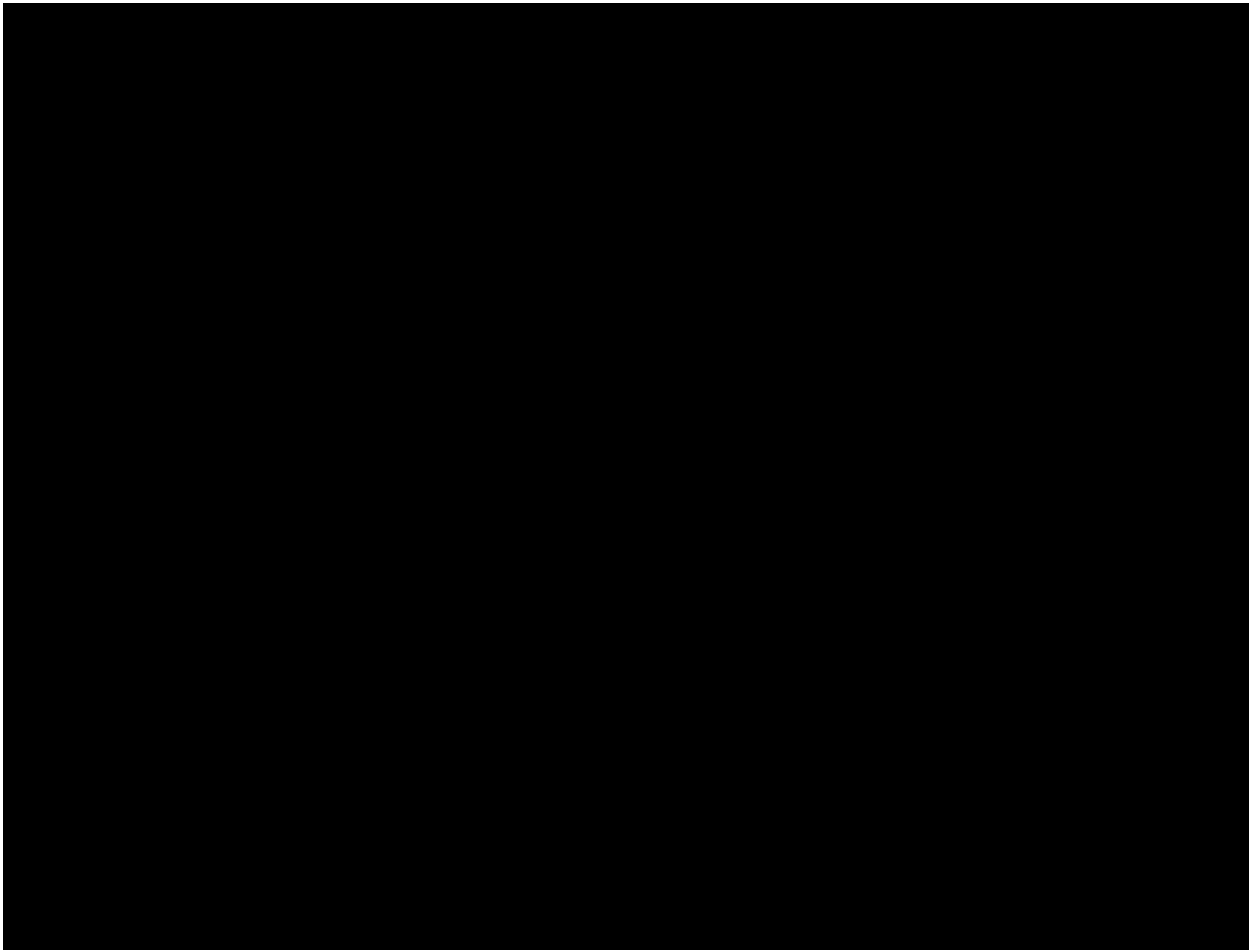
REDACTED FOR DENKA PERFORMANCE ELASTOMER
CONFIDENTIAL BUSINESS INFORMATION

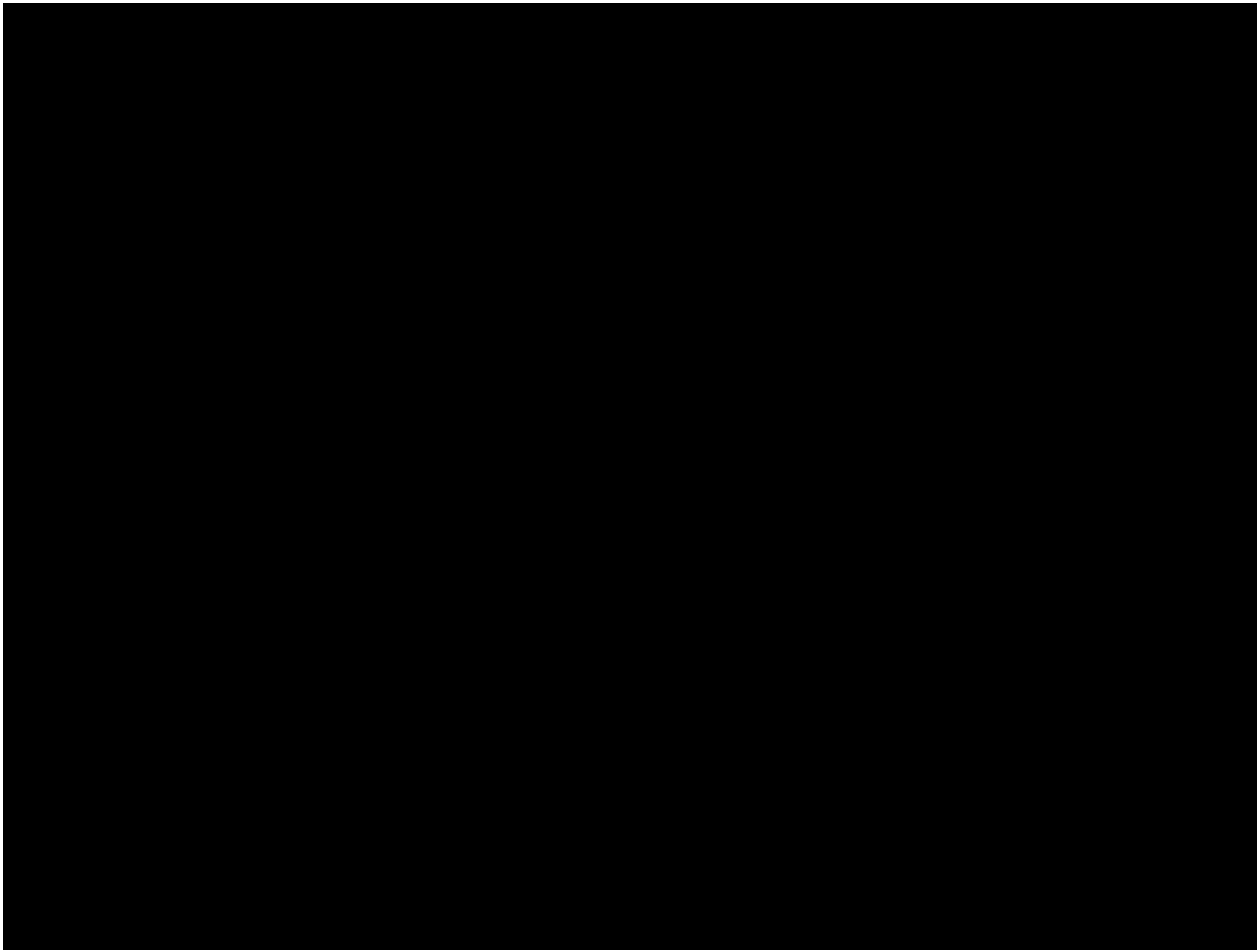
PRODUCED IN NATIVE FORMAT

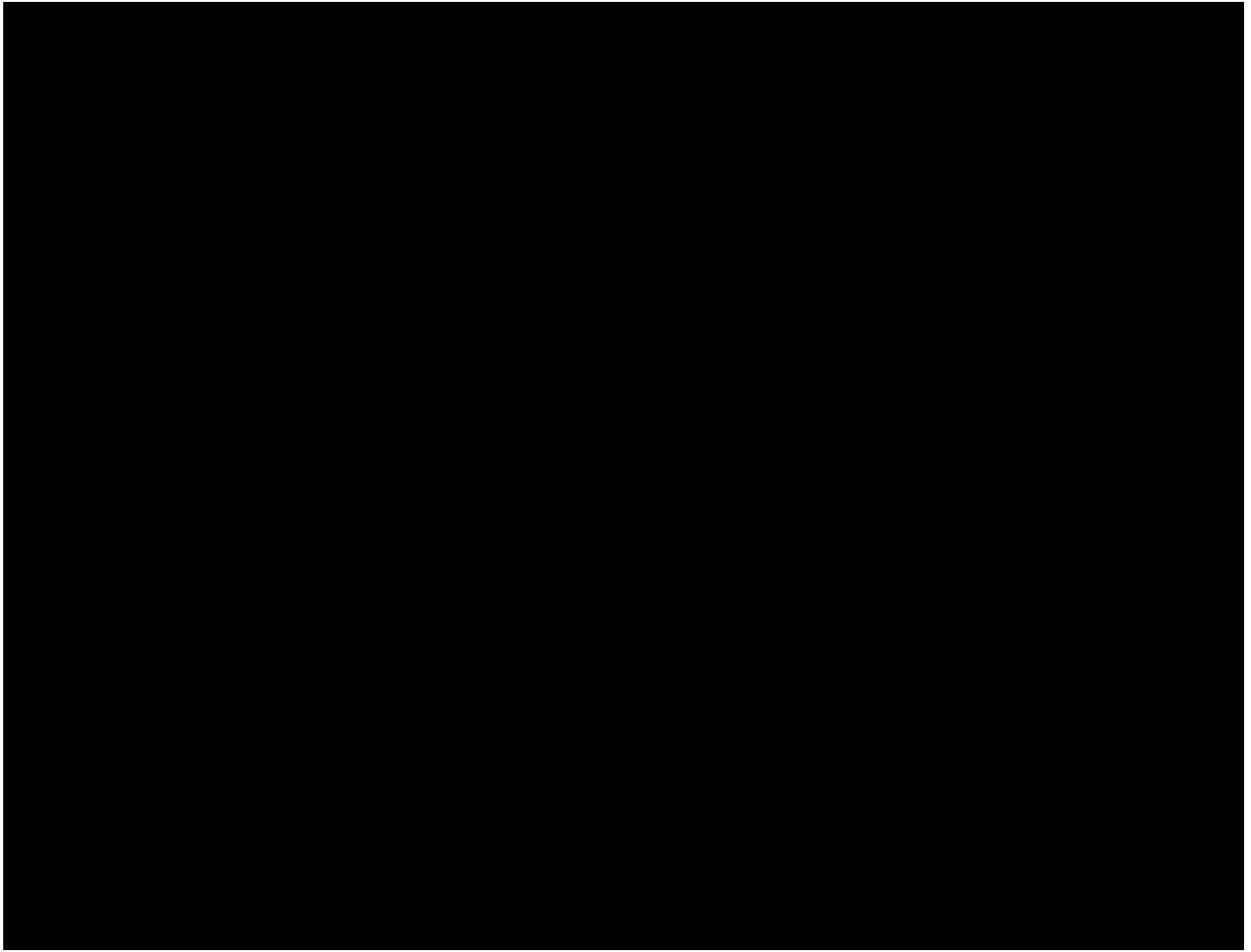
DSCN0623.MOV

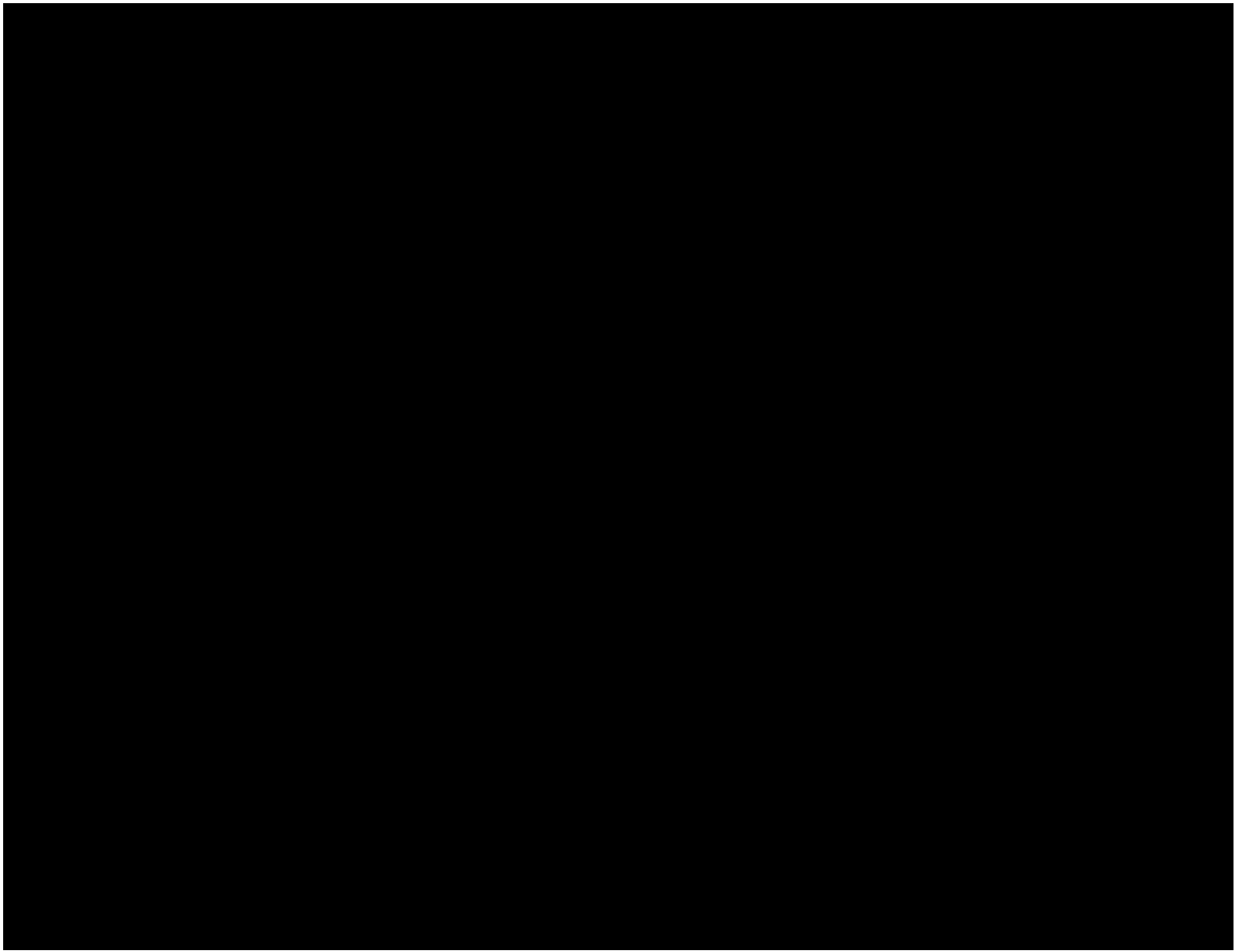
REDACTED FOR DENKA PERFORMANCE ELASTOMER
CONFIDENTIAL BUSINESS INFORMATION

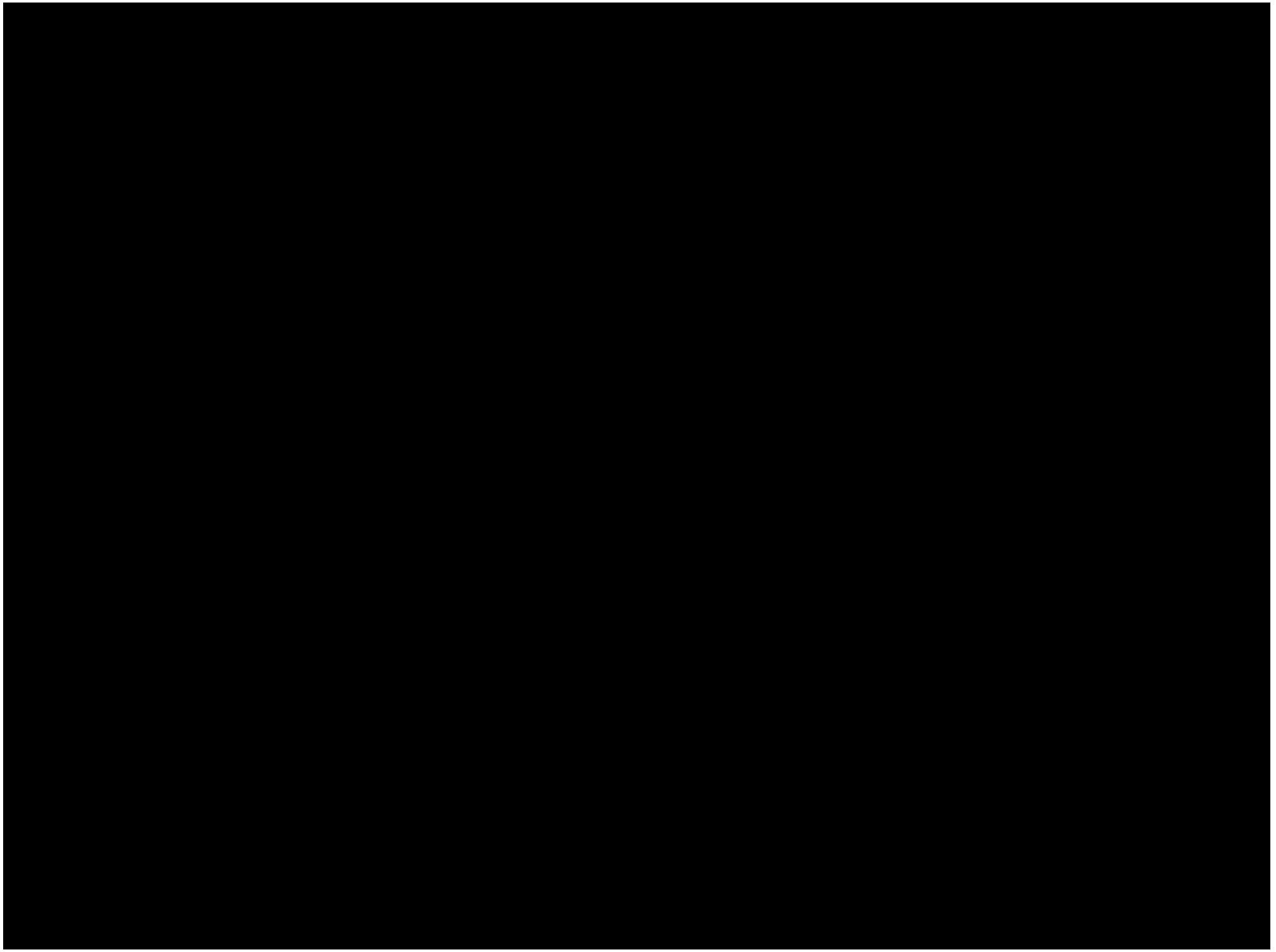


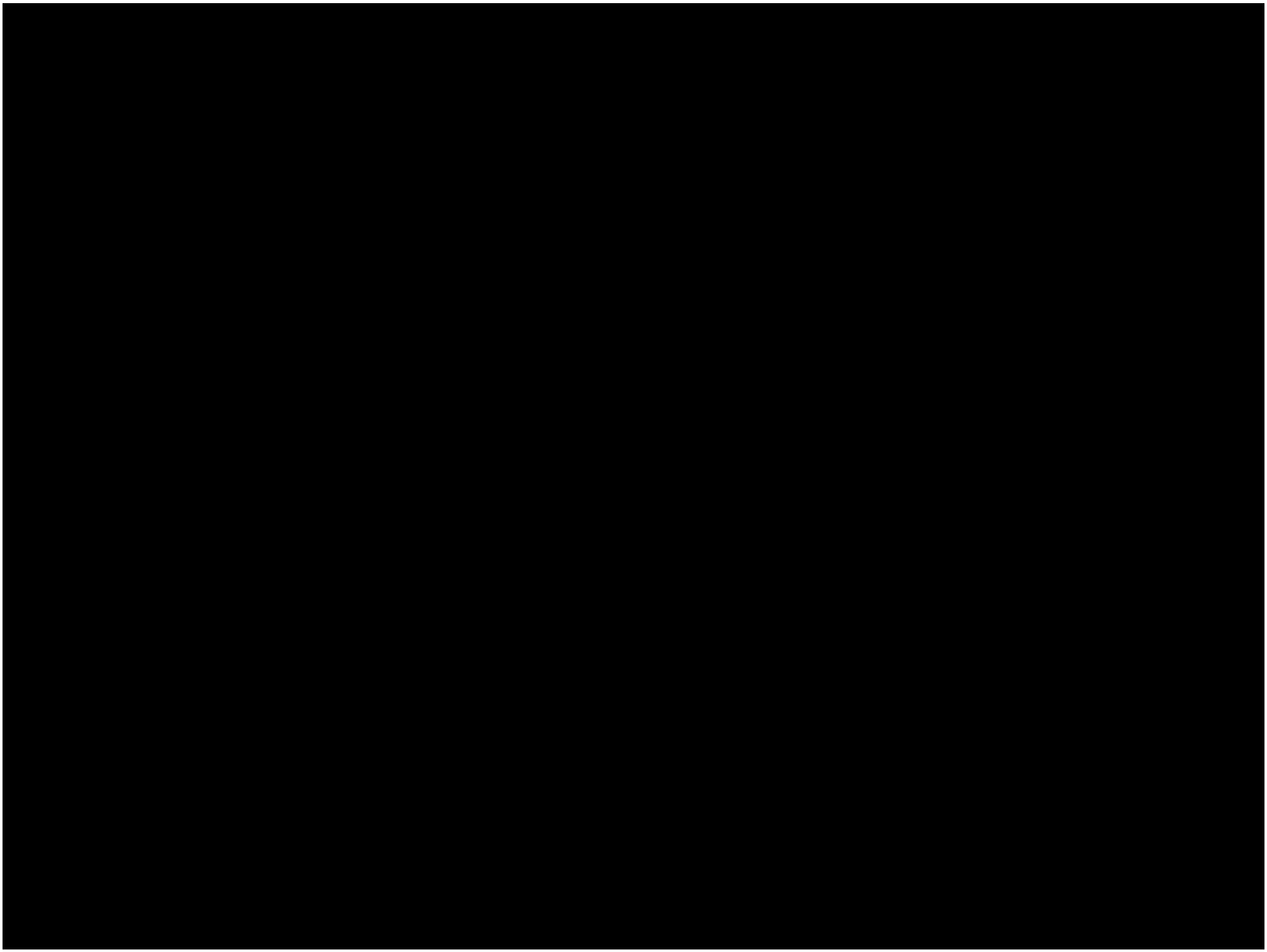


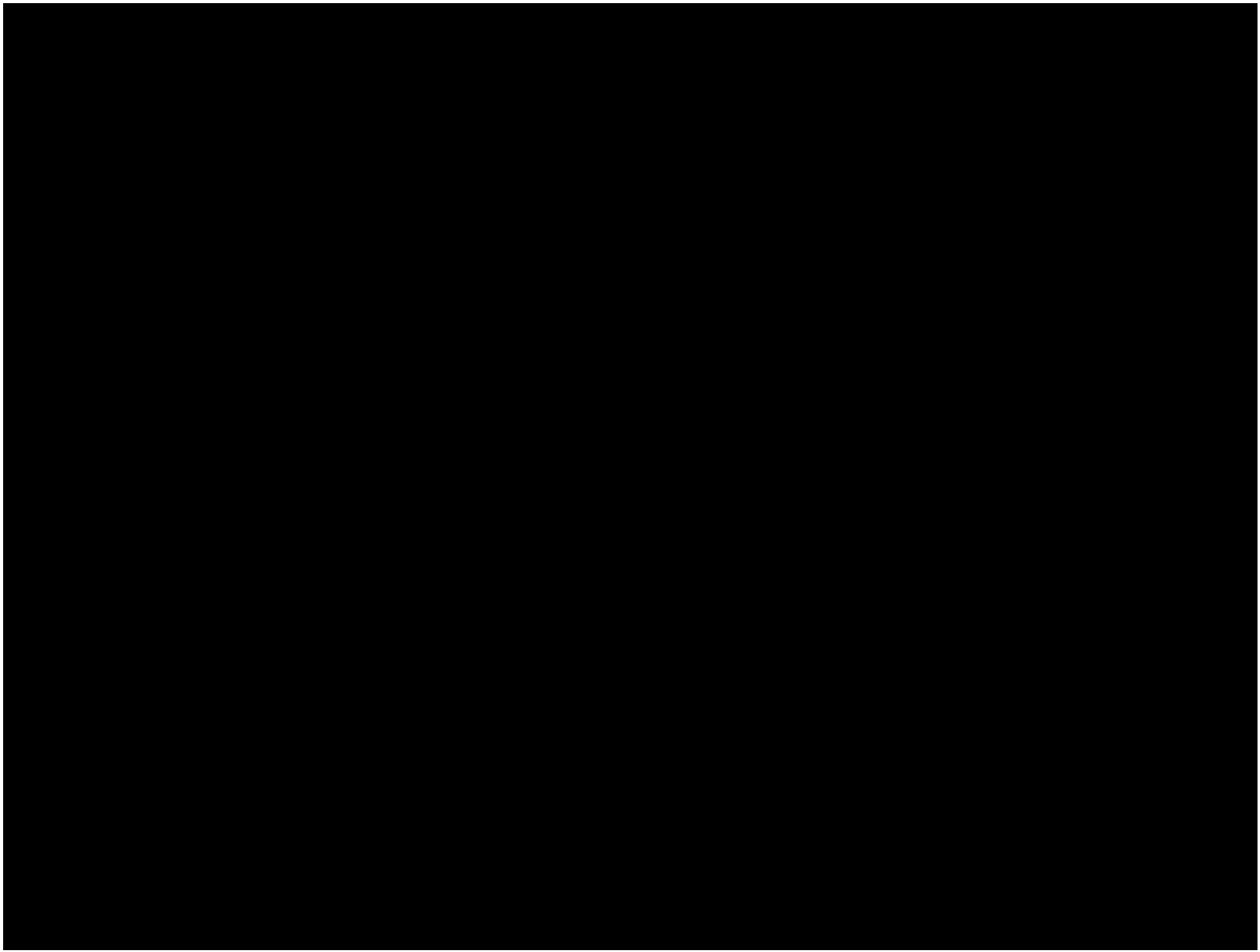


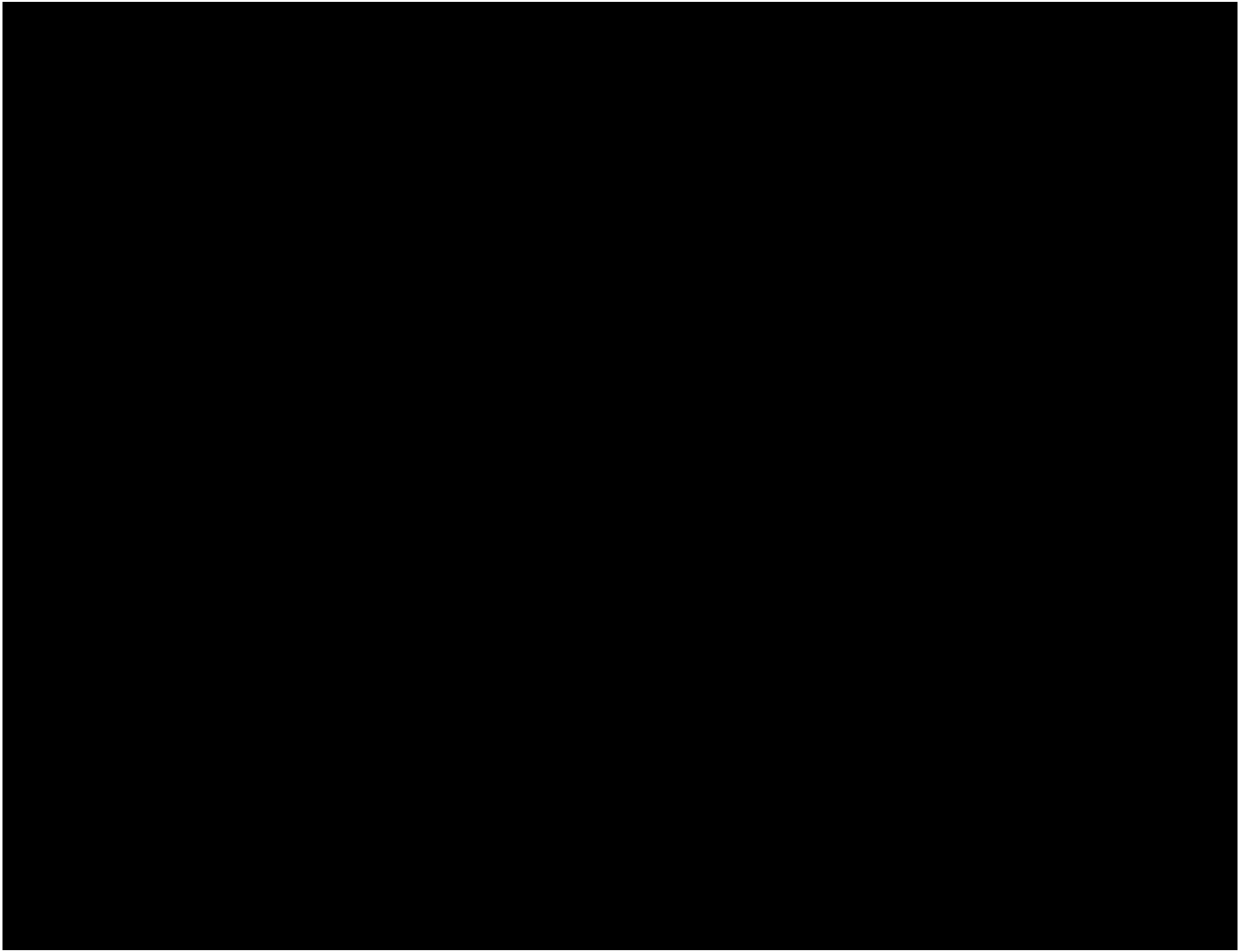


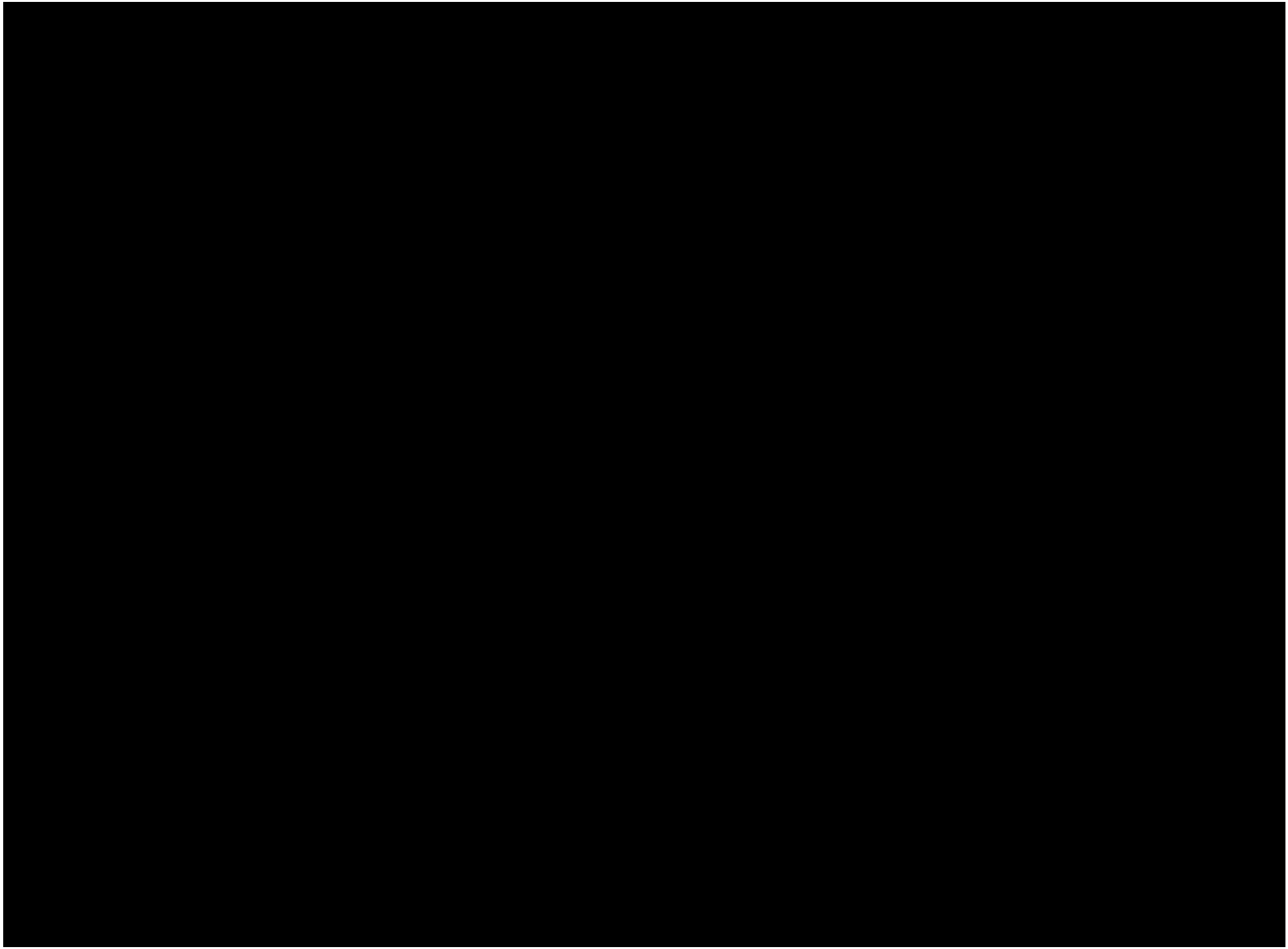


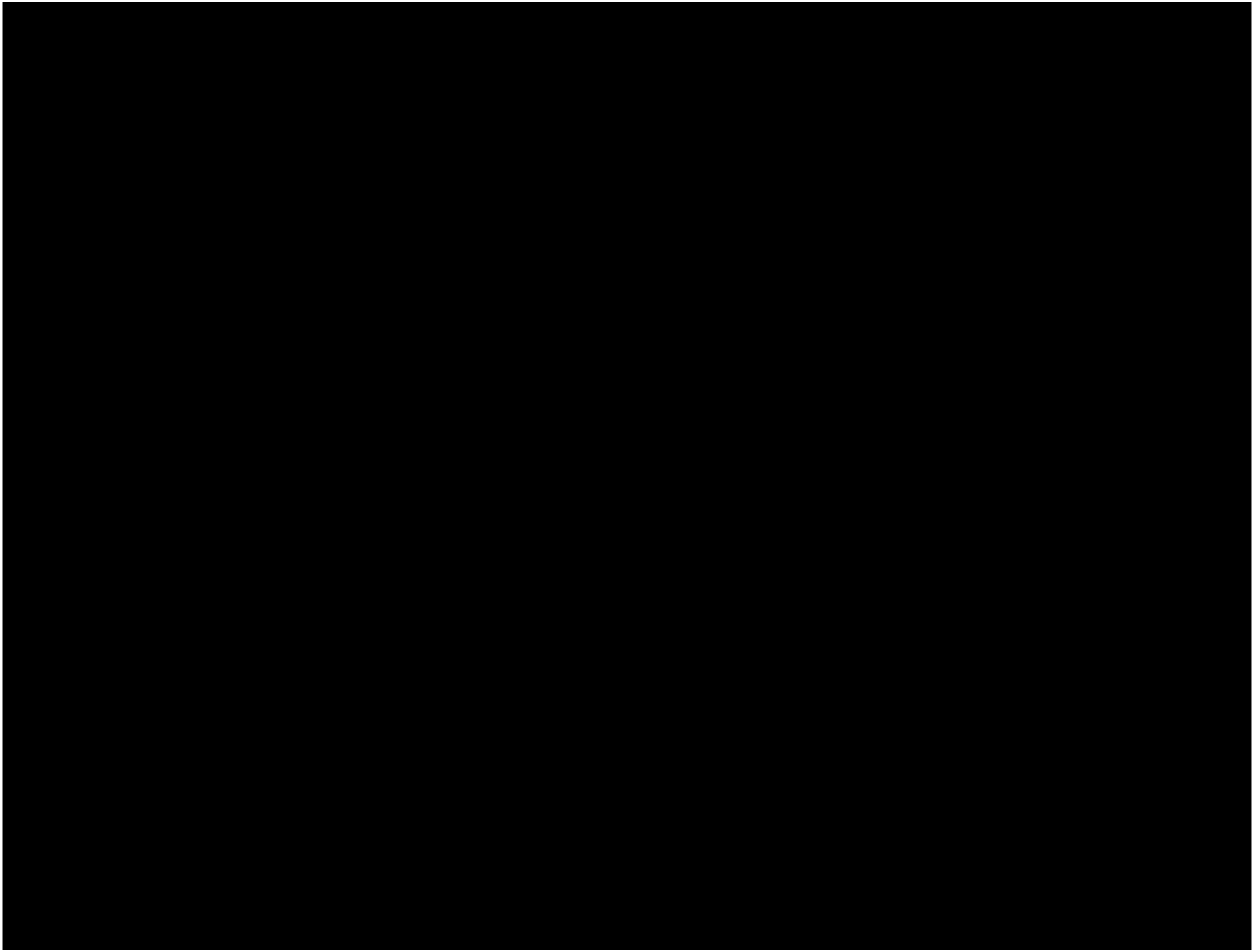












PRODUCED IN NATIVE FORMAT

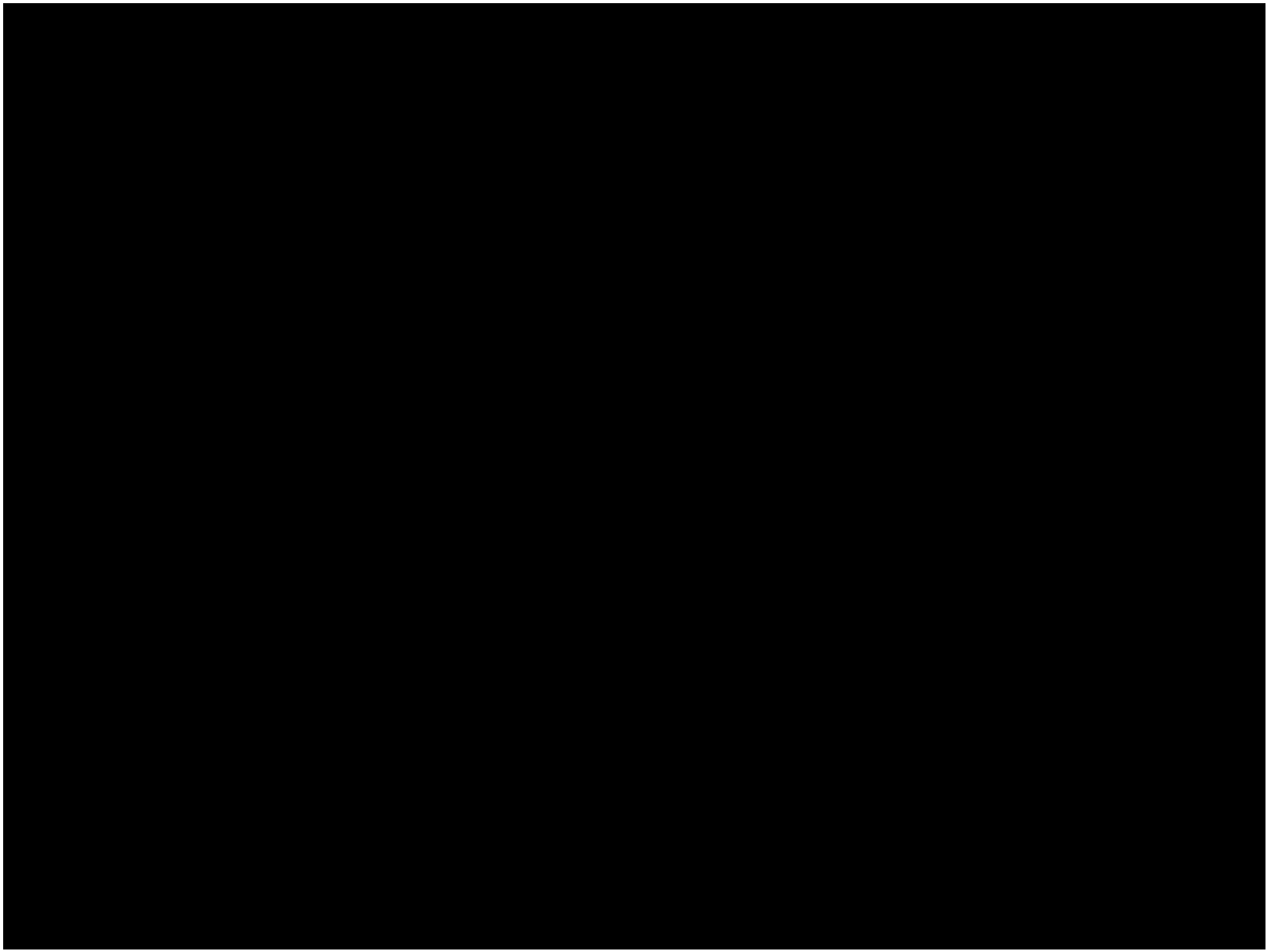
DSCN0638.MOV

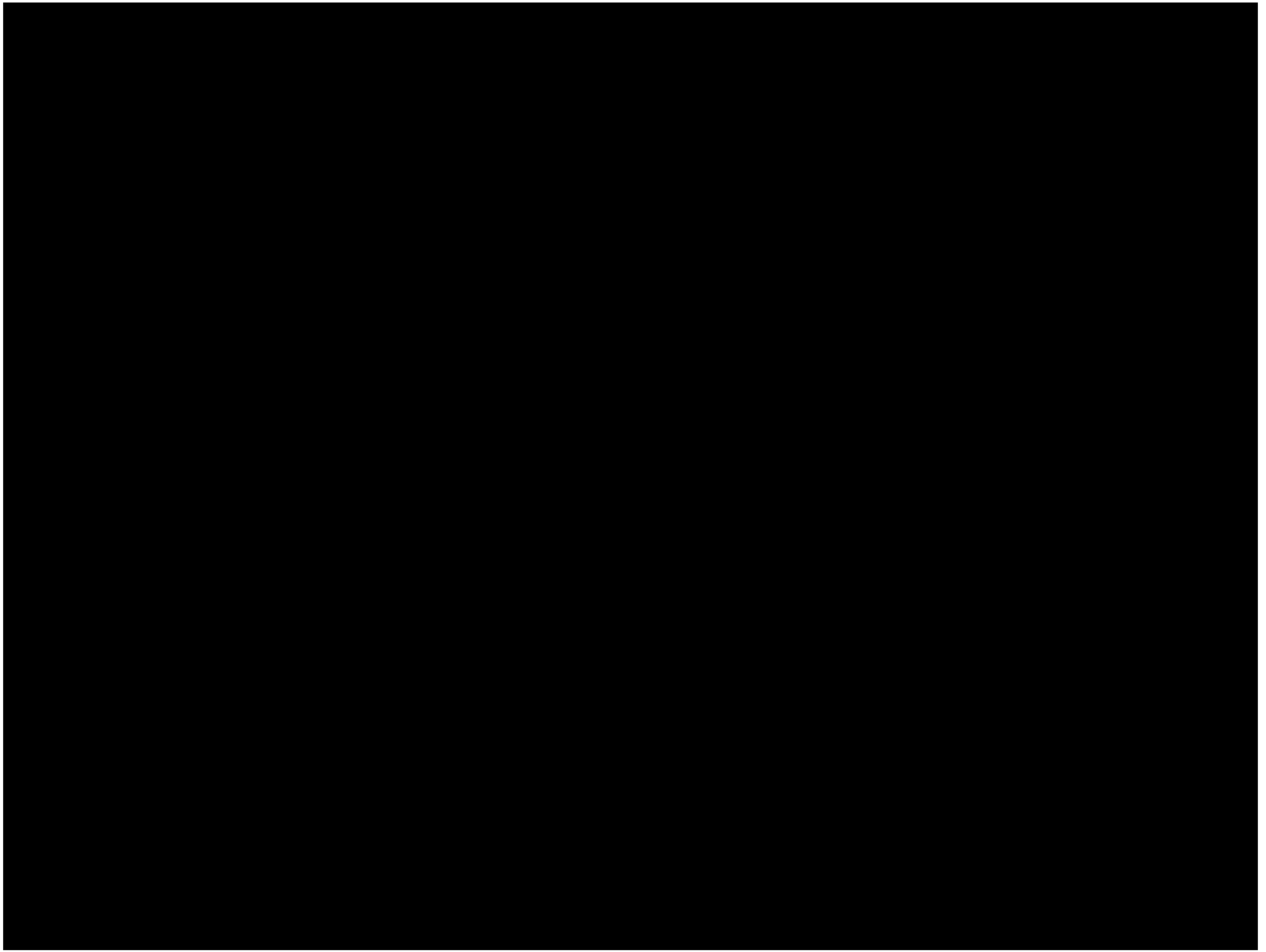
REDACTED FOR DENKA PERFORMANCE ELASTOMER
CONFIDENTIAL BUSINESS INFORMATION

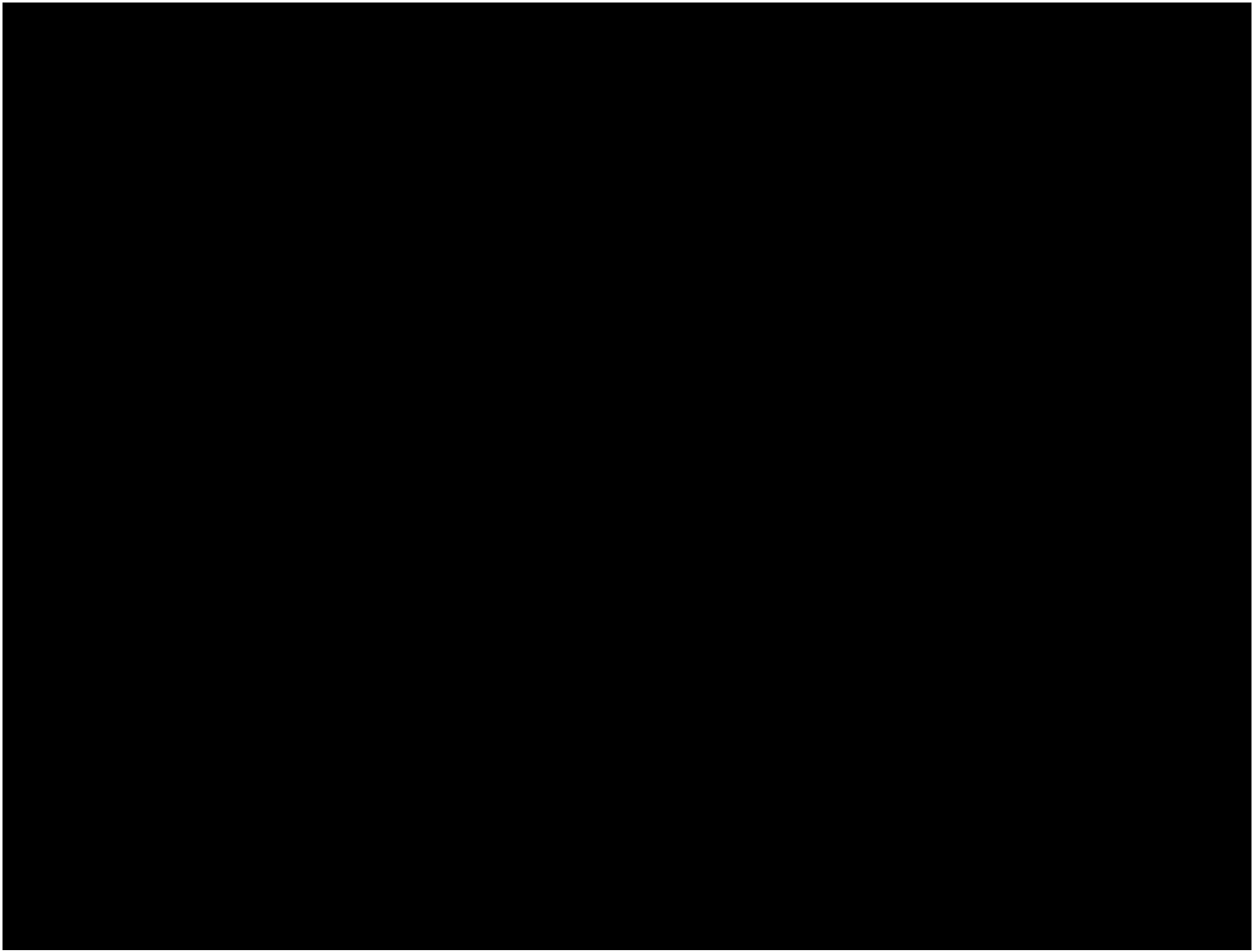
PRODUCED IN NATIVE FORMAT

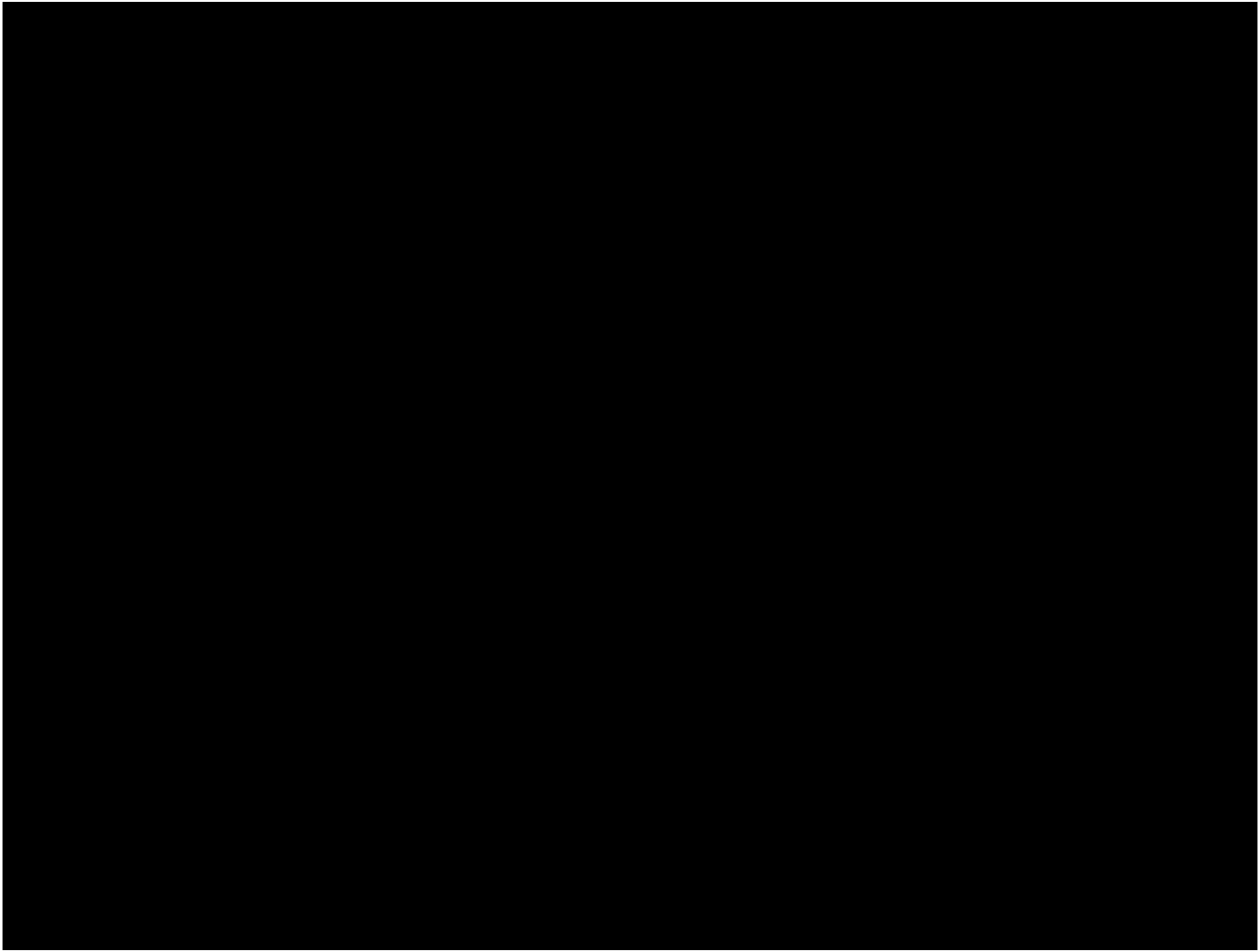
DSCN0639.MOV

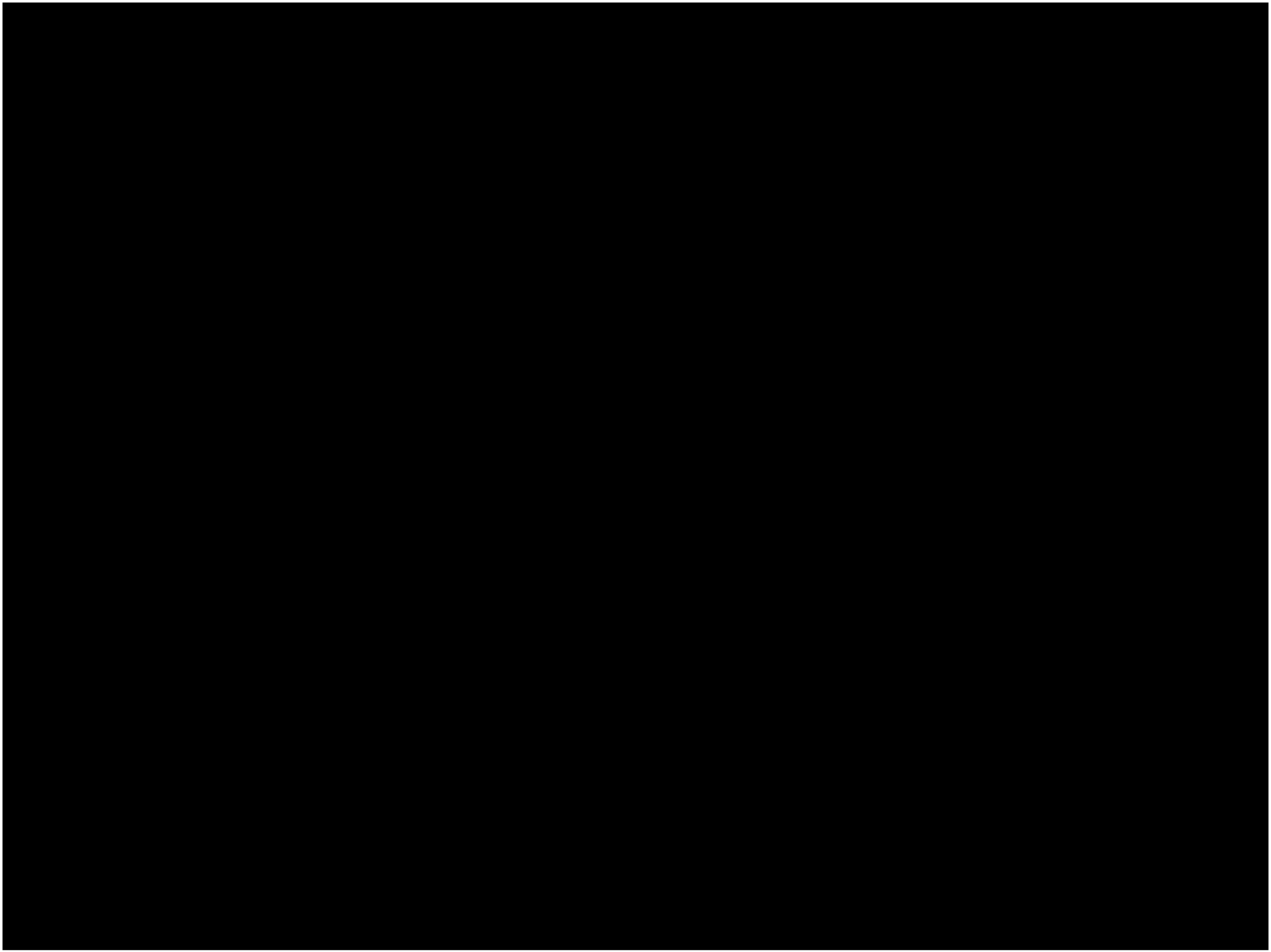
REDACTED FOR DENKA PERFORMANCE ELASTOMER
CONFIDENTIAL BUSINESS INFORMATION

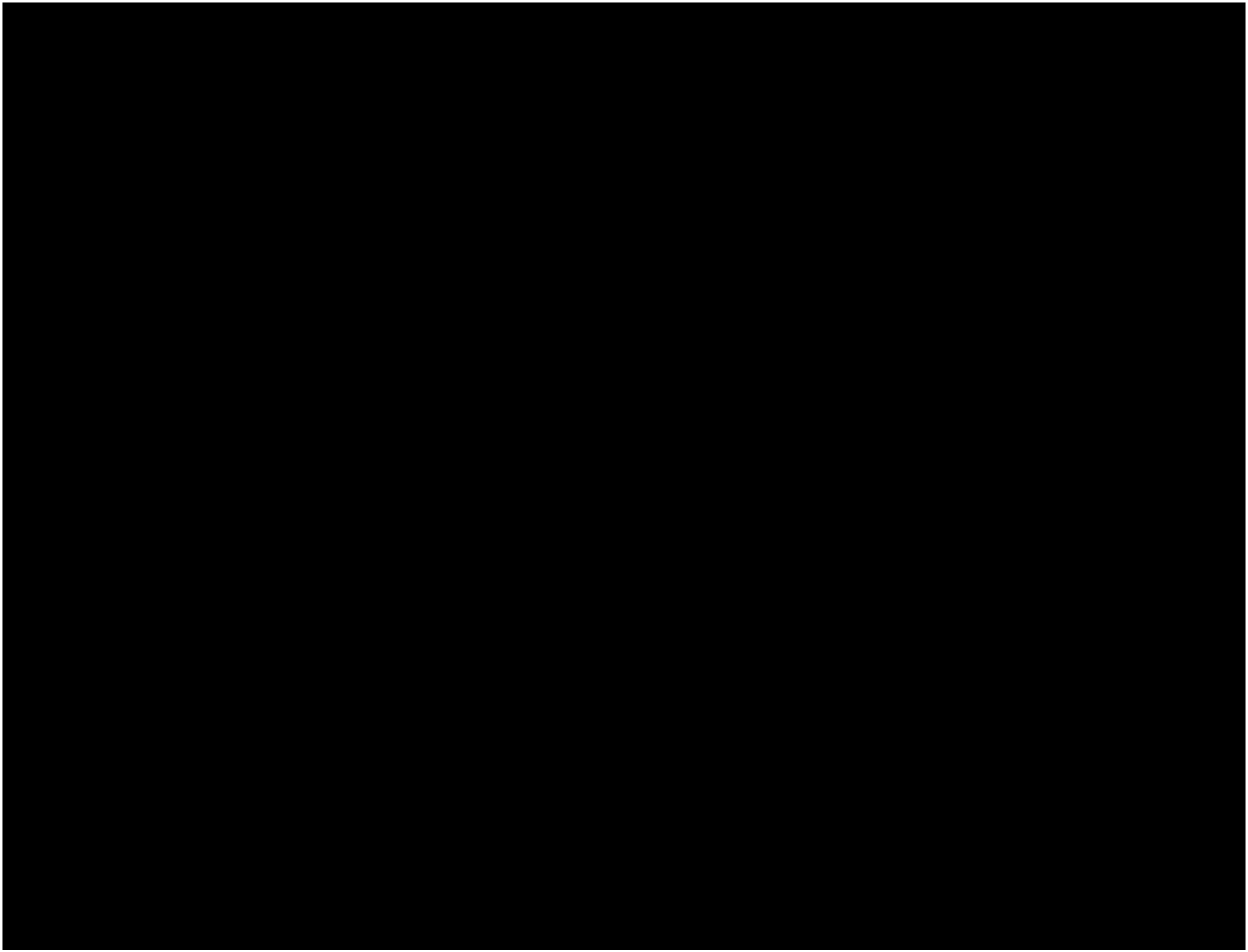


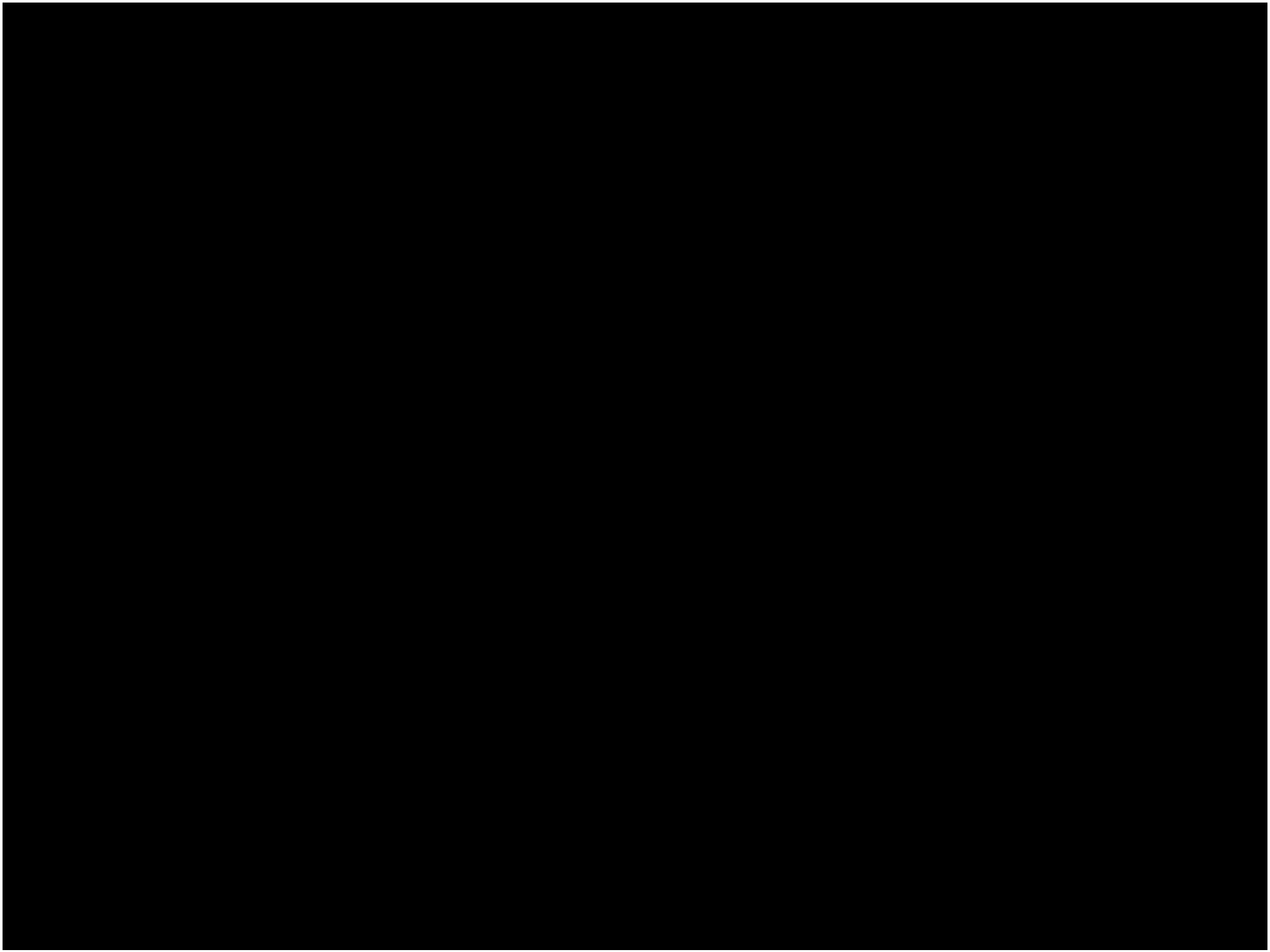


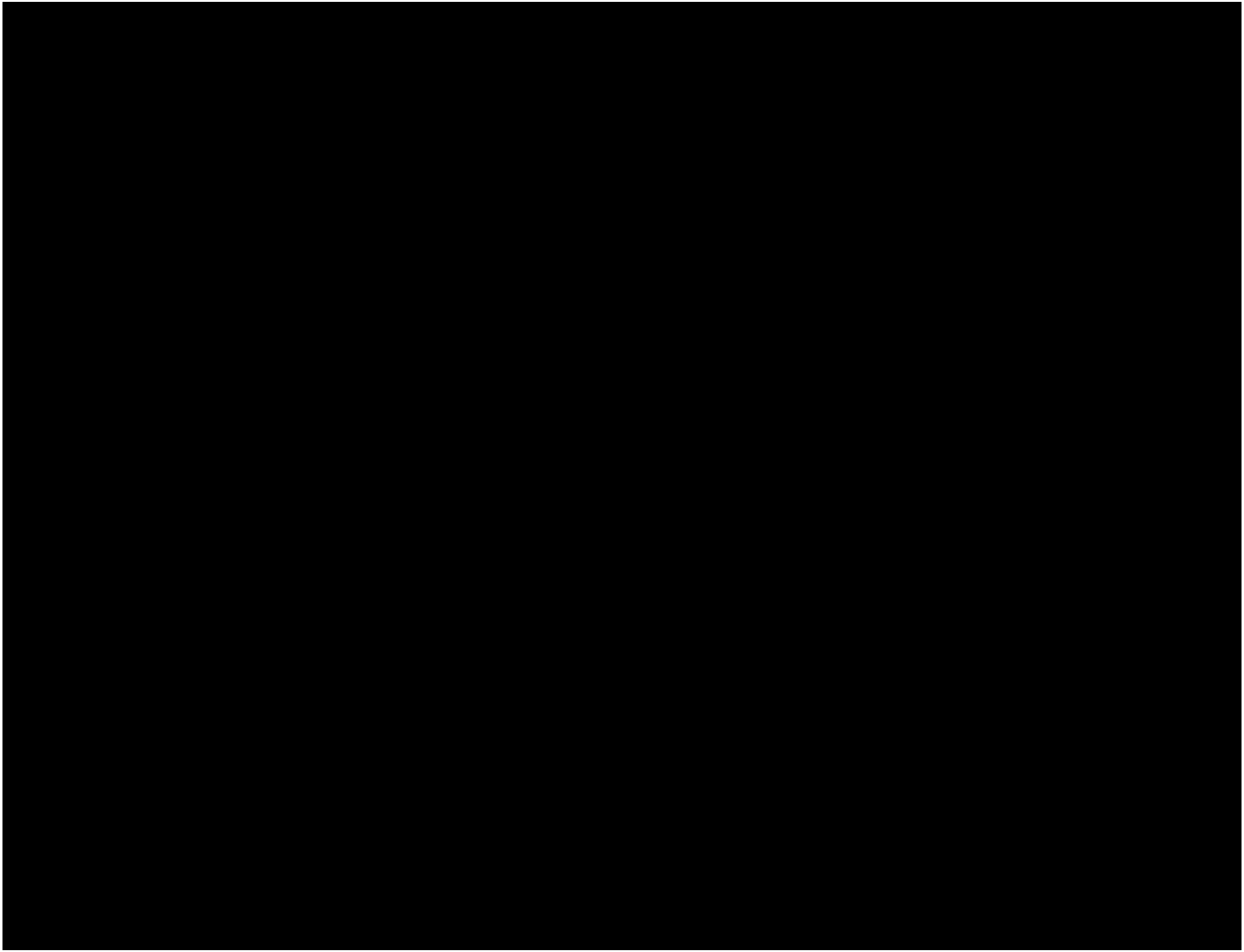








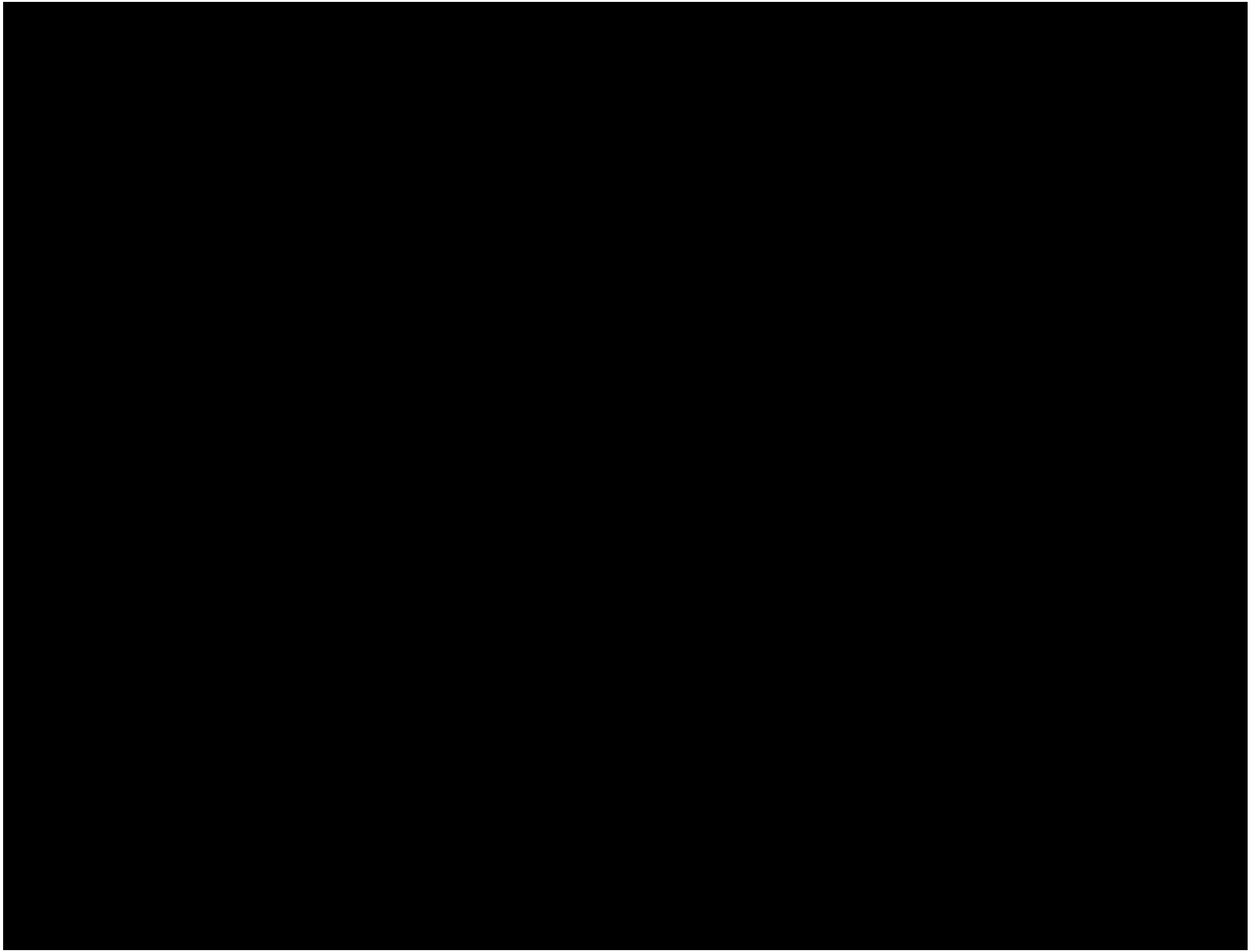


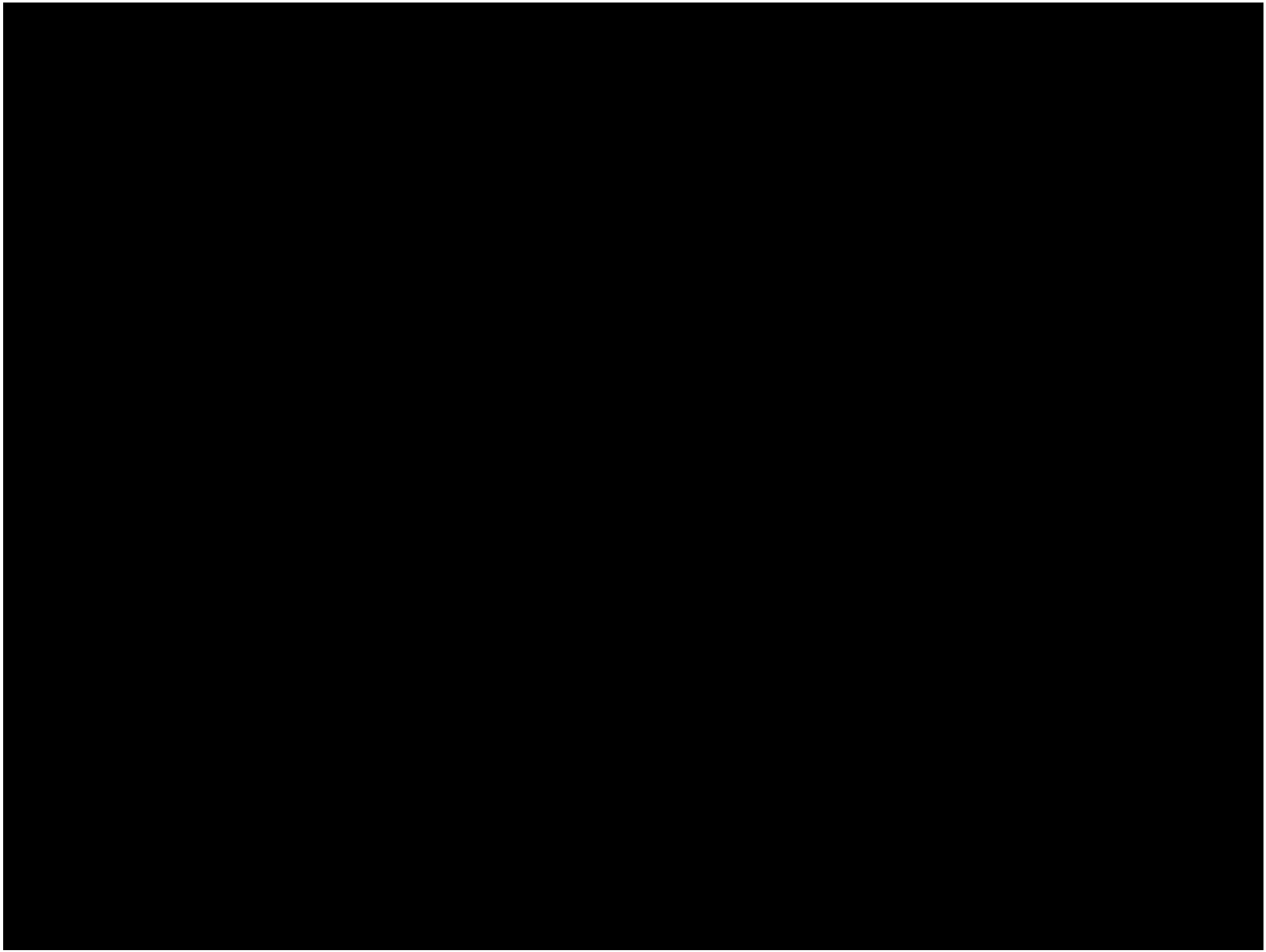


PRODUCED IN NATIVE FORMAT

DSCN0637.MOV

REDACTED FOR DENKA PERFORMANCE ELASTOMER
CONFIDENTIAL BUSINESS INFORMATION

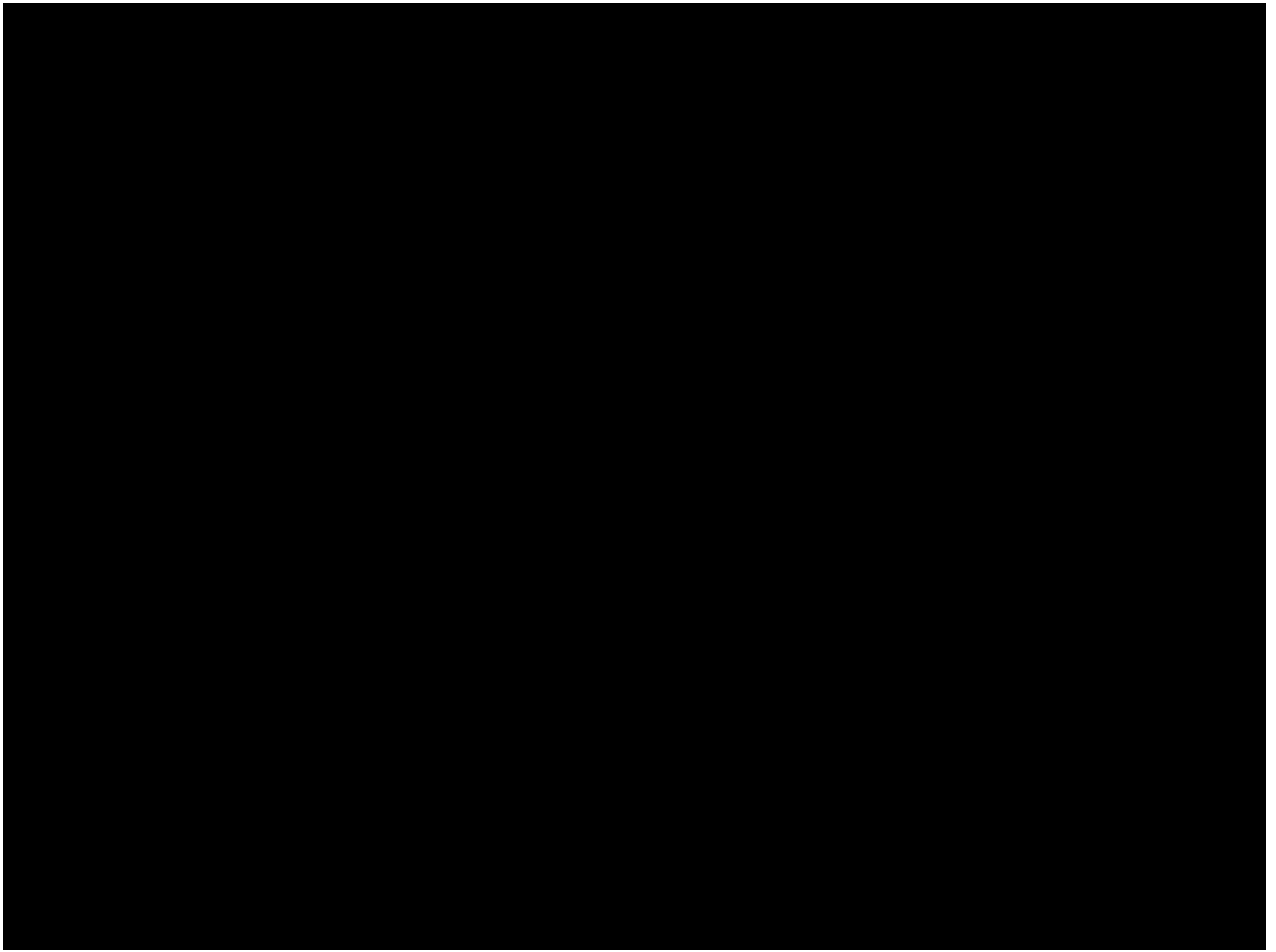




PRODUCED IN NATIVE FORMAT

DSCN0659.MOV

REDACTED FOR DENKA PERFORMANCE ELASTOMER
CONFIDENTIAL BUSINESS INFORMATION



PRODUCED IN NATIVE FORMAT

DSCN0661.MOV

REDACTED FOR DENKA PERFORMANCE ELASTOMER
CONFIDENTIAL BUSINESS INFORMATION

Attachment 2

Attachment 2

PK Pump Out and Strainer Cleaning Operation (CBI)

Section 3-06-60
PK Pump Out and Strainer Cleaning Operation

Date Used _____ Name: _____

A. PURPOSE:

[redacted]

B. CHEMICALS AND HAZARDS:

[redacted]

C. ALARMS AND INTERLOCK:

[redacted]

D. PROCESS DESCRIPTION:

[redacted]

[redacted]

E. PROCEDURE:

[redacted]

Pumping out Dry Type PKs

[redacted]

Pumping out LD Type PKs

Cleaning the PK Drop Strainer

[redacted]

F. PROCESS CONTROL AND SAMPLE SCHEDULE:

[redacted]

G. UNUSUAL CONDITIONS:

[redacted]

Attachment 3

Attachment 3

Clearing Unstripped Emulsion Storage Tank for Cleaning (CBI)

SECTION 3-07-14

CLEARING UNSTRIPPED EMULSION STORAGE TANK FOR CLEANING

Date Used _____ Name: _____

A. PURPOSE:

[redacted]

B. CHEMICALS AND HAZARDS:

[redacted]

C. ALARMS AND INTERLOCKS:

[redacted]

D. PROCESS DESCRIPTION:

[redacted]

[redacted]

E. PROCEDURE:

[redacted]

[redacted]

F. PROCESS CONTROL AND SAMPLE SCHEDULE:

[redacted]

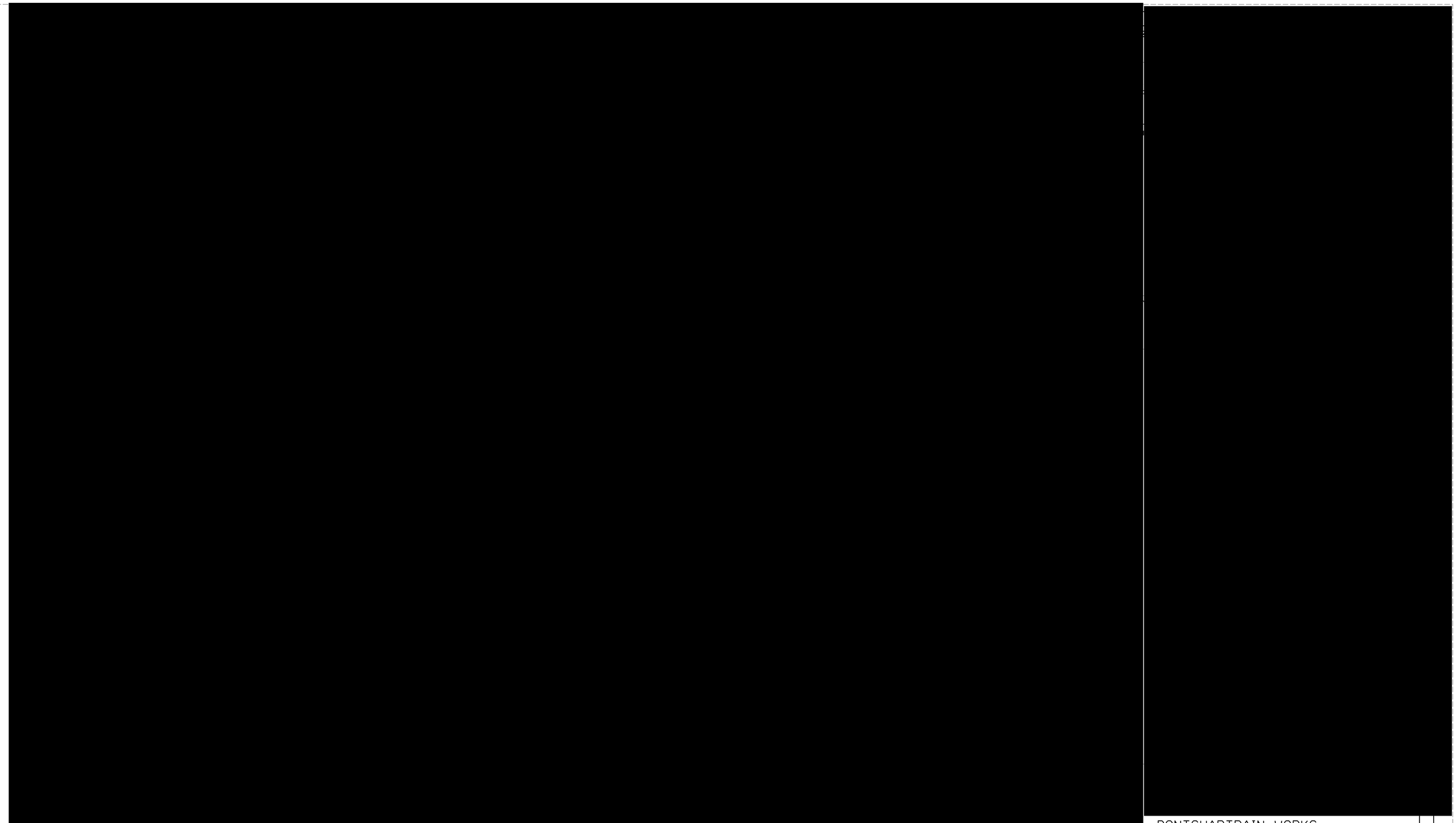
G. UNUSUAL CONDITIONS:

[redacted]

Attachment 4

Attachment 4

Engineering Drawings of the Outside Brine Pit (CBI)



PONTCHARTRAIN WORKS
ELASTOMERS NEOPRENE PLANT
DA-29 POLY AREA-BRINE PIT
FDN PLAN, TRENCHES & PAVING
CONCRETE-STEEL

-X

-Y

PROJ	NO	REVISION	RVSD	CHKD	APPD	DATE
*	55	CONVERTED MANUAL TO CAD	REA	JFC	JJB	10-1-08
W9553	56-57	ADDED NOTE #4	CCB	STC	UM	8/15/13
W9553	58	MODIFIED DETAIL	CCB	STC	UM	8/15/13
1020694	59	ADDED AERATION TANK FDN	RJB	WGF	WGF	06/23/17
1020694	60	ADDED AERATION TANK BLOWER FDN	RJB	WGF	WGF	06/23/17

STANDARDS		REFERENCE DRAWINGS				
B17L		W376011	SECTION & DETAILS CONC	W1773255	OBP H.R.	
B5M		W362952	CONC SECT 4 DET SH 2			
B4X		W361981	PROCESS PLAN			
		W362236	PROCESS SECTION			
		W429239	PIT ADD'T			

PROJECT	*	
SCALE	1/4" = 1'-0"	DATE
DRAWN	GEO C HEWES JR	12/18/67
CHECKED		
APPROVED- DESIGN RELEASE	CD TURNER	08/05/68
APPROVED- CONSTR. RELEASE	CD TURNER	12/30/68

DENKA PERFORMANCE ELASTOMER
LAPLACE, LOUISIANA

W362533

[redacted]

PONTCHARTRAIN WORKS
ELASTOMERS NEOPRENE PLANT
DA-29 POLY AREA-BRINE PIT
SECTIONS AND DETAILS
CONCRETE

-X

-Y

PROJ	NO	REVISION	RVSD	CHKD	APPD	DATE
*	27	CONVERTED MANUAL TO CAD	JMG	REA	JJB	10-1-08

STANDARDS		REFERENCE DRAWINGS		
		W362533	PLAN CONC.	
		W1773255	OBP H.R.	
		W177327	CONC. DET	

•DATE•TIME•USER•

PROJECT	*	
SCALE	3/16" & 3/4"	DATE
DRAWN	HURST	11/14/68
CHECKED		
APPROVED- DESIGN RELEASE	CD TURNER	12/2/68
APPROVED- CONSTR. RELEASE	CD TURNER	12/30/68

DUPONT

E.I.DU PONT DE NEMOURS & CO.,INC.
WILMINGTON, DELAWARE
DUPONT ENGINEERING

W376011

[redacted]

PONTCHARTRAIN WORKS
ELASTOMERS NEOPRENE PLANT
DA29 POLY AREA-RINE PIT EXTENSION
FOUNDATION PLAN, SECTION & DET.
CONCRETE

-X

-Y

PROJ	NO	REVISION	RVSD	CHKD	APPD	DATE
*	15	CONVERTED MANUAL TO CAD	JMG	TRM	CNH	10-1-08
F04159	16-17	MOD. H.R. ON PIT EAST SIDE	CCB	STC	MOT	8-25-10

(Additional revision blocks with headers PROJ / NO / REVISION / RVSD / CHKD / APPD / DATE are blank.)

STANDARDS		REFERENCE DRAWINGS			
B118P	B1V	W362533	CONC. FDN PLAN	W1773255	OBP H.R.
B13	B8S	W376011	CONC. SECT. DET.	W1773257	CONC. DET
B3V		W361981	PROCESS		
B4V		W362236	PROCESS		
B9L		W355981	PIPING		

•DATE•TIME•USER•

		DATE
PROJECT	9335	
SCALE	1/4" & 3/8" = 1'-0"	
DRAWN	HURST	7-16-71
CHECKED	SW/KO	4/27/72
APPROVED- DESIGN RELEASE	N.H. WHITTLE	5/10/72
APPROVED- CONSTR. RELEASE	N.H. WHITTLE	5/10/72

DU PONT
E.I. DU PONT DE NEMOURS & CO., INC.
WILMINGTON, DELAWARE
DUPONT ENGINEERING

W429239

17 16

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

Attachment 5

Attachment 5

Raw Materials Characteristics and Hazards (CBI)

SECTION 1-06-01

RAW MATERIALS
(CHEMICALS and HAZARDS)

A. PURPOSE:

[redacted]

B. CHEMICALS AND HAZARDS:

A-522 (Turbine Oil)

[redacted]

TRANSFORMER OIL

[redacted]

Glacial Acetic Acid - CAS # 64-19-7

[redacted]

ACR (2,3-Dichloro-1,3-Butadiene) - SDS # 41310423 (D P E)

[redacted]

Addiox - CAS # 7732-18-5

[redacted]

Anhydrous Ammonia (NH_3) - CAS # 766-41-7

[redacted]

[redacted]

Antifreeze/Coolant, (Ethylene Glycol Based Antifreeze) - CAS # 107-21-1

[redacted]

Calcium Chloride Brine (Inhibited) - CAS # 010043-52-4

[redacted]

Calcium Chloride Brine (Uninhibited) - CAS # 010043-52-4

[redacted]

Caustic (Liquid or Flakes) (Sodium Hydroxide) – GMID # 550109

[redacted]

CD (Chloroprene) - CAS # 126-99-8

[redacted]

CD Heels - SDS # 71610570

[redacted]

CD Inhibitor Solution

[redacted]

Chemtreat CL-1360 (Brine Corrosion Inhibitor) – CAS # 10588-01-9

[redacted]

Chemtreat CL-281 (Na2CrO4) (Brine Corrosion Inhibitor) – CSA # 10588-01-9

[redacted]

Condensate (Hot)

[redacted]

Copper Sulfate Pentahydrate - **CAS # 7758-99-8 (BDH Inc.)**

[redacted]

Cumene Hydroperoxide - **CAS # 80-15-9**

[redacted]

DAXAD 12KLS (Potassium naphthalenesulfonate-formaldehyde dispersants)

[redacted]

DBH [2,5 DI-T-Butylhldroquinone] - CAS # 88-58-4

[redacted]

DDM (Dodecyl Mercaptan) - CAS # 112-55-0

[redacted]

DEA (Diethanolamine) - CAS # 111-42-2

[redacted]

Dextrose, Anhydrous - CAS # 50-99-7

[redacted]

DIBN (Diisobutylene Nitrosate) - CAS # 65152-04-7

[redacted]

Defoamer 1512 - GMID # 550068

[redacted]

Defoamer - Macallen 01-38A

Mineral Oil CAS# - 64742-52-5
Silicone Dioxide CAS# - 112926-00-8

[redacted]

Dresinate 91-44

[redacted]

EDMA (Ethylene Glycol Dimethacrylate) - CAS # 97-90-5

[redacted]

Empimin LV 33/A (Sodium Octyl Sulfate Solution) - CAS # 142-31-4

[redacted]

FLORADYME 1100 - CAS # 61788-89-4

[redacted]

[redacted]

HCl (Hydrochloric Acid)

[redacted]

Hi Pressure Water

[redacted]

Hydrochloric Acid, 31.5% - uninhibited - CAS # 7647-01-0

[redacted]

[redacted]

IRGANOX - CAS # 123-28-4

[redacted]

IODOFORM (Triiodomethane) - CAS # 75-47-8

[redacted]

KELTROL

Xanthan Gum - RN # 11138-66-2

[redacted]

Lomar PM - CAS # 9084-06-4

[redacted]

Lomar PW - CAS # 9084-06-4

[redacted]

Lowinox TBM-6

[redacted]

Methylene Chloride - CAS # 000075-09-2 (Dow Chemical)

[redacted]

[redacted]

Min-U-Gel 400 (Fuller's Earth) - **CAS # 8031-18-3**

[redacted]

NDPA (nitrosodiphenyl amine) - **CAS # 86-30-6**

[redacted]

NMP/PTZ Inhibitor

[redacted]

[redacted]

NPH Ammonium Salt - CAS # 135-20-6

[redacted]

O-DCB – Orthodichlorobenzene, Grade F - CAS # 95-50-1

[redacted]

Octopol - CAS # 136-30-1

[redacted]

PANA N-Phenyl-1-Naphthylamine (Neozone A)

[redacted]

Perchloroethylene (Perclene) - CAS #127-18-4

[redacted]

Potassium Hydroxide (45%) (KOH) - **CAS # 1310-58-3**

Potassium Persulfate - CAS # 7727-21-1

[redacted]

Potassium Sulfite Powder - CAS # 10117-38-1

[redacted]

PTZ (Phenothiazine) - CAS # 92-84-2

[redacted]

PTZ/NDPA Solution (1%)

[redacted]

PTZ/NDPA Solution (10%)

[redacted]

RCD (Recovered CD)

[redacted]

Resin 90 - CAS # 8050-09-7

[redacted]

Rosin S

[redacted]

Silver Salt (Antro-quinone-2-sodium sulfonate) - CAS # 131-08-8

[redacted]

Soda Ash - CAS # 497-19-8

[redacted]

Sodium Acetate - CAS # 127-09-3

[redacted]

Sodium Chloride Brine

[redacted]

Sodium Formaldehyde Sulfoxylate (SFS) - CAS # 149-44-0

[redacted]

Sodium Hydroxide (Caustic) (LIQUID) - GMID # 55010 CAS #1310-73-2

[redacted]

Sodium Hydroxide (Caustic) (FLAKES) - GMID # 550109 CAS #1310-73-2

[redacted]

Sodium Sulfite - **CAS # 7757-83-7**

[redacted]

Steam (All Pressures)

[redacted]

Stripped Emulsion

[redacted]

Sulfamic Acid - **CAS # 5329-14-6**

[redacted]

Sulfur (Ground) - **CAS # 7704-34-9**

[redacted]

[redacted]

SUVA Cold-MP (HFC-134a)

[redacted]

TBC [4-Tert-Butylcatechol] - CAS # 98-29-3

[redacted]

TETD (Tetraethylthiuram Disulfide) - SDS # FLX0023 (Flexsys America)

[redacted]

[redacted]

THF [Tetrahydrofuran] - CAS #109-99-9

[redacted]

Toluene

[redacted]

Tri Sodium Phosphate Solution (5%) - CAS # 7601-54-9

[redacted]

Triton X-100 - **CAS # 9036-19-5**

[redacted]

Unstripped (Unpolymerized) Emulsion

[redacted]

Sodium Lauryl Sulfate 20% (Sodium Lauryl Sulfate/SLS) - **CAS #151-21-3**

[redacted]

Xylene - CAS # 1330-20-7

[redacted]

D. PROCESS DESCRIPTION:
[redacted]

E. PROCEDURE:
[redacted]

F. PROCESS CONTROL AND SAMPLE SCHEDULE:
[redacted]

G. UNUSUAL CONDITIONS:
[redacted]

Attachment 6

Attachment 6

Emergency Stabilizer Make-up (CBI)

3-05-52
EMERGENCY STABILIZER SOLUTION MAKE UP

Date Used: _____ Name: _____

A. PURPOSE:

[redacted]

B. CHEMICALS AND HAZARDS:

[redacted]

C. ALARMS AND INTERLOCKS:

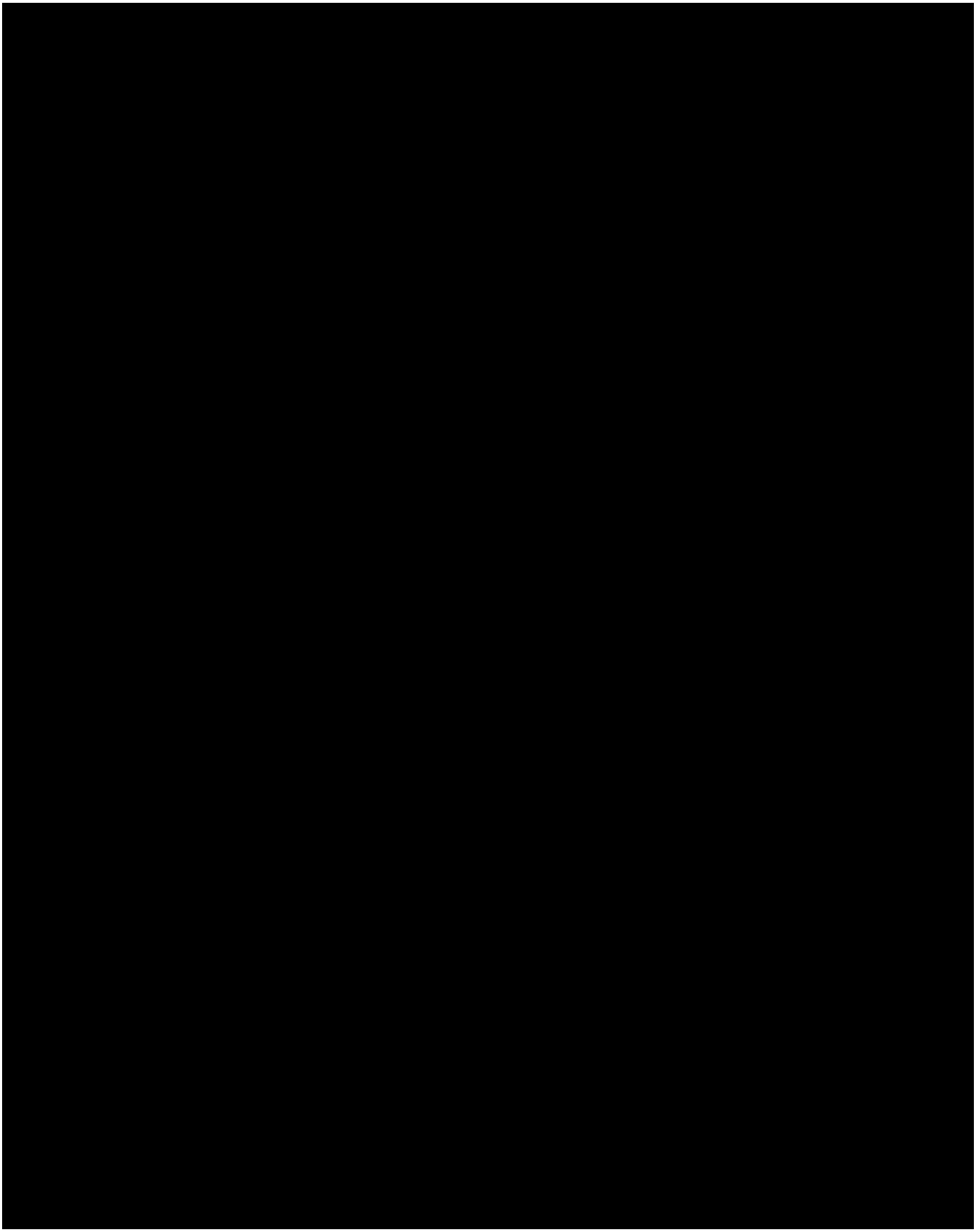
[redacted]

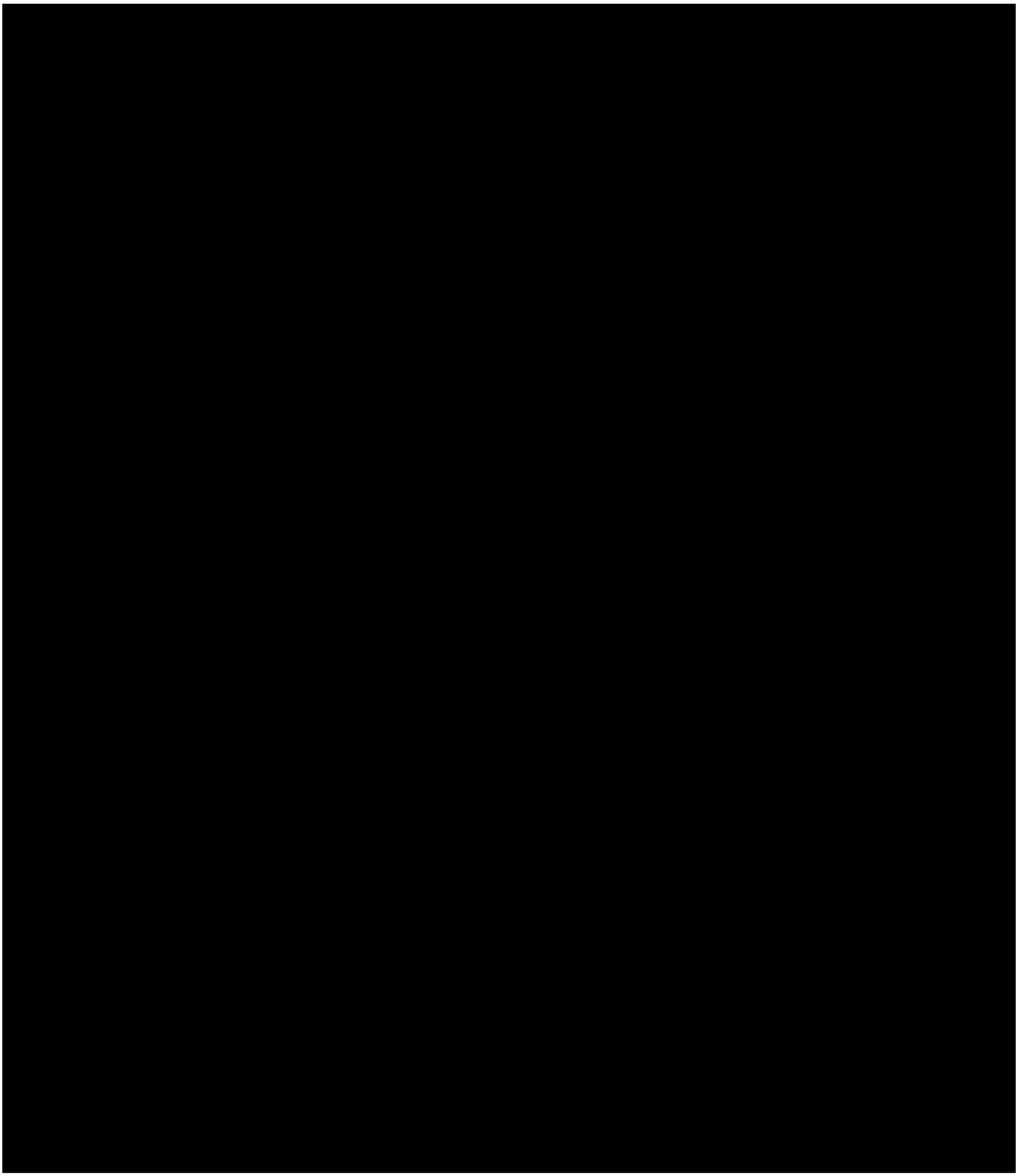
D. PROCESS DESCRIPTION:

[redacted]

E. PROCEDURE:

[redacted]





F. PROCESS CONTROL AND SAMPLE SCHEDULE:

[redacted]

G. UNUSUAL CONDITIONS:

[redacted]

PONTCHARTRAIN WORKS
POLYMERIZATION AREA
STANDARD OPERATING PROCEDURE

EMERGENCY STABILIZER

Attachment 7

Attachment 7

START Technical Support Report for ECAD - Denka Enforcement Multimedia Sampling

TECHNICAL SUPPORT REPORT

FOR

ECAD - DENKA ENFORCEMENT MULTIMEDIA SAMPLING
560 LOUISIANA HIGHWAY-44
LAPLACE, ST. JOHN THE BAPTIST PARISH, LOUISIANA

Prepared for

U.S. Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

EPA Contract Number EP-S5-17-02
Technical Direction Document No. 0005/22-471
Weston Work Order No. 20600.012.005.5471
NRC Report No. N/A
FPN N/A
SSID 0600
EPA OSC Eric Delgado

Prepared by

Weston Solutions, Inc.
2600 Dallas Parkway, Suite 280
Frisco, Texas 75034

July 2022

PROJECT SUMMARY

This final report describes the U.S. Environmental Protection Agency (EPA) Region 6 Technical Support actions for the Enforcement and Compliance Assurance Division (ECAD) Denka Enforcement Multimedia Sampling event in LaPlace, St. John the Baptist Parish, Louisiana. A detailed report follows this project summary, and the attachments are provided as separate portable document format (PDF) files.

On April 22, 2022, the Superfund Technical Assessment and Response Team (START) was notified by EPA Region 6 On-Scene Coordinator (OSC) Eric Delgado of an EPA inspection conducted at the Denka Performance Elastomers, LLC (Denka) manufacturing facility. The OSC stated that a Resource Conservation and Recovery Act (RCRA) inspection at the facility was hindered due to inspectors encountering volatile organic compound (VOC) vapor readings that indicated additional respiratory protection would be necessary to continue the investigation. The OSC requested that START assist the ECAD in the inspection process by collecting solid, liquid and air samples, readings by a handheld VOC photoionization detector (PID), and documentation during a specific waste handling procedure conducted by Denka during the neoprene manufacturing process. Due to restrictions during the RCRA inspection that prevented the subcontractors from conducting Level B work, EPA tasked START to collect air, liquid, and solid samples to support RCRA inspection activities (Attachments F-J). Work performed by START during Denka's waste handling procedure was conducted in Level B personal protective equipment (PPE).

START coordinated with OSC Delgado and ECAD Lead Inspector John Penland to develop a Quality Assurance Project Plan (QAPP) documenting the project goals, sampling approach, quality assurance requirements, and analytical specifications. The goal of the event was to gather data to determine if waste material (referred to as "polymer kettle strainer waste") removed from the neoprene process lines was a source of chloroprene emissions, and to estimate the amount of chloroprene emitted from the material during its management. START was informed that the neoprene manufacturing process involves [redacted]

[redacted] presenting a physical and inhalation hazard due to the presence of chloroprene. The solids from the kettle are transferred by cart to a pit outside of the process building. Here, the materials are covered with brine water, allowing the waste to polymerize in a controlled environment. The stabilized polymer kettle strainer waste is removed from the brine pit using an excavator and placed into an open-topped roll-off container. The material is then sent to a non-hazardous waste landfill for final disposal.

START provided five personnel to execute the QAPP goals as approved by EPA. During the event, START collected eight air samples (seven locations and one co-located quality assurance/quality control [QA/QC] sample) using 6-liter summa canisters outfitted with a 200-milliliter-per-hour (ml/hr) flow controller. This canister setup enabled the collection of 6 liters of air over a 30-minute period. Sample locations and rationale were designed to collect representative air samples throughout the polymer kettle strainer waste removal process, along with background samples for comparison purposes. In addition to air samples, one solid and two liquid waste samples were collected from the brine pit to gather analytical information for these waste streams. Detailed information regarding sample collection is provided within Section 3 of this report. Analytical results for the air, solid and liquid samples are provided within Attachments F, G, H, and I of this report.

This Technical Support Report was prepared to describe the technical scope of work completed as part of Technical Direction Document (TDD) No. 0005/22-471.

☐ The EPA Task Monitor did not provide final approval of this report prior to the completion date of the work assignment. Therefore, Weston Solutions, Inc. has submitted this report absent the Task Monitor's approval.

☒ The EPA Task Monitor has provided final approval of this report. Therefore, Weston Solutions, Inc. has submitted this report with the Task Monitor's approval.

1. INTRODUCTION

On April 22, 2022, the Superfund Technical Assessment and Response Team (START) contractor received a phone call from Eric Delgado, the EPA Region 6 On Scene Coordinator (OSC), regarding an EPA inspection conducted at the Denka Performance Elastomers, LLC (Denka) manufacturing facility (site). The OSC stated that a Resource Conservation and Recovery Act (RCRA) inspection at the facility was hindered due to the inspectors encountering volatile organic compound (VOC) vapor readings that indicated additional respiratory protection would be necessary to continue the investigation. The OSC requested that START assist the Enforcement and Compliance Assurance Division (ECAD) in the inspection process by collecting air, liquid, and solid waste samples; conducting air monitoring activities with a handheld VOC photoionization detector (PID) meter: and documenting specific waste handling procedures conducted by Denka during the neoprene manufacturing process. Due to the levels of VOCs documented by the RCRA inspectors, work conducted by START during Denka's waste handling process would be conducted in Level B personal protective equipment (PPE).

On April 22, 2022, the U.S. Environmental Protection Agency (EPA) activated Weston Solutions, Inc. (WESTON®), the EPA Region 6 START contractor, under Technical Direction Document (TDD) No. 0005/22-471, to provide support and to compile documentation of technical support activities at the Site.

2. BACKGROUND AND SITE DESCRIPTION

EPA RCRA personnel inspected the Denka Performance Elastomers facility from April 18 through April 21, 2022. During the inspection, concerns were raised regarding the handling and classification of polymer kettle strainer waste generated in Denka's polymer unit. [redacted]

[redacted] To safely allow the reaction of the waste material, the worker transports the waste to a concrete pit outside of the polymer building. Workers place the waste into the upstream cell of the pit and cover the material with brine. The brine prevents the potential combustion of the polymer kettle strainer waste due to the ongoing auto-polymerization reaction.

Once the waste material reaches a state at which the facility determines the waste material can be extracted, the material is removed from the pit and placed into an open-topped roll-off container using an excavator. Residual brine liquids drain from the roll-off container onto the ground surface and flow into drainage channels that direct the liquids to the middle cell of the pit. Wastewaters from the pit are pumped to the on-site wastewater treatment plant. Material within the roll-off box is sent to a non-hazardous disposal facility.

During the RCRA inspection, EPA representatives observed the waste generating units and utilized a VOC PID meter to monitor the atmosphere during operations. During the evaluation of the polymer unit, the inspectors documented VOC readings above the levels that the inspectors believed would allow them to collect samples safely. The EPA ECAD determined that Level B PPE would be required to conduct activities within the polymer unit during the waste generating and removal processes and contacted the EPA Region 6 Superfund and Emergency Management Division for assistance.

3. SUMMARY OF ACTIONS

3.1 OBJECTIVES AND PLANNING

START, in conjunction with OSC Delgado and ECAD inspector John Penland developed a site-specific Quality Assurance Project Plan (QAPP) to identify the project goals and means by which these objectives would be achieved (Attachment E). The goal of the project was to assess the facility's waste management processes conducted by Denka personnel cleaning the kettle strainers inside of the polymer unit and the potential impact to human health and the environment stemming from these practices. The evaluation of the processes and potential impacts to human health and

the environment would be achieved by collecting air, liquid, and solid waste samples; conducting air monitoring using a VOC PID meter; as well as observing and documenting the waste management practices.

Air samples would include background locations, areas within the polymer unit building housing the kettles (both before and during Denka's servicing of the strainers), areas upwind and downwind of the brine pit, and near the material as it was transferred from the building to the brine pit. Liquid samples (2) would be collected from the brine pit before placement of the solids and 10 minutes after placement of the solids. One solid sample would be collected from solids removed from the brine pit, prior to placement into the waste neoprene roll-off box. A list of sample identification numbers and location descriptions is provided in Section 3.4.

The team reviewed the sampling approach with Denka personnel to ensure that coordination and safety requirements were met. Sampling efforts were coordinated with the Denka facility so that the sampling team was in place prior to and during the servicing of the kettle strainers and to enable collection of background air samples approximately 30 minutes prior to the servicing. The sampling team planned to collect split liquid and solid samples for the Denka facility and record the transfer of custody to the appropriate personnel.

Due to the high levels of VOCs measured with the handheld PID meter during the April RCRA inspection, all sampling efforts after the opening of the strainer would be conducted by personnel in Level B PPE. The sampling group was comprised of two teams of two people. One team served as the primary sampling team and the second as the backup/rescue team. The backup/rescue team was able to step into the sampling role if the sampling efforts exceeded the timeframe permitted by the Self-Contained Breathing Apparatus (SCBAs). The primary sampling team would don new tanks and serve as the backup team at that point.

3.2 SAMPLING ACTIVITIES

On May 5, 2022, START mobilized five people to the Denka facility to conduct sampling, monitoring, and documentation activities. The START Field Team Leader (FTL) met with ECAD inspector John Penland at the facility to conduct a site walk to orient the team prior to the sampling event. START and Mr. Penland observed the locations of the kettles, identified the strainer that would be serviced, the brine pit, and areas outside of the polymer unit that could be utilized as a

support zone. The team was briefed as to the specific air sampling locations, liquid sampling location, solid waste sampling location, sequence of events, safety protocols, and documentation requirements. Winds at the site were documented to be from the south at 10-20 miles per hour.

Sampling activities were initiated at 1530 hours with the deployment and collection of the background air sampling canister (DR-A-BK-05052022-01). The background location was selected to provide a baseline level of VOCs within the polymer unit building prior to the servicing of the strainer. The canister was placed approximately 5 feet east of the strainer to be serviced.

To determine the impact of adding polymer kettle strainer waste to the brine pit liquids, liquid samples were collected before and after the addition of the waste. At 1545 hours, START collected a water sample (DR-L-LB-05052022-01) and duplicate (DR-L-LB-05052022-02) from the brine pit to determine the VOC levels within the liquid prior to the addition of polymer kettle strainer waste. After the addition of the waste material to the brine pit (1651 hours), a liquid sample (DR-L-LA-05052022-01) was collected from the brine pit at 1710 hours to determine the VOC levels. Split samples of the liquid material were provided to Denka.

To assess the potential impacts to the atmosphere caused by the removal of solid materials from the brine pit and placing the material into a dedicated roll-off box, the EPA team collected air and solid samples during Denka's removal of solids from the brine pit. Prior to the removal, START placed canisters approximately 2 feet upwind (DR-A-BU-05052022-01) and 20 feet downwind (DR-A-BD-05052022-01) of the brine pit. The canisters were activated at 1604 hours, and Denka personnel began removing solid material from the brine pit using an excavator at approximately 1610 hours, placing the material into an open-topped roll-off box. START collected and split with Denka a solid waste sample (DR-S-BP-05052022-01) from the excavator bucket at 1610 hours. Air sample collection was completed at 1631 hours.

Once the background air sample had been collected at approximately 1600 hours, START began deploying air sampling canisters at the following locations:

- Canister placed approximately 5 feet from strainer to be serviced – DR-A-KP-05052022-01
- Canister placed approximately 15 feet east of the strainer – DR-A-KD-05052022-01. This sample had a co-located canister (DR-A-KD-05052022-02) for QA purposes.

- Canister that remained within approximately 5 feet of the cart as it was loaded with waste material and transported to the brine pit. Once material was placed in the brine pit, the canister was placed approximately 3 feet from the downwind (north) side of the pit. - DR-A-KT-05052022-01
- Canister placed approximately 15 feet upwind (south) of the brine pit. – DR-A-PU-05052022-01

Between 1637 and 1639 hours, START opened the canister valves at the locations described above in anticipation of the start of the strainer servicing process. At 1642 hours, the Denka technician, in level C PPE, began closing valves, venting the kettle, and opening the strainer. At 1645 hours, after a reading of 40 parts per million (ppm), the lamp on the START VOC PID meter malfunctioned (lamp error message) and would no longer read or record data. The Denka technician placed the cart beneath the strainer and began removing the waste material from the baskets using a metal hook. Once approximately one-half of the material was removed from the strainer, the technician removed the basket (two baskets per strainer) and dumped the contents into the cart, including the fabric filter bags. After completing the first basket, the same approach was taken with the second. A new filter bag was placed into the baskets and the baskets were returned into the strainer. The strainer lid was closed, and the screws were tightened. The technician completed removal of the polymer kettle strainer waste and filter bag by 1649 hours and began transporting the material from the polymer unit building to the brine pit. All material was placed into the pit by 1651 hours.

Sample Summary:

- DR-S-BP-05052022-01 – Solid sample from brine pit
- DR-A-BU-05052022-01 – Air sample upwind (south) of brine pit during removal.
- DR-A-BD-05052022-01 – Air sample downwind (north) of brine pit during removal.
- DR-L-LB-05052022-01 – Liquid sample from brine pit before addition of material from strainer.
- DR-L-LB-05052022-02– Duplicate: Liquid sample from brine pit before addition of material from strainer.
- DR-L-LA-05052022-01 – Liquid sample from brine pit after addition of material from strainer.

- DR-A-BK-05052022-01 – Background air sample from strainer area prior to waste removal.
- DR-A-KP-05052022-01 – Air sample from strainer area during waste removal.
- DR-A-KD-05052022-01 – Air sample from 15 feet east of strainer during waste removal.
- DR-A-KD-05052022-02– Duplicate: Air sample from 15 feet east of strainer during waste removal.
- DR-A-KT-05052022-01 – Air sample collected in proximation with cart transportation waste material from strainer to brine pit.
- DR-A-PU-05052022-01 – Air sample collected approximately 15 feet upwind (south) of the brine pit during strainer servicing.

After collection of the final sample the START team completed documentation and preservation of all sample media and packaged all equipment. START participated in a post event debrief at the Denka offices where ECAD inspector John Penland reviewed activities conducted in the field.

Due to the time at which the field activities and debrief were completed, START was unable to ship or transport samples to the respective laboratories on May 5, 2022. All sample media was transported to the WESTON Baton Rouge, LA, office and secured within the locked building. The solid and liquid the samples were picked up by the Pace Analytical courier on May 6, 2022, and delivered to the laboratory on the same day for VOC analysis by SW-846 method 8260. Air samples were shipped to Eastern Research Group (ERG) laboratory on May 6, 2022, for VOC analysis by EPA Compendium TO-15.

4. LIST OF ATTACHMENTS

Attachment A Site Location Map

Attachment B Site Area Map

Attachment C Site Layout Map

Attachment D Sample Location Map

Attachment E Site-Specific Quality Assurance Project Plan

Attachment F Air Analytical Results Table

Attachment G Air Analytical Results – Laboratory Deliverables

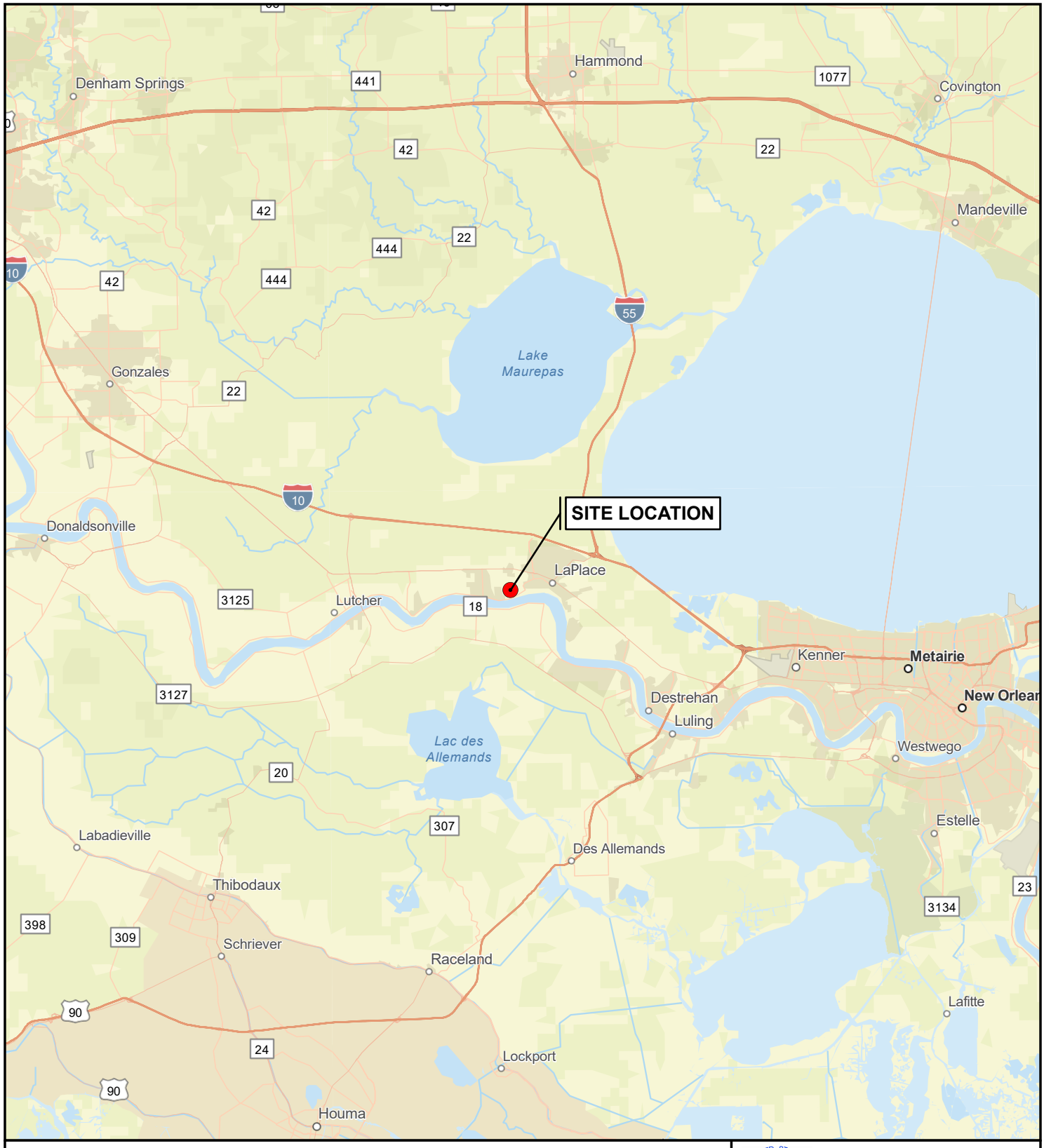
Attachment H Liquid Analytical Results Table

Attachment I Solid Analytical Results Table

Attachment J Solid and Liquid Analytical Results – Laboratory Deliverables

ATTACHMENT A

Site Location Map



LEGEND

- SITE LOCATION

0 8 16

SCALE IN MILES

SOURCE: WORLD STREET MAPS; ESRI
TDD: 0005/22-471

US EPA REGION 6

ATTACHMENT A

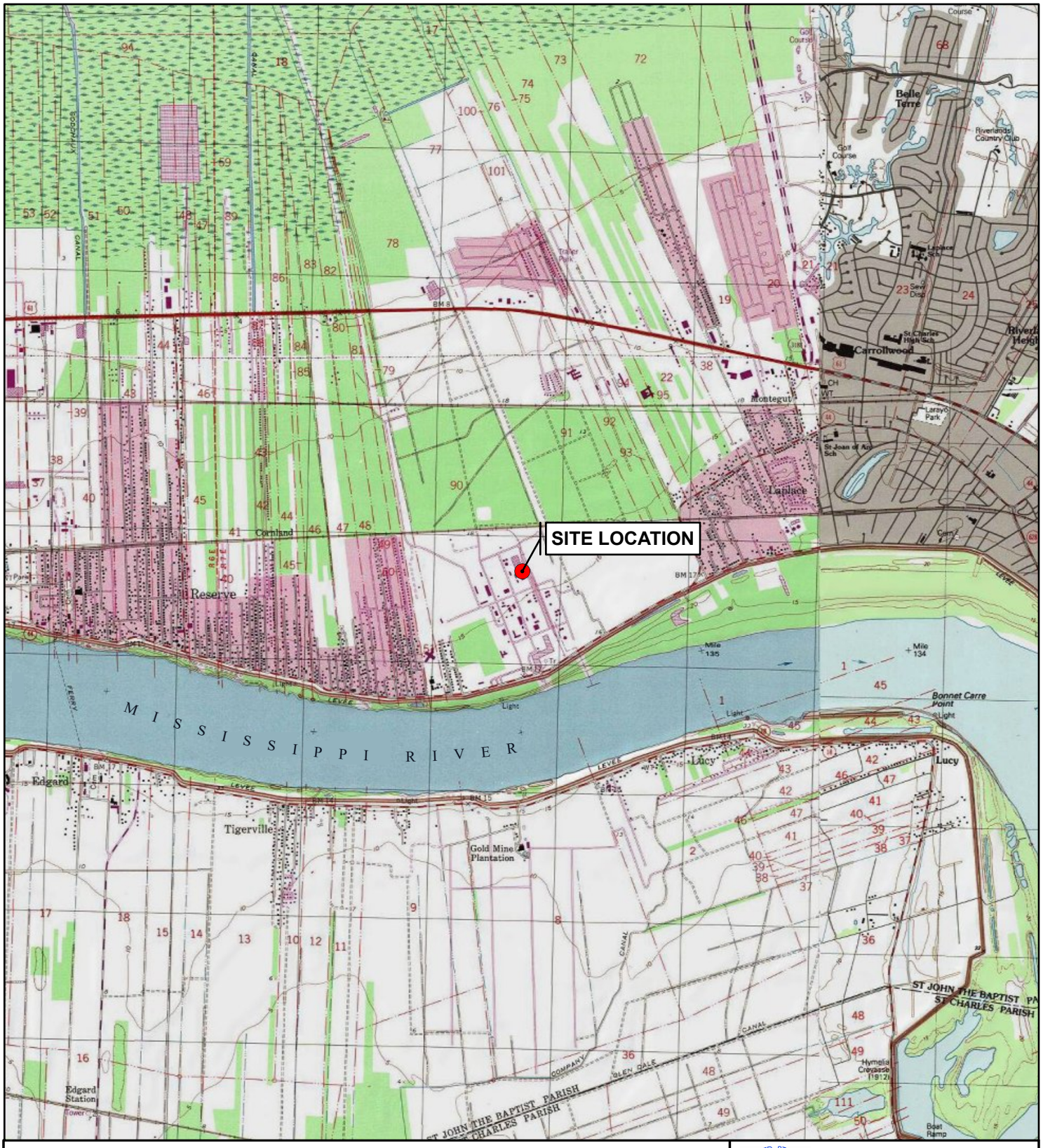
SITE LOCATION MAP
ECAD - DENKA ENFORCEMENT
MULTIMEDIA SAMPLING
560 LOUISIANA HIGHWAY 44
LAPLACE, ST. JOHN THE BAPTIST PARISH, LOUISIANA

DATE	PROJECT NO	SCALE
JULY 2022	20600.012.005.5471	AS SHOWN

FILE: \\nasatxgis1\ATX_GIS_Data\EPA\Region 6 START IV\Superfund\ECAD - Denka Enforcement Multimedia Sampling\pro\ECAD - Denka Enforcement Multimedia Sampling\ECAD - Denka Enforcement Multimedia Sampling.aprx 11:47 AM 7/5/2022 covasj

ATTACHMENT B

Site Area Map



LEGEND

- SITE LOCATION

0 4,000 8,000

SCALE IN FEET

SOURCE: NATIONAL GEOGRAPHIC TOPO; ESRI
TDD: 0005/22-471

US EPA REGION 6

ATTACHMENT B

SITE AREA MAP
ECAD - DENKA ENFORCEMENT
MULTIMEDIA SAMPLING
560 LOUISIANA HIGHWAY 44
LAPLACE, ST. JOHN THE BAPTIST PARISH, LOUISIANA

DATE	PROJECT NO	SCALE
JULY 2022	20600.012.005.5471	AS SHOWN

FILE: \\nasatxgis1\ATX_GIS_Data\EPA\Region 6 START IV\Superfund\ECAD - Denka Enforcement Multimedia Sampling\pro\ECAD - Denka Enforcement Multimedia Sampling\ECAD - Denka Enforcement Multimedia Sampling.aprx 11:52 AM 7/5/2022 covasj

ATTACHMENT C

Site Layout Map

LEGEND

- BRINE PIT
- EQUIPMENT STORAGE AWNING
- POLYMER UNIT BUILDING
- WASTE NEOPRENE ROLL-OFF CONTAINER

0 40 80

SCALE IN FEET

SOURCE: ©NEARMAP IMAGERY; 2022
TDD: 0005/22-471

US EPA REGION 6

ATTACHMENT C

SITE LAYOUT MAP
ECAD - DENKA ENFORCEMENT
MULTIMEDIA SAMPLING
560 LOUISIANA HIGHWAY 44
LAPLACE, ST. JOHN THE BAPTIST PARISH, LOUISIANA

DATE	PROJECT NO	SCALE
JULY 2022	**20600.012.005.5471**	**AS SHOWN**

FILE: \\nasatxgis1\ATX_GIS_Data\EPA\Region 6 START IV\Superfund\ECAD - Denka Enforcement Multimedia Sampling\pro\ECAD - Denka Enforcement Multimedia Sampling\ECAD - Denka Enforcement Multimedia Sampling.aprx 12:16 PM 7/5/2022 covasj

ATTACHMENT D

Sample Location Map

LEGEND

1. DR-S-BP-05052022-01 – Solid sample from brine pit.
2. DR-A-BU-05052022-01 – Air sample upwind of brine pit during removal.
3. DR-A-BD-05052022-01 – Air sample downwind of brine pit during removal.
4. DR-L-LB-05052022-01 – Liquid sample from brine pit before addition of material from kettle.
5. DR-L-LB-05052022-02– Duplicate: Liquid sample from brine pit before addition of material from kettle.
6. DR-L-LA-05052022-01 – Liquid sample from brine pit after addition of material from kettle.
7. DR-A-BK-05052022-01 – Background air sample from kettle area prior to waste removal.
8. DR-A-KP-05052022-01 – Air sample from kettle area during waste removal.
9. DR-A-KD-05052022-01 – Air sample from 15 feet east of kettle during waste removal.
10. DR-A-KD-05052022-02– Duplicate: Air sample from 15 feet east of kettle during waste removal.
11. DR-A-KT-05052022-01 – Air sample collected in proximation with cart transportation waste material from kettle to brine pit. Arrow indicates general travel path.
12. DR-A-PU-05052022-01 – Air sample collected approximately 15 feet upwind (south) of the brine pit during kettle servicing.

LEGEND

- TRAVEL PATH
- [1] SAMPLE LOCATION
- BRINE PIT
- EQUIPMENT STORAGE AWNING
- POLYMER UNIT BUILDING
- WASTE NEOPRENE ROLL-OFF CONTAINER

N

0 40 80

SCALE IN FEET

SOURCE: ©NEARMAP IMAGERY; 2022
TDD: 0005/22-471

US EPA REGION 6

ATTACHMENT D

SAMPLE LOCATION MAP
ECAD - DENKA ENFORCEMENT
MULTIMEDIA SAMPLING
560 LOUISIANA HIGHWAY 44
LAPLACE, ST. JOHN THE BAPTIST PARISH, LOUISIANA

DATE	PROJECT NO	SCALE
JULY 2022	20600.012.005.5471	AS SHOWN

FILE: \\nasatxgis1\ATX_GIS_Data\EPA\Region 6 START IV\Superfund\ECAD - Denka Enforcement Multimedia Sampling\pro\ECAD - Denka Enforcement Multimedia Sampling\ECAD - Denka Enforcement Multimedia Sampling.aprx 2:24 PM 7/5/2022 covasj

ATTACHMENT E

Site Specific QAPP

Region 6 - Enforcement & Compliance Assurance Division

QUALITY ASSURANCE PROJECT PLAN

DENKA PERFORMANCE ELASTOMERS

560 Louisiana Highway 44, LaPlace, LA 70068

Prepared by:

Weston Solutions– EPA Region 6 START Contractor

2600 Dallas Parkway, Suite 280
Frisco, Texas 75034

Prepared for:

U.S. Environmental Protection Agency, Region 6
Enforcement & Compliance Assurance Division
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

April 29, 2022

SECTION A – PROJECT MANAGEMENT

A.1 Denka Performance Elastomers QAPP

Denka Performance Elastomers
Quality Assurance Project Plan

Prepared by:

David Bordelon START Date: 4/29/2022

Approvals:

_____ Date: _____

_____ Date: _____

A.2 Table of Contents

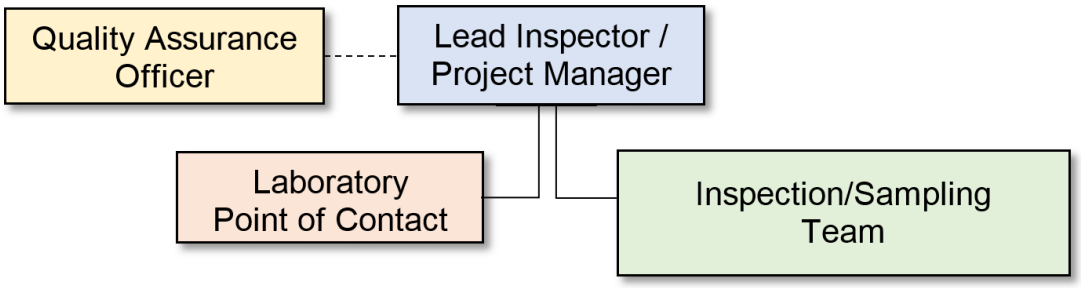
A.3 / A.4 Project Organization and Distribution List

The individuals participating in the project and their specific roles and responsibilities are shown below. These individuals will receive copies of the approved Quality Assurance Project Plan (QAPP) and subsequent revisions:

Table A.1: Roles & Responsibilities/Distribution List

Individual(s) Assigned:	Responsible for:	Authorized to:
John Penland 214-755-8795	Lead Inspector / Project Manager	Project Decisions, Lead and Assist Team Member(s), Collect and Assess Data
Jeff Wright START – R6 225-278-8406	Laboratory Point of Contact	Lab coordination for scheduling, analyses, validation, and deliverables.
David Bordelon START – R6 225-772-7921	Inspection/Sampling Team Member(s)	Inspect / Sample / Collect Data
Erik Hadwin START – R6 225-773-9104		

Figure A.1: Project Organization Chart



For current R6 Organization Chart, click on the following link:

https://usepa.sharepoint.com/sites/R6_Development/r6app/keypers/Lists/Organization%20List/AllItems.aspx?__utma=172919287.230895279.1551278682.1560952790.1560952937.338&__utmb=172919287.6.9.1560956460225&__utmc=172919287&__utmx=-&__utmz=172919287.1527106362.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none)&__utmv=-&__utmk=55076843

A.5 Problem Definition and Background

Problem(s) to be resolved, decision(s) to be made and/or hypothesis to be tested:

This QAPP will address both the potential offsite migration of hazardous waste and potential hazardous was being processed, stored, and treated on site. Data gathered using handheld meters during the site inspection indicated that fugitive emissions of chloroprene were encountered during normal plant processes and further investigation was necessary to confirm the meter readings. See pre-inspection plan for further details.

Historical & background information:

EPA RCRA personnel conducted an inspection of the Denka Performance Elastomers facility on April 18-21 of 2022. During the inspection concerns were raised regarding the handling and classification of polymer kettle strainer waste generated in Denka's polymer unit. [redacted] To inhibit the reaction of the waste material, the worker transports the waste to a concrete pit located outside of the polymer building. Workers place the waste into the upstream cell of the pit and cover the material with brine. The brine prevents the auto-polymerization of the polymer kettle strainer waste from combusting.

Once the waste material reaches a stable state, the material is removed from pit and placed into an open-topped roll-off container using an excavator. Residual brine liquids that drain from the roll-off container onto the ground surface flow into drainage channels which direct the liquids to the middle cell of the pit. Wastewaters from the pit are pumped to the onsite wastewater treatment plant. Material within the roll-off box is sent to a non-hazardous disposal facility.

During the RCRA inspection, EPA representatives were conducting observations of the waste generating units and utilizing a VOC meter to monitor the work atmosphere during operations. During the evaluation of the polymer unit the inspectors documented VOC readings above the levels which the inspectors believed would allow them to collect samples safely. The EPA ECAD determined that level B PPE would be required to conduct activities within the Polymer unit during the waste generating and removal processes and contacted the EPA Region 6 Superfund and Emergency Management Division for assistance.

A.6 Project/Task Description

The project goal will be to assess the impact to human health and the environment stemming from the waste management practices conducted by Denka personnel during the cleaning of screens within "kettles" inside of the Denka Polymer Unit. The screens remove solid waste materials from the process liquids and are periodically removed and solids placed within a brine pit. The solids are considered by Denka personnel to be reactive and if exposed to atmospheres outside of the process unit will exothermically polymerize, releasing chloroprene as a vapor and produce a significant amount of heat. Denka personnel have indicated that if left unchecked, the material will self-combust.

The placement within the brine pit reportedly enables the polymerization to occur beneath the liquid surface and reduce/restrict off gassing and self-combustion.

The sampling tasks will include collection of air, liquid, and solid samples. Air samples will include background locations, within the building housing the kettles both before and during Denka's servicing the screens, and in close proximity to the material during the transfer from the building to the brine pit. Liquid samples will be collected from the brine pit before placement of the solids, 10 minutes after placement of the solids, and 1 hour after placement of the solids. One solid sample will be collected from the brine pit or from the waste neoprene roll-off box depending upon accessibility and age of the material within the roll-off box.

Sampling efforts will be coordinated with the Denka facility to have the sampling team in place prior to and during the servicing of the screens. Background air samples will be collected approximately one hour prior to the servicing and the final liquid sample will be collected one hour after the placement of the last load of solid waste material into brine pit. The sampling team will collected split samples for the Denka facility and record the transfer of custody to the appropriate personnel.

Due to the high levels of VOCs measured with the handheld meters during the inspection, all sampling efforts (with the exception of background air samples) will be conducted by personnel in level B PPE. The sampling group will be comprised of two teams of two personnel. One team will serve as the primary sampling team and the second as the backup/rescue team. The backup/rescue team will step into the sampling roll if the sampling efforts exceed the timeframe permitted by the SCBAs. The primary team will don new tanks and serve as the backup team at that point.

The team will review the sampling approach with Denka personnel to ensure coordination and safety requirements are met.

All sampling activities will be documented within a site logbook and electronic devices. Sample media will be packaged appropriately with the proper preservatives and containers and shipped on the same day as collected. If the site activities exceed the timeframe needed to ship samples on the same day the samples will be properly preserved and placed within a locked facility overnight.

<u>This QAPP has been prepared to address:</u>

To determine 1) if hazardous waste is being improperly managed and 2) if hazardous waste is being released into the environment

<u>The work to be performed includes:</u>

1)Sampling of air before and during waste handling, 2) Sampling of liquids within the brine pit, 3) Sampling of solid waste with the brine pit and designated roll-off box, and 4) Observation and documentation of waste handling techniques.

<u>List samples/measurements to be collected/made and data to be obtained:</u>

1) Air – EPA TO-15 analysis (approximate 30 min sample period per canister)
    a. Background –

i. Upwind/downwind of Polymer building prior to screen change out.
ii. Two sample points within Polymer building prior to screen change out.

b. Polymer Building
i. One sample at kettle/screen during removal to determine immediate vicinity chloroprene.
ii. One sample 20-30 feet away to determine effectiveness of vent hose.

c. Travel corridor – one sample taken from the point at which the popcorn polymer placed within the wheelbarrow is transported from the kettle to the brine pit and continuing sampling at the brine pit until the summa canister has completed the collection

2) Brine Pit Liquid – EPA 8260B (chloroprene included in compound list)
a. Background – a liquid sample will be collected from the brine pit prior to the waste material being placed into the pit.
b. Initial sample – a sample will be collected approximately 10 minutes after the waste material has been placed into the brine pit. This will capture changes to the brine solution due to the polymer reaction.
c. Post sample - a sample will be collected approximately 1 hour after the waste material has been placed into the brine pit. This will capture changes to the brine solution after the majority of the polymer reaction has occurred.

3) Solid Brine Pit Sample – sample will be analyzed for EPA 8260B (chloroprene included in compound list). A sample of the solid material produced within the brine solution will be collected to determine the amount of free chloroprene within the solid.

Special personnel or equipment requirements:

Due levels of VOCs recorded during the site inspection using a PID meter, all work conducted during the kettle/screen servicing will be conducted in level B PPE. All personnel conducting the work will be HAZWOPER trained and experienced in level B work. Health monitoring will be conducted during operations.

Proposed work schedule (dates and time of sample collection):

All sampling efforts will be coordinated with Denka and the servicing of the kettle/screens. Times and dates are unknown at this time

Products to be produced:

At the conclusion of the inspection a XX report will be produced which will include a laboratory report along with a QA/QC review.

A.7 Quality Objectives & Criteria

This inspection will be conducted under the authority of EPA RCRA.

To support this requirement, EPA has developed a systematic planning process based on a graded approach for environmental decision making called the Data Quality Objectives (DQO) Process. The DQO Process is the Agency's preferred planning process and provides quality objectives and performance criteria based on the user's determination of tolerable error in the results. For details on the DQO Process and guidance on how and when it may be used, see the "*Guidance on Systematic Planning Using the Data Quality Objectives Process (EPA QA/G-4) (EPA, February 2006).*" This process has limited applicability to most enforcement inspection activities, since generally only Special Projects lend themselves to development of formal DQOs and defining of error limits, hypothesis testing, etc.

All data collected shall be in accordance with the appropriate EPA methodologies and protocols found in the appropriate regulatory guidance. The data shall be used to determine the following:

1. Levels of hazardous materials entering the atmosphere as fugitive emissions due to waste handling procedures.
2. Levels of hazardous materials entering the facilities waste water stream as a result of the facility's waste handling procedures.
3. Reactivity of the polymer popcorn

The data must meet the approved method accuracy requirements such as those found in Industry-specific methods (40 CFR 136). All supporting QA/QC information shall be provided. The data may be used to support any future enforcement actions.

A.8 Special Training/Certification

At a minimum, field personnel have completed the required Health and Safety 24-hour initial and 8-hour annual training that is mandatory under OSHA 29 CFR 1910.120(e)(8) and EPA Order 3500.1 requirements. Under various programs, this training is mandatory to maintain inspector credentials. All non-credentialed personnel (e.g. inspectors in training) must meet the 29 CFR 1910.120(e)(8) requirements, and should be in accompanied by credentialed personnel while inspecting/sampling at the facility/site. Inspection personnel must be familiar with and follow bio-security procedures.

Additional Special Training:
No additional training is required at this time.

A.9 Documents and Records

The records for this project will include miscellaneous correspondence, field notes, laboratory analytical reports, photo logs, and inspection reports. All laboratory reports will be submitted to the EPA Lead Inspector/Project Manager. Field notes will include observations about facility conditions at the site(s) where samples are collected. Any noteworthy deviation from the procedures specified in the QAPP will be recorded in the field activity logs. Laboratory analytical reports will be generated for all of the samples received by the laboratory. Each set of samples will include a chain of custody form signed by the samplers and the laboratory recipient. All samples will be delivered by Weston Solutions personnel directly to the laboratory.

The EPA Project Manager will disseminate copies of the QAPP to the people listed in the distribution list once it is approved. Any revisions to the QAPP will be numbered sequentially. It will be the responsibility of the EPA Project Manager to ensure that each person on the distribution list receives copies of any revisions.
All EPA records and documents from this project will be handled according to the following EPA Region 6 Field Activities Quality System Procedures:

- Records Management - R6PROC-003
- Management of Sampling and Environmental Data - R6PROC-004
- Field Documentation - R6PROC-005
- Field Equipment Inventory and Management - R6PROC-006
- Field Inspections and Investigations - R6PROC-007
- Field Activities Report Preparation and Distribution- R6PROC-008

The designated and/or contracted laboratory/ies will manage the testing and original raw data from this project (both hard copy and electronic) in accordance with their established and accredited procedures. Any deviations from these procedures shall be approved by the EPA Project Manager before implementation.

SECTION B – DATA GENERATION & ACQUISITION

B.1 Sampling Process Design (Experimental Design)

The decision on whether or not to collect a sample will be contingent upon the following factors:

1. The facility representatives can conduct the service of removing the screens from the kettles and follow standard operating procedures regarding the collection and disposal of the waste stream.
2. EPA contractors can retrieve liquid samples from the brine pit utilizing tools available to the team.
3. EPA contractors can retrieve solid samples from the brine pit utilizing tools available to the team.

Because these samples are to be the result of an inspection and/or a one-time inspection/sampling event, a detail process design is not feasible or appropriate. However, the procedures to be followed from initiation to final report could be described as followed:

Step 1: The COR directs the START contractor to assemble sampling equipment, chain of custody forms, pre-inspection plan, QAPP, sampling equipment/containers, ice chests, etc. and notifies laboratory to expect samples of a particular matrix for a specific analysis (see Table B.1).

Step 2: The START contractor proceeds to field for observation, data gathering, and sample collection, if the situation warrants.

Step 3: START Contractor transports/ships sample(s) along with chain of custody forms to the laboratory for analytical testing.

Step 4: Analytical results are received from laboratory, EPA representatives evaluate data, attaches to report along with a QA/QC review, and takes any required action.

Types and number of samples required:
See Table B.1.

Sampling network design & rationale for design:
EPA representatives will collect samples to determine if hazardous wastes form the facility have been released into the environment.

Air samples will be collected and analyzed for VOCs via method TO-15 based upon previous field observations and records. Samples will be collected using 6-liter summa type air canisters with evacuated contents, creating a vacuum by which air in taken into the canister. A 200ml/minute flow controller will be attached to the orifice of the summa canister, allowing an approximate 30-minute sample to be collected. Air samples will be collected from the kettle area during servicing, along the pathway from the polymer building to the brine pit, and at the edge of the brine pit. Background samples will be

collected to provide a comparison value by which the release of materials into the atmosphere during the kettle servicing can be prepared.

Liquid samples will be collected from the brine pit and analyzed for VOCs via method 8260B. Samples will be collected from multiple depths within the brine pit using a container affixed to an extension pole. A background sample will be collected prior to the popcorn polymer waste product being introduced to the pit. After the waste material has been added to the pit the team will wait approximately 10 minutes prior to collecting the first sample. The facility has stated that the waste material will react and polymerize within this controlled environment to form neoprene. The EPA has surmised that this initial 10-minute time period will allow for the reaction of the material to begin. A second sample will be collected one hour after the waste material is added to the pit.

After the one-hour period the team will assess if the waste material has reacted to form neoprene. If solid material is noted within the brine pit the team will collect a solid sample and analyze the sample for VOCs via method 8260B. The solid sample will be collected using a screen attached to the extension pole. The solid material sample will be collected using a Terra Core or Encore sampling device. These devices collect the appropriate amount of sample material while limiting the loss of VOCS from the sample. Samples will be placed into the appropriate containers and preserved as the method instructs.

Table B.1 Samples by Matrix

Matrix	# of Matrix Samples	# of Field Blank**	# of Trip Blank*	# of Blind Duplicate	# of MS/MSD	Total # of Samples	Analysis *Example:* *TCLP RCRA 8 Metals SW846 6010C/7471*
Air	7			1		8	VOC by TO-15
Liquid	3		1	1		5	VOC by 8260B
Solid	1					1	VOC by 8260B

Note: *Trip blanks are for VOC analyses only. ** Field blanks column may also include rinsate blanks.

Typical Analytical Method No.

Volatile Organics by GC/MS
SW846 - 8260B
EPA500 - 524.2
EPA600 - 624
CLP - VOA – MC
CLP - VOA – LC
Std. Methods 6210B
Std. Methods 6210C
Std. Methods 6210D

Volatile Organics by GC
SW-846 - 8021B
EPA500 - 502.2
EPA600 - 601

Semi-Volatile Organics by GC/MS
SW846 - 8270D
EPA500 - 525.2
EPA600 - 625
CLP - SVOA - MC
CLP - SVOA - LC
CLP - PEST - LC
Std. Methods 6410

PAH
SW846 - 8310 (HPLC)

Inorganic Analytes
SW- 846 7000 Series (AA)
SW- 846 6010C (ICP)
SW- 846 6020A (ICP-MS)
EPA 200 Series (AA)
EPA 200.7 (ICP)
EPA 200.8 (ICP-MS)
CLP Inorganic Method (ICP)
CLP Inorganic Method (AA)
Std Methods 3000 Series (AA)
Std. Method 3120 (ICP)

Herbicides
SW846 - 8151A
EPA 500 - 515.4
EPA 500 - 515.2
Std. Methods 6640

Pesticides & PCBs
SW846 - 8081B
SW846 - 8082A
EPA500 - 508
EPA600 - 608
CLP-PEST- MC
Std. Methods 6630

EPA600 - 602
Std. Methods 6220B
Std. Methods 6220C
Std. Methods 6230B
Std. Methods 6230C
Std. Methods 6230D

Sampling locations & frequency of sampling:
Sampling is anticipated to be a single event from locations will include the following:

1. Air background locations
    a. Upwind of Polymer Building
    b. Downwind of Polymer Building
    c. Inside of polymer building near kettles
    d. Inside of polymer building 20-30 feet from kettles
2. Air Samples
    a. Inside of polymer building near kettle during screen servicing
    b. Inside of polymer building 20-30 feet away from kettle during screen servicing
    c. Collected alongside of the waste product as it is transported from the kettle to the brine pit.
3. Liquid Samples from Brine Pit
    a. Background sample collected prior to waste placement.
    b. After waste placement and after a 10-minute waiting period
    c. After waste placement and after a 1-hour waiting period
4. Solid Sample – to be collected from the brine pit after the 1-hour waiting period

Sample matrices:
See Table B.1.

Classification of measurement parameters:
Critical – For enforcement case development

Validation study information, for non-standard situations:
N/A: Standard laboratory validation is required.

B.2 Sampling Methods

Identify sample collection procedures:

AIR
Air samples will be analyzed for VOCs using EPA method TO-15 and collected following EPA SOP 1704 (Appendix B). START will utilize a 6-liter summa canister with particulate filters and inline pressure regulators and gauges to collect samples from 3-5 feet above ground surface. All air samples will be collected using flow controllers set to draw 200ml/minute of air into the summa canister. Batch certified summa canisters, particulate filters (as needed) and gauges will be provided by the contracted laboratory. Inline gauges will be set to collect a representative sample over the 30-minute period and retain at a minimum -2” Hg vacuum reading at the end of the sampling period. START will document that all normal vent systems will be operating normally at the time of the event. PID readings will be taken continuously during the sampling event.
Prior to the sampling event, each summa canister will be leak checked by START. With the inline regulator/gauge attached and shut in with a Swagelok nut the canisters

vacuum will be applied to the regulator by opening the summa canister valve until the gauge reading stabilizes. The summa canister valve will then be closed, and the gauge readings monitored for one minute. If the gauge loses more than 2" Hg of vacuum the fittings will be adjusted and the test repeated until a satisfactory result indicating no leakage around the flow controller is achieved.
START will document the time, temperature, ambient pressure, and canister pressure for each summa canister at the time of deployment and collection. Each summa canister will be equipped with a sample tagged affixed to the canister housing. The site-specific sample ID will be written onto each tag at deployment. At the time of collection, the inline regulator will be removed from the canister and a Swagelok nut installed at the inlet. Canisters will be placed within the designated container and prepared for shipment.

LIQUID
Upon initiation of sampling, the EPA team will place barriers around the sampling area to prevent any liquid from spilling onto the ground surface surrounding the brine pit. PID readings will be taken continuously during the sampling event. Readings will be recorded in the site logbook and electronically. An extension pole will be outfitted with a glass 8-ounce jar and secured with a pipe clamp and serve as the sample collection mechanism. New jars and clamps will be utilized for each sample event.
The samples will be placed directly into laboratory-supplied pre-preserved 40-ml VOA vial containers (3 per sample) and labelled according to the procedures described in this document. The sampling team will ensure that no air is captured within the vials during the collection process. Samples will be placed within a laboratory-provided "bubble wrap" bag and then placed inside of a zipper lock quart baggie. The sealed samples will be placed on ice immediately. All documentation of sample collection and chain of custody procedures will follow instructions provided in this QAPP.

SOLID
Samples will be collected from the brine pit using an extension pole and a screen. The solid material will be extracted from the pit and immediately placed into a dedicated aluminum pan. Sample cores will be collected according to VOC TerraCore sampling protocols. A Terra Core sampling kit will be utilized to extract 5-gram sample of the solid from the solid material. All debris will be removed from the outside of the sampling tool and the plug will be squared off to the lip of the sampler. The plunger will be rotated 90 degrees and the plug released into the 40 ml pre-labeled, pre-preserved (methanol) vial. A second sample using the same methods will be collected adjacent to the first to insure against breakage and provide additional sample volume should the analysis require a "re-run". Samples will be placed within a laboratory provided "bubble wrap" bag and then placed inside of a zipper lock quart baggie. The sealed samples will be placed on ice immediately. All documentation of sample collection and chain of custody procedures will follow instructions provided in this QAPP.

<u>Identify sampling methods and equipment:</u>

Sampling methods and regulatory citation: The analytical methods, sample containers, holding times, and sample preservation requirements are presented in Table B.4 and apply to EPA Sampling Methods:
8260B and TO-15

Sampling equipment available during the inspection/sampling event:
The team anticipates using summa canisters with 200ml/minute flow controllers to collect air samples.
The team anticipates using a container attached to an extension pole to collect liquid samples.
The team anticipates using a screen attached to an extension pole to collect a solid sample.

Implementation requirements: Will be based on based on the Lead Inspector's field observations, field conditions, facility operations and/or timing.

Sample preservation requirements: See Table B.4 – Analytical Methods, Preservatives and Containers for Samples

Decontamination procedures: All equipment will be dedicated to the sample media collection. No decontamination will be conducted.

Any support facilities needed: No support facilities will be needed.

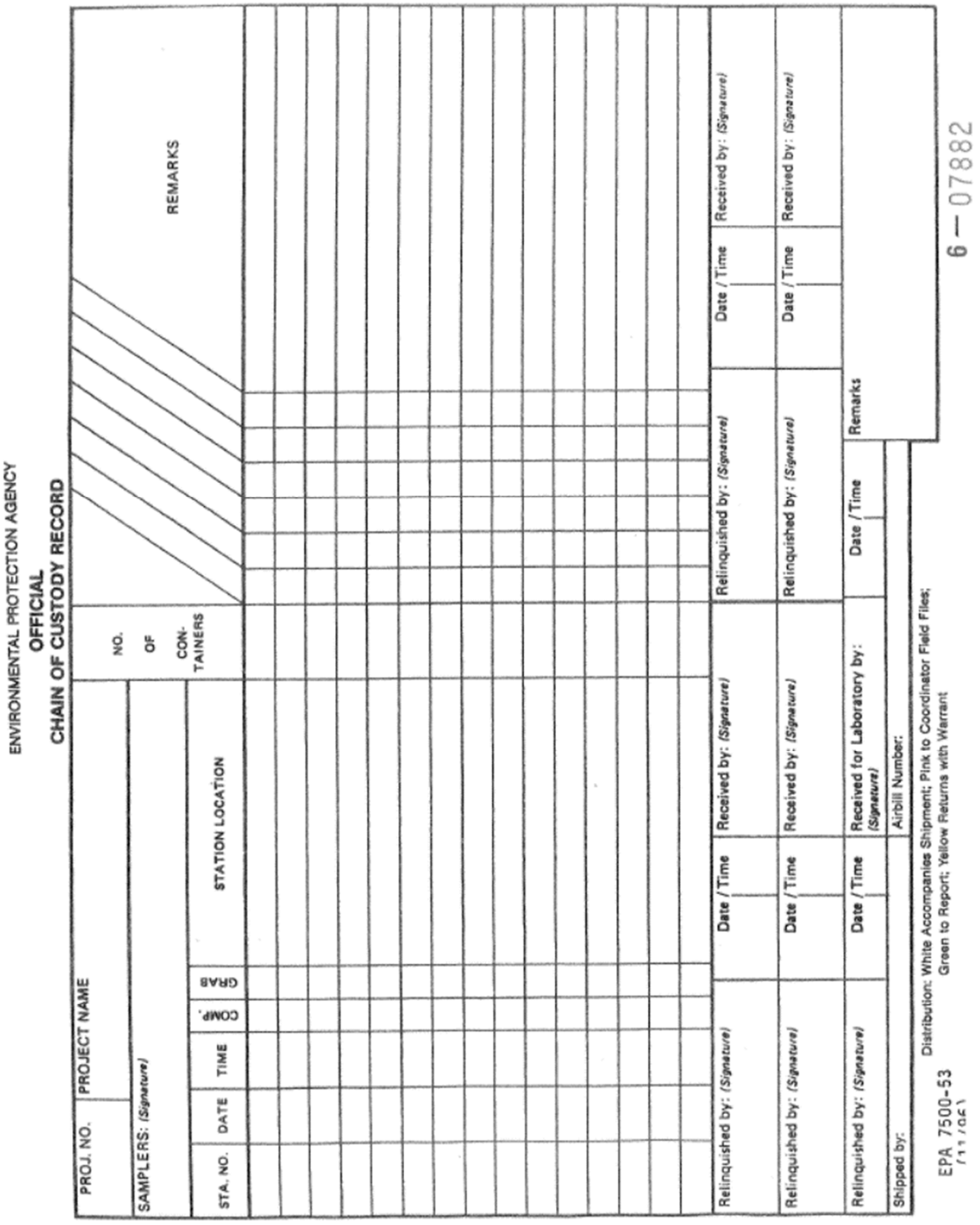
If a failure in the sampling or measurement system occurs, the Lead Inspector/Project Manager must be notified. The Quality Assurance Officer and/or Laboratory Point of Contact will act as advisors to the Lead Inspector/Project Manager. The Lead Inspector/Project Manager will be responsible for any decision concerning corrective action. Corrective action in the field or in the laboratory will be documented in the field notes and/or in the final laboratory analytical report based on the action(s) required.

B.3 Sampling Handling & Custody

The date and time of sample collection will be recorded on the field activity log and on all samples: additionally, that information will be recorded on the Chain of Custody (COC) form. The desired analytical tests to be performed and any preservatives used will also be noted on the COC form. An example COC format is attached in Figure B.3.

Prior to shipment, all samples shall be in custody with the inspection/sampling team. Sample team shall keep all samples in an environment that maintain its preservation (e.g., inside cooler(s) with double bagged ice and packing material) In lieu of tied on tags, stick on sample labels may be used as long as they contain the following information: sampler name, date, time, station location, sampler signature, sample # and analysis requested. Custody seals shall be used on each sample container and sample coolers, unless samples are hand delivered to the designated laboratory by a member of the inspection/sampling team along as the custody chain is not breached.

Figure B.3. Official Chain of Custody Example



B.4 Analytical Methods

Identify analytical methods to be followed (with all options) & required equipment:
See Table B.4 – Analytical Methods, Preservatives and Containers for Samples.

Specify any specific method performance criteria:
N/A

Provide validation information for non-standard methods:
N/A

Identify procedures to follow when failures occur:
If failure(s) occur during the analysis, the Laboratory Point of Contact will contact the Lead Inspector/Project Manager within 24-hours, and communicate the failure and identify potential corrective remedies. The Lead Inspector/Project Manager will make the determination on the remedy. The failure(s) and corrective remedies will be document via email and cc: the first-line supervisor and the QA Officer.

Identify individuals responsible for corrective action and appropriate documentation:
Jeff Wright – Laboratory Coordinator
David Bordelon – Project Manager

Table B.4 – Analytical Methods, Preservatives and Containers for Samples

Sample Matrix	# of Samples	Analyte / Analyte Sweep	Analytical Method No.	Holding Time (Days)	TCLP	Size and Type of Containers	# of Containers per Sample	Preservatives
Air	7	VOC	TO-15	28		6L Summa Canister	1	None
Liquid	3	VOC	8260B	14		40-mL glass vials	3	HCl w/ Ice (<6°c)
Solid	1	VOC	8260B	14		EnCore® 5 Gram Sampler	2	NaHSO4 w/ Ice (<6 °c)

Typical Analytical Method No.

Volatile Organics by GC/MS
SW846 - 8260B
EPA500 - 524.2
EPA600 - 624
CLP - VOA – MC
CLP - VOA – LC
Std. Methods 6210B
Std. Methods 6210C
Std. Methods 6210D

Volatile Organics by GC
SW-846 - 8021B
EPA500 - 502.2
EPA600 - 601
EPA600 - 602
Std. Methods 6220B
Std. Methods 6220C
Std. Methods 6230B
Std. Methods 6230C
Std. Methods 6230D

Semi-Volatile Organics by GC/MS
SW846 - 8270D
EPA500 - 525.2
EPA600 - 625
CLP - SVOA - MC
CLP - SVOA - LC
CLP - PEST - LC
Std. Methods 6410

PAH (HPLC)
SW846 - 8310

Inorganic Analytes
SW- 846 7000 Series (AA)
SW- 846 6010C (ICP)
SW- 846 6020A (ICP-MS)
EPA 200 Series (AA)
EPA 200.7 (ICP)
EPA 200.8 (ICP-MS)
CLP Inorganic Method (ICP)
CLP Inorganic Method (AA)
Std Methods 3000 Series (AA)
Std. Method 3120 (ICP)

Herbicides
SW846 - 8151A
EPA 500 - 515.4
EPA 500 - 515.2
Std. Methods 6640

Pesticides & PCBs
SW846 - 8081B
SW846 - 8082A
EPA500 - 508
EPA600 - 608
CLP-PEST- MC
Std. Methods 6630

B.5 Quality Control

Identified below are a number of quality control samples that will be collected.

Trip Blanks

Number of Blank(s): Example: One sample for each sample shipping container that contains samples for VOC analysis.

Trip Blank Type: A trip blank provided by the laboratory will accompany the samples from time of collection to receipt at the laboratory

Describe Preparation: For each trip blank, type II reagent grade water from the laboratory will be placed in three 40-ml vials and preserved with HCL. The VOC analysis will be consistent with the analysis on the environmental/waste samples.

Field Blanks

Number of Blank(s): Example: N/A

Field Blank Type: N/A

Describe Preparation: N/A

Equipment Rinsate Blanks

All equipment will be dedicated, no decontamination is expected.

Rinsate Type: N/A

Describe Preparation: N/A

Blind Replicate or Duplicate Samples

One duplicate sample will be collected per 10 samples.

Sample Matrix: Air

Location: From the location within the Polymer building approximately 20-30 feet from the kettle.

Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Samples

N/A

Sample Matrix: N/A

Location: N/A

B.6 Instrument/Equipment Testing, Inspection, and Maintenance

EPA field personnel will use the PID as appropriate based on the project-specific field parameter needs and/or Health and Safety conditions. Along with data collection, measurements from this instrument may be used to alert field personnel to potential hazardous conditions. In addition, readings collected by the instrument may be documented in the field logbook and included in the final inspection report. The instrument will be maintained in accordance with the manufacturer's recommendations detailed in the instrument manual.

B.7 Instrument/Equipment Calibration and Frequency

Identify all tools, gauges, instruments, and other sampling, measuring, and test equipment used for data generation or collection activities affecting quality that must be controlled and calibrated:
MultiRAE

Describe or reference how calibration will be conducted using certified equipment and/or standards with known valid relationships to nationally recognized performance standards. If no such nationally recognized standards exist, document the basis for the calibration:
The MultiRAE instrument will be calibrated using isobutylene and mixed calibration gasses prior to entry of the facility in accordance with the procedures listed in the instrument manual. This calibration will be confirmed by a bump test prior to each use of the instrument. Should the bump test fail, the instrument will be recalibrated before use.

EPA field personnel shall record field usage in the maintenance/calibration logbook that is maintained with the equipment along with the inspection/sampling logbook.

B.8 Inspection/Acceptance of Supplies & Consumables

The EPA Project Manager will be responsible for inspecting sample containers prior to leaving for the inspection. Only new sample containers accompanied by the manufacturer's certification of pre-cleaning will be used. The sample containers will be inspected for cracks, ill-fitting lids, or other defects prior to use and will be discarded if defects are found.

B.9 Data Acquisition Requirements for Non-Direct Measurements

Records may be collected during the inspection/sampling event to document activities at the facility. Documents may be requested for a period of up to XX years prior to the inspection/sampling event. These records will be used for determining the facility's compliance with the requirements of RCRA.

B.10 Data Management

Data for this project will be produced both onsite and at the designated/approved Laboratory. Laboratory data will be submitted to the EPA Project Manager and will be included in the subsequent inspection report. Data collected during the inspection may be designated as Confidential Business Information (CBI) by representatives of CRS. For any information for which a CBI claim is made that information will be handled in accordance with the provisions specified for RCRA CBI. All records and documents generated during this project will be handled in accordance with EPA's "Standard Operating Procedures for Record and Information Management"

SECTION C – ASSESSMENT AND OVERSIGHT

C.1 Assessments and Response Actions

Documentation and analytical results collected during this project will be evaluated to determine the compliance status as it applies to the facility's requirements under RCRA. Results of this evaluation will determine what action, if any, the Agency should take in response to any Areas of Concern identified during the inspection. The magnitude and breadth of any concerns identified will determine the appropriate response on the part of the Agency which includes but is not limited to the issuance of administrative orders, administrative penalty orders, or judicial referral.

C.2 Reports to Management

This project will result in the generation of an inspection report which will include an inspection narrative, a photographic log, documents collected during the inspection, and analytical reports for all samples collected, if any.

SECTION D – DATA VALIDATION AND USABILITY

D.1 Data Review, Verification, and Validation

Data will be accepted if they meet the following criteria:

1. Field logs are complete.
2. Prior to releasing the analytical data, the laboratory staff well review both the sample and QC data to verify sample identity, instrument calibration, quantitation limits, dilution factors, numerical computations, accuracy of transcriptions, and chemical interpretations. In addition, the QC data are tabulated and the results reviewed to ascertain whether they were within the project-required limits for accuracy and precision. Any non-conforming data will be discussed in the data package case narrative. If necessary, qualifiers are applied based on this information. The laboratory staff review will consist of a Peer review, a Senior Chemist review, a Point of Contact review, and a QA Officer review. The review will follow the US EPA National Functional Guidelines for Organic Methods Data Review (SOM02.2), US EPA National Functional Guidelines for Inorganic Data Review (ISM02.2).
3. Field data is reviewed to ensure that they are complete; that sample collection information is thoroughly documented; and that any deviations from the QAPP are noted.
4. Actual sampling locations is documented in the inspection logbook. Locations were determined using GPS instrumentation, linear measurements, and/or photographic references.
5. Sample handling procedures are documented on chain of custody forms.

Any deviations from the QAPP are to be reported in the field logs. The Lead Inspector/Project Manager will verify the contents of these logs. If the data fails to meet the criteria they will be flagged as estimated. Any flagged data will be discussed with management to determine if the data point will be rejected and re-sampling done.

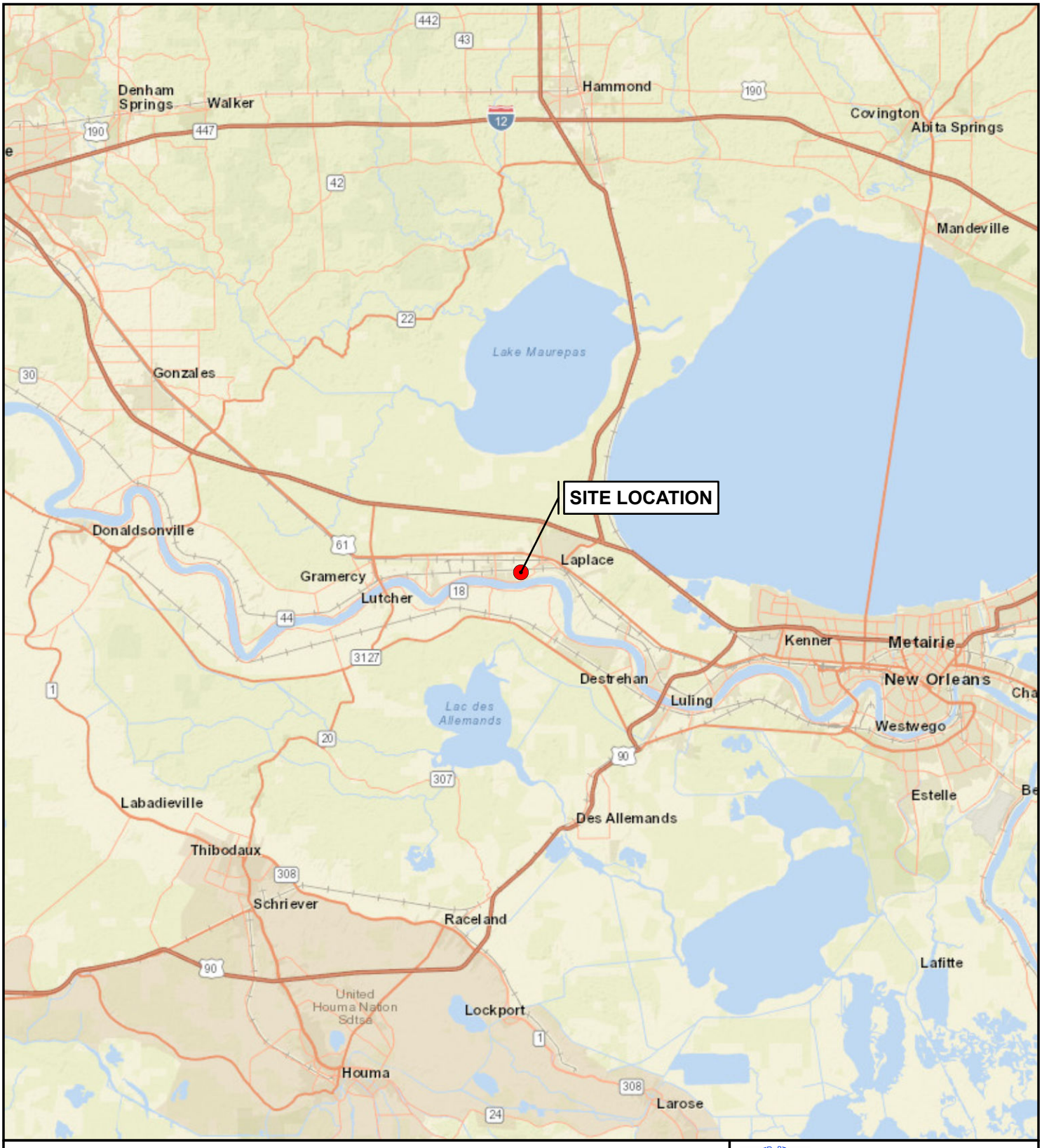
D.2 Verification and Validation Methods

Field data will be validated by the Lead Inspector/Project Manager, and any problems identified during this project will be documented in the field logs. The laboratory supervisor will validate laboratory data according to methods established in their QA Plan.
The Lead Inspector/Project Manager will review and verify field logs and analytical data reports. Any problems or deviations identified will be discussed with the project team and the first-line supervisor to determine corrective action measures.

D.3 Reconciliation with User Requirements

The designated laboratory will provide a final laboratory report along with the supporting electronic data in a usable spreadsheet format. All laboratory bench sheets and equipment calibrations will be maintained by the designated laboratory and will be available upon request. The data will be used to support any future enforcement actions or litigation.

APPENDIX A: FACILITY MAP



LEGEND

- SITE LOCATION

0 10 20

SCALE IN MILES

SOURCE: WORLD STREET MAPS; ESRI
TDD:
SSID:
NRC:

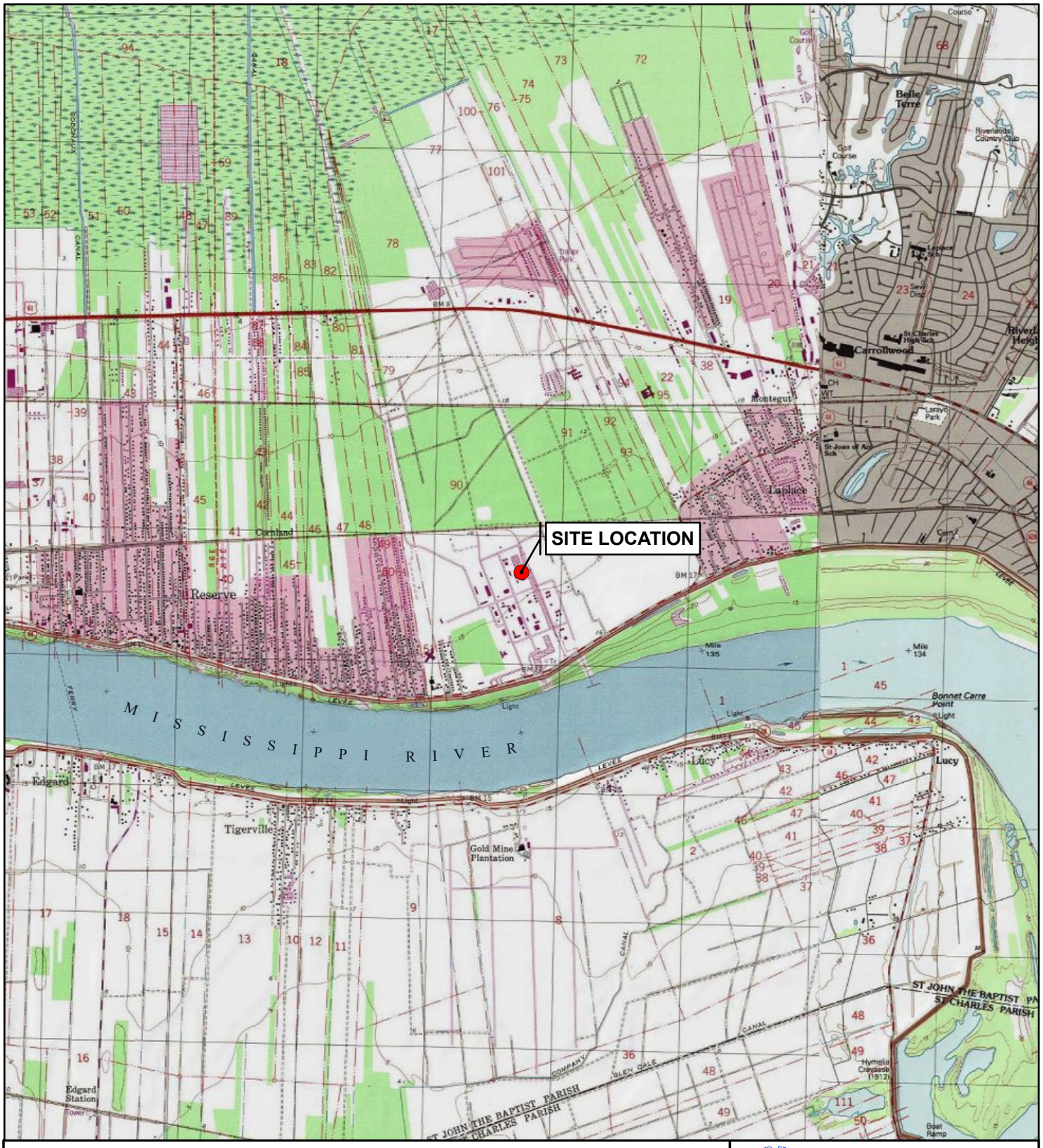
US EPA REGION 6

ATTACHMENT A

SITE LOCATION MAP
RCRA DENKA SUPPORT
LATITUDE: 30.05888° N
LONGITUDE: 90.52426° W
RESERVE, ST. JOHN THE BAPTIST PARISH, LOUISIANA

DATE	PROJECT NO	SCALE
APRIL 2022		AS SHOWN

FILE: \\nasatxgis1\ATX_GIS_Data\EPA\Region 6 START IV\Superfund\RCRA Denka Support\pro\RCRA Denka Support\RCRA Denka Support.aprx 4:41 PM 4/28/2022 covasj



LEGEND

- SITE LOCATION

0 4,000 8,000

SCALE IN FEET

SOURCE: NATIONAL GEOGRAPHIC TOPO; ESRI
TDD:
SSID:
NRC:

US EPA REGION 6

ATTACHMENT B

SITE AREA MAP
RCRA DENKA SUPPORT
LATITUDE: 30.05888° N
LONGITUDE: 90.52426° W
RESERVE, ST. JOHN THE BAPTIST PARISH, LOUISIANA

DATE	PROJECT NO	SCALE
APRIL 2022		AS SHOWN

FILE: \\nasatxgis1\ATX_GIS_Data\EPA\Region 6 START IV\Superfund\RCRA Denka Support\pro\RCRA Denka Support\RCRA Denka Support.aprx 4:51 PM 4/28/2022 covasj

LEGEND

- BRINE PIT
- EQUIPMENT STORAGE AWNING
- POLY BUILDING
- WASTE NEOPRENE ROLL-OFF CONTAINER

0 40 80

SCALE IN FEET

SOURCE: ©NEARMAP IMAGERY; 2022
TDD:
SSID:
NRC:

US EPA REGION 6

ATTACHMENT C

SITE LAYOUT MAP
RCRA DENKA SUPPORT
LATITUDE: 30.05888° N
LONGITUDE: 90.52426° W
RESERVE, ST. JOHN THE BAPTIST PARISH, LOUISIANA

DATE	PROJECT NO	SCALE
APRIL 2022		AS SHOWN

FILE: \\nasatxgis1\ATX_GIS_Data\EPA\Region 6 START IV\Superfund\RCRA Denka Support\pro\RCRA Denka Support\RCRA Denka Support.aprx 4:47 PM 4/28/2022 covasj

ATTACHMENT F

Air Analytical Results Table

Attachment F
Summary of Air Analytical Data
ECAD - Denka Enforcement Multimedia Sampling

				Station	DR-A-BD	DR-A-BK	DR-A-BU	DR-A-KD	DR-A-KD	DR-A-KP	DR-A-KT	DR-A-PU
				Sample ID	DR-A-BD-05052022-01	DR-A-BK-05052022-01	DR-A-BU-05052022-01	DR-A-KD-05052022-02 D2	DR-A-KD-050522-01 D1	DR-A-KP-05052022-01	DR-A-KT-05052022-01	DR-A-PU-05052022-01
				Date	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022
Analyte	CAS.NO	Units	Type		FS	FS	FS	FD	FS	FS	FS	FS
TO-15												
1,1,1-Trichloroethane	71-55-6	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	79-34-5	ug/m3	--		9.56 U	16.2 U	11.9 U	8.53 U	7.43 U	9.22 U	6.47 U	10.6 U
1,1,2-Trichloroethane	79-00-5	ug/m3	--		ND	6.4 U	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	75-35-4	ug/m3	--		ND	ND	ND	ND	ND	4.89 U	ND	ND
1,2,4-Trichlorobenzene	120-82-1	ug/m3	--		66.4 U	120 U	89.2 U	45.7 U	51.2 U	55.8 U	41.9 U	132 U
1,2,4-Trimethylbenzene	95-63-6	ug/m3	--		18.3 U	31.7 U	27.6 U	ND	ND	ND	ND	26.3 U
1,2-Dibromoethane	106-93-4	ug/m3	--		ND	12.5 U	10.4 U	ND	ND	ND	ND	6.89 U
1,2-Dichloroethane	107-06-2	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	78-87-5	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	108-67-8	ug/m3	--		7 U	13.7 U	9.46 U	4.93 U	5.76 U	6.31 U	5.91 U	9.36 U
1,3-Butadiene	106-99-0	ug/m3	--		ND	ND	15.7 U	10.9 U	9.91 U	18.2 U	16.6 U	15.4 U
Acetonitrile	75-05-8	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
Acetylene	74-86-2	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	107-02-8	ug/m3	--		59 U	85.2 U	49.6 U	186 U	172 U	120 U	157 U	133 U
Acrylonitrile	107-13-1	ug/m3	--		ND	6.55 U	4.46 U	ND	ND	ND	ND	ND
Benzene	71-43-2	ug/m3	--		23.5 U	22.2 U	25.3 U	24.8 U	25.9 U	24.9 U	27.9 U	20.8 U
Bromochloromethane	74-97-5	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	75-27-4	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	75-25-2	ug/m3	--		8.66 U	15.6 U	12 U	8.03 U	6.85 U	6.86 U	6.23 U	10.7 U
Bromomethane	74-83-9	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	75-15-0	ug/m3	--		ND	ND	22.4 U	ND	18.5 U	ND	15 U	8.99 U
Carbon Tetrachloride	56-23-5	ug/m3	--		ND	ND	ND	ND	ND	2.28 U	ND	ND
Chlorobenzene	108-90-7	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	75-00-3	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	67-66-3	ug/m3	--		ND	4.33 U	4.89 U	5.24 U	4.82 U	17.9 U	25.7 U	3.65 U
Chloromethane	74-87-3	ug/m3	--		15.8 U	13 U	17.5 U	19 U	15 U	14.3 U	17.7 U	15.6 U
Chloroprene	126-99-8	ug/m3	--		**969 D**	**1050 D**	**10200 D**	**18400 D**	**19000 D**	**193000 D**	**243000 D**	**4390 D**
cis-1,2-Dichloroethylene	156-59-2	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	10061-01-5	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	124-48-1	ug/m3	--		ND	7.98 U	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	75-71-8	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane	75-09-2	ug/m3	--		ND	4.39 U	ND	ND	ND	4.49 U	ND	ND
Dichlorotetrafluoroethane	76-14-2	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Acrylate	140-88-5	ug/m3	--		ND	ND	ND	ND	ND	ND	ND	ND

Attachment F
Summary of Air Analytical Data
ECAD - Denka Enforcement Multimedia Sampling

			Station	DR-A-BD	DR-A-BK	DR-A-BU	DR-A-KD	DR-A-KD	DR-A-KP	DR-A-KT	DR-A-PU
			Sample ID	DR-A-BD-05052022-01	DR-A-BK-05052022-01	DR-A-BU-05052022-01	DR-A-KD-05052022-02 D2	DR-A-KD-050522-01 D1	DR-A-KP-05052022-01	DR-A-KT-05052022-01	DR-A-PU-05052022-01
			Date	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022
Analyte	CAS.NO	Units	Type	FS	FS	FS	FD	FS	FS	FS	FS
Ethyl tert-Butyl Ether	637-92-3	ug/m3	--	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	100-41-4	ug/m3	--	4.11 U	7.75 U	5.4 U	5.48 U	4.92 U	4.44 U	3.79 U	4.74 U
Ethylene oxide	75-21-8	ug/m3	--	12.7 U	ND	ND	ND	ND	ND	ND	ND
Hexachloro-1,3-butadiene	87-68-3	ug/m3	--	101 U	187 U	128 U	64.5 U	66.3 U	91.5 U	61.2 U	277 U
m,p-Xylene	108-38-3, 106-42-3	ug/m3	--	ND	16.9 U	12.9 U	10.5 U	10.1 U	9.79 U	7.83 U	11 U
m-Dichlorobenzene	541-73-1	ug/m3	--	12.4 U	27.1 U	18.9 U	9.34 U	10 U	10.1 U	9.4 U	17.8 U
Methyl Isobutyl Ketone	108-10-1	ug/m3	--	22.3 U	20.7 U	18.5 U	17.5 U	14 U	13.8 U	21.2 U	18.1 U
Methyl Methacrylate	80-62-6	ug/m3	--	0 CE, U	0 CE, U	0 CE, U	0 CE, U	0 CE, U	0 CE, U	0 CE, U	ND
Methyl tert-Butyl Ether	1634-04-4	ug/m3	--	ND	ND	ND	ND	ND	ND	ND	ND
n-Octane	111-65-9	ug/m3	--	ND	ND	ND	ND	ND	ND	ND	ND
o-Dichlorobenzene	95-50-1	ug/m3	--	16.4 U	33.5 U	29.3 U	11.4 U	13 U	13.1 U	14.1 U	26.6 U
o-Xylene	95-47-6	ug/m3	--	4.66 U	8.57 U	6.57 U	4.92 U	4.19 U	4.53 U	3.79 U	5.92 U
p-Dichlorobenzene	106-46-7	ug/m3	--	14.1 U	29.2 U	20.2 U	10.1 U	11.3 U	10.5 U	10.5 U	19.5 U
Propylene	115-07-1	ug/m3	--	71.9 U	63.8 U	65.9 U	69.2 U	68.3 U	65.2 U	73.6 U	62.3 U
Styrene	100-42-5	ug/m3	--	5.59 U	9.69 U	7.6 U	4.48 U	4.87 U	4.31 U	4.31 U	7 U
tert-Amyl Methyl Ether	994-05-8	ug/m3	--	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	127-18-4	ug/m3	--	ND	6.62 U	5.93 U	ND	ND	ND	ND	ND
Toluene	108-88-3	ug/m3	--	**217 D**	**4720 D**	**914 D**	**9890 D**	**10300 D**	**10500 D**	**5820 D**	**774 D**
trans-1,2-Dichloroethylene	156-60-5	ug/m3	--	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	10061-02-6	ug/m3	--	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	79-01-6	ug/m3	--	24.8 U	21.9 U	24.4 U	24.7 U	25 U	ND	ND	24.1 U
Trichlorofluoromethane	75-69-4	ug/m3	--	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorotrifluoroethane	76-13-1	ug/m3	--	ND	19.4 U	21 U	21.7 U	18.3 U	19.8 U	18.2 U	19.7 U
Vinyl chloride	75-01-4	ug/m3	--	ND	ND	ND	ND	ND	ND	ND	ND

Notes
FS - Field Sample
FD = Field Duplicate
CAS.No = Chemical Abstract System Registry Number
ug/m3 = micrograms per cubic meter
ND = Indicates the compound was analyzed for, but not detected
U = Under detection Limit
D = Resullt obtained by dilution
BOLD = analyte was detected

ATTACHMENT G

Air Analytical Results – Laboratory Deliverable

Eastern Research Group
601 Keystone Park Drive
Suite 700
Morrisville, NC 27560

June 07, 2022

Shaun Burke
OECA
2890 Woodbridge Avenue
Edison, NJ 08837
Project Name: Denka

Dear Shaun Burke,

This report contains the analytical results for the sample(s) received under chain(s) of custody by Eastern Research Group on 05/09/22 10:03.

Values below the MDL for QC results in this report are recorded as ND, however the actual values are reported in the accompanying Excel report with a "U" flag (Under the detection limit). The actual values are reported in AQS.

This test is accredited under the 2016 TNI Standard for Environmental Laboratories (FL DOH Certification # E87673). All analyses were performed as described in the US EPA-approved QAPP, under the contract for UATMP, NATTS, CSATAM, PAMS and NMOC support (US EPA Contract No. EP-D-14-030). This cover page is an integral part of this report, and any exceptions or comments are noted on the last page.

Release of the data contained in this data package and in the data submitted in the electronic data deliverable, has been authorized by the Program Manager, or the Program Manager's designee as verified by the following signature.

The issuance of the final Certificate of Analysis takes precedence over any previous Report. If you have any questions, please contact me at 919-468-7872.

Sincerely,

Randolph Bower
TO-15 Task Lead
randy.bower@erg.com

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

ANALYTICAL REPORT FOR SAMPLES

SampleName	LabNumber	Matrix	Sampled	Received
DR-A-KT-05052022-01	2050917-01	Air	05/05/22 17:06	05/09/22 10:03
DR-A-KD-050522-01 D1	2050917-02	Air	05/05/22 17:05	05/09/22 10:03
DR-A-BK-05052022-01	2050917-03	Air	05/05/22 16:05	05/09/22 10:03
DR-A-KP-05052022-01	2050917-04	Air	05/05/22 17:04	05/09/22 10:03
DR-A-KD-05052022-02 D2	2050917-05	Air	05/05/22 17:05	05/09/22 10:03
DR-A-BU-05052022-01	2050917-06	Air	05/05/22 16:31	05/09/22 10:03
DR-A-PU-05052022-01	2050917-07	Air	05/05/22 17:03	05/09/22 10:03
DR-A-BD-05052022-01	2050917-08	Air	05/05/22 16:31	05/09/22 10:03

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-KT-05052022-01 **Lab ID:** 2050917-01 **Sampled:** 05/05/22 17:06
Pressure @ Receipt: 6.50 "Hg **Canister #:** SAT070 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/14/22 01:03

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Acetylene	ND	ND	U	138
Propylene	42.7	73.60	U	43.3
Dichlorodifluoromethane	ND	ND	U	17.1
Chloromethane	8.53	17.70	U	35.8
Dichlorotetrafluoroethane	ND	ND	U	10.4
Vinyl chloride	ND	ND	U	9.88
1,3-Butadiene	7.48	16.60	U	26.0
Ethylene oxide	ND	ND	U	60.3
Bromomethane	ND	ND	U	25.7
Chloroethane	ND	ND	U	20.6
Acetonitrile	ND	ND	U	173
Acrolein	68.4	157.00	U	222
Trichlorofluoromethane	ND	ND	U	29.5
Acrylonitrile	ND	ND	U	21.1
1,1-Dichloroethene	ND	ND	U	14.4
Dichloromethane	ND	ND	U	249
Carbon Disulfide	4.81	15.00	U	17.8
Trichlorotrifluoroethane	2.37	18.20	U	11.4
trans-1,2-Dichloroethylene	ND	ND	U	10.9
1,1-Dichloroethane	ND	ND	U	9.85
Methyl tert-Butyl Ether	ND	ND	U	8.43
Chloroprene	**66900**	**243,000.00**	D	**702**
cis-1,2-Dichloroethylene	ND	ND	U	28.6
Bromochloromethane	ND	ND	U	9.51
Chloroform	5.25	25.70	U	9.56
Ethyl tert-Butyl Ether	ND	ND	U	8.53
1,2-Dichloroethane	ND	ND	U	8.93
1,1,1-Trichloroethane	ND	ND	U	14.9
Benzene	8.71	27.90	U	12.9
Carbon Tetrachloride	ND	ND	U	14.1
tert-Amyl Methyl Ether	ND	ND	U	10.5
1,2-Dichloropropane	ND	ND	U	11.4
Ethyl Acrylate	ND	ND	U	16.6
Bromodichloromethane	ND	ND	U	31.9
Trichloroethylene	ND	ND	U	15.4
Methyl Methacrylate	ND	ND	CE, U	83.8
cis-1,3-Dichloropropene	ND	ND	U	8.78
Methyl Isobutyl Ketone	5.16	21.20	U	38.7
trans-1,3-Dichloropropene	ND	ND	U	12.4
1,1,2-Trichloroethane	ND	ND	U	11.8

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-KT-05052022-01 **Lab ID:** 2050917-01 **Sampled:** 05/05/22 17:06
Pressure @ Receipt: 6.50 "Hg **Canister #:** SAT070 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/14/22 01:03

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Toluene	**1540**	**5,820.00**	D	**49.4**
Dibromochloromethane	ND	ND	U	11.0
1,2-Dibromoethane	ND	ND	U	13.8
n-Octane	ND	ND	U	18.1
Tetrachloroethylene	ND	ND	U	36.0
Chlorobenzene	ND	ND	U	13.1
Ethylbenzene	0.870	3.79	U	14.1
m,p-Xylene	1.80	7.83	U	40.2
Bromoform	0.601	6.23	U	13.7
Styrene	1.01	4.31	U	14.8
1,1,2,2-Tetrachloroethane	0.941	6.47	U	11.9
o-Xylene	0.870	3.79	U	19.3
1,3,5-Trimethylbenzene	1.20	5.91	U	18.6
1,2,4-Trimethylbenzene	ND	ND	U	14.3
m-Dichlorobenzene	1.56	9.40	U	20.3
p-Dichlorobenzene	1.74	10.50	U	21.2
o-Dichlorobenzene	2.34	14.10	U	23.5
1,2,4-Trichlorobenzene	5.63	41.90	U	78.2
Hexachloro-1,3-butadiene	5.73	61.20	U	92.4

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-KD-050522-01 D1 **Lab ID:** 2050917-02 **Sampled:** 05/05/22 17:05
Pressure @ Receipt: 6.50 "Hg **Canister #:** SAT094 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 22:57

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Acetylene	ND	ND	U	138
Propylene	39.6	68.30	U	43.2
Dichlorodifluoromethane	ND	ND	U	17.0
Chloromethane	7.23	15.00	U	35.7
Dichlorotetrafluoroethane	ND	ND	U	10.3
Vinyl chloride	ND	ND	U	9.85
1,3-Butadiene	4.47	9.91	U	25.9
Ethylene oxide	ND	ND	U	60.0
Bromomethane	ND	ND	U	25.6
Chloroethane	ND	ND	U	20.5
Acetonitrile	ND	ND	U	173
Acrolein	75.0	172.00	U	221
Trichlorofluoromethane	ND	ND	U	29.4
Acrylonitrile	ND	ND	U	21.0
1,1-Dichloroethene	ND	ND	U	14.4
Dichloromethane	ND	ND	U	248
Carbon Disulfide	5.94	18.50	U	17.8
Trichlorotrifluoroethane	2.38	18.30	U	11.4
trans-1,2-Dichloroethylene	ND	ND	U	10.8
1,1-Dichloroethane	ND	ND	U	9.81
Methyl tert-Butyl Ether	ND	ND	U	8.39
Chloroprene	**5240**	**19,000.00**	D	**26.6**
cis-1,2-Dichloroethylene	ND	ND	U	28.5
Bromochloromethane	ND	ND	U	9.47
Chloroform	0.986	4.82	U	9.52
Ethyl tert-Butyl Ether	ND	ND	U	8.49
1,2-Dichloroethane	ND	ND	U	8.89
1,1,1-Trichloroethane	ND	ND	U	14.9
Benzene	8.09	25.90	U	12.9
Carbon Tetrachloride	ND	ND	U	14.0
tert-Amyl Methyl Ether	ND	ND	U	10.4
1,2-Dichloropropane	ND	ND	U	11.3
Ethyl Acrylate	ND	ND	U	16.5
Bromodichloromethane	ND	ND	U	31.8
Trichloroethylene	4.64	25.00	U	15.4
Methyl Methacrylate	ND	ND	CE, U	83.4
cis-1,3-Dichloropropene	ND	ND	U	8.74
Methyl Isobutyl Ketone	3.42	14.00	U	38.5
trans-1,3-Dichloropropene	ND	ND	U	12.3
1,1,2-Trichloroethane	ND	ND	U	11.8

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-KD-050522-01 D1 **Lab ID:** 2050917-02 **Sampled:** 05/05/22 17:05
Pressure @ Receipt: 6.50 "Hg **Canister #:** SAT094 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 22:57

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Toluene	**2720**	**10,300.00**	D	**49.2**
Dibromochloromethane	ND	ND	U	10.9
1,2-Dibromoethane	ND	ND	U	13.8
n-Octane	ND	ND	U	18.0
Tetrachloroethylene	ND	ND	U	35.9
Chlorobenzene	ND	ND	U	13.0
Ethylbenzene	1.13	4.92	U	14.0
m,p-Xylene	2.32	10.10	U	40.0
Bromoform	0.661	6.85	U	13.6
Styrene	1.14	4.87	U	14.8
1,1,2,2-Tetrachloroethane	1.08	7.43	U	11.8
o-Xylene	0.964	4.19	U	19.3
1,3,5-Trimethylbenzene	1.17	5.76	U	18.5
1,2,4-Trimethylbenzene	ND	ND	U	14.3
m-Dichlorobenzene	1.66	10.00	U	20.3
p-Dichlorobenzene	1.87	11.30	U	21.1
o-Dichlorobenzene	2.15	13.00	U	23.4
1,2,4-Trichlorobenzene	6.89	51.20	U	77.9
Hexachloro-1,3-butadiene	6.20	66.30	U	92.1

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-BK-05052022-01 **Lab ID:** 2050917-03 **Sampled:** 05/05/22 16:05
Pressure @ Receipt: 4.50 "Hg **Canister #:** 5015 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 15:37

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Acetylene	ND	ND	U	121
Propylene	37.0	63.80	U	38.1
Dichlorodifluoromethane	ND	ND	U	15.0
Chloromethane	6.29	13.00	U	31.4
Dichlorotetrafluoroethane	ND	ND	U	9.12
Vinyl chloride	ND	ND	U	8.68
1,3-Butadiene	ND	ND	U	22.8
Ethylene oxide	ND	ND	U	52.9
Bromomethane	ND	ND	U	22.6
Chloroethane	ND	ND	U	18.1
Acetonitrile	ND	ND	U	152
Acrolein	37.1	85.20	U	195
Trichlorofluoromethane	ND	ND	U	25.9
Acrylonitrile	3.01	6.55	U	18.5
1,1-Dichloroethene	ND	ND	U	12.7
Dichloromethane	1.26	4.39	U	218
Carbon Disulfide	ND	ND	U	15.7
Trichlorotrifluoroethane	2.52	19.40	U	10.0
trans-1,2-Dichloroethylene	ND	ND	U	9.55
1,1-Dichloroethane	ND	ND	U	8.65
Methyl tert-Butyl Ether	ND	ND	U	7.40
Chloroprene	**290**	**1,050.00**	D	**23.5**
cis-1,2-Dichloroethylene	ND	ND	U	25.1
Bromochloromethane	ND	ND	U	8.35
Chloroform	0.884	4.33	U	8.39
Ethyl tert-Butyl Ether	ND	ND	U	7.49
1,2-Dichloroethane	ND	ND	U	7.84
1,1,1-Trichloroethane	ND	ND	U	13.1
Benzene	6.95	22.20	U	11.4
Carbon Tetrachloride	ND	ND	U	12.4
tert-Amyl Methyl Ether	ND	ND	U	9.21
1,2-Dichloropropane	ND	ND	U	9.99
Ethyl Acrylate	ND	ND	U	14.6
Bromodichloromethane	ND	ND	U	28.0
Trichloroethylene	4.06	21.90	U	13.6
Methyl Methacrylate	ND	ND	CE, U	73.6
cis-1,3-Dichloropropene	ND	ND	U	7.71
Methyl Isobutyl Ketone	5.05	20.70	U	34.0
trans-1,3-Dichloropropene	ND	ND	U	10.9
1,1,2-Trichloroethane	1.17	6.40	U	10.4

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-BK-05052022-01 **Lab ID:** 2050917-03 **Sampled:** 05/05/22 16:05
Pressure @ Receipt: 4.50 "Hg **Canister #:** 5015 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 15:37

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Toluene	**1250**	**4,720.00**	D	**43.3**
Dibromochloromethane	0.935	7.98	U	9.63
1,2-Dibromoethane	1.63	12.50	U	12.1
n-Octane	ND	ND	U	15.9
Tetrachloroethylene	0.974	6.62	U	31.7
Chlorobenzene	ND	ND	U	11.5
Ethylbenzene	1.78	7.75	U	12.4
m,p-Xylene	3.89	16.90	U	35.3
Bromoform	1.51	15.60	U	12.0
Styrene	2.27	9.69	U	13.0
1,1,2,2-Tetrachloroethane	2.36	16.20	U	10.4
o-Xylene	1.97	8.57	U	17.0
1,3,5-Trimethylbenzene	2.79	13.70	U	16.3
1,2,4-Trimethylbenzene	6.43	31.70	U	12.6
m-Dichlorobenzene	4.50	27.10	U	17.9
p-Dichlorobenzene	4.84	29.20	U	18.6
o-Dichlorobenzene	5.56	33.50	U	20.6
1,2,4-Trichlorobenzene	16.1	120.00	U	68.7
Hexachloro-1,3-butadiene	17.5	187.00	U	81.2

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-KP-05052022-01 **Lab ID:** 2050917-04 **Sampled:** 05/05/22 17:04
Pressure @ Receipt: 5.50 "Hg **Canister #:** 5040 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 19:48

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Acetylene	ND	ND	U	133
Propylene	37.8	65.20	U	41.6
Dichlorodifluoromethane	ND	ND	U	16.4
Chloromethane	6.89	14.30	U	34.3
Dichlorotetrafluoroethane	ND	ND	U	9.97
Vinyl chloride	ND	ND	U	9.48
1,3-Butadiene	8.19	18.20	U	24.9
Ethylene oxide	ND	ND	U	57.8
Bromomethane	ND	ND	U	24.7
Chloroethane	ND	ND	U	19.8
Acetonitrile	ND	ND	U	166
Acrolein	52.4	120.00	U	213
Trichlorofluoromethane	ND	ND	U	28.3
Acrylonitrile	ND	ND	U	20.2
1,1-Dichloroethene	1.23	4.89	U	13.9
Dichloromethane	1.29	4.49	U	239
Carbon Disulfide	ND	ND	U	17.1
Trichlorotrifluoroethane	2.58	19.80	U	11.0
trans-1,2-Dichloroethylene	ND	ND	U	10.4
1,1-Dichloroethane	ND	ND	U	9.45
Methyl tert-Butyl Ether	ND	ND	U	8.09
Chloroprene	**53100**	**193,000.00**	D	**128**
cis-1,2-Dichloroethylene	ND	ND	U	27.5
Bromochloromethane	ND	ND	U	9.12
Chloroform	3.66	17.90	U	9.17
Ethyl tert-Butyl Ether	ND	ND	U	8.18
1,2-Dichloroethane	ND	ND	U	8.57
1,1,1-Trichloroethane	ND	ND	U	14.3
Benzene	7.77	24.90	U	12.4
Carbon Tetrachloride	0.362	2.28	U	13.5
tert-Amyl Methyl Ether	ND	ND	U	10.1
1,2-Dichloropropane	ND	ND	U	10.9
Ethyl Acrylate	ND	ND	U	15.9
Bromodichloromethane	ND	ND	U	30.6
Trichloroethylene	ND	ND	U	14.8
Methyl Methacrylate	ND	ND	CE, U	80.4
cis-1,3-Dichloropropene	ND	ND	U	8.42
Methyl Isobutyl Ketone	3.37	13.80	U	37.1
trans-1,3-Dichloropropene	ND	ND	U	11.9
1,1,2-Trichloroethane	ND	ND	U	11.4

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-KP-05052022-01 **Lab ID:** 2050917-04 **Sampled:** 05/05/22 17:04
Pressure @ Receipt: 5.50 "Hg **Canister #:** 5040 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 19:48

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Toluene	**2780**	**10,500.00**	D	**47.4**
Dibromochloromethane	ND	ND	U	10.5
1,2-Dibromoethane	ND	ND	U	13.3
n-Octane	ND	ND	U	17.4
Tetrachloroethylene	ND	ND	U	34.6
Chlorobenzene	ND	ND	U	12.5
Ethylbenzene	1.02	4.44	U	13.5
m,p-Xylene	2.25	9.79	U	38.6
Bromoform	0.662	6.86	U	13.1
Styrene	1.01	4.31	U	14.2
1,1,2,2-Tetrachloroethane	1.34	9.22	U	11.4
o-Xylene	1.04	4.53	U	18.6
1,3,5-Trimethylbenzene	1.28	6.31	U	17.8
1,2,4-Trimethylbenzene	ND	ND	U	13.7
m-Dichlorobenzene	1.68	10.10	U	19.5
p-Dichlorobenzene	1.74	10.50	U	20.4
o-Dichlorobenzene	2.17	13.10	U	22.5
1,2,4-Trichlorobenzene	7.51	55.80	U	75.1
Hexachloro-1,3-butadiene	8.56	91.50	U	88.7

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-KD-05052022-02 D2 **Lab ID:** 2050917-05 **Sampled:** 05/05/22 17:05
Pressure @ Receipt: 7.50 "Hg **Canister #:** 5025 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 20:51

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Acetylene	ND	ND	U	144
Propylene	40.1	69.20	U	45.0
Dichlorodifluoromethane	ND	ND	U	17.7
Chloromethane	9.19	19.00	U	37.2
Dichlorotetrafluoroethane	ND	ND	U	10.8
Vinyl chloride	ND	ND	U	10.3
1,3-Butadiene	4.90	10.90	U	27.0
Ethylene oxide	ND	ND	U	62.6
Bromomethane	ND	ND	U	26.8
Chloroethane	ND	ND	U	21.4
Acetonitrile	ND	ND	U	180
Acrolein	80.8	186.00	U	231
Trichlorofluoromethane	ND	ND	U	30.7
Acrylonitrile	ND	ND	U	21.9
1,1-Dichloroethene	ND	ND	U	15.0
Dichloromethane	ND	ND	U	258
Carbon Disulfide	ND	ND	U	18.5
Trichlorotrifluoroethane	2.83	21.70	U	11.9
trans-1,2-Dichloroethylene	ND	ND	U	11.3
1,1-Dichloroethane	ND	ND	U	10.2
Methyl tert-Butyl Ether	ND	ND	U	8.76
Chloroprene	**5070**	**18,400.00**	D	**27.8**
cis-1,2-Dichloroethylene	ND	ND	U	29.8
Bromochloromethane	ND	ND	U	9.88
Chloroform	1.07	5.24	U	9.93
Ethyl tert-Butyl Ether	ND	ND	U	8.86
1,2-Dichloroethane	ND	ND	U	9.28
1,1,1-Trichloroethane	ND	ND	U	15.5
Benzene	7.76	24.80	U	13.4
Carbon Tetrachloride	ND	ND	U	14.6
tert-Amyl Methyl Ether	ND	ND	U	10.9
1,2-Dichloropropane	ND	ND	U	11.8
Ethyl Acrylate	ND	ND	U	17.2
Bromodichloromethane	ND	ND	U	33.1
Trichloroethylene	4.58	24.70	U	16.1
Methyl Methacrylate	ND	ND	CE, U	87.0
cis-1,3-Dichloropropene	ND	ND	U	9.12
Methyl Isobutyl Ketone	4.27	17.50	U	40.2
trans-1,3-Dichloropropene	ND	ND	U	12.9
1,1,2-Trichloroethane	ND	ND	U	12.3

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-KD-05052022-02 D2 **Lab ID:** 2050917-05 **Sampled:** 05/05/22 17:05
Pressure @ Receipt: 7.50 "Hg **Canister #:** 5025 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 20:51

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Toluene	**2620**	**9,890.00**	D	**51.3**
Dibromochloromethane	ND	ND	U	11.4
1,2-Dibromoethane	ND	ND	U	14.4
n-Octane	ND	ND	U	18.8
Tetrachloroethylene	ND	ND	U	37.5
Chlorobenzene	ND	ND	U	13.6
Ethylbenzene	1.26	5.48	U	14.6
m,p-Xylene	2.41	10.50	U	41.8
Bromoform	0.775	8.03	U	14.2
Styrene	1.05	4.48	U	15.4
1,1,2,2-Tetrachloroethane	1.24	8.53	U	12.3
o-Xylene	1.13	4.92	U	20.1
1,3,5-Trimethylbenzene	1.00	4.93	U	19.3
1,2,4-Trimethylbenzene	ND	ND	U	14.9
m-Dichlorobenzene	1.55	9.34	U	21.1
p-Dichlorobenzene	1.68	10.10	U	22.1
o-Dichlorobenzene	1.90	11.40	U	24.4
1,2,4-Trichlorobenzene	6.15	45.70	U	81.3
Hexachloro-1,3-butadiene	6.04	64.50	U	96.0

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-BU-05052022-01 **Lab ID:** 2050917-06 **Sampled:** 05/05/22 16:31
Pressure @ Receipt: 6.50 "Hg **Canister #:** SAT120 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 16:40

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Acetylene	ND	ND	U	139
Propylene	38.2	65.90	U	43.7
Dichlorodifluoromethane	ND	ND	U	17.2
Chloromethane	8.48	17.50	U	36.1
Dichlorotetrafluoroethane	ND	ND	U	10.5
Vinyl chloride	ND	ND	U	9.97
1,3-Butadiene	7.08	15.70	U	26.2
Ethylene oxide	ND	ND	U	60.8
Bromomethane	ND	ND	U	26.0
Chloroethane	ND	ND	U	20.8
Acetonitrile	ND	ND	U	175
Acrolein	21.6	49.60	U	224
Trichlorofluoromethane	ND	ND	U	29.8
Acrylonitrile	2.05	4.46	U	21.3
1,1-Dichloroethene	ND	ND	U	14.6
Dichloromethane	ND	ND	U	251
Carbon Disulfide	7.17	22.40	U	18.0
Trichlorotrifluoroethane	2.73	21.00	U	11.5
trans-1,2-Dichloroethylene	ND	ND	U	11.0
1,1-Dichloroethane	ND	ND	U	9.93
Methyl tert-Butyl Ether	ND	ND	U	8.50
Chloroprene	**2820**	**10,200.00**	D	**27.0**
cis-1,2-Dichloroethylene	ND	ND	U	28.9
Bromochloromethane	ND	ND	U	9.59
Chloroform	1.00	4.89	U	9.64
Ethyl tert-Butyl Ether	ND	ND	U	8.60
1,2-Dichloroethane	ND	ND	U	9.01
1,1,1-Trichloroethane	ND	ND	U	15.1
Benzene	7.89	25.30	U	13.1
Carbon Tetrachloride	ND	ND	U	14.2
tert-Amyl Methyl Ether	ND	ND	U	10.6
1,2-Dichloropropane	ND	ND	U	11.5
Ethyl Acrylate	ND	ND	U	16.7
Bromodichloromethane	ND	ND	U	32.2
Trichloroethylene	4.54	24.40	U	15.6
Methyl Methacrylate	ND	ND	CE, U	84.5
cis-1,3-Dichloropropene	ND	ND	U	8.86
Methyl Isobutyl Ketone	4.50	18.50	U	39.0
trans-1,3-Dichloropropene	ND	ND	U	12.5
1,1,2-Trichloroethane	ND	ND	U	11.9

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-BU-05052022-01 **Lab ID:** 2050917-06 **Sampled:** 05/05/22 16:31
Pressure @ Receipt: 6.50 "Hg **Canister #:** SAT120 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 16:40

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Toluene	**242**	**914.00**	D	**49.8**
Dibromochloromethane	ND	ND	U	11.1
1,2-Dibromoethane	1.35	10.40	U	13.9
n-Octane	ND	ND	U	18.2
Tetrachloroethylene	0.873	5.93	U	36.4
Chlorobenzene	ND	ND	U	13.2
Ethylbenzene	1.24	5.40	U	14.2
m,p-Xylene	2.97	12.90	U	40.5
Bromoform	1.16	12.00	U	13.8
Styrene	1.78	7.60	U	15.0
1,1,2,2-Tetrachloroethane	1.73	11.90	U	12.0
o-Xylene	1.51	6.57	U	19.5
1,3,5-Trimethylbenzene	1.92	9.46	U	18.8
1,2,4-Trimethylbenzene	5.61	27.60	U	14.4
m-Dichlorobenzene	3.14	18.90	U	20.5
p-Dichlorobenzene	3.35	20.20	U	21.4
o-Dichlorobenzene	4.86	29.30	U	23.7
1,2,4-Trichlorobenzene	12.0	89.20	U	78.9
Hexachloro-1,3-butadiene	12.0	128.00	U	93.3

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-PU-05052022-01 **Lab ID:** 2050917-07 **Sampled:** 05/05/22 17:03
Pressure @ Receipt: 5.50 "Hg **Canister #:** SAT003 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 17:42

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Acetylene	ND	ND	U	135
Propylene	36.1	62.30	U	42.4
Dichlorodifluoromethane	ND	ND	U	16.7
Chloromethane	7.52	15.60	U	35.1
Dichlorotetrafluoroethane	ND	ND	U	10.2
Vinyl chloride	ND	ND	U	9.68
1,3-Butadiene	6.94	15.40	U	25.5
Ethylene oxide	ND	ND	U	59.0
Bromomethane	ND	ND	U	25.2
Chloroethane	ND	ND	U	20.2
Acetonitrile	ND	ND	U	170
Acrolein	57.9	133.00	U	218
Trichlorofluoromethane	ND	ND	U	28.9
Acrylonitrile	ND	ND	U	20.7
1,1-Dichloroethene	ND	ND	U	14.1
Dichloromethane	ND	ND	U	244
Carbon Disulfide	2.88	8.99	U	17.5
Trichlorotrifluoroethane	2.56	19.70	U	11.2
trans-1,2-Dichloroethylene	ND	ND	U	10.7
1,1-Dichloroethane	ND	ND	U	9.64
Methyl tert-Butyl Ether	ND	ND	U	8.25
Chloroprene	**1210**	**4,390.00**	D	**26.2**
cis-1,2-Dichloroethylene	ND	ND	U	28.0
Bromochloromethane	ND	ND	U	9.31
Chloroform	0.747	3.65	U	9.36
Ethyl tert-Butyl Ether	ND	ND	U	8.35
1,2-Dichloroethane	ND	ND	U	8.75
1,1,1-Trichloroethane	ND	ND	U	14.6
Benzene	6.49	20.80	U	12.7
Carbon Tetrachloride	ND	ND	U	13.8
tert-Amyl Methyl Ether	ND	ND	U	10.3
1,2-Dichloropropane	ND	ND	U	11.1
Ethyl Acrylate	ND	ND	U	16.2
Bromodichloromethane	ND	ND	U	31.2
Trichloroethylene	4.48	24.10	U	15.1
Methyl Methacrylate	ND	ND	U	82.0
cis-1,3-Dichloropropene	ND	ND	U	8.60
Methyl Isobutyl Ketone	4.42	18.10	U	37.9
trans-1,3-Dichloropropene	ND	ND	U	12.1
1,1,2-Trichloroethane	ND	ND	U	11.6

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-PU-05052022-01 **Lab ID:** 2050917-07 **Sampled:** 05/05/22 17:03
Pressure @ Receipt: 5.50 "Hg **Canister #:** SAT003 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 17:42

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Toluene	**205**	**774.00**	D	**48.3**
Dibromochloromethane	ND	ND	U	10.7
1,2-Dibromoethane	0.895	6.89	U	13.5
n-Octane	ND	ND	U	17.7
Tetrachloroethylene	ND	ND	U	35.3
Chlorobenzene	ND	ND	U	12.8
Ethylbenzene	1.09	4.74	U	13.8
m,p-Xylene	2.53	11.00	U	39.4
Bromoform	1.03	10.70	U	13.4
Styrene	1.64	7.00	U	14.5
1,1,2,2-Tetrachloroethane	1.54	10.60	U	11.6
o-Xylene	1.36	5.92	U	18.9
1,3,5-Trimethylbenzene	1.90	9.36	U	18.2
1,2,4-Trimethylbenzene	5.33	26.30	U	14.0
m-Dichlorobenzene	2.95	17.80	U	19.9
p-Dichlorobenzene	3.23	19.50	U	20.8
o-Dichlorobenzene	4.41	26.60	U	23.0
1,2,4-Trichlorobenzene	17.8	132.00	U	76.6
Hexachloro-1,3-butadiene	25.9	277.00	U	90.5

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-BD-05052022-01 **Lab ID:** 2050917-08 **Sampled:** 05/05/22 16:31
Pressure @ Receipt: 7.0 "Hg **Canister #:** 5014 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 18:45

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Acetylene	ND	ND	U	145
Propylene	41.7	71.90	U	45.4
Dichlorodifluoromethane	ND	ND	U	17.9
Chloromethane	7.64	15.80	U	37.5
Dichlorotetrafluoroethane	ND	ND	U	10.9
Vinyl chloride	ND	ND	U	10.4
1,3-Butadiene	5.72	12.70	U	27.3
Ethylene oxide	ND	ND	U	63.2
Bromomethane	ND	ND	U	27.0
Chloroethane	ND	ND	U	21.6
Acetonitrile	ND	ND	U	182
Acrolein	25.7	59.00	U	233
Trichlorofluoromethane	ND	ND	U	30.9
Acrylonitrile	ND	ND	U	22.1
1,1-Dichloroethene	ND	ND	U	15.1
Dichloromethane	ND	ND	U	261
Carbon Disulfide	ND	ND	U	18.7
Trichlorotrifluoroethane	ND	ND	U	12.0
trans-1,2-Dichloroethylene	ND	ND	U	11.4
1,1-Dichloroethane	ND	ND	U	10.3
Methyl tert-Butyl Ether	ND	ND	U	8.84
Chloroprene	**267**	**969.00**	D	**28.1**
cis-1,2-Dichloroethylene	ND	ND	U	30.0
Bromochloromethane	ND	ND	U	9.97
Chloroform	ND	ND	U	10.0
Ethyl tert-Butyl Ether	ND	ND	U	8.94
1,2-Dichloroethane	ND	ND	U	9.36
1,1,1-Trichloroethane	ND	ND	U	15.7
Benzene	7.34	23.50	U	13.6
Carbon Tetrachloride	ND	ND	U	14.8
tert-Amyl Methyl Ether	ND	ND	U	11.0
1,2-Dichloropropane	ND	ND	U	11.9
Ethyl Acrylate	ND	ND	U	17.4
Bromodichloromethane	ND	ND	U	33.5
Trichloroethylene	4.61	24.80	U	16.2
Methyl Methacrylate	ND	ND	CE, U	87.8
cis-1,3-Dichloropropene	ND	ND	U	9.21
Methyl Isobutyl Ketone	5.43	22.30	U	40.6
trans-1,3-Dichloropropene	ND	ND	U	13.0
1,1,2-Trichloroethane	ND	ND	U	12.4

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Description: DR-A-BD-05052022-01 **Lab ID:** 2050917-08 **Sampled:** 05/05/22 16:31
Pressure @ Receipt: 7.0 "Hg **Canister #:** 5014 **Received:** 05/09/22 10:03
Comments: **Analyzed:** 05/13/22 18:45

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Toluene	**57.5**	**217.00**	D	**51.8**
Dibromochloromethane	ND	ND	U	11.5
1,2-Dibromoethane	ND	ND	U	14.5
n-Octane	ND	ND	U	19.0
Tetrachloroethylene	ND	ND	U	37.8
Chlorobenzene	ND	ND	U	13.7
Ethylbenzene	0.945	4.11	U	14.8
m,p-Xylene	ND	ND	U	42.1
Bromoform	0.836	8.66	U	14.4
Styrene	1.31	5.59	U	15.5
1,1,2,2-Tetrachloroethane	1.39	9.56	U	12.5
o-Xylene	1.07	4.66	U	20.3
1,3,5-Trimethylbenzene	1.42	7.00	U	19.5
1,2,4-Trimethylbenzene	3.72	18.30	U	15.0
m-Dichlorobenzene	2.06	12.40	U	21.3
p-Dichlorobenzene	2.34	14.10	U	22.3
o-Dichlorobenzene	2.72	16.40	U	24.6
1,2,4-Trichlorobenzene	8.93	66.40	U	82.0
Hexachloro-1,3-butadiene	9.49	101.00	U	96.9

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Air Toxics by EPA Compendium Method TO-15 - Quality Control

Batch B2E1302 - Summa Canister Prep

Blank (B2E1302-BLK1) Prepared & Analyzed: 05/13/22

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Acetylene	ND	ppbv				U
Propylene	ND	ppbv				U
Dichlorodifluoromethane	ND	ppbv				U
Chloromethane	ND	ppbv				U
Dichlorotetrafluoroethane	ND	ppbv				U
Vinyl chloride	ND	ppbv				U
1,3-Butadiene	ND	ppbv				U
Ethylene oxide	ND	ppbv				U
Bromomethane	ND	ppbv				U
Chloroethane	ND	ppbv				U
Acetonitrile	ND	ppbv				U
Acrolein	ND	ppbv				U
Trichlorofluoromethane	ND	ppbv				U
Acrylonitrile	ND	ppbv				U
1,1-Dichloroethene	ND	ppbv				U
Dichloromethane	ND	ppbv				U
Carbon Disulfide	ND	ppbv				U
Trichlorotrifluoroethane	ND	ppbv				U
trans-1,2-Dichloroethylene	ND	ppbv				U
1,1-Dichloroethane	ND	ppbv				U
Methyl tert-Butyl Ether	ND	ppbv				U
Chloroprene	ND	ppbv				U
cis-1,2-Dichloroethylene	ND	ppbv				U
Bromochloromethane	ND	ppbv				U
Chloroform	ND	ppbv				U
Ethyl tert-Butyl Ether	ND	ppbv				U
1,2-Dichloroethane	ND	ppbv				U
1,1,1-Trichloroethane	ND	ppbv				U
Benzene	ND	ppbv				U
Carbon Tetrachloride	ND	ppbv				U
tert-Amyl Methyl Ether	ND	ppbv				U
1,2-Dichloropropane	ND	ppbv				U
Ethyl Acrylate	ND	ppbv				U
Bromodichloromethane	ND	ppbv				U
Trichloroethylene	ND	ppbv				U
Methyl Methacrylate	ND	ppbv				U
cis-1,3-Dichloropropene	ND	ppbv				U

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Air Toxics by EPA Compendium Method TO-15 - Quality Control						
Batch B2E1302 - Summa Canister Prep						
Blank (B2E1302-BLK1) Continued			Prepared & Analyzed: 05/13/22			
Methyl Isobutyl Ketone	ND	ppbv				U
trans-1,3-Dichloropropene	ND	ppbv				U
1,1,2-Trichloroethane	ND	ppbv				U
Toluene	ND	ppbv				U
Dibromochloromethane	ND	ppbv				U
1,2-Dibromoethane	ND	ppbv				U
n-Octane	ND	ppbv				U
Tetrachloroethylene	ND	ppbv				U
Chlorobenzene	ND	ppbv				U
Ethylbenzene	ND	ppbv				U
m,p-Xylene	ND	ppbv				U
Bromoform	ND	ppbv				U
Styrene	ND	ppbv				U
1,1,2,2-Tetrachloroethane	ND	ppbv				U
o-Xylene	ND	ppbv				U
1,3,5-Trimethylbenzene	ND	ppbv				U
1,2,4-Trimethylbenzene	ND	ppbv				U
m-Dichlorobenzene	ND	ppbv				U
p-Dichlorobenzene	ND	ppbv				U
o-Dichlorobenzene	ND	ppbv				U
1,2,4-Trichlorobenzene	ND	ppbv				U
Hexachloro-1,3-butadiene	ND	ppbv				U
Duplicate (B2E1302-DUP2)	**Source: 2050917-05**		Prepared: 05/05/22 Analyzed: 05/13/22			**D**
Acetylene	ND	ppbv	ND		25	U
Propylene	ND	ppbv	ND		25	U
Dichlorodifluoromethane	ND	ppbv	ND		25	U
Chloromethane	ND	ppbv	ND		25	U
Dichlorotetrafluoroethane	ND	ppbv	ND		25	U
Vinyl chloride	ND	ppbv	ND		25	U
1,3-Butadiene	ND	ppbv	ND		25	U
Ethylene oxide	ND	ppbv	ND		25	U
Bromomethane	ND	ppbv	ND		25	U
Chloroethane	ND	ppbv	ND		25	U
Acetonitrile	ND	ppbv	ND		25	U
Acrolein	ND	ppbv	ND		25	U
Trichlorofluoromethane	ND	ppbv	ND		25	U
Acrylonitrile	ND	ppbv	ND		25	U

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Air Toxics by EPA Compendium Method TO-15 - Quality Control						
Batch B2E1302 - Summa Canister Prep						
Duplicate (B2E1302-DUP2) Continued	**Source: 2050917-05**		Prepared: 05/05/22 Analyzed: 05/13/22			**D**
1,1-Dichloroethene	ND	ppbv	ND		25	U
Dichloromethane	ND	ppbv	ND		25	U
Carbon Disulfide	ND	ppbv	ND		25	U
Trichlorotrifluoroethane	ND	ppbv	ND		25	U
trans-1,2-Dichloroethylene	ND	ppbv	ND		25	U
1,1-Dichloroethane	ND	ppbv	ND		25	U
Methyl tert-Butyl Ether	ND	ppbv	ND		25	U
Chloroprene	5060	ppbv	5,070.00	0.185	25	D
cis-1,2-Dichloroethylene	ND	ppbv	ND		25	U
Bromochloromethane	ND	ppbv	ND		25	U
Chloroform	ND	ppbv	ND		25	U
Ethyl tert-Butyl Ether	ND	ppbv	ND		25	U
1,2-Dichloroethane	ND	ppbv	ND		25	U
1,1,1-Trichloroethane	ND	ppbv	ND		25	U
Benzene	ND	ppbv	ND		25	U
Carbon Tetrachloride	ND	ppbv	ND		25	U
tert-Amyl Methyl Ether	ND	ppbv	ND		25	U
1,2-Dichloropropane	ND	ppbv	ND		25	U
Ethyl Acrylate	ND	ppbv	ND		25	U
Bromodichloromethane	ND	ppbv	ND		25	U
Trichloroethylene	ND	ppbv	ND		25	U
Methyl Methacrylate	ND	ppbv	ND		25	CE, U
cis-1,3-Dichloropropene	ND	ppbv	ND		25	U
Methyl Isobutyl Ketone	ND	ppbv	ND		25	U
trans-1,3-Dichloropropene	ND	ppbv	ND		25	U
1,1,2-Trichloroethane	ND	ppbv	ND		25	U
Toluene	2590	ppbv	2,620.00	1.14	25	D
Dibromochloromethane	ND	ppbv	ND		25	U
1,2-Dibromoethane	ND	ppbv	ND		25	U
n-Octane	ND	ppbv	ND		25	U
Tetrachloroethylene	ND	ppbv	ND		25	U
Chlorobenzene	ND	ppbv	ND		25	U
Ethylbenzene	ND	ppbv	ND		25	U
m,p-Xylene	ND	ppbv	ND		25	U
Bromoform	ND	ppbv	ND		25	U
Styrene	ND	ppbv	ND		25	U
1,1,2,2-Tetrachloroethane	ND	ppbv	ND		25	U

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Air Toxics by EPA Compendium Method TO-15 - Quality Control

Batch B2E1302 - Summa Canister Prep

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Duplicate (B2E1302-DUP2) Continued	**Source: 2050917-05**		Prepared: 05/05/22 Analyzed: 05/13/22			**D**
o-Xylene	ND	ppbv	ND		25	U
1,3,5-Trimethylbenzene	ND	ppbv	ND		25	U
1,2,4-Trimethylbenzene	ND	ppbv	ND		25	U
m-Dichlorobenzene	ND	ppbv	ND		25	U
p-Dichlorobenzene	ND	ppbv	ND		25	U
o-Dichlorobenzene	ND	ppbv	ND		25	U
1,2,4-Trichlorobenzene	ND	ppbv	ND		25	U
Hexachloro-1,3-butadiene	ND	ppbv	ND		25	U
Duplicate (B2E1302-DUP3)	**Source: 2050917-02**		Prepared: 05/05/22 Analyzed: 05/14/22			**D**
Acetylene	ND	ppbv	ND		25	U
Propylene	ND	ppbv	ND		25	U
Dichlorodifluoromethane	ND	ppbv	ND		25	U
Chloromethane	ND	ppbv	ND		25	U
Dichlorotetrafluoroethane	ND	ppbv	ND		25	U
Vinyl chloride	ND	ppbv	ND		25	U
1,3-Butadiene	ND	ppbv	ND		25	U
Ethylene oxide	ND	ppbv	ND		25	U
Bromomethane	ND	ppbv	ND		25	U
Chloroethane	ND	ppbv	ND		25	U
Acetonitrile	ND	ppbv	ND		25	U
Acrolein	ND	ppbv	ND		25	U
Trichlorofluoromethane	ND	ppbv	ND		25	U
Acrylonitrile	ND	ppbv	ND		25	U
1,1-Dichloroethene	ND	ppbv	ND		25	U
Dichloromethane	ND	ppbv	ND		25	U
Carbon Disulfide	ND	ppbv	ND		25	U
Trichlorotrifluoroethane	ND	ppbv	ND		25	U
trans-1,2-Dichloroethylene	ND	ppbv	ND		25	U
1,1-Dichloroethane	ND	ppbv	ND		25	U
Methyl tert-Butyl Ether	ND	ppbv	ND		25	U
Chloroprene	5270	ppbv	5,240.00	0.622	25	D
cis-1,2-Dichloroethylene	ND	ppbv	ND		25	U
Bromochloromethane	ND	ppbv	ND		25	U
Chloroform	ND	ppbv	ND		25	U
Ethyl tert-Butyl Ether	ND	ppbv	ND		25	U
1,2-Dichloroethane	ND	ppbv	ND		25	U
1,1,1-Trichloroethane	ND	ppbv	ND		25	U

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Air Toxics by EPA Compendium Method TO-15 - Quality Control						
Batch B2E1302 - Summa Canister Prep						
Duplicate (B2E1302-DUP3) Continued	**Source: 2050917-02**		Prepared: 05/05/22 Analyzed: 05/14/22			**D**
Benzene	ND	ppbv	ND		25	U
Carbon Tetrachloride	ND	ppbv	ND		25	U
tert-Amyl Methyl Ether	ND	ppbv	ND		25	U
1,2-Dichloropropane	ND	ppbv	ND		25	U
Ethyl Acrylate	ND	ppbv	ND		25	U
Bromodichloromethane	ND	ppbv	ND		25	U
Trichloroethylene	ND	ppbv	ND		25	U
Methyl Methacrylate	ND	ppbv	ND		25	CE, U
cis-1,3-Dichloropropene	ND	ppbv	ND		25	U
Methyl Isobutyl Ketone	ND	ppbv	ND		25	U
trans-1,3-Dichloropropene	ND	ppbv	ND		25	U
1,1,2-Trichloroethane	ND	ppbv	ND		25	U
Toluene	2740	ppbv	2,720.00	0.636	25	D
Dibromochloromethane	ND	ppbv	ND		25	U
1,2-Dibromoethane	ND	ppbv	ND		25	U
n-Octane	ND	ppbv	ND		25	U
Tetrachloroethylene	ND	ppbv	ND		25	U
Chlorobenzene	ND	ppbv	ND		25	U
Ethylbenzene	ND	ppbv	ND		25	U
m,p-Xylene	ND	ppbv	ND		25	U
Bromoform	ND	ppbv	ND		25	U
Styrene	ND	ppbv	ND		25	U
1,1,2,2-Tetrachloroethane	ND	ppbv	ND		25	U
o-Xylene	ND	ppbv	ND		25	U
1,3,5-Trimethylbenzene	ND	ppbv	ND		25	U
1,2,4-Trimethylbenzene	ND	ppbv	ND		25	U
m-Dichlorobenzene	ND	ppbv	ND		25	U
p-Dichlorobenzene	ND	ppbv	ND		25	U
o-Dichlorobenzene	ND	ppbv	ND		25	U
1,2,4-Trichlorobenzene	ND	ppbv	ND		25	U
Hexachloro-1,3-butadiene	ND	ppbv	ND		25	U

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Air Toxics by EPA Compendium Method TO-15 - Quality Control

Sequence 2205037

Calibration Check (2205037-CCV1) Prepared & Analyzed: 05/13/22

Analyte	Result	Units	% Difference	Limit (%)	Notes
Acetylene	2.31	ppbv	-11.4	30.00	
Propylene	2.33	ppbv	-10.1	30.00	
Dichlorodifluoromethane	2.43	ppbv	-6.2	30.00	
Chloromethane	2.44	ppbv	-5.8	30.00	
Dichlorotetrafluoroethane	2.47	ppbv	-6.6	30.00	
Vinyl chloride	2.45	ppbv	-5.6	30.00	
1,3-Butadiene	2.44	ppbv	-6.1	30.00	
Ethylene oxide	2.39	ppbv	-0.9	30.00	
Bromomethane	2.50	ppbv	-3.9	30.00	
Chloroethane	2.55	ppbv	-2.5	30.00	
Acetonitrile	2.86	ppbv	11.0	30.00	
Acrolein	2.37	ppbv	-8.7	30.00	
Trichlorofluoromethane	2.29	ppbv	-11.6	30.00	
Acrylonitrile	2.56	ppbv	-5.0	30.00	
1,1-Dichloroethene	2.36	ppbv	-9.9	30.00	
Dichloromethane	2.85	ppbv	8.4	30.00	
Carbon Disulfide	2.48	ppbv	-10.2	30.00	
Trichlorotrifluoroethane	2.22	ppbv	-16.0	30.00	
trans-1,2-Dichloroethylene	2.65	ppbv	1.4	30.00	
1,1-Dichloroethane	2.47	ppbv	-5.4	30.00	
Methyl tert-Butyl Ether	2.57	ppbv	-1.8	30.00	
Chloroprene	2.53	ppbv	-3.6	30.00	
cis-1,2-Dichloroethylene	2.60	ppbv	0.7	30.00	
Bromochloromethane	2.55	ppbv	-1.6	30.00	
Chloroform	2.50	ppbv	-5.4	30.00	
Ethyl tert-Butyl Ether	2.60	ppbv	0.08	30.00	
1,2-Dichloroethane	2.51	ppbv	-2.9	30.00	
1,1,1-Trichloroethane	2.38	ppbv	-8.7	30.00	
Benzene	2.45	ppbv	-6.3	30.00	
Carbon Tetrachloride	2.37	ppbv	-8.8	30.00	
tert-Amyl Methyl Ether	2.68	ppbv	3.5	30.00	
1,2-Dichloropropane	2.59	ppbv	-0.1	30.00	
Ethyl Acrylate	2.62	ppbv	0.3	30.00	
Bromodichloromethane	2.57	ppbv	-1.5	30.00	

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Air Toxics by EPA Compendium Method TO-15 - Quality Control

Sequence 2205037

Calibration Check (2205037-CCV1) Continued Prepared & Analyzed: 05/13/22

Analyte	Result	Units	% Difference	Limit (%)	Notes
Trichloroethylene	2.63	ppbv	0.7	30.00	
Methyl Methacrylate	2.53	ppbv	-2.2	30.00	
cis-1,3-Dichloropropene	2.55	ppbv	-1.8	30.00	
Methyl Isobutyl Ketone	2.71	ppbv	4.5	30.00	
trans-1,3-Dichloropropene	2.38	ppbv	-8.7	30.00	
1,1,2-Trichloroethane	2.56	ppbv	-2.1	30.00	
Toluene	2.69	ppbv	3.6	30.00	
Dibromochloromethane	2.43	ppbv	-6.3	30.00	
1,2-Dibromoethane	2.40	ppbv	-8.5	30.00	
n-Octane	3.05	ppbv	16.9	30.00	
Tetrachloroethylene	2.49	ppbv	-5.3	30.00	
Chlorobenzene	2.53	ppbv	-3.1	30.00	
Ethylbenzene	2.65	ppbv	2.0	30.00	
m,p-Xylene	5.75	ppbv	11.0	30.00	
Bromoform	2.47	ppbv	-4.9	30.00	
Styrene	2.94	ppbv	12.9	30.00	
1,1,2,2-Tetrachloroethane	2.63	ppbv	0.8	30.00	
o-Xylene	2.77	ppbv	6.1	30.00	
1,3,5-Trimethylbenzene	2.68	ppbv	2.6	30.00	
1,2,4-Trimethylbenzene	2.87	ppbv	9.7	30.00	
m-Dichlorobenzene	2.57	ppbv	-1.3	30.00	
p-Dichlorobenzene	2.58	ppbv	-0.8	30.00	
o-Dichlorobenzene	2.59	ppbv	-1.0	30.00	
1,2,4-Trichlorobenzene	3.11	ppbv	14.5	30.00	
Hexachloro-1,3-butadiene	3.06	ppbv	12.5	30.00	

CERTIFICATE OF ANALYSIS

OECA
2890 Woodbridge Avenue
Edison, NJ 08837
ATTN: Shaun Burke
PHONE: (202) 564-1039 **FAX:** (732) 321-6616

FILE #: 0325.00.000
REPORTED: 06/07/22 13:36
SUBMITTED: 05/09/22
AQS SITE CODE:
SITE CODE: Denka

Notes and Definitions

U	Under Detection Limit
D	This result obtained by dilution.
CE	Not reportable due to a co-eluting compound.
ND	Analyte NOT DETECTED
NR	Not Reported
MDL	Method Detection Limit
RPD	Relative Percent Difference

Note: This test is accredited under the 2016 TNI Standard; however the following analytes are not accredited: acetylene, bromodichloroethane, dichlorotetrafluoromethane, ethyl tert butyl ether, n-octane, tert amyl methyl ether, trichlorofluoroethane, and bromochloromethane.

ERG
Eastern Research Group, Inc.
601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

ERG LIMS ID # 2050917-01

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: DR-A-KT-05052022-01
Canister Number: SA1070
City/State: LAPLACE, LA
Lab Initial Can. Press. ("Hg): 29.7
AQS Code: —
Cleaning Batch # : H2-1367
Collection Date: 5/5/22
Date Can. Cleaned: 4/27/22
Options:
SNMOC (Y/N): —
Duplicate Event (Y/N): —
TOXICS (Y/N): TO-15
Duplicate Can # : —
METHANE (Y/N): —
Relinquished by: RMB
Date: 5/4/22

Field Setup

Received by: DMB
Date: 5/5/22
Operator: DMB
MFC Setting: 30 min
System #: PH1-6
Elapsed Timer Reset (Y/N): N/A
Setup Date: 5/5/22 1638
Canister Valve Opened (Y/N): Y
Field Initial Can. Press.: -30 psig psia "Hg (Circle one)

Field Recovery

Recovery Date: 5/5/22 1706
Sample Duration (3 or 24 hr): 30 min
Operator: DMB
Elapsed Time: 28
Field Final Can. Press.: -6 psig psia "Hg (Circle one)
Status: VALID VOID (Circle one)
Canister Valve Closed (Y/N): Y
Relinquished by: DMB
Date: 5/5/22

Lab Recovery

Received by: CC
Date: 5/9/22
Lab Final Can. Press.: 6.5 psig "Hg (Circle one)
Status: VALID VOID (Circle one)
Gauge: 1 (3) (Circle one)
If void, why:

Samples stored in Air Tox Lab (Room 130)

01-2022

Comments:

White: Sample Traveler
Canary: Lab Copy
Pink: Field Copy

D1

ERG LIMS ID # 220S0917-02

601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: DR-A-KD-050522-01 Canister Number: SA7094

City/State: LAVACA, LA Lab Initial Can. Press. ("Hg): 29.7

AQS Code: — Cleaning Batch # : HI-1367

Collection Date: 5/5/22 Date Can. Cleaned: 4/27/22

Options:

SNMOC (Y/N): — Duplicate Event (Y/N): Yes

TOXICS (Y/N): TO-15 Duplicate Can # : 5025

METHANE (Y/N): —

Relinquished by: RMB Date: RMB 5/4/22 5/4/22

Field Setup

Received by: DMB Date: 5/5/22

Operator: DMB MFC Setting: 30 min

System #: Pit1-9 Elapsed Timer Reset (Y/N): —

Setup Date: 5/5/22 1639 Canister Valve Opened (Y/N): Y

Field Initial Can Press.: -30 psig psia "Hg (Circle one)

Field Recovery

Recovery Date: 5/5/22 1705 Sample Duration (3 or 24 hr): 30 min

Operator: DMB Elapsed Time: 26 min

Field Final Can. Press.: -6 psig psia "Hg (Circle one)

Status: VALID VOID (Circle one) Canister Valve Closed (Y/N): Y

Relinquished by: Date: 5/5/22

Lab Recovery

Received by: CCC Date: 5/9/22

Lab Final Can. Press.: 6.5 psig "Hg (Circle one)

Status: VALID VOID (Circle one) Gauge: 1 3 (Circle one)

If void, why:

Samples stored in Air Tox Lab (Room 130)

01-2022

Comments:

White: Sample Traveler Canary: Lab Copy Pink: Field Copy

ERG LIMS ID # 205097-03

601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: DR-A-BK-050520222-01 Canister Number: 5015

City/State: WAPLACE, IA Lab Initial Can. Press. ("Hg): 29.7

AQS Code: - Cleaning Batch # : HZ-1367

Collection Date: 05/05/22 Date Can. Cleaned: 4/27/22

Options:

SNMOC (Y/N): - Duplicate Event (Y/N): N

TOXICS (Y/N): TO-15 Duplicate Can # : -

METHANE (Y/N): -

Relinquished by: RMB Date: 5/4/22

Field Setup

Received by: DB Date: 5/5/22

Operator: DMB MFC Setting: 30 min

System #: PH1-12 Elapsed Timer Reset (Y/N): N/A

Setup Date: 5/5/22 1536 Canister Valve Opened (Y/N): Y

Field Initial Can. Press.: -30 psig psia "Hg (Circle one)

Field Recovery

Recovery Date: 5/5/22 1605 Sample Duration (3 or 24 hr): 30m-

Operator: DMB Elapsed Time: 30min

Field Final Can. Press.: -5 psig psia "Hg (Circle one)

Status: VALID VOID (Circle one) Canister Valve Closed (Y/N): Y

Relinquished by: DMB Date: 5/5/22

Lab Recovery

Received by: CCC Date: 5/9/22

Lab Final Can. Press.: 4.5 psig "Hg (Circle one)

Status: VALID VOID (Circle one) Gauge: 1 3 (Circle one)

If void, why:

Samples stored in Air Tox Lab (Room 130)

01-2022

Comments:

White: Sample Traveler Canary: Lab Copy Pink: Field Copy

ERG

ERG LIMS ID # 2050917-04

601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: DR-1-KP-050520222-01 Canister Number: 5040

City/State: Lapalace, LA Lab Initial Can. Press. ("Hg): 29.7

AQS Code: - Cleaning Batch # : H2-1367

Collection Date: 5/5/22 Date Can. Cleaned: 4/27/22

Options:

SNMOC (Y/N): - Duplicate Event (Y/N): -

TOXICS (Y/N): TO-15 Duplicate Can # : -

METHANE (Y/N): -

Relinquished by: RMB Date: 5/4/22

Field Setup

Received by: DMB Date: 5/5/22

Operator: DMB MFC Setting: 30 min

System #: PM1-5 Elapsed Timer Reset (Y/N): NA

Setup Date: 5/5/22 1638 Canister Valve Opened (Y/N): Y

Field Initial Can. Press.: -30 psig psia "Hg (Circle one)

Field Recovery

Recovery Date: 5/5/22 1704 Sample Duration (3 or 24 hr): 30 min.

Operator: DMB Elapsed Time: 26 min

Field Final Can. Press.: -5 psig psia Hg (Circle one)

Status: VALID VOID (Circle one) Canister Valve Closed (Y/N): Y

Relinquished by: [signature] Date: 5/5/22

Lab Recovery

Received by: CCC Date: 5/9/22

Lab Final Can. Press.: 5.5 psig "Hg (Circle one)

Status: VALID VOID (Circle one) Gauge: 1 3 (Circle one)

If void, why:

Samples stored in Air Tox Lab (Room 130)

01-2022

Comments:

White: Sample Traveler Canary: Lab Copy Pink: Field Copy

D2

ERG

Eastern Research Group, Inc.

601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

ERG LIMS ID # 205017-05

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: DR-A-KD-050520 22-02 Canister Number: 5025

City/State: LAPLACE, LA Lab Initial Can. Press. ("Hg): 29.7

AQS Code: — Cleaning Batch # : H2-1367

Collection Date: ~~05~~ 05/05/22 Date Can. Cleaned: 4/27/22

Options:

SNMOC (Y/N): — Duplicate Event (Y/N): Y

TOXICS (Y/N): TO-15 Duplicate Can # : 5AT094

METHANE (Y/N): —

Relinquished by: 5/4/22 Date: _____

Field Setup

Received by: DMB Date: 5/5/22

Operator: DMB MFC Setting: 30 min

System #: PIT1-10 Elapsed Timer Reset (Y/N): N/A

Setup Date: 5/5/22 1639 Canister Valve Opened (Y/N): Y

Field Initial Can. Press.: -30 psig psia (Hg) (Circle one)

Field Recovery

Recovery Date: 5/5/22 1705 Sample Duration (3 or 24 hr): 30 min

Operator: DMB Elapsed Time: 26 min

Field Final Can. Press.: -7 psig psia (Hg) (Circle one)

Status: (VALID) VOID (Circle one) Canister Valve Closed (Y/N): Y

Relinquished by: DMB Date: 5/5/22

Lab Recovery

Received by: CLC Date: 5/9/22

Lab Final Can. Press.: 7.5 psig (Hg) (Circle one)

Status: (VALID) VOID (Circle one) Gauge: 1 (3) (Circle one)

If void, why: _____

Samples stored in Air Tox Lab (Room 130)

01-2022

Comments: _____

White: Sample Traveler Canary: Lab Copy Pink: Field Copy

ERG

ERG LIMS ID # 2050917-06

601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: DR-A-BU-050520 22-01 Canister Number: SAT120

City/State: Lafayette, LA Lab Initial Can. Press. ("Hg): 29.7

AQS Code: _____ Cleaning Batch # : H2-1367

Collection Date: 05/05/22 Date Can. Cleaned: 4/27/22

Options:

SNMOC (Y/N): — Duplicate Event (Y/N): —

TOXICS (Y/N): TO-15 Duplicate Can # : —

METHANE (Y/N): —

Relinquished by: 5/4/22 RMB Date: 5/4/22

Field Setup

Received by: DMB Date: 5/5/22

Operator: DMB MFC Setting: 30 min

System #: PH1-1 Elapsed Timer Reset (Y/N): N/A

Setup Date: 5/5/22 1604 Canister Valve Opened (Y/N): Y

Field Initial Can. Press.: -30 psig psia "Hg (Circle one)

Field Recovery

Recovery Date: 5/5/22 1631 Sample Duration (3 or 24 hr): 30 —

Operator: DMB Elapsed Time: 27 min

Field Final Can. Press.: -6 psig psia "Hg (Circle one)

Status: VALID VOID (Circle one) Canister Valve Closed (Y/N): Y

Relinquished by: [signature] Date: 5/5/22

Lab Recovery

Received by: CCC Date: 5/9/22

Lab Final Can. Press.: 6.5 psig "Hg (Circle one)

Status: VALID VOID (Circle one) Gauge: 1 3 (Circle one)

If void, why: _____

Samples stored in Air Tox Lab (Room 130)

01-2022

Comments: _____

White: Sample Traveler Canary: Lab Copy Pink: Field Copy

ERG LIMS ID # 2050917-07

601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: DR-A-PU-05052022-01 Canister Number: SAT003

City/State: LAPLACE, LA Lab Initial Can. Press. ("Hg): 29.7

AQS Code: — Cleaning Batch # : HI-1367

Collection Date: 05/05/22 Date Can. Cleaned: 4/27/22

Options:

SNMOC (Y/N): — Duplicate Event (Y/N): N

TOXICS (Y/N): TO-15 Duplicate Can # : —

METHANE (Y/N): —

Relinquished by: RMB Date: 5/4/22

Field Setup

Received by: DMB Date: 5/5/22

Operator: DMB MFC Setting: 30 min

System #: PH1-4 Elapsed Timer Reset (Y/N): N/A

Setup Date: 5/5/22 1637 Canister Valve Opened (Y/N): Y

Field Initial Can. Press.: -30 psig psia "Hg (Circle one)

Field Recovery

Recovery Date: 5/5/22 1703 Sample Duration (3 or 24 hr): 30 min

Operator: DMB Elapsed Time: 26

Field Final Can. Press.: -5 psig psia "Hg (Circle one)

Status: VALID VOID (Circle one) Canister Valve Closed (Y/N): Y

Relinquished by: DMB Date: 5/5/22

Lab Recovery

Received by: CCC Date: 5/9/22

Lab Final Can. Press.: 5.5 psig "Hg (Circle one)

Status: VALID VOID (Circle one) Gauge: 1 3 (Circle one)

If void, why:

Samples stored in Air Tox Lab (Room 130)

01-2022

Comments:

White: Sample Traveler Canary: Lab Copy Pink: Field Copy

ERG LIMS ID # 2050417-08

601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: DR-A-BD-05052022-01 Canister Number: 5014

City/State: Waveland, LA Lab Initial Can. Press. ("Hg): 29.7

AQS Code: - Cleaning Batch # : H2-1367

Collection Date: 05/05/22 Date Can. Cleaned: 4/27/22

Options:

SNMOC (Y/N): - Duplicate Event (Y/N): -

TOXICS (Y/N): Y - TO-15 Duplicate Can # : -

METHANE (Y/N): -

Relinquished by: RMB Date: 5/4/22

Field Setup

Received by: DmB Date: 5/5/22

Operator: DmB MFC Setting: 30 mm

System #: Pit1-14 Elapsed Timer Reset (Y/N): N/A

Setup Date: 5/5/22 1605 Canister Valve Opened (Y/N): Y

Field Initial Can. Press.: -30 psig psia (Hg) (Circle one)

Field Recovery

Recovery Date: 5/5/22 1631 Sample Duration (3 or 24 hr): 30mm

Operator: DmB Elapsed Time: 26 m

Field Final Can. Press.: -7 psig psia (Hg) (Circle one)

Status: (VALID) VOID (Circle one) Canister Valve Closed (Y/N): Y

Relinquished by: [signature] Date: 5/5/22

Lab Recovery

Received by: CCC Date: 5/9/22

Lab Final Can. Press.: 7 psig (Hg) (Circle one)

Status: (VALID) VOID (Circle one) Gauge: 1 (3) (Circle one)

If void, why:

Samples stored in Air Tox Lab (Room 130)

01-2022

Comments:

White: Sample Traveler Canary: Lab Copy Pink: Field Copy

ATTACHMENT H

Liquid Analytical Results Table

Attachment H
Summary of Liquid Analytical Data
ECAD - Denka Enforcement Multimedia Sampling

			Station	DR-L-LA	DR-L-Lb	DR-L-Lb
			Sample ID	DR-L-LA-05052022-01	DR-L-LB-05052022-01	DR-L-LB-05052022-02
			Date	05/05/2022	05/05/2022	05/05/2022
Analyte	**CAS.NO**	**Units**	**Type**	**FS**	**FS**	**FD**
EPA 8260						
1,1,1-Trichloroethane	71-55-6	mg/L	--	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	79-34-5	mg/L	--	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	79-00-5	mg/L	--	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	75-34-3	mg/L	--	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	75-35-4	mg/L	--	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	96-12-8	mg/L	--	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane (EDB)	106-93-4	mg/L	--	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	107-06-2	mg/L	--	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	78-87-5	mg/L	--	0.5 U	0.5 U	0.5 U
2-Butanone (MEK)	78-93-3	mg/L	--	1 U	1 U	1 U
2-Hexanone	591-78-6	mg/L	--	1 U	1 U	1 U
4-Methyl-2-pentanone (MIBK)	108-10-1	mg/L	--	1 U	1 U	1 U
Acetone	67-64-11	mg/L	--	1 U	1 U	1 U
Benzene	71-43-2	mg/L	--	0.5 U	0.5 U	0.5 U
Bromodichloromethane	75-27-4	mg/L	--	0.5 U	0.5 U	0.5 U
Bromoform	75-25-2	mg/L	--	0.5 U	0.5 U	0.5 U
Bromomethane	74-83-9	mg/L	--	0.5 U	0.5 U	0.5 U
Carbon disulfide	75-15-0	mg/L	--	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	56-23-5	mg/L	--	0.5 U	0.5 U	0.5 U
Chlorobenzene	108-90-7	mg/L	--	0.5 U	0.5 U	0.5 U
Chloroethane	75-00-3	mg/L	--	0.5 U	0.5 U	0.5 U
Chloroform	67-66-3	mg/L	--	0.5 U	0.5 U	0.5 U
Chloromethane	74-87-3	mg/L	--	0.5 U	0.5 U	0.5 U
Chloroprene	126-99-8	mg/L	--	**341**	**62.8**	**64.1**
cis-1,2-Dichloroethene	156-59-2	mg/L	--	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	10061-01-5	mg/L	--	0.5 U	0.5 U	0.5 U
Dibromochloromethane	124-48-1	mg/L	--	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	75-71-8	mg/L	--	0.5 U	0.5 U	0.5 U
Ethylbenzene	100-41-4	mg/L	--	0.5 U	0.5 U	0.5 U
Isopropylbenzene (Cumene)	98-82-8	mg/L	--	0.5 U	0.5 U	0.5 U
m&p-Xylene	179601-23-1	mg/L	--	1 U	1 U	1 U
Methyl acetate	79-20-9	mg/L	--	1 U	1 U	1 U
Methylene Chloride	75-09-2	mg/L	--	0.5 U	0.5 U	0.5 U
Methyl-tert-butyl ether	1634-04-4	mg/L	--	0.5 U	0.5 U	0.5 U
o-Xylene	95-47-6	mg/L	--	0.5 U	0.5 U	0.5 U
Styrene	100-42-5	mg/L	--	0.5 U	0.5 U	0.5 U
Tetrachloroethene	127-18-4	mg/L	--	0.5 U	0.5 U	0.5 U
Toluene	108-88-3	mg/L	--	**7.6**	**8.4**	**8**
trans-1,2-Dichloroethene	156-60-5	mg/L	--	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	10061-02-6	mg/L	--	0.5 U	0.5 U	0.5 U
Trichloroethene	79-01-6	mg/L	--	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	75-69-4	mg/L	--	0.5 U	0.5 U	0.5 U
Vinyl chloride	75-01-4	mg/L	--	0.2 U	0.2 U	0.2 U

Notes
FS - Field Sample
FD = Field Duplicate
CAS.No = Chemical Abstract System Registry Number
mg/L = milligrams per liter
U = Indicates the compound was analyzed for, but not detected
BOLD = analyte was detected

ATTACHMENT I

Solid Analytical Results Table

Attachment I
Summary of Solid Analytical Data
ECAD - Denka Enforcement Multimedia Sampling

			Station	DR-S-BP
			Sample ID	DR-S-BP-05052022-02
			Date	05/05/2022
Analyte	**CAS.NO**	**Units**	**Type**	**FS**
EPA 8260				
1,1,1-Trichloroethane	71-55-6	mg/kg	--	13.9 U
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	--	13.9 U
1,1,2-Trichloroethane	79-00-5	mg/kg	--	13.9 U
1,1-Dichloroethane	75-34-3	mg/kg	--	13.9 U
1,1-Dichloroethene	75-35-4	mg/kg	--	13.9 U
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	--	13.9 U
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	--	13.9 U
1,2-Dichloroethane	107-06-2	mg/kg	--	13.9 U
1,2-Dichloropropane	78-87-5	mg/kg	--	13.9 U
2-Butanone (MEK)	78-93-3	mg/kg	--	27.8 U
2-Hexanone	591-78-6	mg/kg	--	27.8 U
4-Methyl-2-pentanone (MIBK)	108-10-1	mg/kg	--	27.8 U
Acetone	67-64-11	mg/kg	--	27.8 U
Benzene	71-43-2	mg/kg	--	13.9 U
Bromodichloromethane	75-27-4	mg/kg	--	13.9 U
Bromoform	75-25-2	mg/kg	--	13.9 U
Bromomethane	74-83-9	mg/kg	--	13.9 U
Carbon disulfide	75-15-0	mg/kg	--	13.9 U
Carbon tetrachloride	56-23-5	mg/kg	--	13.9 U
Chlorobenzene	108-90-7	mg/kg	--	13.9 U
Chloroethane	75-00-3	mg/kg	--	13.9 U
Chloroform	67-66-3	mg/kg	--	13.9 U
Chloromethane	74-87-3	mg/kg	--	13.9 U
Chloroprene	126-99-8	mg/kg	--	**1080**
cis-1,2-Dichloroethene	156-59-2	mg/kg	--	13.9 U
cis-1,3-Dichloropropene	10061-01-5	mg/kg	--	13.9 U
Dibromochloromethane	124-48-1	mg/kg	--	13.9 U
Dichlorodifluoromethane	75-71-8	mg/kg	--	13.9 U
Ethylbenzene	100-41-4	mg/kg	--	13.9 U
Isopropylbenzene (Cumene)	98-82-8	mg/kg	--	13.9 U
m&p-Xylene	179601-23-1	mg/kg	--	27.8 U
Methyl acetate	79-20-9	mg/kg	--	27.8 U
Methylene Chloride	75-09-2	mg/kg	--	13.9 U
Methyl-tert-butyl ether	1634-04-4	mg/kg	--	13.9 U
o-Xylene	95-47-6	mg/kg	--	13.9 U
Styrene	100-42-5	mg/kg	--	13.9 U
Tetrachloroethene	127-18-4	mg/kg	--	13.9 U
Toluene	108-88-3	mg/kg	--	**240**
trans-1,2-Dichloroethene	156-60-5	mg/kg	--	13.9 U
trans-1,3-Dichloropropene	10061-02-6	mg/kg	--	13.9 U
Trichloroethene	79-01-6	mg/kg	--	13.9 U
Trichlorofluoromethane	75-69-4	mg/kg	--	13.9 U
Vinyl chloride	75-01-4	mg/kg	--	5.6 U

Notes
FS - Field Sample
FD = Field Duplicate
CAS.No = Chemical Abstract System Registry Number
mg/L = milligrams per liter
U = Indicates the compound was analyzed for, but not detected
BOLD = analyte was detected

ATTACHMENT J

Solid and Liquid Analytical Results – Laboratory Deliverable

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

May 19, 2022

Jeff Wright
Weston Solutions, Inc.
13702 Coursey Blvd.
Bldg #7, STE A
Baton Rouge, LA 70817

RE: Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Dear Jeff Wright:

Enclosed are the analytical results for sample(s) received by the laboratory on May 06, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - New Orleans

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Clay Ledet
clay.ledet@pacelabs.com
(504)469-0333
Project Manager

Enclosures

cc: David Bordelon, Weston Solutions, Inc.

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

CERTIFICATIONS

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Pace Analytical Services New Orleans

Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

SAMPLE SUMMARY

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Lab ID	Sample ID	Matrix	Date Collected	Date Received
20243028001	**DR-L-LB-05052022-01**	Water	05/05/22 15:45	05/06/22 17:50
20243028002	**DR-L-LB-05052022-02**	Water	05/05/22 15:45	05/06/22 17:50
20243028003	**DR-L-LA-05052022-01**	Water	05/05/22 17:10	05/06/22 17:50
20243028004	**DR-S-BP-05052022-02**	Solid	05/05/22 16:10	05/06/22 17:50

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

SAMPLE ANALYTE COUNT

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Lab ID	Sample ID	Method	Analysts	Analytes Reported
20243028001	**DR-L-LB-05052022-01**	EPA 8260	SLK	46
20243028002	**DR-L-LB-05052022-02**	EPA 8260	SLK	46
20243028003	**DR-L-LA-05052022-01**	EPA 8260	SLK	46
20243028004	**DR-S-BP-05052022-02**	EPA 8260	JRP	46

PASI-N = Pace Analytical Services - New Orleans

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

PROJECT NARRATIVE

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Method: **EPA 8260**
Description: 8260 MSV
Client: Weston Solutions, Inc.
Date: May 19, 2022

General Information:
3 samples were analyzed for EPA 8260 by Pace Analytical Services New Orleans. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 255081

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 20243028001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1213307)
  - Chloroprene
- MSD (Lab ID: 1213308)
  - Chloroprene

R1: RPD value was outside control limits.

- MSD (Lab ID: 1213308)
  - 1,2-Dibromo-3-chloropropane
  - Methyl acetate

Additional Comments:

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

PROJECT NARRATIVE

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Method: **EPA 8260**
Description: 8260 MSV
Client: Weston Solutions, Inc.
Date: May 19, 2022

Analyte Comments:

QC Batch: 255081

D4: Sample was diluted due to the presence of high levels of target analytes.

- DR-L-LA-05052022-01 (Lab ID: 20243028003)
  - Chloroprene
  - Toluene
- DR-L-LB-05052022-01 (Lab ID: 20243028001)
  - Toluene
- DR-L-LB-05052022-02 (Lab ID: 20243028002)
  - Chloroprene
  - Toluene
- MS (Lab ID: 1213307)
  - Toluene
- MSD (Lab ID: 1213308)
  - Toluene

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

PROJECT NARRATIVE

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Method: **EPA 8260**
Description: 8260 MSV 5030 Med Level
Client: Weston Solutions, Inc.
Date: May 19, 2022

General Information:
1 sample was analyzed for EPA 8260 by Pace Analytical Services New Orleans. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 5035/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 255724

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 20242755001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 1217691)
  - Chloroethane

Additional Comments:

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

PROJECT NARRATIVE

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Method: **EPA 8260**
Description: 8260 MSV 5030 Med Level
Client: Weston Solutions, Inc.
Date: May 19, 2022

Analyte Comments:

QC Batch: 255724

D4: Sample was diluted due to the presence of high levels of target analytes.
- DR-S-BP-05052022-02 (Lab ID: 20243028004)
  - Vinyl chloride

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- DR-S-BP-05052022-02 (Lab ID: 20243028004)
  - Chloroprene

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

ANALYTICAL RESULTS

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Sample: DR-L-LB-05052022-01 **Lab ID: 20243028001** Collected: 05/05/22 15:45 Received: 05/06/22 17:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
	Pace Analytical Services - New Orleans							
Acetone	ND	mg/L	1.0	100		05/11/22 23:01	67-64-1	
Benzene	ND	mg/L	0.50	100		05/11/22 23:01	71-43-2	
Bromodichloromethane	ND	mg/L	0.50	100		05/11/22 23:01	75-27-4	
Bromoform	ND	mg/L	0.50	100		05/11/22 23:01	75-25-2	
Bromomethane	ND	mg/L	0.50	100		05/11/22 23:01	74-83-9	
2-Butanone (MEK)	ND	mg/L	1.0	100		05/11/22 23:01	78-93-3	
Carbon disulfide	ND	mg/L	0.50	100		05/11/22 23:01	75-15-0	
Carbon tetrachloride	ND	mg/L	0.50	100		05/11/22 23:01	56-23-5	
Chlorobenzene	ND	mg/L	0.50	100		05/11/22 23:01	108-90-7	
Chloroethane	ND	mg/L	0.50	100		05/11/22 23:01	75-00-3	
Chloroform	ND	mg/L	0.50	100		05/11/22 23:01	67-66-3	
Chloromethane	ND	mg/L	0.50	100		05/11/22 23:01	74-87-3	
Chloroprene	**62.8**	mg/L	5.0	1000		05/12/22 13:08	126-99-8	M1
1,2-Dibromo-3-chloropropane	ND	mg/L	0.50	100		05/11/22 23:01	96-12-8	R1
Dibromochloromethane	ND	mg/L	0.50	100		05/11/22 23:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/L	0.50	100		05/11/22 23:01	106-93-4	
Dichlorodifluoromethane	ND	mg/L	0.50	100		05/11/22 23:01	75-71-8	
1,1-Dichloroethane	ND	mg/L	0.50	100		05/11/22 23:01	75-34-3	
1,2-Dichloroethane	ND	mg/L	0.50	100		05/11/22 23:01	107-06-2	
1,1-Dichloroethene	ND	mg/L	0.50	100		05/11/22 23:01	75-35-4	
cis-1,2-Dichloroethene	ND	mg/L	0.50	100		05/11/22 23:01	156-59-2	
trans-1,2-Dichloroethene	ND	mg/L	0.50	100		05/11/22 23:01	156-60-5	
1,2-Dichloropropane	ND	mg/L	0.50	100		05/11/22 23:01	78-87-5	
cis-1,3-Dichloropropene	ND	mg/L	0.50	100		05/11/22 23:01	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/L	0.50	100		05/11/22 23:01	10061-02-6	
Ethylbenzene	ND	mg/L	0.50	100		05/11/22 23:01	100-41-4	
2-Hexanone	ND	mg/L	1.0	100		05/11/22 23:01	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/L	0.50	100		05/11/22 23:01	98-82-8	
Methyl acetate	ND	mg/L	1.0	100		05/11/22 23:01	79-20-9	R1
Methylene Chloride	ND	mg/L	0.50	100		05/11/22 23:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/L	1.0	100		05/11/22 23:01	108-10-1	
Methyl-tert-butyl ether	ND	mg/L	0.50	100		05/11/22 23:01	1634-04-4	
Styrene	ND	mg/L	0.50	100		05/11/22 23:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND	mg/L	0.50	100		05/11/22 23:01	79-34-5	
Tetrachloroethene	ND	mg/L	0.50	100		05/11/22 23:01	127-18-4	
Toluene	**8.4**	mg/L	0.50	100		05/11/22 23:01	108-88-3	D4
1,1,1-Trichloroethane	ND	mg/L	0.50	100		05/11/22 23:01	71-55-6	
1,1,2-Trichloroethane	ND	mg/L	0.50	100		05/11/22 23:01	79-00-5	
Trichloroethene	ND	mg/L	0.50	100		05/11/22 23:01	79-01-6	
Trichlorofluoromethane	ND	mg/L	0.50	100		05/11/22 23:01	75-69-4	
Vinyl chloride	ND	mg/L	0.20	100		05/11/22 23:01	75-01-4	
m&p-Xylene	ND	mg/L	1.0	100		05/11/22 23:01	179601-23-1	
o-Xylene	ND	mg/L	0.50	100		05/11/22 23:01	95-47-6	
Surrogates								
Toluene-d8 (S)	102	%.	76-124	1000		05/12/22 13:08	2037-26-5	
Toluene-d8 (S)	104	%.	76-124	100		05/11/22 23:01	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

ANALYTICAL RESULTS

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Sample: DR-L-LB-05052022-01 **Lab ID: 20243028001** Collected: 05/05/22 15:45 Received: 05/06/22 17:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
	Pace Analytical Services - New Orleans							
Surrogates								
4-Bromofluorobenzene (S)	101	%.	78-121	100		05/11/22 23:01	460-00-4	
4-Bromofluorobenzene (S)	97	%.	78-121	1000		05/12/22 13:08	460-00-4	
Dibromofluoromethane (S)	102	%.	74-128	1000		05/12/22 13:08	1868-53-7	
Dibromofluoromethane (S)	101	%.	74-128	100		05/11/22 23:01	1868-53-7	

Sample: DR-L-LB-05052022-02 **Lab ID: 20243028002** Collected: 05/05/22 15:45 Received: 05/06/22 17:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
	Pace Analytical Services - New Orleans							
Acetone	ND	mg/L	1.0	100		05/11/22 23:19	67-64-1	
Benzene	ND	mg/L	0.50	100		05/11/22 23:19	71-43-2	
Bromodichloromethane	ND	mg/L	0.50	100		05/11/22 23:19	75-27-4	
Bromoform	ND	mg/L	0.50	100		05/11/22 23:19	75-25-2	
Bromomethane	ND	mg/L	0.50	100		05/11/22 23:19	74-83-9	
2-Butanone (MEK)	ND	mg/L	1.0	100		05/11/22 23:19	78-93-3	
Carbon disulfide	ND	mg/L	0.50	100		05/11/22 23:19	75-15-0	
Carbon tetrachloride	ND	mg/L	0.50	100		05/11/22 23:19	56-23-5	
Chlorobenzene	ND	mg/L	0.50	100		05/11/22 23:19	108-90-7	
Chloroethane	ND	mg/L	0.50	100		05/11/22 23:19	75-00-3	
Chloroform	ND	mg/L	0.50	100		05/11/22 23:19	67-66-3	
Chloromethane	ND	mg/L	0.50	100		05/11/22 23:19	74-87-3	
Chloroprene	**64.1**	mg/L	5.0	1000		05/12/22 13:26	126-99-8	D4
1,2-Dibromo-3-chloropropane	ND	mg/L	0.50	100		05/11/22 23:19	96-12-8	
Dibromochloromethane	ND	mg/L	0.50	100		05/11/22 23:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/L	0.50	100		05/11/22 23:19	106-93-4	
Dichlorodifluoromethane	ND	mg/L	0.50	100		05/11/22 23:19	75-71-8	
1,1-Dichloroethane	ND	mg/L	0.50	100		05/11/22 23:19	75-34-3	
1,2-Dichloroethane	ND	mg/L	0.50	100		05/11/22 23:19	107-06-2	
1,1-Dichloroethene	ND	mg/L	0.50	100		05/11/22 23:19	75-35-4	
cis-1,2-Dichloroethene	ND	mg/L	0.50	100		05/11/22 23:19	156-59-2	
trans-1,2-Dichloroethene	ND	mg/L	0.50	100		05/11/22 23:19	156-60-5	
1,2-Dichloropropane	ND	mg/L	0.50	100		05/11/22 23:19	78-87-5	
cis-1,3-Dichloropropene	ND	mg/L	0.50	100		05/11/22 23:19	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/L	0.50	100		05/11/22 23:19	10061-02-6	
Ethylbenzene	ND	mg/L	0.50	100		05/11/22 23:19	100-41-4	
2-Hexanone	ND	mg/L	1.0	100		05/11/22 23:19	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/L	0.50	100		05/11/22 23:19	98-82-8	
Methyl acetate	ND	mg/L	1.0	100		05/11/22 23:19	79-20-9	
Methylene Chloride	ND	mg/L	0.50	100		05/11/22 23:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/L	1.0	100		05/11/22 23:19	108-10-1	
Methyl-tert-butyl ether	ND	mg/L	0.50	100		05/11/22 23:19	1634-04-4	
Styrene	ND	mg/L	0.50	100		05/11/22 23:19	100-42-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

ANALYTICAL RESULTS

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Sample: DR-L-LB-05052022-02 **Lab ID: 20243028002** Collected: 05/05/22 15:45 Received: 05/06/22 17:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
	Pace Analytical Services - New Orleans							
1,1,2,2-Tetrachloroethane	ND	mg/L	0.50	100		05/11/22 23:19	79-34-5	
Tetrachloroethene	ND	mg/L	0.50	100		05/11/22 23:19	127-18-4	
Toluene	**8.0**	mg/L	0.50	100		05/11/22 23:19	108-88-3	D4
1,1,1-Trichloroethane	ND	mg/L	0.50	100		05/11/22 23:19	71-55-6	
1,1,2-Trichloroethane	ND	mg/L	0.50	100		05/11/22 23:19	79-00-5	
Trichloroethene	ND	mg/L	0.50	100		05/11/22 23:19	79-01-6	
Trichlorofluoromethane	ND	mg/L	0.50	100		05/11/22 23:19	75-69-4	
Vinyl chloride	ND	mg/L	0.20	100		05/11/22 23:19	75-01-4	
m&p-Xylene	ND	mg/L	1.0	100		05/11/22 23:19	179601-23-1	
o-Xylene	ND	mg/L	0.50	100		05/11/22 23:19	95-47-6	
Surrogates								
Toluene-d8 (S)	102	%.	76-124	1000		05/12/22 13:26	2037-26-5	
Toluene-d8 (S)	103	%.	76-124	100		05/11/22 23:19	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	78-121	100		05/11/22 23:19	460-00-4	
4-Bromofluorobenzene (S)	100	%.	78-121	1000		05/12/22 13:26	460-00-4	
Dibromofluoromethane (S)	103	%.	74-128	1000		05/12/22 13:26	1868-53-7	
Dibromofluoromethane (S)	100	%.	74-128	100		05/11/22 23:19	1868-53-7	

Sample: DR-L-LA-05052022-01 **Lab ID: 20243028003** Collected: 05/05/22 17:10 Received: 05/06/22 17:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
	Pace Analytical Services - New Orleans							
Acetone	ND	mg/L	1.0	100		05/11/22 23:36	67-64-1	
Benzene	ND	mg/L	0.50	100		05/11/22 23:36	71-43-2	
Bromodichloromethane	ND	mg/L	0.50	100		05/11/22 23:36	75-27-4	
Bromoform	ND	mg/L	0.50	100		05/11/22 23:36	75-25-2	
Bromomethane	ND	mg/L	0.50	100		05/11/22 23:36	74-83-9	
2-Butanone (MEK)	ND	mg/L	1.0	100		05/11/22 23:36	78-93-3	
Carbon disulfide	ND	mg/L	0.50	100		05/11/22 23:36	75-15-0	
Carbon tetrachloride	ND	mg/L	0.50	100		05/11/22 23:36	56-23-5	
Chlorobenzene	ND	mg/L	0.50	100		05/11/22 23:36	108-90-7	
Chloroethane	ND	mg/L	0.50	100		05/11/22 23:36	75-00-3	
Chloroform	ND	mg/L	0.50	100		05/11/22 23:36	67-66-3	
Chloromethane	ND	mg/L	0.50	100		05/11/22 23:36	74-87-3	
Chloroprene	**341**	mg/L	50.0	10000		05/12/22 20:04	126-99-8	D4
1,2-Dibromo-3-chloropropane	ND	mg/L	0.50	100		05/11/22 23:36	96-12-8	
Dibromochloromethane	ND	mg/L	0.50	100		05/11/22 23:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/L	0.50	100		05/11/22 23:36	106-93-4	
Dichlorodifluoromethane	ND	mg/L	0.50	100		05/11/22 23:36	75-71-8	
1,1-Dichloroethane	ND	mg/L	0.50	100		05/11/22 23:36	75-34-3	
1,2-Dichloroethane	ND	mg/L	0.50	100		05/11/22 23:36	107-06-2	
1,1-Dichloroethene	ND	mg/L	0.50	100		05/11/22 23:36	75-35-4	
cis-1,2-Dichloroethene	ND	mg/L	0.50	100		05/11/22 23:36	156-59-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

ANALYTICAL RESULTS

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Sample: DR-L-LA-05052022-01 **Lab ID: 20243028003** Collected: 05/05/22 17:10 Received: 05/06/22 17:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
	Pace Analytical Services - New Orleans							
trans-1,2-Dichloroethene	ND	mg/L	0.50	100		05/11/22 23:36	156-60-5	
1,2-Dichloropropane	ND	mg/L	0.50	100		05/11/22 23:36	78-87-5	
cis-1,3-Dichloropropene	ND	mg/L	0.50	100		05/11/22 23:36	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/L	0.50	100		05/11/22 23:36	10061-02-6	
Ethylbenzene	ND	mg/L	0.50	100		05/11/22 23:36	100-41-4	
2-Hexanone	ND	mg/L	1.0	100		05/11/22 23:36	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/L	0.50	100		05/11/22 23:36	98-82-8	
Methyl acetate	ND	mg/L	1.0	100		05/11/22 23:36	79-20-9	
Methylene Chloride	ND	mg/L	0.50	100		05/11/22 23:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/L	1.0	100		05/11/22 23:36	108-10-1	
Methyl-tert-butyl ether	ND	mg/L	0.50	100		05/11/22 23:36	1634-04-4	
Styrene	ND	mg/L	0.50	100		05/11/22 23:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	mg/L	0.50	100		05/11/22 23:36	79-34-5	
Tetrachloroethene	ND	mg/L	0.50	100		05/11/22 23:36	127-18-4	
Toluene	**7.6**	mg/L	0.50	100		05/11/22 23:36	108-88-3	D4
1,1,1-Trichloroethane	ND	mg/L	0.50	100		05/11/22 23:36	71-55-6	
1,1,2-Trichloroethane	ND	mg/L	0.50	100		05/11/22 23:36	79-00-5	
Trichloroethene	ND	mg/L	0.50	100		05/11/22 23:36	79-01-6	
Trichlorofluoromethane	ND	mg/L	0.50	100		05/11/22 23:36	75-69-4	
Vinyl chloride	ND	mg/L	0.20	100		05/11/22 23:36	75-01-4	
m&p-Xylene	ND	mg/L	1.0	100		05/11/22 23:36	179601-23-1	
o-Xylene	ND	mg/L	0.50	100		05/11/22 23:36	95-47-6	
Surrogates								
Toluene-d8 (S)	103	%.	76-124	100		05/11/22 23:36	2037-26-5	
Toluene-d8 (S)	101	%.	76-124	10000		05/12/22 20:04	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	78-121	100		05/11/22 23:36	460-00-4	
4-Bromofluorobenzene (S)	97	%.	78-121	10000		05/12/22 20:04	460-00-4	
Dibromofluoromethane (S)	101	%.	74-128	100		05/11/22 23:36	1868-53-7	
Dibromofluoromethane (S)	103	%.	74-128	10000		05/12/22 20:04	1868-53-7	

Sample: DR-S-BP-05052022-02 **Lab ID: 20243028004** Collected: 05/05/22 16:10 Received: 05/06/22 17:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
	Pace Analytical Services - New Orleans							
Acetone	ND	mg/kg	27.8	50	05/19/22 09:30	05/19/22 14:09	67-64-1	
Benzene	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	71-43-2	
Bromodichloromethane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	75-27-4	
Bromoform	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	75-25-2	
Bromomethane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	74-83-9	
2-Butanone (MEK)	ND	mg/kg	27.8	50	05/19/22 09:30	05/19/22 14:09	78-93-3	
Carbon disulfide	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	75-15-0	
Carbon tetrachloride	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	56-23-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

ANALYTICAL RESULTS

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Sample: DR-S-BP-05052022-02 **Lab ID: 20243028004** Collected: 05/05/22 16:10 Received: 05/06/22 17:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - New Orleans							
Chlorobenzene	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	108-90-7	
Chloroethane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	75-00-3	
Chloroform	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	67-66-3	
Chloromethane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	74-87-3	
Chloroprene	**1080**	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	126-99-8	E
1,2-Dibromo-3-chloropropane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	96-12-8	
Dibromochloromethane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	106-93-4	
Dichlorodifluoromethane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	75-71-8	
1,1-Dichloroethane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	75-34-3	
1,2-Dichloroethane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	107-06-2	
1,1-Dichloroethene	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	156-60-5	
1,2-Dichloropropane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	78-87-5	
cis-1,3-Dichloropropene	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	10061-02-6	
Ethylbenzene	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	100-41-4	
2-Hexanone	ND	mg/kg	27.8	50	05/19/22 09:30	05/19/22 14:09	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	98-82-8	
Methyl acetate	ND	mg/kg	27.8	50	05/19/22 09:30	05/19/22 14:09	79-20-9	
Methylene Chloride	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	27.8	50	05/19/22 09:30	05/19/22 14:09	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	1634-04-4	
Styrene	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	79-34-5	
Tetrachloroethene	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	127-18-4	
Toluene	**240**	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	108-88-3	
1,1,1-Trichloroethane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	79-00-5	
Trichloroethene	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	79-01-6	
Trichlorofluoromethane	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	75-69-4	
Vinyl chloride	ND	mg/kg	5.6	50	05/19/22 09:30	05/19/22 14:09	75-01-4	D4
m&p-Xylene	ND	mg/kg	27.8	50	05/19/22 09:30	05/19/22 14:09	179601-23-1	
o-Xylene	ND	mg/kg	13.9	50	05/19/22 09:30	05/19/22 14:09	95-47-6	
Surrogates								
Toluene-d8 (S)	100	%.	75-125	50	05/19/22 09:30	05/19/22 14:09	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	64-139	50	05/19/22 09:30	05/19/22 14:09	460-00-4	
Dibromofluoromethane (S)	97	%.	66-143	50	05/19/22 09:30	05/19/22 14:09	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

QUALITY CONTROL DATA

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

QC Batch: 255081
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - New Orleans
Associated Lab Samples: 20243028001, 20243028002, 20243028003

METHOD BLANK: 1213305 Matrix: Water
Associated Lab Samples: 20243028001, 20243028002, 20243028003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	mg/L	ND	0.0050	05/11/22 19:49	
1,1,2,2-Tetrachloroethane	mg/L	ND	0.0050	05/11/22 19:49	
1,1,2-Trichloroethane	mg/L	ND	0.0050	05/11/22 19:49	
1,1-Dichloroethane	mg/L	ND	0.0050	05/11/22 19:49	
1,1-Dichloroethene	mg/L	ND	0.0050	05/11/22 19:49	
1,2-Dibromo-3-chloropropane	mg/L	ND	0.0050	05/11/22 19:49	
1,2-Dibromoethane (EDB)	mg/L	ND	0.0050	05/11/22 19:49	
1,2-Dichloroethane	mg/L	ND	0.0050	05/11/22 19:49	
1,2-Dichloropropane	mg/L	ND	0.0050	05/11/22 19:49	
2-Butanone (MEK)	mg/L	ND	0.010	05/11/22 19:49	
2-Hexanone	mg/L	ND	0.010	05/11/22 19:49	
4-Methyl-2-pentanone (MIBK)	mg/L	ND	0.010	05/11/22 19:49	
Acetone	mg/L	ND	0.010	05/11/22 19:49	
Benzene	mg/L	ND	0.0050	05/11/22 19:49	
Bromodichloromethane	mg/L	ND	0.0050	05/11/22 19:49	
Bromoform	mg/L	ND	0.0050	05/11/22 19:49	
Bromomethane	mg/L	ND	0.0050	05/11/22 19:49	
Carbon disulfide	mg/L	ND	0.0050	05/11/22 19:49	
Carbon tetrachloride	mg/L	ND	0.0050	05/11/22 19:49	
Chlorobenzene	mg/L	ND	0.0050	05/11/22 19:49	
Chloroethane	mg/L	ND	0.0050	05/11/22 19:49	
Chloroform	mg/L	ND	0.0050	05/11/22 19:49	
Chloromethane	mg/L	ND	0.0050	05/11/22 19:49	
Chloroprene	mg/L	ND	0.0050	05/11/22 19:49	
cis-1,2-Dichloroethene	mg/L	ND	0.0050	05/11/22 19:49	
cis-1,3-Dichloropropene	mg/L	ND	0.0050	05/11/22 19:49	
Dibromochloromethane	mg/L	ND	0.0050	05/11/22 19:49	
Dichlorodifluoromethane	mg/L	ND	0.0050	05/11/22 19:49	
Ethylbenzene	mg/L	ND	0.0050	05/11/22 19:49	
Isopropylbenzene (Cumene)	mg/L	ND	0.0050	05/11/22 19:49	
m&p-Xylene	mg/L	ND	0.010	05/11/22 19:49	
Methyl acetate	mg/L	ND	0.010	05/11/22 19:49	
Methyl-tert-butyl ether	mg/L	ND	0.0050	05/11/22 19:49	
Methylene Chloride	mg/L	ND	0.0050	05/11/22 19:49	
o-Xylene	mg/L	ND	0.0050	05/11/22 19:49	
Styrene	mg/L	ND	0.0050	05/11/22 19:49	
Tetrachloroethene	mg/L	ND	0.0050	05/11/22 19:49	
Toluene	mg/L	ND	0.0050	05/11/22 19:49	
trans-1,2-Dichloroethene	mg/L	ND	0.0050	05/11/22 19:49	
trans-1,3-Dichloropropene	mg/L	ND	0.0050	05/11/22 19:49	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

QUALITY CONTROL DATA

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

METHOD BLANK: 1213305 Matrix: Water
Associated Lab Samples: 20243028001, 20243028002, 20243028003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Trichloroethene	mg/L	ND	0.0050	05/11/22 19:49	
Trichlorofluoromethane	mg/L	ND	0.0050	05/11/22 19:49	
Vinyl chloride	mg/L	ND	0.0020	05/11/22 19:49	
4-Bromofluorobenzene (S)	%.	99	78-121	05/11/22 19:49	
Dibromofluoromethane (S)	%.	102	74-128	05/11/22 19:49	
Toluene-d8 (S)	%.	104	76-124	05/11/22 19:49	

METHOD BLANK: 1213802 Matrix: Water
Associated Lab Samples: 20243028001, 20243028002, 20243028003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	mg/L	ND	0.0050	05/12/22 11:06	
1,1,2,2-Tetrachloroethane	mg/L	ND	0.0050	05/12/22 11:06	
1,1,2-Trichloroethane	mg/L	ND	0.0050	05/12/22 11:06	
1,1-Dichloroethane	mg/L	ND	0.0050	05/12/22 11:06	
1,1-Dichloroethene	mg/L	ND	0.0050	05/12/22 11:06	
1,2-Dibromo-3-chloropropane	mg/L	ND	0.0050	05/12/22 11:06	
1,2-Dibromoethane (EDB)	mg/L	ND	0.0050	05/12/22 11:06	
1,2-Dichloroethane	mg/L	ND	0.0050	05/12/22 11:06	
1,2-Dichloropropane	mg/L	ND	0.0050	05/12/22 11:06	
2-Butanone (MEK)	mg/L	ND	0.010	05/12/22 11:06	
2-Hexanone	mg/L	ND	0.010	05/12/22 11:06	
4-Methyl-2-pentanone (MIBK)	mg/L	ND	0.010	05/12/22 11:06	
Acetone	mg/L	ND	0.010	05/12/22 11:06	
Benzene	mg/L	ND	0.0050	05/12/22 11:06	
Bromodichloromethane	mg/L	ND	0.0050	05/12/22 11:06	
Bromoform	mg/L	ND	0.0050	05/12/22 11:06	
Bromomethane	mg/L	ND	0.0050	05/12/22 11:06	
Carbon disulfide	mg/L	ND	0.0050	05/12/22 11:06	
Carbon tetrachloride	mg/L	ND	0.0050	05/12/22 11:06	
Chlorobenzene	mg/L	ND	0.0050	05/12/22 11:06	
Chloroethane	mg/L	ND	0.0050	05/12/22 11:06	
Chloroform	mg/L	ND	0.0050	05/12/22 11:06	
Chloromethane	mg/L	ND	0.0050	05/12/22 11:06	
Chloroprene	mg/L	ND	0.0050	05/12/22 11:06	
cis-1,2-Dichloroethene	mg/L	ND	0.0050	05/12/22 11:06	
cis-1,3-Dichloropropene	mg/L	ND	0.0050	05/12/22 11:06	
Dibromochloromethane	mg/L	ND	0.0050	05/12/22 11:06	
Dichlorodifluoromethane	mg/L	ND	0.0050	05/12/22 11:06	
Ethylbenzene	mg/L	ND	0.0050	05/12/22 11:06	
Isopropylbenzene (Cumene)	mg/L	ND	0.0050	05/12/22 11:06	
m&p-Xylene	mg/L	ND	0.010	05/12/22 11:06	
Methyl acetate	mg/L	ND	0.010	05/12/22 11:06	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

QUALITY CONTROL DATA

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

METHOD BLANK: 1213802 Matrix: Water
Associated Lab Samples: 20243028001, 20243028002, 20243028003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methyl-tert-butyl ether	mg/L	ND	0.0050	05/12/22 11:06	
Methylene Chloride	mg/L	ND	0.0050	05/12/22 11:06	
o-Xylene	mg/L	ND	0.0050	05/12/22 11:06	
Styrene	mg/L	ND	0.0050	05/12/22 11:06	
Tetrachloroethene	mg/L	ND	0.0050	05/12/22 11:06	
Toluene	mg/L	ND	0.0050	05/12/22 11:06	
trans-1,2-Dichloroethene	mg/L	ND	0.0050	05/12/22 11:06	
trans-1,3-Dichloropropene	mg/L	ND	0.0050	05/12/22 11:06	
Trichloroethene	mg/L	ND	0.0050	05/12/22 11:06	
Trichlorofluoromethane	mg/L	ND	0.0050	05/12/22 11:06	
Vinyl chloride	mg/L	ND	0.0020	05/12/22 11:06	
4-Bromofluorobenzene (S)	%.	98	78-121	05/12/22 11:06	
Dibromofluoromethane (S)	%.	103	74-128	05/12/22 11:06	
Toluene-d8 (S)	%.	102	76-124	05/12/22 11:06	

LABORATORY CONTROL SAMPLE: 1213306

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/L	0.05	0.048	96	76-126	
1,1,2,2-Tetrachloroethane	mg/L	0.05	0.062	123	65-129	
1,1,2-Trichloroethane	mg/L	0.05	0.056	112	75-121	
1,1-Dichloroethane	mg/L	0.05	0.051	101	71-127	
1,1-Dichloroethene	mg/L	0.05	0.046	92	63-130	
1,2-Dibromo-3-chloropropane	mg/L	0.05	0.050	100	59-131	
1,2-Dibromoethane (EDB)	mg/L	0.05	0.055	109	75-125	
1,2-Dichloroethane	mg/L	0.05	0.052	103	65-131	
1,2-Dichloropropane	mg/L	0.05	0.053	105	72-125	
2-Butanone (MEK)	mg/L	0.05	0.059	117	34-170	
2-Hexanone	mg/L	0.05	0.061	122	52-147	
4-Methyl-2-pentanone (MIBK)	mg/L	0.05	0.057	115	58-141	
Acetone	mg/L	0.05	0.068	135	16-192	
Benzene	mg/L	0.05	0.051	101	74-132	
Bromodichloromethane	mg/L	0.05	0.054	108	73-117	
Bromoform	mg/L	0.05	0.056	112	58-132	
Bromomethane	mg/L	0.05	0.037	74	47-157	
Carbon disulfide	mg/L	0.05	0.043	87	52-145	
Carbon tetrachloride	mg/L	0.05	0.049	98	68-129	
Chlorobenzene	mg/L	0.05	0.052	103	79-121	
Chloroethane	mg/L	0.05	0.043	86	34-160	
Chloroform	mg/L	0.05	0.050	100	70-120	
Chloromethane	mg/L	0.05	0.038	76	44-142	
Chloroprene	mg/L	0.05	0.047	94	64-140	
cis-1,2-Dichloroethene	mg/L	0.05	0.048	95	71-124	
cis-1,3-Dichloropropene	mg/L	0.05	0.052	105	77-121	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

QUALITY CONTROL DATA

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

LABORATORY CONTROL SAMPLE: 1213306

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	mg/L	0.05	0.053	106	67-122	
Dichlorodifluoromethane	mg/L	0.05	0.031	62	28-148	
Ethylbenzene	mg/L	0.05	0.052	104	79-116	
Isopropylbenzene (Cumene)	mg/L	0.05	0.050	100	77-126	
m&p-Xylene	mg/L	0.1	0.10	103	78-119	
Methyl acetate	mg/L	0.05	0.053	106	47-155	
Methyl-tert-butyl ether	mg/L	0.05	0.053	106	58-135	
Methylene Chloride	mg/L	0.05	0.048	95	49-145	
o-Xylene	mg/L	0.05	0.051	103	77-121	
Styrene	mg/L	0.05	0.050	101	81-123	
Tetrachloroethene	mg/L	0.05	0.059	117	62-138	
Toluene	mg/L	0.05	0.051	102	79-120	
trans-1,2-Dichloroethene	mg/L	0.05	0.048	95	68-125	
trans-1,3-Dichloropropene	mg/L	0.05	0.053	107	77-121	
Trichloroethene	mg/L	0.05	0.050	99	77-117	
Trichlorofluoromethane	mg/L	0.05	0.040	79	45-164	
Vinyl chloride	mg/L	0.05	0.035	70	48-130	
4-Bromofluorobenzene (S)	%.			99	78-121	
Dibromofluoromethane (S)	%.			102	74-128	
Toluene-d8 (S)	%.			104	76-124	

LABORATORY CONTROL SAMPLE: 1213803

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/L	0.05	0.050	100	76-126	
1,1,2,2-Tetrachloroethane	mg/L	0.05	0.057	115	65-129	
1,1,2-Trichloroethane	mg/L	0.05	0.054	108	75-121	
1,1-Dichloroethane	mg/L	0.05	0.054	108	71-127	
1,1-Dichloroethene	mg/L	0.05	0.051	102	63-130	
1,2-Dibromo-3-chloropropane	mg/L	0.05	0.047	95	59-131	
1,2-Dibromoethane (EDB)	mg/L	0.05	0.051	103	75-125	
1,2-Dichloroethane	mg/L	0.05	0.054	107	65-131	
1,2-Dichloropropane	mg/L	0.05	0.053	106	72-125	
2-Butanone (MEK)	mg/L	0.05	0.055	110	34-170	
2-Hexanone	mg/L	0.05	0.053	106	52-147	
4-Methyl-2-pentanone (MIBK)	mg/L	0.05	0.052	104	58-141	
Acetone	mg/L	0.05	0.065	129	16-192	
Benzene	mg/L	0.05	0.053	106	74-132	
Bromodichloromethane	mg/L	0.05	0.053	106	73-117	
Bromoform	mg/L	0.05	0.050	99	58-132	
Bromomethane	mg/L	0.05	0.057	113	47-157	
Carbon disulfide	mg/L	0.05	0.049	97	52-145	
Carbon tetrachloride	mg/L	0.05	0.051	101	68-129	
Chlorobenzene	mg/L	0.05	0.053	107	79-121	
Chloroethane	mg/L	0.05	0.071	143	34-160	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

QUALITY CONTROL DATA

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

LABORATORY CONTROL SAMPLE: 1213803

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloroform	mg/L	0.05	0.052	105	70-120	
Chloromethane	mg/L	0.05	0.063	127	44-142	
Chloroprene	mg/L	0.05	0.049	98	64-140	
cis-1,2-Dichloroethene	mg/L	0.05	0.050	101	71-124	
cis-1,3-Dichloropropene	mg/L	0.05	0.053	106	77-121	
Dibromochloromethane	mg/L	0.05	0.050	100	67-122	
Dichlorodifluoromethane	mg/L	0.05	0.052	104	28-148	
Ethylbenzene	mg/L	0.05	0.053	106	79-116	
Isopropylbenzene (Cumene)	mg/L	0.05	0.051	102	77-126	
m&p-Xylene	mg/L	0.1	0.11	107	78-119	
Methyl acetate	mg/L	0.05	0.046	92	47-155	
Methyl-tert-butyl ether	mg/L	0.05	0.052	104	58-135	
Methylene Chloride	mg/L	0.05	0.054	107	49-145	
o-Xylene	mg/L	0.05	0.052	103	77-121	
Styrene	mg/L	0.05	0.051	101	81-123	
Tetrachloroethene	mg/L	0.05	0.051	102	62-138	
Toluene	mg/L	0.05	0.051	103	79-120	
trans-1,2-Dichloroethene	mg/L	0.05	0.052	104	68-125	
trans-1,3-Dichloropropene	mg/L	0.05	0.053	107	77-121	
Trichloroethene	mg/L	0.05	0.051	102	77-117	
Trichlorofluoromethane	mg/L	0.05	0.053	106	45-164	
Vinyl chloride	mg/L	0.05	0.053	106	48-130	
4-Bromofluorobenzene (S)	%.			99	78-121	
Dibromofluoromethane (S)	%.			104	74-128	
Toluene-d8 (S)	%.			102	76-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1213307 1213308

Parameter	Units	20243028001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	mg/L	ND	5	5	4.8	5.6	96	112	73-141	15	20	
1,1,2,2-Tetrachloroethane	mg/L	ND	5	5	5.5	6.8	110	135	48-148	20	20	
1,1,2-Trichloroethane	mg/L	ND	5	5	5.1	6.1	101	121	46-154	18	20	
1,1-Dichloroethane	mg/L	ND	5	5	5.8	6.7	116	134	63-145	15	20	
1,1-Dichloroethene	mg/L	ND	5	5	4.9	5.5	98	109	28-176	11	20	
1,2-Dibromo-3-chloropropane	mg/L	ND	5	5	4.4	5.5	89	110	40-152	21	20	R1
1,2-Dibromoethane (EDB)	mg/L	ND	5	5	4.9	5.8	98	116	69-134	17	20	
1,2-Dichloroethane	mg/L	ND	5	5	4.7	5.7	95	114	51-147	18	20	
1,2-Dichloropropane	mg/L	ND	5	5	4.9	5.7	98	113	64-140	15	20	
2-Butanone (MEK)	mg/L	ND	5	5	5.1	6.0	101	120	10-200	17	20	
2-Hexanone	mg/L	ND	5	5	5.2	6.3	105	125	40-157	18	20	
4-Methyl-2-pentanone (MIBK)	mg/L	ND	5	5	5.0	6.1	99	121	36-165	20	20	
Acetone	mg/L	ND	5	5	6.1	7.2	122	143	10-200	16	20	
Benzene	mg/L	ND	5	5	5.0	5.8	100	117	29-186	16	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

QUALITY CONTROL DATA

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1213307 1213308

Parameter	Units	20243028001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromodichloromethane	mg/L	ND	5	5	4.9	5.8	99	116	58-139	16	20	
Bromoform	mg/L	ND	5	5	5.0	6.0	101	121	57-135	18	20	
Bromomethane	mg/L	ND	5	5	4.0	4.1	80	81	42-168	1	20	
Carbon disulfide	mg/L	ND	5	5	4.9	5.1	97	102	44-170	4	20	
Carbon tetrachloride	mg/L	ND	5	5	5.1	5.9	101	119	45-162	16	20	
Chlorobenzene	mg/L	ND	5	5	4.9	5.8	99	116	71-135	17	20	
Chloroethane	mg/L	ND	5	5	4.7	4.8	95	96	32-175	1	20	
Chloroform	mg/L	ND	5	5	4.8	5.7	96	114	61-136	17	20	
Chloromethane	mg/L	ND	5	5	4.1	4.1	80	79	38-154	1	20	
Chloroprene	mg/L	62.8	5	5	64.6	62.7	37	-2	59-153	3	20	M1
cis-1,2-Dichloroethene	mg/L	ND	5	5	4.7	5.5	93	109	44-160	16	20	
cis-1,3-Dichloropropene	mg/L	ND	5	5	4.8	5.6	96	112	47-153	15	20	
Dibromochloromethane	mg/L	ND	5	5	4.8	5.8	97	116	64-130	18	20	
Dichlorodifluoromethane	mg/L	ND	5	5	3.6	3.6	72	72	22-160	0	20	
Ethylbenzene	mg/L	ND	5	5	5.0	6.0	100	119	51-153	17	20	
Isopropylbenzene (Cumene)	mg/L	ND	5	5	5.0	6.1	101	123	68-145	20	20	
m&p-Xylene	mg/L	ND	10	10	10.1	11.9	101	119	30-173	16	20	
Methyl acetate	mg/L	ND	5	5	4.5	5.7	90	114	20-173	23	20	R1
Methyl-tert-butyl ether	mg/L	ND	5	5	4.8	5.8	96	117	36-160	19	20	
Methylene Chloride	mg/L	ND	5	5	4.8	5.5	95	110	56-140	14	20	
o-Xylene	mg/L	ND	5	5	4.9	5.9	98	118	10-197	18	20	
Styrene	mg/L	ND	5	5	4.8	5.6	95	111	37-163	16	20	
Tetrachloroethene	mg/L	ND	5	5	5.1	5.9	102	117	18-193	14	20	
Toluene	mg/L	8.4	5	5	13.0	13.2	93	97	33-175	2	20	D4
trans-1,2-Dichloroethene	mg/L	ND	5	5	4.9	5.6	99	112	63-140	13	20	
trans-1,3-Dichloropropene	mg/L	ND	5	5	4.9	5.8	98	116	47-153	17	20	
Trichloroethene	mg/L	ND	5	5	4.9	5.6	97	112	24-181	14	20	
Trichlorofluoromethane	mg/L	ND	5	5	4.5	4.7	91	94	37-182	3	20	
Vinyl chloride	mg/L	ND	5	5	4.0	4.1	81	81	19-169	0	20	
4-Bromofluorobenzene (S)	%.						101	104	78-121			
Dibromofluoromethane (S)	%.						102	102	74-128			
Toluene-d8 (S)	%.						103	101	76-124			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

QUALITY CONTROL DATA

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

QC Batch: 255724
QC Batch Method: EPA 5035/5030B
Analysis Method: EPA 8260
Analysis Description: 8260 MSV 5030 Med Level
Laboratory: Pace Analytical Services - New Orleans
Associated Lab Samples: 20243028004

METHOD BLANK: 1217688 Matrix: Solid
Associated Lab Samples: 20243028004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	mg/kg	ND	0.25	05/19/22 10:03	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.25	05/19/22 10:03	
1,1,2-Trichloroethane	mg/kg	ND	0.25	05/19/22 10:03	
1,1-Dichloroethane	mg/kg	ND	0.25	05/19/22 10:03	
1,1-Dichloroethene	mg/kg	ND	0.25	05/19/22 10:03	
1,2-Dibromo-3-chloropropane	mg/kg	ND	0.25	05/19/22 10:03	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.25	05/19/22 10:03	
1,2-Dichloroethane	mg/kg	ND	0.25	05/19/22 10:03	
1,2-Dichloropropane	mg/kg	ND	0.25	05/19/22 10:03	
2-Butanone (MEK)	mg/kg	ND	0.50	05/19/22 10:03	
2-Hexanone	mg/kg	ND	0.50	05/19/22 10:03	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.50	05/19/22 10:03	
Acetone	mg/kg	ND	0.50	05/19/22 10:03	
Benzene	mg/kg	ND	0.25	05/19/22 10:03	
Bromodichloromethane	mg/kg	ND	0.25	05/19/22 10:03	
Bromoform	mg/kg	ND	0.25	05/19/22 10:03	
Bromomethane	mg/kg	ND	0.25	05/19/22 10:03	
Carbon disulfide	mg/kg	ND	0.25	05/19/22 10:03	
Carbon tetrachloride	mg/kg	ND	0.25	05/19/22 10:03	
Chlorobenzene	mg/kg	ND	0.25	05/19/22 10:03	
Chloroethane	mg/kg	ND	0.25	05/19/22 10:03	
Chloroform	mg/kg	ND	0.25	05/19/22 10:03	
Chloromethane	mg/kg	ND	0.25	05/19/22 10:03	
cis-1,2-Dichloroethene	mg/kg	ND	0.25	05/19/22 10:03	
cis-1,3-Dichloropropene	mg/kg	ND	0.25	05/19/22 10:03	
Dibromochloromethane	mg/kg	ND	0.25	05/19/22 10:03	
Dichlorodifluoromethane	mg/kg	ND	0.25	05/19/22 10:03	
Ethylbenzene	mg/kg	ND	0.25	05/19/22 10:03	
Isopropylbenzene (Cumene)	mg/kg	ND	0.25	05/19/22 10:03	
m&p-Xylene	mg/kg	ND	0.50	05/19/22 10:03	
Methyl acetate	mg/kg	ND	0.50	05/19/22 10:03	
Methyl-tert-butyl ether	mg/kg	ND	0.25	05/19/22 10:03	
Methylene Chloride	mg/kg	ND	0.25	05/19/22 10:03	
o-Xylene	mg/kg	ND	0.25	05/19/22 10:03	
Styrene	mg/kg	ND	0.25	05/19/22 10:03	
Tetrachloroethene	mg/kg	ND	0.25	05/19/22 10:03	
Toluene	mg/kg	ND	0.25	05/19/22 10:03	
trans-1,2-Dichloroethene	mg/kg	ND	0.25	05/19/22 10:03	
trans-1,3-Dichloropropene	mg/kg	ND	0.25	05/19/22 10:03	
Trichloroethene	mg/kg	ND	0.25	05/19/22 10:03	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

QUALITY CONTROL DATA

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

METHOD BLANK: 1217688 Matrix: Solid
Associated Lab Samples: 20243028004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Trichlorofluoromethane	mg/kg	ND	0.25	05/19/22 10:03	
Vinyl chloride	mg/kg	ND	0.10	05/19/22 10:03	
4-Bromofluorobenzene (S)	%.	101	64-139	05/19/22 10:03	
Dibromofluoromethane (S)	%.	102	66-143	05/19/22 10:03	
Toluene-d8 (S)	%.	101	75-125	05/19/22 10:03	

LABORATORY CONTROL SAMPLE: 1217689

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	2.5	2.4	97	76-126	
1,1,2,2-Tetrachloroethane	mg/kg	2.5	2.7	107	65-129	
1,1,2-Trichloroethane	mg/kg	2.5	2.5	101	75-121	
1,1-Dichloroethane	mg/kg	2.5	2.5	99	71-127	
1,1-Dichloroethene	mg/kg	2.5	2.1	82	63-130	
1,2-Dibromo-3-chloropropane	mg/kg	2.5	2.4	98	59-131	
1,2-Dibromoethane (EDB)	mg/kg	2.5	2.6	102	75-125	
1,2-Dichloroethane	mg/kg	2.5	2.4	94	65-131	
1,2-Dichloropropane	mg/kg	2.5	2.6	104	72-125	
2-Butanone (MEK)	mg/kg	2.5	2.9	116	34-170	
2-Hexanone	mg/kg	2.5	2.8	112	52-147	
4-Methyl-2-pentanone (MIBK)	mg/kg	2.5	2.7	110	58-141	
Acetone	mg/kg	2.5	2.9	117	16-192	
Benzene	mg/kg	2.5	2.6	106	74-132	
Bromodichloromethane	mg/kg	2.5	2.4	96	73-117	
Bromoform	mg/kg	2.5	2.6	102	58-132	
Bromomethane	mg/kg	2.5	2.0	81	47-157	
Carbon disulfide	mg/kg	2.5	2.0	80	52-145	
Carbon tetrachloride	mg/kg	2.5	2.5	101	68-129	
Chlorobenzene	mg/kg	2.5	2.5	101	79-121	
Chloroethane	mg/kg	2.5	1.9	77	34-160	
Chloroform	mg/kg	2.5	2.5	98	70-120	
Chloromethane	mg/kg	2.5	3.1	122	44-142	
cis-1,2-Dichloroethene	mg/kg	2.5	2.5	100	71-124	
cis-1,3-Dichloropropene	mg/kg	2.5	2.5	102	77-121	
Dibromochloromethane	mg/kg	2.5	2.5	100	67-122	
Dichlorodifluoromethane	mg/kg	2.5	2.5	99	28-148	
Ethylbenzene	mg/kg	2.5	2.5	101	79-116	
Isopropylbenzene (Cumene)	mg/kg	2.5	2.6	103	77-126	
m&p-Xylene	mg/kg	5	5.0	100	78-119	
Methyl acetate	mg/kg	2.5	2.6	103	47-155	
Methyl-tert-butyl ether	mg/kg	2.5	2.4	97	58-135	
Methylene Chloride	mg/kg	2.5	2.4	97	49-145	
o-Xylene	mg/kg	2.5	2.5	101	77-121	
Styrene	mg/kg	2.5	2.5	99	81-123	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

QUALITY CONTROL DATA

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

LABORATORY CONTROL SAMPLE: 1217689

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	mg/kg	2.5	2.6	105	62-138	
Toluene	mg/kg	2.5	2.5	99	79-120	
trans-1,2-Dichloroethene	mg/kg	2.5	2.6	102	68-125	
trans-1,3-Dichloropropene	mg/kg	2.5	2.4	98	77-121	
Trichloroethene	mg/kg	2.5	2.6	104	77-117	
Trichlorofluoromethane	mg/kg	2.5	2.1	82	45-164	
Vinyl chloride	mg/kg	2.5	1.9	77	48-130	
4-Bromofluorobenzene (S)	%.			101	64-139	
Dibromofluoromethane (S)	%.			98	66-143	
Toluene-d8 (S)	%.			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1217690 1217691

Parameter	Units	20242755001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	mg/kg	ND	2.6	2.6	2.7	2.8	103	106	73-141	3	20	
1,1,2,2-Tetrachloroethane	mg/kg	ND	2.6	2.6	2.9	2.9	110	110	48-148	0	20	
1,1,2-Trichloroethane	mg/kg	ND	2.6	2.6	2.8	2.8	105	106	46-154	1	20	
1,1-Dichloroethane	mg/kg	ND	2.6	2.6	2.8	2.8	106	108	63-145	1	20	
1,1-Dichloroethene	mg/kg	ND	2.6	2.6	2.1	2.1	80	81	28-176	1	20	
1,2-Dibromo-3-chloropropane	mg/kg	ND	2.6	2.6	2.5	2.7	96	101	40-152	5	20	
1,2-Dibromoethane (EDB)	mg/kg	ND	2.6	2.6	2.8	2.9	105	109	69-134	3	20	
1,2-Dichloroethane	mg/kg	ND	2.6	2.6	2.6	2.6	97	99	51-147	2	20	
1,2-Dichloropropane	mg/kg	ND	2.6	2.6	3.0	3.0	112	114	64-140	2	20	
2-Butanone (MEK)	mg/kg	ND	2.6	2.6	2.8	2.9	94	100	10-200	5	20	
2-Hexanone	mg/kg	ND	2.6	2.6	2.9	3.1	108	116	40-157	7	20	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	2.6	2.6	2.8	2.9	107	110	36-165	2	20	
Acetone	mg/kg	ND	2.6	2.6	2.8	3.1	94	105	10-200	10	20	
Benzene	mg/kg	ND	2.6	2.6	3.0	3.0	112	114	29-186	2	20	
Bromodichloromethane	mg/kg	ND	2.6	2.6	2.7	2.8	103	104	58-139	1	20	
Bromoform	mg/kg	ND	2.6	2.6	2.7	2.8	102	107	57-135	4	20	
Bromomethane	mg/kg	ND	2.6	2.6	2.0	2.0	75	75	42-168	0	20	
Carbon disulfide	mg/kg	ND	2.6	2.6	2.0	2.0	75	76	44-170	2	20	
Carbon tetrachloride	mg/kg	ND	2.6	2.6	2.8	2.9	107	109	45-162	2	20	
Chlorobenzene	mg/kg	ND	2.6	2.6	2.9	2.9	109	111	71-135	2	20	
Chloroethane	mg/kg	ND	2.6	2.6	0.90	0.74	34	28	32-175	19	20	M1
Chloroform	mg/kg	ND	2.6	2.6	2.7	2.8	104	106	61-136	2	20	
Chloromethane	mg/kg	ND	2.6	2.6	3.4	3.4	128	127	38-154	1	20	
Chloroprene	mg/kg				2.8	2.8				2	20	
cis-1,2-Dichloroethene	mg/kg	ND	2.6	2.6	2.8	2.9	107	108	44-160	1	20	
cis-1,3-Dichloropropene	mg/kg	ND	2.6	2.6	2.8	2.9	107	108	47-153	1	20	
Dibromochloromethane	mg/kg	ND	2.6	2.6	2.7	2.8	102	104	64-130	2	20	
Dichlorodifluoromethane	mg/kg	ND	2.6	2.6	2.8	2.7	105	103	22-160	2	20	
Ethylbenzene	mg/kg	ND	2.6	2.6	2.9	2.9	110	111	51-153	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

QUALITY CONTROL DATA

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1217690 1217691

Parameter	Units	20242755001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Isopropylbenzene (Cumene)	mg/kg	ND	2.6	2.6	3.0	3.0	114	114	68-145	0	20	
m&p-Xylene	mg/kg	ND	5.3	5.3	5.7	5.8	108	110	30-173	1	20	
Methyl acetate	mg/kg	ND	2.6	2.6	2.6	2.7	99	103	20-173	4	20	
Methyl-tert-butyl ether	mg/kg	ND	2.6	2.6	2.7	2.7	100	102	36-160	2	20	
Methylene Chloride	mg/kg	ND	2.6	2.6	2.9	2.9	108	109	56-140	1	20	
o-Xylene	mg/kg	ND	2.6	2.6	3.0	3.0	113	113	10-197	1	20	
Styrene	mg/kg	ND	2.6	2.6	2.8	2.9	107	108	37-163	1	20	
Tetrachloroethene	mg/kg	ND	2.6	2.6	3.2	3.4	120	127	18-193	6	20	
Toluene	mg/kg	ND	2.6	2.6	2.8	2.8	107	108	33-175	0	20	
trans-1,2-Dichloroethene	mg/kg	ND	2.6	2.6	2.9	2.9	108	108	63-140	0	20	
trans-1,3-Dichloropropene	mg/kg	ND	2.6	2.6	2.7	2.7	101	102	47-153	1	20	
Trichloroethene	mg/kg	ND	2.6	2.6	3.0	3.0	112	114	24-181	1	20	
Trichlorofluoromethane	mg/kg	ND	2.6	2.6	1.9	2.0	73	74	37-182	1	20	
Vinyl chloride	mg/kg	ND	2.6	2.6	2.1	2.1	78	81	19-169	3	20	
4-Bromofluorobenzene (S)	%.						104	103	64-139			
Dibromofluoromethane (S)	%.						95	96	66-143			
Toluene-d8 (S)	%.						101	100	75-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

QUALIFIERS

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The Nelac Institute

ANALYTE QUALIFIERS

D4	Sample was diluted due to the presence of high levels of target analytes.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

Pace Analytical Services, LLC
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Voaltiles + Chloroprene
Pace Project No.: 20243028

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
20243028001	**DR-L-LB-05052022-01**	EPA 8260	255081		
20243028002	**DR-L-LB-05052022-02**	EPA 8260	255081		
20243028003	**DR-L-LA-05052022-01**	EPA 8260	255081		
20243028004	**DR-S-BP-05052022-02**	EPA 5035/5030B	255724	EPA 8260	255848

Pace

CHAIN-OF-CUSTODY / Analytical Request Docum

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be com

WO# : 20243028

20243028

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/

Section A	Section B	Section C
uired Client Information:	**Required Project Information:**	**Invoice Information:**
pany: weston solution inc.	Report To: Jeff Wright	Attention:
ress: 4324 S. Sherwood Forest Blvd #100	Copy To:	Company Name:
n Rouge , LA 70816		Address:
il: jeff.wright@westonsolutions.com	Purchase Order #:	Pace Quote:
ne: 225-772-7929 Fax:	Project Name:	Pace Project Manager: clay.ledet@pacelabs.com,
uested Due Date: 48 hr	Project #:	Pace Profile #: 17402/142

Regulatory Agency

State / Location

Requested Analysis Filtered (Y/N)

SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260 Full List	8260 Full List	8260 Full List	Residual Chlorine (Y/N)
DR-L-LB-05052022-01	WW	G	5/5/22	1545				3				X					X				
DR-L-LB-05052022-02	WW	G	5/5/22	1545				3				X					X				
DR-L-LA-05052022-01	WW	G	5/5/22	~~1715~~ 1710				3				X					X				
DR-S-BP-05052022-01	SO	G	5/5/22	1610				2	X								X				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Weston	5/6/22	14:15		5/6/22	14:15				
		5/6/22	14:15		5/6/22	15:-				
		5/6/22	17:-		5/6/22	1750	1.8 °C	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

F34 3.0

WO#: 20243028

Pace

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Project : PM: CAL Due Date: 05/12/22
CLIENT: 20-WestonSol

Courier: ☑ Pace Courier ☐ Hired Courier ☐ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: ☐ YES ☑ NO **Custody Seals intact:** ☐ YES ☐ NO

Samples on ice: ☑ YES ☐ NO **Type of Ice:** (Wet) Blue None

Date and Initials of person examining contents: 5/9/22 CAR

Temp should be ≤6°C *Temp must be measured from Temperature blank when present

Cooler #1 Thermometer Used: 10 Cooler Temp °C: (Observed) 1.8 (CF) 0 (Actual) 1.8
Cooler #2 Thermometer Used: _____ Cooler Temp °C: (Observed) _____ (CF) _____ (Actual) _____
Cooler #3 Thermometer Used: _____ Cooler Temp °C: (Observed) _____ (CF) _____ (Actual) _____
Cooler #4 Thermometer Used: _____ Cooler Temp °C: (Observed) _____ (CF) _____ (Actual) _____

Tracking #: _____

Temperature Blank Present"?	☐Yes ☐No ☑N/A	
Chain of Custody Present:	☑Yes ☐No ☐N/A	
Chain of Custody Complete:	☑Yes ☐No ☐N/A	
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	
Sampler Name & Signature on COC:	☐Yes ☑No ☐N/A	
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	
Sufficient Volume:	☑Yes ☐No ☐N/A	
Correct Containers Used:	☑Yes ☐No ☐N/A	
Filtered vol. Rec. for Diss. tests	☐Yes ☐No ☑N/A	
Sample Labels match COC:	☑Yes ☐No ☐N/A	
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes ☐No ☐N/A	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☐Yes ☐No ☑N/A	If No, was preserative added? ☐Yes ☐No If added record lot #.: HNO3 _____ H2SO4 _____ Date: _____ Time: _____
All containers preservation checked found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	
Trip Blank Present:	☐Yes ☑No	

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Attachment 8

Attachment 8

Daily Activity Summary for May 5, 2022 – FY2022 Denka Sampling Investigation

From: Penland, John
To: christopher-meyers@denkape.com; Bordelon, David
Cc: Osbourne, Margaret; Yurk, Jeffrey; Delgado, Eric
Subject: Daily Summary May 5, 2022 - FY2022 RCRA Sampling Investigation at the Denka facility located in LaPlace, LA (LAR000009415)
Date: Thursday, May 5, 2022 11:23:00 PM

All,
Here is a summary of my notes from today's inspection. If there are any errors or omissions please le t me know.

Inspection Participants

NAME	TITLE	REPRESENTING	PHONE	EMAIL
John Penland	Sr. Environmental Scientist – Lead Inspector	US EPA Region 6	214-665-9717	Penland.john@epa.gov
Chris Meyers		Denka Performance Elastomer, LLC.		christopher-meyers@denkape.com
Cory Green	Sr. SHE Consultant	Denka Performance Elastomer, LLC.	985-536-7583	cory-green@denkape.com
Patrick Walsh	SHE/PSM Manager	Denka Performance Elastomer, LLC.	985-536-7573	patrick-walsh@denkape.com
David Bordelon		EPA - START		david.bordelon@westonsolutions.com
Derrick Cobb		EPA - START		derrick.cobb@westonsolutions.com
Jose Ojeda		EPA - START		jose.ojeda@westonsolutions.com
Jeff Wright		EPA - START		jeff.wright@westonsolutions.com
Luke Murray		EPA - START		luke.murray@mecx.net
Bob Holden		Jones Walker		
Jason Hutt		Bracewell		
Kevin Volkell		Bracewell		
Jorge Lavastida		Denka Performance Elastomer, LLC.		

Introduction

On May 5, 2022, I conducted an onsite inspection of the Denka Performance Elastomers, LLC. Manufacturing facility located in LaPlace, St. John the Baptist Parish, Louisiana (Denka). Denka has notified as a large quantity generator of hazardous waste and was issued the EPA identification number LAR000009415. Denka is a treatment, storage, and disposal facility and operates under the requirements of RCRA permit LAR000009415-OP-1 issued by the Louisiana Department of Environmental Quality. This inspection is a follow-up to the April 18-21, 2021, RCRA inspection where initial concerns were raised about the generation and management of the "neoprene popcorn" generated in the poly unit. This inspection involved observation of the facility's standard operating procedures and sample collection of air, liquid, and solid media associated with or impacted by the "neoprene popcorn" generation and management procedures.

Summary

- Inspection start – approximately 09:30am
- I presented my credentials to Mr. Patrick Walsh, Mr. Cory Green, and Mr. Chris Meyer and informed them that I was there under the authority of section 3007 of RCRA and Condition II.E.8 of RCRA permit LAR000009415-OP-1 to conduct a follow-up inspection of the Denka facility.
- Denka had been notified of this sampling inspection through their counsel on April 29, 2022 and again through their counsel on May 4, 2022. The April 29, 2022, notification provided a basic list of planned samples and offered Denka the opportunity to prepare containers for the collection of split samples.
- During our initial meeting I explained that the purpose of this sampling inspection was to collect information and samples related to the generation and management of the "neoprene popcorn". At this time, EPA is assessing this material as a solid waste and potentially a hazardous waste. This concern was previously identified during the April 18-21, 2022 inspection.
- According to Chris Meyers, following the completion of the April 18-21, 2022 inspection, additional information concerning the amount of residual chloroprene present in the "neoprene popcorn" was located and will be provided as part of the response to the records request originating from EPA during that inspection.
- I asked whether Denka considered the "neoprene popcorn" to be a solid waste based on the definition of "abandoned" in 40 CFR 261.2. Cory Green acknowledged that the solid waste definition could apply. Patrick Walsh asserted that Denka had sold the stabilized "neoprene popcorn" for its commercial value previously, though it does not currently do so.
- I explained the D001 flammable solids definition and asked whether that could apply as the "neoprene popcorn" had been previously described by the Poly Unit Production Manager as a self-heating material. Cory Green disputed that the material would ignite or burn vigorously since the material is wet as generated.
- I explained the D003 reactivity definition and its association with the property of auto-polymerization. Both Patrick Walsh and Cory Green acknowledged that auto-polymerization is an attribute of the "neoprene popcorn".
- As part of this inspection, I requested and received the following documents marked as Confidential:
    - PK Pump Out and Strainer Cleaning Operation

Clearing Unstripped Emulsion Storage Tank for Cleaning
    - 3 Engineering Drawings of the Brine Pit
    - Raw Materials Characteristics and Hazards
    - Emergency Stabilizer Make-up
- David Bordelon arrived at approximately 12:00pm
- At approximately 12:30pm we conducted our initial reconnaissance of the planned sample collection area and equipment staging location.
- We departed the facility for lunch at approximately 1:00pm
- We returned to the facility at approximately 2:15pm and briefed the START contractors.
- Initiated sampling at approximately 3:30pm
- A detailed sampling report will be prepared by the START contractors to accompany the report from the laboratory
- Following the conclusion of sampling activities, we returned to the Denka offices where I summarized the activities listed above to Denka representatives and their counsel.
- During this inspection I collected both photos and video recordings which are being claimed as Confidential by Denka.
- For all Confidential claims asserted by Denka please refer to the Region 6 CBI letter provided during the April 18-21, 2022 inspection.

John Penland
Senior Environmental Scientist (ECDSR)
Enforcement and Compliance Assurance Division
Waste Enforcement Branch
EPA Region 6 1201 Elm St., Suite 500
Dallas, Texas 75270
(214)665-9717