



January 3, 2023

Via Email Only to: preston.hernandez@tyson.com rechelle.hollowaty@tyson.com

Preston Hernandez Complex Environmental Manager Tyson Chicken, Inc. - Hope Processing 275 County Road 278 Hope, AR 71801

RE: Application for Registration AFIN: 29-00035; Registration No.: 1291-A-REG315

Dear Mr. Hernandez,

The Division of Environmental Quality has reviewed your facility's application for registration for the facility located at 275 County Road 278, Hope in Hempstead County, Arkansas.

The Division of Environmental Quality has determined that the information certified in the application fulfills the required criteria for registration as specified in Arkansas Air Pollution Control Code (Rule 18), Rule 18.315 and other applicable regulations. Your registration number has been assigned as 1291-A-REG315.

This registration is your authority to construct, operate, and maintain the equipment and/or control apparatus as set forth in your registration request received on December 13, 2022. Tyson Chicken, Inc. - Hope Processing is required to update this registration should the facility operations or emissions change so that the current registration no longer reflects actual operations.

Please maintain a copy of this letter and the application at the facility.

Sincerely,

Thomas Rhearine

Thomas Rheaume, P.E. Senior Operations Manager, Office of Air Quality, Division of Environmental Quality 5301 Northshore Drive, North Little Rock, AR 72118-5317

c: Compliance Monitoring

Attachment: Registration Application

ARKANSAS DEPARTMENT OF ENERGY AND ENVIRONMENT

Air Application for Registrations, Minor Source Permits, or Title V Permits

version 1.40

(Submission #: HPP-WG4S-F4VYC, version 1)



Details

Submission Alias Hope Processing Plant Air Registration

AFIN 29-00035

Submission ID HPP-WG4S-F4VYC

Submission Reason Modification

Form Input

General Information

AFIN, Application Type, Current Registrations or Air Permits, and Changes

Indicate below the Arkansas DEQ Facility Identification Number (AFIN) if one has already been assigned; if this application is for a Registration, Minor Source air permit, or a Title V/Major Source air permit; the type of application; list any active registration or air permit numbers; and clearly and concisely indicate the changes associated with this application.

Specifically identify all changes requested in this application in the paragraph box below. Identify any physical modifications, including increases in the amount or type of throughputs, fuel use, control equipment, or other factors affecting emissions. Also, specifically identify any other requested changes to the permit or permit conditions, including but not limited to recordkeeping requirements, testing, monitoring, etc. Because of the complexity of permits, any changes not listed in the paragraph box below may not be reviewed or incorporated into the draft permit.

Arkansas DEQ Facility Identification Number (AFIN)

29-00035

Select the Type of Permit Registration

Select the Type of Registration Application

Registration Modification

List All Changes and Revised Sources Associated with this Application or Indicate "None" Including Sulfuric Acid emission from the use of a sulfuric acid solution in the evisceration dip tanks for anti-microbial intervention.

List Current Active Registration or Air Permit Number for the Facility (If Applicable)

1291-A-REG315

Dates of Construction/Reconstruction

If the facility is a new facility or the modifications to the facility involve construction of new emission units or reconstruction, enter the proposed construction or reconstruction and operation dates. If a modification does not involve construction of new emission units or reconstruction, do not enter any dates. [Note: Except for Registrations, permits are generally required before any construction may commence. Contact the Office of Air Quality for more information and exceptions.]

Expected Date of Commencement of Construction or Reconstruction NONE PROVIDED

Expected Date of Completion of Construction or Reconstruction NONE PROVIDED

Expected Date of Operation

NONE PROVIDED

Air Application Contact Information

In many cases, the person who prepared and is most knowledgeable about the application is someone other than the facility mailing contact. The air application contact's email will be copied on correspondence sent to the facility regarding this submission. This contact will only be used for this ePortal submission. If this section is blank and the Office of Air Quality requires additional information, we will contact the person listed as the facility mailing address contact.

Air Application Contact Information

Air Application Co		
Prefix Mr.		
First Name Preston	Last Name Hemandez	
Title Complex Environme	ental Manager	
Organization Name Tyson Foods, Inc.	e	
Phone Type	Number	Extension
Home	870-777-7362	
Email preston.hemandez@)tyson.com	
Fax NONE PROVIDED		
Air Application Co	ntact Address	
275 County Road 27	78	
Hope, AR 71801		
United States		

Federal Regulations Applicability

Indicate the applicability of the listed federal regulations.

Are there any 40 C.F.R. & 60, 61, or 63 federal regulations that are applicable to this application? No

Applicant Information

Facility Information

Please provide the following information about the facility.

Legal Name - Facility Name

Tyson Chicken, Inc. Hope Processing

North American Industry Classification System (NAICS)

Please provide the NAICS codes and descriptions for your facility. Click here to search for and review the NAICS Codes via the Census Bureau NAICS Lookup

Primary NAICS Code and Description

311615 - Poultry Processing

Secondary NAICS Code and Description NONE PROVIDED

Tertiary NAICS Code and Description NONE PROVIDED

Facility Physical Address

Physical Address

275 County Road 278 Hope, AR 71801

Facility Physical County

Hempstead

Facility Physical Location Latitude and Longitude 33.740138,-93.61456

Facility Mailing Address

Mailing Contact Prefix Mr. First Name Last Name Preston Hemandez Title Complex Environmental Manager **Organization Name** NONE PROVIDED Phone Type Number Extension 870-777-7362 Business Email preston.hemandez@tyson.com Fax NONE PROVIDED Mailing Address 275 County Road 278 Hope, AR 71801 United States

Additional Facility Email Contact

If you want an additional facility contact to be included on emails of correspondence for this facility, please enter their email address below. This contact should be facility personnel only.

Enter the Additional Facility Email Contact

rechelle.hollowaty@tyson.com

Billing Information

Please provide the following information for the Billing contact for this application.

Billing Information Billing Contact Prefix NONE PROVIDED First Name Last Name Stephanie Hendricks Title Administrative Coordinator for EHS **Organization Name** Tyson Foods, Inc. Phone Type Number Extension 479-290-4713 **Business** Email stephanie.hendricks@tyson.com Fax NONE PROVIDED **Billing Address** 2200 W Don Tyson Pkwy Springdale, AR 72762 **United States**

Organizational Information

Please provide the following information for the applicant. If the applicant is a Corporation, Limited Liability Company, Limited Partnership, or Cooperative; your legal name must exactly match the name registered with the Arkansas Secretary of State. Please use the following link to reference the Secretary of State registered name listing. The Secretary of State information is not required for Administrative Amendments.

All Corporations, Limited Liability Companies (LLC), Limited Partnerships (LP, LLP, and LLLP), and Cooperatives must be registered and in good standing with the Arkansas Secretary of State and the state of origin (if other than Arkansas). <u>Click here to view the Secretary of State registered name listing</u>

Legal Organization

Corporation (Domestic or Foreign, includes for-profit, nonprofit, and corporation d/b/a company)

Enter the Arkansas Secretary of State's Filing Number

100166292

Indicate if the Applicant is chartered in Arkansas (i.e. domestic) or chartered in a state other than Arkansas (i.e. foreign). Refer to the State of Origin that is listed on the Arkansas Secretary of State s website for this applicant. Foreign (Chartered Outside of Arkansas)

Attach the Current Proof of Good Standing from the State of Origin

Tyson Chicken, Inc. - DE 4.28.22.pdf - 12/13/2022 08:57 AM Comment

NONE PROVIDED

Responsible Official Information

Provide the information below for the person under whose electronic signature or hardcopy signature this form will be certified when completed. This person must be a responsible official. For the definition of responsible official click the link below. <u>Click Here for the Definition of Responsible Official</u>

Responsible Official

First Name	Last Name
Randy	King
Title	
Complex Manager	
Company or Agen	cy of the Responsible Official

Tyson Chicken, Inc.

How Does the Person Certifying this Submission Qualify as a Responsible Official?

The person is a duly authorized representative that is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit (e.g., Plant Manager)

Attach the Delegation of Authority Letter

Tyson Chicken Inc.-Signatory Authority.pdf - 12/13/2022 09:00 AM Comment NONE PROVIDED

How Will the Responsible Official Certify this Submission?

An original hardcopy Certification of ePortal Submission form signed by the Responsible Official will be mailed or delivered to DEQ

Since the responsible official is not electronically signing this submission, please complete the Certification of ePortal Submission form. This form will be available under the Download/Export button on the Submission Overview page after you submit this submission. Mail the original signed form to the Division of Environmental Quality. Your submittal will not be considered complete until the original hardcopy certification is received.

Registration Information

Total Actual Emissions (Required for Registrations)

Enter the total actual emissions from the facility.

PM (tons per year) 9.57

PM10 (tons per year) 9.57

SO2 (tons per year) 0.04

VOC (tons per year) 21.41

CO (tons per year) 6.06

NOx (tons per year) 7.21

Lead (tons per year) 3.61E-5

Single Hazardous Air Pollutant (tons per year) 0.13

Total Hazardous Air Pollutants (tons per year) 0.14

Air Contaminants (tons per year) 0.02

Process Information

Process Description (Required for All Applications Except Administrative Amendments)

A written description of the process by NAICS number must accompany each application. This must include a description of each relevant piece of equipment and process. The description must be in sufficient detail to provide the permit engineer an understanding of the process. The applicant should place special emphasis on any process or equipment with the potential to emit any pollutants to the atmosphere. The process description should describe material flow between processes (if any) and the source (SN) to which each process is vented should be identified in the narrative. The applicant should describe any work practice standards used to control emissions. Attach the process description below.

Attach the Process Description

Hope Project Description Summary 12 12 22 (1).pdf - 12/13/2022 02:23 PM Comment NONE PROVIDED

Process Flow Diagram (Required for All Applications Except Administrative Amendments)

The process flow diagram must be in sufficient detail to understand the general process. The process flow diagram must clearly identify all relevant processes or pieces of equipment. All points where raw materials and/or chemicals are introduced into the process and all points where intermediate and/or finished products are removed from the process must be clearly identified with quantities of materials shown. The process flow diagram should show material flow between processes (if any) and the applicant should identify the source number (SN) on the diagram. Attach the process flow diagram below.

Attach the Process Flow Diagram

PFD.pdf - 12/13/2022 09:18 AM Comment NONE PROVIDED

Emission Information

Emission Calculations (Required for All Applications Except Administrative Amendments if No Changes to Emissions)

Provide detailed calculations for the emissions of the pollutants. The calculations must contain a detailed explanation of the source of the emission estimation. Please retain all sources in the emission calculations. While calculations are required for revised sources, calculations for all sources at the facility are preferred. Any calculations included in a spreadsheet format must also include a detailed sample calculation. Unless this is an Administrative Amendment that does not involve changes to emissions, attach the emission calculations below.

Additional instructions for the emission calculations may be found at the following link. Click Here for More Instructions for the Emission Calculations

Attach the Emission Calculations

ADEQ Calcs for Hope Process Actual CY2021 (2022_12_22).xlsx - 12/13/2022 02:16 PM Comment NONE PROVIDED

Equipment Forms

Equipment Specifications (Required for All Applications Except Modifications that Do Not Involve New Construction or Do Not Change the Manner in which the Current Process Operates and Administrative Amendments)

Include engineering drawings, operating parameters, manufacturer's specifications, and other information as requested for each piece of equipment directly related to the emission of pollutants to the atmosphere. It is not necessary to submit specifications for equipment not relevant to air pollution. If this application involves new construction or changes the manner in which the current process operates or this is an initial or renewal application, attach any equipment specifications below.

Attach the Equipment Specifications

Assist SDS.PDF - 12/13/2022 02:11 PM

Comment

There are no equipment modifications other than chemical change.

Additional Information

Suggested Specific Conditions

If you have any specific conditions that you would like to propose, attach them below.

Attach Any Suggested Specific Conditions

NONE PROVIDED Comment NONE PROVIDED

Other Information

If you have any other information that you would like to submit for review, attach it below.

Attach Any Other Information

Comment NONE PROVIDED

Modeling Information

DEQ will perform screening modeling for Criteria and Non-Criteria Air Pollutants. If you have information that you would like to submit regarding modeling, attach it below.

NAAQS

DEQ will perform screening modeling for Criteria Air Pollutants under the following circumstances. If potential issues are identified as a result of this modeling, the facility will be contacted for additional information and requirements.

Other than modeling for projects requiring Prevention of Significant Deterioration (PSD) dispersion modeling, a NAAQS evaluation is required under the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark. Code Ann. • 8-4-318, dated March 2017 and the DEQ Air Permit Screening Modeling Instructions for emission increases of:

-100 tpy or greater PM10, for the 24-hour PM10 NAAQS.

-100 tpy or greater SO2, for the 1-hour SO2 NAAQS. Modeling for the 3-hour SO2 NAAQS is not required.

-100 tpy or greater NOx, for the 1-hour NO2 NAAQS. Modeling for the annual NO2 NAAQS is not required.

Refer to the DEQ Air Permit Screening Modeling Instructions at the link below for further information. Click Here for the DEQ Air Permit Screening Modeling Instructions

Non-Criteria Pollutants

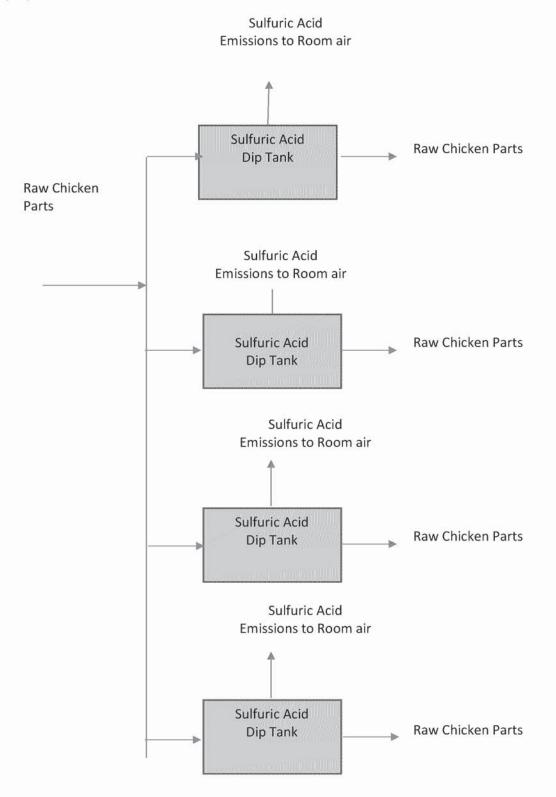
DEQ will perform screening modeling for Non-Criteria Air Pollutants (Hazardous Air Pollutants and Others). If potential issues are identified as a result of this modeling, the facility will be contacted for additional information and requirements.

Refer to the NCAPCS implementation guidance at the link below for further information. <u>Click Here for the NCAPCS Implementation Guidance</u>

Attach Any Modeling Information NONE PROVIDED Comment NONE PROVIDED

Hope Assist Process Flow Diagram

12/12/2022





November 17, 2022

To: File

RE: Signatory Authority

The Manager listed below is hereby authorized to serve as my delegated Responsible Official to sign permit applications, renewals and terminations required by permits, regulations and/or compliance plans for the location listed below:

Name	Title	Legal Entity	Facility Address
Randy King	Complex	Tyson Chicken, Inc.	275 County Road 278
	Manager	Hope Processing Plant	Hope, AR 71801
Randy King	Complex	Tyson Chicken, Inc.	100 Beech Street
	Manager	Hope Feed mill	Hope, AR 71801
Randy King	Complex	Tyson Chicken, Inc.	2510 Hwy 73 East
	Manager	Hope Hatchery	Hope, AR 71801

The Manager listed below is hereby designated to serve as a Cognizant Official (or duly authorized representative) for signing reports, inspection certifications, etc., by environmental permits, regulations and other information requested by the ADEQ Director.

Name	Title	Legal Entity	Facility Address
Joshua Williams	Plant Manager	Tyson Chicken, Inc. Processing Plant	275 County Road 278 Hope, AR 71801
Preston	Environmental	Tyson Chicken, Inc.	100 Beech Street
Hernandez	Manager	Hope Feed mill	Hope, AR 71801
Preston	Environmental	Tyson Chicken, Inc.	2510 Hwy 73 East
Hernandez	Manager	Hope Hatchery	Hope, AR 71801
Preston	Environmental	Tyson Chicken, Inc.	275 County Road 278
Hernandez	Manager	Processing Plant	Hope, AR 71801

Nathan McKay Vice President Operations

PROJECT DESCRIPTION SUMMARY

Tyson Foods, Inc. owns and operates a harvesting and further processing facility in Hope (Hempstead County), Arkansas. The facility's NAICS number is 311615, poultry processing. The facility is updating the information for the registration. The actual emissions for CY2021 are calculated to be less than the permitting threshold under ADEQ Reg. 18.301, thus the facility is still applicable for registration. The source to be updated in the registration include the following:

• Use of Sulfuric Acid Solution (maximum 43%), SN-13; PTE emissions are estimated to be ~0.02 tpy

Tyson is requesting the registration remain active for Hope facility even though the CY2021 actual criteria pollutant emissions have dropped below the registration threshold. Plans are to increase production over the next few years and we will most likely exceed the threshold for PM10 of 10 tpy. Therefore, to eliminate a back and forth registration application, we would rather keep the existing registration in place.

PROCESS DESCRIPTION

Poultry Processing:

Caged live chickens are delivered to the harvest facility by truck. Approximately 268,800 chickens are processed each day, five days a week. The live birds are lifted manually from the conveyor and placed on a two shackle-like conveyance lines to be stunned, slaughtered, gutted, and inspected. The birds are then sent to a chiller where they are sized and placed in ice to be sent to cut-up or further processing at the facility. There are two (2) natural gas boiler SN-01 and SN-10 rated for 16.74 MMBtu/hr and 14.65, respectively. Two (2) high pressure direct contact natural gas water heater systems SN-02 and SN-03 rated for 15 MMBtu/hr and 17 MMBtu/hr respectively, are used to clean all of the equipment from the cage unloading area to the final bird chillers. There are 16 existing process heaters used to for both heating the facility as well as drying the facility after sanitation. The total heat input of the 16 heaters is approximately 22 MMBtu/hr.

The facility uses PAA (peracetic acid and acetic acid) solution as well as a sulfuric acid solution for antimicrobial intervention purposes.

Further Processing:

Raw chicken meat is removed from storage, weighed, and transported to margination tanks. From the marinating tanks, the product is frozen and diced. The diced product is battered, breaded, and fried in three (3) existing direct heated fryers SN-06, SN-07, and SN-12. SN-07 and SN-12 will employee a quick draft/wet demister device to reduce potential particulate by more than 95% to the atmosphere. The facility currently operates one (1) natural gas thermal fluid natural gas heater, SN-05 rated for 9.997 MMBtu/hr and will be installing an additional thermal fluid heater SN-11 rated for 4.99 MMBtu/hr.

Diesel and PAA Tanks:

There is one (1) 20,000-gallon diesel tank in operation at the facility for use in refilling diesel reefer units. As well, the facility has two (2) 400 gallon day tanks for PAA.

Cooling Towers:

Tyson operates nine (9) cooling towers for water condensing at the facility.

Cleaners and Sanitizers:

The facility uses several types of cleaners and sanitizers for both building that contain VOC.

Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "TYSON CHICKEN, INC." IS DULY INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL CORPORATE EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE TWENTY-EIGHTH DAY OF APRIL, A.D. 2022.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL REPORTS HAVE BEEN FILED TO DATE.

AND I DO HEREBY FURTHER CERTIFY THAT THE FRANCHISE TAXES HAVE BEEN PAID TO DATE.



Jeffrey W. Bull ck, Secretary of Stati

Authentication: 203300304 Date: 04-28-22

2791430 8300

SR# 20221684578 You may verify this certificate online at corp.delaware.gov/authver.shtml

	NOX	CO	VOC	ΡM	PM10	SOX	Total HAPS	Total POM	Total HAPS Total POM Total Sulfuric
Equipment	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy
Natural Gas	7.21	6.06	0.40	0.55	0.55	0.04	0.14	8.70E-06	
Fryer Finished Production	1		19.00	3.48	3.48	9		ä	
Live Hang	1	ı	1	0.04	0.04	x	ï		3
Sulfuric Acid Solution									0.02
Diesel Tank			2.76E-03						
PAA Tanks			0.01						
PAA System			0.28						
Cleaners/Sani			1.71						
Cooling Towers				5.50	5.50				
Facility Total	7.21	6.06	21.41	9.57	9.57	0.04	0.14	0.00	0.02
Registration Threshold tpy actual	25-40	25-75	24-40	15-24 PM	15-24 PM 10-15 PM10 25-40	25-40	Single HAP: 1-2; Total	1-2; Total	

Summary of Hope CY2021 Emissions updated 12/12/22

Facility is applicable to Registration

Facility is applicable to Registration

Natural Gas Fueled Equipment: Products of Combustion updated 9/22/22

The facility has numerous boilers, water heaters, thermal fluid heates, and process heaters. Natural gas is the only fuel used in this equipment. Equipment information and emissions estimates are shown below.

Unit	CY2021 Natural Gas Usage
Source Numbers	All Natural Gas Units
Heat Input Rate (MMBtu/yr)	147156
Fuel Input Rate (MMscf/yr)	144.271

Pollutant Factor Unix Imb/m Imb/m Imixion Factor Reference POI 300 100 100 11115.0 2.21 Denoi Denoi POI 55 733.43 0.00 100 1006.46 0.03 POI 733.45 0.03 1096.46 0.03 1096.46 0.03 POI 246.00 1096.46 0.03 3.465.00 1036.46 0.03 POI 246.00 1096.46 10.05 2.666.00 1006.47 10.04.42 POI 246.00 1096.46 10.06 10.06 10.06 10.06 POI 246.00 1096.46 10.06 10.06 10.06 10.06 POI 246.00 1006.60 1006.60 1006.60 1006.70 10.06 POI Evenellihitititi 1206.60 1306.67 10.06 10.02 POI Evenellihititititi 1206.60 1306.70 10.06 10.06 POI Evenelit			Emission	Emission Factor			
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2-Methylensphthale 2-40E-G5 3-46E-G5 1.73E-G6 7.3 Methylenrole 1.88E-G5 2.50E-G3 1.30E-G5 7.3 Methylenrole 1.88E-G5 2.50E-G4 1.30E-G5 Acenaphtylenre 1.80E-G5 2.50E-G4 1.30E-G5 Acenaphtylenre 1.80E-G5 2.50E-G4 1.30E-G7 Acenaphtylenre 2.80E-G6 1.30E-G7 3.46E-G4 1.30E-G7 Acenaphtylenre 2.80E-G6 1.30E-G6 1.30E-G7 3.03E-G1 1.30E-G7 Benrol[h)perylenn 1.20E-G6 Benrol[h)perylenn 1.20E-G6 1.30E-G7 3.03E-G1 1.30E-G7 Benrol[h)perylenn 1.20E-G6 Benrol[h]mtthre 1.30E-G7 3.03E-G1 1.30E-G7 Dibenrol[h]prylenr 1.30E-G6 1.30E-G7 3.03E-G1 1.30E-G7 Benrol[h]prylen 1.30E-G6 1.30E-G7 3.03E-G1 1.30E-G7 Benrol[h]prylen 1.30E-G6 1.30E-G7 3.03E-G1 1.30E-G7 Benrol[h]prylen 1.30E-G6 1.30E-G7 3.03E-G1 1.30E-G7 <		HAPS/POM					
3.44ttlylchloranthr 1.80E-05 3.44ttlylchloranthr 1.80E-05 3.30E-05 Acenaphthylene 1.80E-05 2.50E-04 1.30E-07 3.30E-07 Acenaphthylene 1.80E-05 2.60E-04 1.30E-07 3.30E-07 Acenaphthylene 1.80E-05 2.60E-04 1.30E-07 3.46E-04 1.30E-07 Acenaphthylene 1.80E-06 3.30E-07 3.46E-04 1.30E-07 3.46E-04 1.30E-07 Bennel 1.20E-06 1.30E-06 1.30E-06 1.30E-07 3.46E-04 1.30E-07 Denncol(a)hjanthie 1.30E-06 1.30E-07 3.46E-04 1.30E-07 3.46E-04 Denncol(a)hjanthie 1.30E-06 1.30E-07 3.46E-04 1.30E-07 Dinncol(a)hjanthie 1.30E-06 1.30E-07 3.46E-04 1.30E-07 Dinncol(a)hjanthie 1.30E-06 1.30E-07 3.46E-04 1.30E-07 Dinncol(a)hjanthie 1.30E-06 1.30E-01 1.30E-07 Dinncol(a)hjanthie 1.30E-06 1.30E-01 1.30E-01 Dinncolenne <t< td=""><td>POM</td><td>2-Methylenaphthale</td><td>2.40E-05</td><td></td><td>3.46E-03</td><td>1.73E-06</td><td></td></t<>	POM	2-Methylenaphthale	2.40E-05		3.46E-03	1.73E-06	
712 dimethylbant(a 1.062-05 2.315-05 1.135-06 Acanaphthene 1.805-06 2.605-04 1.305-07 Acanaphthene 1.805-06 2.605-04 1.305-07 Acanaphthene 1.805-06 3.465-04 1.305-07 Benclellanthracene 1.805-06 3.465-04 1.305-07 Benclellanthracene 1.306-05 1.305-07 3.465-03 1.305-07 Benclellanthracene 1.306-06 1.305-06 1.305-07 3.465-03 1.305-07 Benclellanthracene 1.306-05 1.305-06 1.305-07 3.465-03 1.305-07 Dibencol(M)fluoranthra 1.306-05 1.305-07 3.465-03 1.305-07 Dibencol(A)fluoranthra 1.306-05 1.305-07 3.665-08 1.305-07 Dibencol(A)fluoranthra 1.306-07 1.305-07 3.665-08 3.665-08 Dibencol(A)fluoranthra 1.306-07 1.305-07 3.665-08 3.665-08 Dibencol(A)fluoranthra 1.306-07 1.305-07 3.665-08 3.665-08 Dibencol(A)fluoranthra	POM	3-Methylchloranthre	1.80E-05		2.60E-03	1.30E-06	
Acenaphthene 1.30E-06 2.60E-04 1.30E-07 Acenaphthene 1.30E-06 3.60E-04 1.30E-07 Actination 1.30E-06 3.60E-04 1.30E-07 Actination 1.30E-06 3.60E-04 1.30E-07 Bencleine 1.30E-06 3.03E-01 1.51E-07 Bencleine 2.00E-06 1.30E-06 1.30E-07 Benclein 1.30E-06 1.30E-06 1.30E-07 Benclein/phonanther 1.30E-06 1.30E-07 3.03E-01 Benclein/phonanther 1.30E-06 1.30E-07 3.03E-01 Dibenclein/phonanther 1.30E-06 1.30E-07 3.03E-01 Dibenclein/phonanther 1.30E-06 1.30E-07 3.66E-03 Dibenclein/phonanther 1.30E-06 1.30E-07 3.66E-03 Dibenclein/phonanther 1.30E-06 1.30E-07 3.66E-03 Dibenclein/phonanther 1.30E-07 3.66E-03 3.66E-03 Dibenclein/phone 3.00E-06 1.30E-07 3.66E-03 Machobenene 1.30E-07 1.30E-07	POM	7,12 dimethylbenz(a	1.60E-05		2.31E-03	1.15E-06	
Accuration 1.30E-06 2.60E-04 1.30E-07 Berrolaphtrylene 2.44E-06 2.44E-06 1.30E-01 Berrolaphtrycene 2.40E-06 2.40E-03 3.46E-04 1.35E-07 Berrolaphtrycene 2.30E-01 3.03E-01 1.51E-04 3.03E-01 Berrolaphtrycene 1.20E-06 1.20E-06 1.35E-04 3.03E-01 Berrolaphtrycene 1.20E-06 1.32E-04 3.03E-01 1.51E-04 Berrolaphtrene 1.20E-06 1.32E-06 1.32E-07 3.03E-01 Dibrorolaphtrene 1.20E-03 1.30E-07 3.03E-01 1.30E-07 Dibrorolaphtrene 1.20E-03 1.30E-07 3.04E-03 3.66E-08 Dibrorolaphtene 1.20E-03 1.30E-07 3.04E-07 3.04E-07 Modemol(1,2.3-cd)py 1.30E-07 1.30E-07 3.66E-08 1.30E-07 Modemol(1,2.3-cd)py 1.30E-07 1.30E-07 3.66E-03 1.30E-07 Modemol(1,2.3-cd)py 1.30E-07 1.30E-07 3.66E-03 1.30E-07 Modemol(1,2.3-cd)py <	POM	Acenaphthene	1.80E-06		2.60E-04	1.30E-07	
Anthracene 2.406-06 3.466-04 1.732-07 Berrole)Inthracene 1.306-05 3.066-01 1.375-07 Berrole)Inthracene 1.306-05 3.066-01 1.315-04 Berrole)Internention 1.306-05 3.066-01 1.315-04 Berrole)Internention 1.306-05 3.066-04 1.306-05 Berrole)Internention 1.306-05 1.306-05 1.306-07 Berrole)Internention 1.306-05 1.306-07 3.066-04 1.306-07 Diberrole,Internention 1.306-05 1.306-07 2.666-04 1.306-07 Diberrole,Internention 1.306-05 1.306-07 2.666-04 1.306-07 Diberrole,Internention 1.306-05 1.306-07 2.666-04 1.306-07 Diberrole,I.2.3-cd/pv 1.306-05 1.306-07 2.666-07 2.666-07 Diberrole,I.2.3-cd/pv 1.306-05 1.306-07 2.666-07 2.666-07 Diberrole,I.2.3-cd/pv 1.306-07 1.306-07 2.666-07 2.666-07 Diberrole,I.2.3-cd/pv 1.306-05 2.666-07	POM	Acenaphthylene	1.80E-06		2.60E-04	1.30E-07	
Benclelanthracene 1.30E-06 2.50E-04 1.30E-07 Benclelanthracene 2.10E-05 3.03E-01 1.31E-04 Benclelaptene 2.10E-05 3.03E-01 1.31E-04 Benclelaptene 2.10E-05 1.30E-05 1.30E-05 Benclelaptene 2.10E-05 1.30E-05 1.30E-05 Benclelaptene 1.30E-05 1.30E-05 1.30E-05 Bencol(g,h))penvlem 1.30E-05 1.30E-07 5.66E-08 Bencol(g,h))penvlem 1.30E-05 1.30E-07 5.66E-08 Dibencolenhene 1.30E-07 2.66E-04 1.30E-07 Dibencolenhene 1.30E-07 1.03E-01 3.66E-08 Formaldehvde 1.20E-06 1.30E-07 3.66E-03 Provene 2.30E-01 1.30E-07 3.66E-03 Proventene 1.30E-07 1.03E-04 3.66E-03 Horanthene 1.30E-07 1.03E-04 3.66E-03 Modentule 1.30E-07 1.03E-04 3.66E-03 Horanthene 1.30E-03 1.30E-04 3.66E-03	POM	Anthracene	2.40E-06		3,46E-04	1.73E-07	
Bencene 2.10E-03 303E-01 151E-04 Bencol(a)/Intentifier 1.20E-06 1.73E-04 8.66E-03 1.50E-06 Bencol(a)/Intentifier 1.20E-06 1.73E-04 8.66E-03 1.50E-06 Bencol(a)/Intentifier 1.20E-06 1.73E-04 8.66E-03 1.30E-07 Chrysten 1.20E-06 1.73E-04 8.66E-03 1.30E-07 Dibencol(a)/Intentifier 1.20E-06 1.73E-04 8.66E-03 1.30E-07 Dibencol(a)/Intentifier 1.20E-03 1.20E-03 8.66E-03 1.30E-07 Dibencol(a)/Intentifier 1.20E-03 1.20E-03 8.66E-03 1.30E-07 Picene 2.00E-06 1.30E-07 1.30E-07 1.30E-07 Modemo(1,2,3-ed)py 1.30E-07 1.30E-07 1.30E-07 Modemo(1,2,3-ed)py 1.30E-07 2.66E-03 1.30E-07 Modemo(1,2,3-ed)py 1.30E-07 2.66E-03 1.30E-07 Modemo(1,2,3-ed)py 1.30E-07 2.66E-03 1.20E-07 Modemo(1,2,3-ed)py 1.30E-07 2.66E-03 1.23E-07<	POM	Benz(a)anthracene	1.80E-06		2.60E-04	1.30E-07	
Denco(a)pyrence 1.20E-06 1.73E-03 8.66E-08 8.66E-08 Benco(b)fluoranther 1.80E-05 2.80E-03 1.30E-05 1.30E-05 Benco(b)fluoranther 1.80E-06 1.20E-06 1.30E-07 3.13E-07 Benco(b)fluoranther 1.80E-06 1.20E-06 1.30E-07 3.13E-07 Dibenco(a)hanther 1.80E-06 1.30E-07 2.60E-04 1.30E-07 Dibenco(a)hanther 1.20E-06 1.30E-07 2.16E-07 2.16E-07 Dibenco(a)hanther 1.20E-06 1.30E-07 3.13E-07 2.16E-07 Dibenco(a)hanther 1.20E-03 1.30E-07 3.13E-07 2.16E-07 Dibenco(a)hanther 1.20E-05 1.30E-07 3.13E-07 2.16E-07 Dibenco(a)hune 2.00E-06 1.30E-07 3.13E-07 3.13E-07 Dibenco(a)hune 2.00E-06 1.30E-07 3.13E-07 3.13E-07 Dibenco(a)hune 2.00E-06 1.30E-07 3.01E-07 3.01E-07 Dibenco(a)hune 2.00E-06 2.00E-06 3.21E-07 3.51E-07 <td></td> <td>Benzene</td> <td>2.10E-03</td> <td></td> <td>3.03E-01</td> <td>1.51E-04</td> <td></td>		Benzene	2.10E-03		3.03E-01	1.51E-04	
Denzo(b/fluoranther 1.80E-05 2.60E-03 1.30E-05 Benzo(g/h/luoranther 1.20E-06 1.30E-05 1.77E-04 8.66E-08 Benzo(g,h.)/pervlem 1.30E-05 2.60E-04 1.30E-07 3.66E-08 Chrysen 1.80E-06 1.30E-07 2.66E-04 1.30E-07 Dibenzo(a)/hutoranther 1.20E-05 1.73E-04 8.66E-08 Dibenzole 3.20E-07 1.73E-04 8.66E-08 Dibenzole 3.20E-07 1.73E-04 8.66E-08 Dibenzole 3.20E-07 1.30E-07 3.66E-08 Fluorene 2.30E-06 1.30E-07 3.66E-08 Machubene 2.30E-03 1.30E-07 3.66E-08 Modervle 7.50E-03 1.30E-07 3.66E-08 Modervle 7.50E-03 1.30E-07 3.66E-08 Preval 3.66E-04 3.66E-08 3.66E-08 Preval 3.66E-03 1.30E-07 3.66E-03 Modervle 2.00E-04 3.66E-03 3.66E-03 Modervle 3.06E-04 3	POM	benzo(a)pyrene	1.20E-06		1.73E-04	8.66E-08	
Bencolgh.I)pervlered 1.20E-06 1.73E-04 8.66E-08 Bencolgh.I)pervlered 1.88E-06 1.90E-07 2.60E-04 1.30E-07 Chrysten 1.30E-05 2.60E-04 1.30E-07 2.60E-04 1.30E-07 Dibencola. 1.20E-06 1.30E-07 2.60E-04 1.30E-07 8.66E-08 Dibencola. 1.20E-05 1.30E-07 2.60E-04 1.30E-07 8.66E-08 Flormen 2.306E-06 1.30E-07 8.66E-08 1.30E-07 8.66E-08 Flormen 2.306E-06 1.30E-07 1.30E-07 8.66E-08 1.30E-07 Maphhelica 1.30E+00 1.30E-07 1.30E-07 1.30E-07 1.30E-07 Maphhelica 1.30E-06 1.30E-07 2.46E-03 1.23E-03 1.26E-06 Prenantitiene 1.30E-07 2.66E-04 2.32E-07 1.30E-07 1.30E-07 Maphhelica 1.30E-07 2.48E-03 1.23E-03 1.23E-03 1.23E-03 Prenantitiene 1.30E-07 2.48E-03 1.23E-03 1.24E-03 1.	POM	benzo(b)fluoranther	1.80E-05		2.60E-03	1.30E-06	
Benco(k)fluoranther 1.30E-06 2.50E-04 1.30E-07 Chrysten 1.30E-05 1.30E-03 1.30E-03 1.30E-07 Dibenco(a,b)antther 1.30E-03 1.30E-03 1.30E-03 1.30E-04 1.30E-07 Dibenco(a,b)antther 1.30E-03 1.30E-03 1.30E-03 2.56E-03 1.30E-07 Fluoranthere 1.20E-03 1.20E-03 1.30E-01 8.66E-03 1.30E-01 Funcene 3.00E-06 1.30E-01 8.66E-03 1.30E-01 1.30E-01 Mexane 1.30E-01 1.30E-01 5.66E-03 1.30E-01 2.56E-03 1.30E-01 Mexane 1.30E-05 1.30E-05 8.66E-03 1.30E-01 5.66E-03 1.30E-01 Modemo(1,2.3-cd)py 1.30E-03 8.66E-03 1.30E-01 2.46E-03 5.66E-03 1.26E-04 5.66E-03 1.26E-04 5.66E-03 1.26E-01 5.75E-04 5.66E-03 5.66E-03<	POM	Benzo(g,h,i)perylene	1.20E-06		1.73E-04	8.66E-08	
Chrysene 1.80E-06 1.80E-06 1.30E-07 1.30E-03 1.30E-03 1.30E-03 1.30E-03 8.66E-03 1.30E-03 8.66E-03	POM	Benzo(k)fluoranther	1.80E-06		2.60E-04	1.30E-07	
Dibenzo(a,h)antthra 1.20E-06 Ib/MMsrf 1.73E-04 8.66E-08 Flororemtheme 1.20E-03 Ib/MMsrf 1.73E-01 8.66E-05 Flororentheme 1.20E-03 1.05E-01 8.66E-05 8.66E-05 Flororentheme 2.80E-06 1.03E+01 8.66E-05 8.66E-05 Flororentheme 2.80E-06 1.03E+01 5.41E-03 8.66E-05 Houremether 2.80E-06 1.03E+00 2.440E-05 1.03E+01 Indeent/1.3-s-010y 1.80E-04 2.02E-04 1.20E-07 1.20E-07 Mapfthaleme 1.070E-05 8.80E-02 1.24E-03 1.23E-04 Preneme 2.00E-04 1.01E-03 2.24E-03 1.23E-04 Preneme 2.00E-04 1.01E-04 2.24E-03 1.24E-05 Arreint 1.10E-03 2.24E-03 1.25E-04 3.66E-05 Arreint 1.10E-04 2.23E-03 1.24E-05 2.24E-05 Arreint 1.10E-04 2.20E-01 1.01E-04 2.22E-01 Arreint 1.10E-04	POM	Chrysene	1.80E-06		2.60E-04	1.30E-07	Emission factors from AD
Dicklorobentame 1.206-03 1.00000	POM	Dibenzo(a,h)antthra	1.20E-06	Ib./AAAaacf	1.73E-04	8.66E-08	Tables 1 A.1 1 A.0 Date
Fluorenthene 3.00E.06 4.33E.64 2.16E.67 Funcener 2.30E.06 4.34E.03 2.36E.01 Formalelityde 2.36E.01 4.36E.01 2.32E.01 Formalelityde 1.30E.07 1.30E.01 1.30E.01 Medeno(1,2.3-cd)by 1.80E-06 1.30E.07 1.30E.07 Mapthhene 1.30E.05 2.56E-06 1.30E.07 Phanathrene 1.30E.07 2.40E.03 2.40E.05 Prene 2.30E-06 3.31E.07 2.45E.04 Pyrene 2.00E-06 1.32E.07 2.45E.04 Pyrene 2.00E-06 1.34E.05 2.45E.04 Pyrene 2.00E-06 1.34E.05 2.45E.04 Pyrene 2.00E-06 1.34E.05 2.45E.04 Pyrene 2.00E-06 1.34E.05 1.34E.05 Bernlium 1.20E.05 1.35E.01 7.35E.06 Cobalt 1.21E.02 2.36E.07 1.35E.01 Mercurv 2.40E.05 3.45E.02 1.35E.05 Mercurv 2.40E.05		Dichlorobenzene	1.20E-03		1.73E-01	8.66E-05	17/1008/
Fluorene 2.805-06 4.04E-04 Formalder/yde 7.50E-02 1.05E+01 Hommalder/yde 7.30E-02 2.60E-04 Map/thalene 5.00E-05 2.60E-04 Nap/thalene 1.05E+01 2.60E-04 Prenanat/rene 1.010E-03 2.60E-04 Prenanat/rene 1.010E-03 2.45E-03 Prenanat/rene 3.40E-03 7.21E-03 Arsenic 2.00E-04 2.45E-03 Arsenic 2.00E-04 7.21E-03 Arsenic 2.00E-04 1.30E-02 Arsenic 2.00E-04 2.35E-02 Arsenic 2.00E-04 2.35E-02 Arsenic 2.30E-03 1.57E-02 Arsenic 2.30E-04 2.35E-02 Arsenic 2.30E-04 2.35E-02 Marganese 2.30E-03 3.35E-02 Mercury 2.30E-03 3.35E-02 Mercury 2.30E-03 3.36E-02 Mercury 2.30E-03 3.36E-02 Mercury 2.30E-03 3.46E-03<	POM	Fluoranthene	3.00E-06		4.33E-04	2.16E-07	-locat 11
Formalder/vde 7.506.02 1.086.01 1.086.01 Hadmen(1,2) 1.306.05 2.606.40 2.606.40 Indoeno(1,2) 6.106.04 2.606.02 2.606.02 Phenanathrene 1.306.05 2.456.03 2.456.03 Present 2.006.06 2.456.03 2.456.03 Present 2.006.06 2.456.03 2.456.03 Arsent 2.006.06 2.306.06 2.456.03 Arsent 2.006.06 2.306.04 2.266.04 Arsent 2.006.05 2.366.03 2.366.02 Arsent 2.306.04 2.366.01 2.366.02 Arsent 2.306.04 3.366.02 2.366.01 Mercury 2.306.04 3.366.02 3.366.02 Mercury 2.306.04 3.366.02 3.366.02 Mercury 2.306.04 3.366.02 3.366.02 Mercury 2.306.03 3.366.02 3.366.02 Mercury 2.306.04 3.366.02 3.366.02 Meruy 2.306.03 3.366.	POM	Fluorene	2.80E-06		4.04E-04	2.02E-07	
Hexane 1.80E+00 2.60E+02 2 Maphthalene 1.90E-06 2.60E-04 2.60E-04 Maphthalene 1.90E-05 8.80E-05 2.60E-04 Phenanathreae 1.70E-05 8.80E-05 2.60E-04 Phrene 3.00E-05 2.80E-01 2.60E-04 Phrene 3.00E-05 2.80E-01 2.80E-01 Phrene 1.00E-05 2.80E-01 2.80E-01 Arsenic 2.00E-04 1.30E-05 2.80E-01 Beryllium 1.30E-05 1.35E-03 2.80E-01 Choaht 3.80E-04 3.20E-01 1.21E-02 Manganese 3.80E-04 3.70E-02 2.80E-01 Marganese 3.80E-04 3.75E-02 3.70E-02 Marganese 3.80E-04 3.75E-02 3.70E-02 Marganese 3.80E-04 3.76E-02 3.70E-02 Marganese 3.80E-04 3.75E-02 3.70E-02 Marganese 3.70E-03 3.70E-02 3.75E-02 Mercury 2.40E-03 3.70		Formaldehyde	7.50E-02		1.08E+01	5.41E-03	
Indeenc(1.2,3-d)pi 1.805-06 2.605-04 Nephthalene 6.016-04 2.805-02 Phenansthrene 1.006-05 2.8365-02 Pyrene 5.006-06 2.8365-02 Pyrene 3.405-05 2.8365-02 Pyrene 3.405-05 2.8365-02 Pyrene 3.405-05 2.8365-02 Barsenic 2.006-04 1.3256-02 Arsenic 2.006-04 1.356-02 Barsenic 2.006-04 1.356-02 Cadmium 1.106-03 1.356-02 Cohelt 8.406-05 1.356-02 Manganese 3.305-04 3.356-02 Mercury 2.006-04 3.356-02		Hexane	1.80E+00		2.60E+02	1.30E-01	
Naphthalene 6.10E-04 8.80E-02 8.80E-02 Phenanathrene 1.70E-05 2.45E-03 2.45E-03 Prene 3.00E-06 7.245E-03 2.45E-03 Prene 3.40E-03 7.245E-03 2.45E-03 Arsenic 2.00E-04 2.35E-02 2.45E-03 Arsenic 2.00E-04 2.38E-02 2.58E-02 Arsenic 1.10E-03 2.38E-02 2.54E-02 Chromium 1.40E-03 2.00E-04 2.00E-04 Chromium 1.40E-03 2.00E-04 2.00E-04 Mercury 3.80E-04 3.36E-02 1.56E-02 Mercury 2.30E-03 3.36E-02 3.36E-02 Mercury 2.00E-03 3.36E-02 3.36E-02 Mercury 2.00E-03 3.36E-02 3.36E-02 Mercury 2.00E-03 3.36E-02 3.46E-03 Mercury 2.00E-03 3.36E-02 3.46E-03 Mercury 2.00E-03 3.36E-02 3.46E-03 Mercury 2.00E-03 3.46E-03 </td <td>POM</td> <td>Indoeno(1,2,3-cd)py</td> <td>1.80E-06</td> <td></td> <td>2.60E-04</td> <td>1.30E-07</td> <td></td>	POM	Indoeno(1,2,3-cd)py	1.80E-06		2.60E-04	1.30E-07	
Phenanathrene 1.06.05 2.456.03 2.456.03 Prene 5.006-06 7.215-04 7.215-04 Toluene 3.406-03 4.916-03 1.7216-03 Arrenic 2.006-06 1.006-03 1.7316-03 1.7316-03 Arrenic 2.006-06 1.106-03 1.1366-03 1.7316-03 1.7316-03 Beryllum 1.106-03 1.106-03 1.1566-01 1.2566-01 1.556-01 Chonhum 1.406-03 2.005-04 1.2566-01 1.256-02 1.556-01 Manganese 3.806-04 3.806-04 3.756-02 1.256-02 1.256-02 Manganese 3.806-04 3.766-03 3.766-02 3.766-02 1.566-04 Manganese 3.806-04 3.766-03 3.766-02 3.766-02 1.566-02 1.566-02 3.766-02 1.566-02 3.766-02 3.766-02 3.766-02 1.566-02 3.766-02 1.566-02 3.766-02 3.766-02 3.766-02 3.766-02 3.766-02 1.566-02 3.766-02 3.766-02 3.766-02 <		Naphthalene	6.10E-04		8.80E-02	4.40E-05	
Pyrene 5.006-06 7.216-04 Poluene 3.406-03 4.916-01 Arsenic 2.006-04 4.916-01 Arsenic 1.206-03 1.756-03 Benyllium 1.106-03 1.756-03 Codmium 1.106-03 1.756-03 Chornium 1.106-03 2.005-04 Chornium 1.106-03 2.005-04 Mangares 3.806-04 2.005-01 Margares 3.806-04 3.755-02 Mercury 2.506-04 3.755-02 Nickel 2.106-03 3.055-01 Mercury 2.606-04 3.055-01 Selenium 2.406-05 3.055-01 Selenium 2.406-05 3.055-01 Mickel 2.016-03 3.055-01 Selenium 2.406-05 3.055-01 Estenium 2.007-05 3.055-01	POM	Phenanathrene	1.70E-05		2.45E-03	1.23E-06	
3.40E-03 4.91E-01 2.00E-04 2.88E-02 1.10E-03 1.38E-02 8.40E-03 1.35E-01 8.40E-03 1.35E-01 8.40E-03 1.35E-02 8.40E-03 1.35E-02 2.00E-04 3.75E-02 2.50E-04 3.75E-02 2.40E-03 3.75E-02 2.50E-04 3.75E-02 2.40E-05 3.75E-02 5.50E-04 3.75E-02 5.50E-04 3.75E-02 2.40E-05 3.75E-02 5.50E-04 3.75E-02 2.40E-05 3.75E-02 5.50E-04 3.75E-02	POM	Pyrene	5.00E-06		7.21E-04	3.61E-07	
2.00E-04 2.88E-02 1.200-05 1.326-03 1.10E-03 1.73E-03 1.10E-03 1.275E-03 8.40E-05 1.26E-03 8.40E-05 1.21E-02 2.00E-04 3.75E-02 2.00E-04 3.75E-02 2.00E-04 3.75E-02 2.00E-04 3.75E-02 2.00E-04 3.75E-02 2.00E-04 7.21E-02 2.00E-04 7.21E-02 2.00E-04 7.21E-02		Toluene	3.40E-03		4.91E-01	2.45E-04	
120E-05 1.20E-03 1.75E-03 1 1.10E-03 1.55E-01 8.40E-05 2.02E-01 1.21E-02 8.40E-05 3.54E-02 3.54E-02 2.00E-04 3.54E-02 3.64E-03 2.00E-04 3.54E-02 3.46E-02 5.00E-04 7.21E-02 3.46E-02 5.00E-04 7.21E-02 3.46E-03		Arsenic	2.00E-04		2.89E-02	1.44E-05	
1.10E-03 1.59E-01 n 1.40E-03 2.00E-01 se 3.80E-04 2.30E-02 se 3.80E-04 3.75E-02 2.50E-04 3.03E-01 3.03E-01 2.50E-04 3.03E-01 3.05E-02 2.50E-04 3.03E-01 3.03E-02 2.50E-04 3.03E-01 3.04E-02 5.50E-04 3.03E-01 7.24E-02 5.50E-04 7.24E-02 7.24E-02		Beryllium	1.20E-05		1.73E-03	8.66E-07	
m 1.40E-03 2.02E-01 s 8.40E-05 1.21E-02 s 3.80E-04 3.75E-02 2.60E-04 3.75E-02 3.03E-01 2.10E-03 3.03E-01 3.04E-05 5.00E-04 3.04E-05 3.46E-03 5.00E-04 7.34E-03 7.34E-03		Cadmium	1.10E-03		1.59E-01	7.93E-05	
se 8.40E-05 se 3.80E-04 2.60E-04 2.10E-03 2.10E-03 2.40E-05 5.00E-04 7.31E-02 3.46E-03 3.46E-03 7.21E-02 7.21E+02 7.21E+02		Chromium	1.40E-03		2.02E-01	1.01E-04	
se 3.80E-04 2.60E-04 2.50E-04 2.10E-03 2.10E-03 3.03E-01 3.03E-01 3.03E-02 7.21E-02 T.02L+02 T.02L+02 7.21E+02		Cobalt	8.40E-05		1.21E-02	6.06E-06	
2.60E-04 3.75E-02 2.10E-03 3.05E-01 2.10F-03 3.05E-01 5.00E-04 7.21E-02 5.00E-04 7.21E-02		Manganese	3.80E-04		5.48E-02	2.74E-05	
2.10E-03 2.40E-05 5.00E-04 7.21E-02 7.21E+02 Total HAP = 2.72E+02		Mercury	2.60E-04		3.75E-02	1.88E-05	
2.40E-05 3.46E-03 5.00E-04 7.21E-02 Total HAP = 2.72E+02		Nickel	2.10E-03		3.03E-01	1.51E-04	
5.00E-04 7.21E-02 7.21E-02 7.72E+02 7.72E+020000000000000000000000000000000		Selenium	2.40E-05		3.46E-03	1.73E-06	
2.72E+02		Lead	5.00E-04		7.21E-02	3.61E-05	
				Total HAP =	2.72E+02	1.36E-01	

	Equipment	MMBtu/hr
Existing	South Webco	0.004
Existing	North Webco	0.004
Existing	East Webco	0.004
Existing	West Webco	0.004
Existing	Aaon Unit-over mezzanine	0.120
Existing	Sec. Proc. Aaon 10 ton #1	0.120
Existing	Sec. Proc. Aaon 10 ton #2	0.120
Existing	Sec. Proc. Aaon 10 ton #3	0.120
Existing	Sec. Proc. Aaon 4 ton #1	0.048
Existing	2014 MAU #1	2.700
Existing	2014 MAU #2	2.700
New	2017 MAU Live Hang #1	1.643
New	2017 MAU Live Hang #2	2.712
New	2017 MAU Live Hang #3	3.944
New	2017 MAU Live Hang #4	3.944
New	2017 New Water Heater Picking/Mainteance	3.50
	Total of Existing and New MMBtu/hr	21.69
	Permit MMBtu/hr	30.00

SN-05 Misc Process Heaters updated 10/27/17

Process Emissions for Fryers updated 9/22/22 CY2021 Throughput

		Emission Rate			Emission Control			Emission Factor
Fryers	Pollutant	(tpy)	Annual	Units	%	Value	Units	Source
	PM/PM10	0.58		lbs	%06	0.11	lbs/ton	Stack Test from a Similar Facility (updated based on the latest data used for Tyson's new Danville, VA Facility).
Fryer Production for Lines 2 and 3	VOC	12.67	211,152,713	lbs	%0	0.240	lbs/ton	Methods for Developing a National Emission Inventory for Commercial Cooking Processes: Technical Memorandum, "Summary of Commercial Cooking Test Results" for a "Deep Fat Fryer"
	PM/PM10	2.90		lbs	9%0	0.11	lbs/ton	Stack Test from a Similar Facility (updated based on the latest data used for Tyson's new Danville, VA Facility).
Fryer Production Line 4	VOC	6.33	105,576,357	lbs	960	0.24	lbs/ton	Methods for Developing a National Emission Inventory for Commercial Cooking Processes: Technical Memorandum, "Summary of Commercial Cooking Test Results" for a "Deep Fat Fryer"
	Total PM/PM10 Total VOC	3.48 19.00	316,729,070					10

		Emission Rate			Emission Control			Emission Factor
Enzone	Dollutant	(va)	Annual CY2022 VTD as of 12/13/22	Units	%	Value	Units	Source
	PM/PM10	0.53		lbs	%06	0.11	lbs/ton	Stack Test from a Similar Facility (updated based on the latest data used for Tyson's new Danville, VA Facility).
Fryer Production for Lines 2 and 3	VOC	11.62	193,702,351	lbs	%0	0.240	lbs/ton	Methods for Developing a National Emission Inventory for Commercial Cooking Processes: Technical Memorandum, "Summary of Commercial Cooking Test Results" for a "Deep Fat Fryer"
	PM/PM10	2.66		lbs	%0	0.11	lbs/ton	Stack Test from a Similar Facility (updated based on the latest data used for Tyson's new Danville, VA Facility).
Fryer Production Line 4	VOC	5.81	96,851,175	lbs	%0	0.24	lbs/ton	Methods for Developing a National Emission Inventory for Commercial Cooking Processes: Technical Memorandum, "Summary of Commercial Cooking Test Results" for a "Deep Fat Fryer"
	Total PM/PM10	3.20						
	Total VOC	17.43						

290553526 96851175.33 Total CY2022

193702350.7

ADEQ Calcs for Hope Process Actual CY2021 (2022_12_22)-v1

Live Hang Operations updated 9/22/22 Actual throughput SN-08/SN-09

The facility operates two live hang lines where the chicken are hung in preprations for slaughter. Emissions from dust and manuare may be vented to atmosphere through four live hang room air vents. AP-42 does not contain emission factors to account for these type of emissions. A study was performed on a Tyson Broken Bow Ok facility to detemine the approximate level of emissions that may be emitted from the live hang operations.

Emission Calculations: <u>Process Rates:</u> Processing Rate for CY2021: 47,036,144 birds/yr Maximum Bird Weight: 7.3 lbs/bird

Emission Rates: Emission Factor: 0.1 lbs PM/ ton bird Assume PM10 = PM Baghouse control efficiency = 99.9%

47,036,144 birds/yr x 0.1 lbs PM/bird x (1-0.999) x (1 ton/2000 lbs) = 0.04 tons/hr PM/PM10 total

Live Hang						
Maximum Process Rate birds/min/	lbs/bird		PM	PM10	units	
47,036,144	7.30		0.1	0.1	lbs/ton processed	Broken Bow, OK emisssion factors
	tons/yr	Control Efficiency for Room Control				
Live Hang vents to room air	171,682	99.9%	0.04	0.04	tpy	
		Total	0.04	0.04	tpy	

Updated 12/12/2022 SN-13 Hope Assist Emission Estimates

Table 2-1. Constants for VOC Emission Calculations

	1 10 10 10 10 10 10 10 10 10 10 10 10 10
Water Molecular Weight (M) of Mixture	52.4 lb/lb-mol
Water Mass Transfer Coefficient (K)	0.83 cm/s
Water Mass Transfer Coefficient (K)	98.031 ft/hr
Ideal Gas Constant	998.9 ft ³ mmHg/lb-mol K
Density Water	8.34 lb/gal
Conversion Factor	3.7854 dm ³ /gallon
Sulfuric Acid (max per SDS)	43%
CY2021 (gallons)	5,940

43% Maximum % sulfuric

Table 2-2. Constants for VOC Emission Calculations for Sulfuric Acid

 Henry's Law Constants¹
 Molecular Weight (M)
 Mass Transfer Coefficient (K)

 Sulfuric Acid
 kH0 (g.mol/dm³ atm)
 -MI/R (K)
 TP (K)
 (K)
 (K)

 Sulfuric Acid
 980
 4,900
 298.15
 98
 79.57

 1. Henry's Law Constants for Inord Organic and Organic species of Poartial Importance in Environmental Chemistry. Version 3 by R. Sander April 8, 1999.

Table 2-3. Constants for VOC Emission Calculations for Evis Units

Equipment Count Temperature ¹ Temperature West Rehang Dip 1 33.0 306.2 East Rehang Dip 1 33.0 306.2 North OLR Dip 1 30.0 307.2				and the set of a set
Equipment Count (C) % Dip 1 33.0 0 1 34.0 1 1 34.0	00 00	Acetic Acid	Concentration Assist ¹	Sulfuric Acid
sg Dip 1 33.0 Dip 34.0 Di 34.0 Di 34.0 1 33.0	(K)	kH (M/atm)	mqq	M (lb-mol/dm ³)
g Dip 1 34.0 Dip 33.0	306.2	637,8	400	3.87E-06
	307.2	605,5	400	3.87E-06
	303.2	747.3	400	3,87E-06
	303.2	747.3	400	3.87E-06

operating data provided by 1350

Table 2-4. Potential VOC Emissions from use of Assist

	Farual Fressure		EVAPOL	EVAPOLATION RALE
	Sulfuric Acid	Evaporation Surface Area	Sulfuric Acid	Sulfuric Acid
Equipment	mmHg	(irč)	(lb/hr)	(tpy)
West Rehang Dip	2.09E-03	17.33	9.23E-04	4.04E-03
East Rehang Dip	2.20E-03	17.33	9.70E-04	4.25E-03
North OLR Dip	1.78E-03	17.33	7.96E-04	3.49E-03
South OLR Dip	1.78E-03	17	7.96E-04	3.49E-03

2. Evaporation rate estimated based on EPA's EIIP Volume II: Chapter 16, Mathods for Estimating Air Entisions from Chemical Manufacturing Facilities, August 2007. Equation 3:24,&3:27

TLV of Sulfuric Acid mg/m3	0.2
PAER (lbs/hr) (0.11 x TLV)	0.022
Is Sulfuric Acid emissions in Ibs/hr less than the	
PAER.	YES

Cooling Towers

internal notes

Updated 9/21/22

Emissions from cooling towers are estimated using the methodology of AP-42 Section 13.4. Emissions estimates are summarized in the table below.

			No equipment spec available. Used a conservatively high drift rate of 0.005%.									
Emissions		(tpy)	0.113 No	0.565	0.565	0.565	1.131	1.131	0.485	0.471	0.471	5.499
PM/PM10 Emissions		(lb/hr)	0.026	0.129	0.129	0.129	0.258	0.258	0.111	0.108	0.108	1.256
	Flow Rate	(gpm)	1,200	1,200	1,200	1,200	2,400	2,400	1,030	1,000	1,000	Total
	Drift Rate	(%)	0.0010	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	
	Maximum TDS	(mdd)	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	
		Description	Cooling Tower 1	Cooling Tower 2	Cooling Tower 3	Cooling Tower 4	Cooling Tower 5	Cooling Tower 6	Cooling Tower 7	Cooling Tower 8	Cooling Tower 9	

It is assumed all PM = PM10 Example Calculations:

 $PM \ lb/hr=flow \ rate (gal/min) * 60 \ min/hr * drift \ rate \%/100 * TDS \ ppm/1,000,000 * 8.34 \ lb \ water/gal/min/hr = 100 \ rate (gal/min) * 100 \ rate (gal/min) = 100 \ rate ($ water $= 1,200 \text{ gal/min} \pm 60 \text{ min/hr} \pm 0.005/100 \pm 4,000 \text{ parts}/1,000,000 \text{ parts} \pm 8.34 \text{ lb water/gal} = 0.12 \text{ lb/hr}$

PM tpy = 0.12 lb/hr * 8,760 hr/yr * ton/2,000 lb = 0.526 tons/yr

				VOC	VOC	VOC	HAP	HAP	HAP
		CY2021 Usage ¹	Density ²	Content ²	Emissions ³	Emission ⁴	Content ²	Emission ³	Emission ⁴
Mfr	Product	(gal/yr)	(lb/gal)	(m/m)	(lb/yr)	(tpy)	(m/m)	(lb/yr)	(tpy)
		C	CLEANERS/Sanitizers/Intervention	tizers/Interve	ntion				
Chem Station	9635 Foam Acid Cleaner	1,625.0	9.22	1.00%	149.76	0.075	%00.0	0.0	0.00
Chem Station	20111 Hand Scrub	9,930	8.43	1.00%	837.27	0.42	0.00%	0.0	0.00
Chem Station	57201 NF All Metal Safe CIP	2,420	8.78	1.00%	212.52	0.11	0.00%	0.0	0.00
Chem Station	8315 Rail and Chain Cleaner	55	8.42	1.00%	0.17	0.00	0.00%	0.0	0.00
Zep	Formula 50	350	8.83	5.00%	0.17	0.00	0.00%	0.0	00.0
Best Sanitizers	Alpet D2	400	7.42	75.00%	2226.8	1.11	0.00%	0.0	0.00
			L	Total					
	Total Cleaners/Sanitizers/Intervention Actual	ervention Actual E	Emissions, tpy	VC	VOC	1.71	Ή	HAP	00'0
Tot	Total Cleaners/Sanitizers/Intervention Potential Emissions ⁵ , tpy	intion Potential Er	nissions ⁵ , tpy	VC	VOC	2.57	Η	НАР	00'0

Potential and Actual VOC/HAP Emissions Calculations: Cleaners, Sanitizers, and Other Chems Updated 8/30/22

¹Data from plant purchasing records

²Per manufacturer's MSDS or Method 24 test results (where available).

³Emissions (lb/year) = (Actual Usage, gal/year)*(Density, lb/gal)*(VOC/HAP Content, %) ⁴Emissions (tpy) = (Emissions, lb/yr) / (2,000 lb/ton) ⁵Potential Emissions, tpy = (Actual Emissions, tpy) * 1.5

Hope Acetic Acid and PAA Potential Emission Exitmates updated 8/30/22

CY2021 Usage (gallons)

113,400

Water Molecular Weight (M)	18.02 lb/lb-mol
Water Mass Transfer Coefficient (K)	0.83 cm/s
Water Mass Transfer Coefficient (K)	98.031 ft/hr
Ideal Gas Constant	998.9 ft ³ mmHg/lb-mol K
Density Water	8.34 lb/gal
Conversion Factor	3.7854 dm ³ /gallon
Acetic Acid Concentration	45-55
Peroxyacetic Acid Concentration	15-30%

Constants for VOC Emission Calculations for Acetic Acid and Peroxyacetic Acid

Chemical	Henry's Law Co kH0 [g-mol/dm ² atm]	nstants ¹ -AH/R (K)	T0 (K)	(M) (Ib/Ib-mol)	Coefficient (K) (ft/hr)
Acetic Acid	086	4,900	298.15	60.05	65.63
Peroxyacetic Acid	840	5,300	298.15	76.05	60.66

Molecular Weight Mass Transfer

stry. Version 3 by R. Sander April 8, 1999. nts for I of Henry's Law Const nry's Law Constants

Henry's Constant
- 13-
20

	1		Henry	JUEISTO S COUSTAILL	TOTHE PHONE	Concen	Concentration
Equipment	Temperature ¹ (C)	Temperature (K)	Acetic Acid kH (M/atm)	Peroxyacetic Acid kH (M/atm)	PAA ^t	Acetic Acid M (lb-mol/dm ³)	Peroxyacetic Acid M (lb-mol/dm ¹)
West Rehang Dip	50	323	275	212	600	1.32E-05	5.21E-06
Cast Rehang Dip	50	323	275	212	600	1.32E-05	5.21E-06
Vorth OLR Dip	50	323	275	212	600	1.32E-05	5.21E-06
outh OLR Dip	50	323	275	212	600	1.32E-05	5.21E-06
Reprocessing Dip	43	316	384	305	600	1.32E-05	5.21E-06
Vorth Prechiller	48	321	302	235	100	2.20E-06	8.69E-07
outh Prechiller	48	321	302	235	100	2.20E-06	8.69E-07
Vorth Chiller	+	277	3,404	3,230	100	2.20E-06	8.69E-07
outh Chiller	*	277	3,404	3,230	100	2.20E-06	8.69E-07
forth Finishing Chiller	10	283	2,341	2,154	800	1.76E-05	6.95E-06
outh Finishing Chiller	DI	283	2,341	2,154	800	1.76E-05	6.95E-06
Ving Dip	34	307	605	499	1000	2.20E-05	8.69E-06
Vest Tender Dip	39	312	469	378	1000	2.20E-05	8.69E-06
last Tender Dip	39	312	469	378	1000	2.20E-05	8.69E-06
treast Dip	42	315	404	322	1000	2.20E-05	8.69E-06
bark Meat Dip	38	311	493	400	1000	2.20E-05	8.69E-06

	Partial	Partial Pressure	Evaporation	Evapor	Evaporation Rate ¹	Evapora	Evaporation Rate ¹
Eauforment	Acetic Acid mmHg	Peroxyacetic Acid mmHg	Surface Area (R ²)	Acetic Acid (lb/hr)	Peroxyacetic Acid (lb/hr)	Acetic Acid (tpy)	Peroxyacetic Acid (tpy)
Vest Rehang Dip	1.66E-02	8.47E-03	17.33	3.51E-03	2.10E-03	0.0154	0.0092
Cast Rehang Dip	1.66E-02	8.47E-03	17.33	3.51E-03	2.10E-03	0.0154	0.0092
Vorth OLR Dip	1.66E-02	8.47E-03	17.33	3.51E-03	2.106-03	0.0154	0.0092
outh OLR Dip	1.66E-02	8.47E-03	17	3.51E-03	2.10E-03	0.0154	0.0092
teprocessing Dip	1.18E-02	5.89E-03	7	9.84E-04	5.73E-04	0.0043	0.0025
Vorth Prechiller	2.51E-03	1.27E-03	200	6.17E-03	3.66E-03	0.0270	0.0160
South Prechiller	2.51E-03	1.27E-03	200	6.17E-03	3.66E-03	0.0270	0.0160
Vorth Chiller	2.23E-04	9.27E-05	750	2.38E-03	1.16E-03	0.0104	0.0051
outh Chiller	2.23E-04	9.27E-05	750	2.38E-03	1.16E-03	0.0104	0.0051
forth Finishing Chiller	2.59E-03	L11E-03	32	1.16E-03	5.81E-04	0.0051	0.0025
outh Finishing Chiller	2.59E-03	1.11E-03	32	1.16E-03	5.81E-04	0.0051	0.0025
Ving Dip	1.25E-02	6.00E-03	8	1.21E-03	6.77E-04	0.0053	0.0030
Vest Tender Dip	1.62E-02	7.92E-03	9	123E-03	7.03E-04	0.0054	0.0031
tast Tender Dip	1.62E-02	7.92E-03	9	1.23E-03	7.03E-04	0.0054	0.0031
Breast Dip	1.88E-02	9.31E-03	8	1.96E-03	1.14E-03	0.0086	0.0050
bark Meat Dip	1.54E-02	7.50E-03	2	3.24E-04	1.855-04	0.0014	0.0008

3-24,843-27 Che . Methods for I on EPA's EllP Volume II L.Evaporation

Example Calculation of Acetic Acid in PAA Dip Tanks

Ĩ		0,275.g-mol dm ³ atm		-14
298.15 K]]] =	= 1.32E.5 lb-n	1.66E-2 mmHg acetic acid	65.63 ft (acetic acid) hr	3.51E-03 lb acetic acid hr
×	lb-mol 60.05 lb	•	=(6/1)(-	
1 323.15 K	0.60 lb acetic acid lb PAA	760 mmHg atm	-	1.66E-2 mmHg
4,900 K (gallon 3.7854 dm3	453.59 g-mol 760 mmHg Ib-mol atm	18.02 lb/lb-mol (water) 60.05 lb/lb-mol (acetic acid	17.33.ft2 23.15 K
exp (8.34 lb gallon	dm ³ atm 0,275 g-mol	Ţ	65.63 ft 17.3 hr 998.9 ft3 mmHg 323.15 K b-mol K
980 g-mol dm ³ atm	600 lb PAA 1,000,000 lb Water	1.32E-5 Ib-mol dm ³	98.03 ft (water) hr	60.05 lb (acetic acid) 65.63 ft lb-mol hr b-mol b-mol b-mol
Henry's Law Constant	Concentration of acetic acid	Partial pressure of acetic acid	Mass transfer coefficient	Evaporation rate of acetic acid

Diesel Storage Tanks

Emissions estimates are contained in the TANKS ESP reports in the following pages.

Diesel Storage Tank #1 (20,000 gal) = Diameter 10 ft.

V=(3.14 x r^2) x L 20,000 = (3.14 x 10^2)/4 x L 2673.61 ft3 = (3.14 x 10^2)/4 x L 2291.76/(3.14 x 100)/4 = L	34.0587 ft
L =	34.0587 ft
CY2021 Throughput (gal)	14,960
VOC Emissions (lbs/yr)	5.5293
VOC Emissions (tpy)	0.00276
PAA Day Tanks X 2	
CY2021 Throughput (gal)	113,400
Volume	400
Diameter ft	4.3
Height ft	4
VOC Emissions (lbs/yr)	26.6989
VOC Emissions (tpy)	0.01335

	Annual	
-	2021	
•	tor	
	Summary	
	Tank	

Site: Hope Processing Actuals, Equations for this site: After 2019 AP-42 revisions H/D ratio: Default 0.5 Tark ID

		5.5293029	13.349431	13.349431	
	Total estimated emissions (lbs)				
		0.38726602	10.768874	10.768874	
	Estimated working losses (Ibs				
	8	5.1420368	2.5805565	2.5805565	
	Estimated standing losses (lbs)				
	Throughput (gal)	14960.00016	56700	56700	
	Product	Diesel	PAA	PAA	
and and the second seco	Tank ID	Diesel Tank (20,000 gal)	PAA Day Tank I	PAA Day Tank 2	

TYSON - HOPE 2021 PU	RCHASES
12104/CHEMSAN 2150 12104 CHEMSAN QUATERNARY DISINFECTANT	QTY
TYSON - HOPE	150
TYSON - HOPE	150
TYSON - HOPE	160
TYSON - HOPE	200
TYSON - HOPE	300
TYSON - HOPE	170
TYSON - HOPE	200
TYSON - HOPE	250
CHEMSAN 2150 TOTAL	1,580
Piece of Equipment	
10757/976500 10757 FOAMER, TIMED, DOORWAY	QTY
TYSON - HOPE	2
TYSON - HOPE	1
976500 TOTAL	3
11358/9635;11358 FOAMING ACID CLEANER	QTY
TYSON - HOPE	200
TYSON - HOPE	125
TYSON - HOPE	165
TYSON - HOPE	150
TYSON - HOPE	175
TYSON - HOPE	180
TYSON - HOPE	180
9635 TOTAL	1,625
11395/50196 11395 FOAMING ALKALINE CLEANER	QTY
TYSON - HOPE	330
TYSON - HOPE	450
TYSON - HOPE	400
TYSON - HOPE	400
TYSON - HOPE	350
TYSON - HOPE	330
TYSON - HOPE	500
TYSON - HOPE	-330
TYSON - HOPE	330
TYSON - HOPE	-223
TYSON - HOPE	330
TYSON - HOPE	450
TYSON - HOPE	550
TYSON - HOPE	400
TYSON - HOPE	400
TYSON - HOPE	400
TYSON - HOPE	450
TYSON - HOPE	400
TYSON - HOPE	330
TYSON - HOPE	300
TYSON - HOPE	400

		TYSON - HOPE	400
		TYSON - HOPE	300
		TYSON - HOPE	225
		TYSON - HOPE	300
		TYSON - HOPE	300
		TYSON - HOPE	330
		TYSON - HOPE	390
		TYSON - HOPE	250
		TYSON - HOPE	250
		TYSON - HOPE	250
		TYSON - HOPE	200
		TYSON - HOPE	330
		TYSON - HOPE	300
		TYSON - HOPE	330
		TYSON - HOPE	330
		TYSON - HOPE	330
		TYSON - HOPE	330
		TYSON - HOPE	250
		TYSON - HOPE	330
		TYSON - HOPE	330
		TYSON - HOPE	420
		TYSON - HOPE	300
		TYSON - HOPE	225
		TYSON - HOPE	190
		TYSON - HOPE	200
		TYSON - HOPE	220
		TYSON - HOPE	250
		TYSON - HOPE	170
		TYSON - HOPE	170
		TYSON - HOPE	70
		50196 TOTAL	15,217
11973	FREEZER CLEANER		QTY
		TYSON - HOPE	150
		TYSON - HOPE	190
		TYSON - HOPE	150
		TYSON - HOPE	175
		TYSON - HOPE	270
		musell uepp	

TYSON - HOPE 200 TYSON - HOPE 330 **50418 TOTAL** 1,465 11044/20111 11044 HAND SCRUB SOAP QTY **TYSON - HOPE** 275 **TYSON - HOPE** 400 TYSON - HOPE 430 **TYSON - HOPE** 300 **TYSON - HOPE** -300 TYSON - HOPE 600 TYSON - HOPE -370 **TYSON - HOPE** 330

11973/50418

TYSON - HOPE300TYSON - HOPE330

	TYSON - HOPE	250
	TYSON - HOPE	250
	TYSON - HOPE	160
	TYSON - HOPE	250
	TYSON - HOPE	275
	TYSON - HOPE	330
	TYSON - HOPE	275
	TYSON - HOPE	400
	TYSON - HOPE	330
	TYSON - HOPE	550
	TYSON - HOPE	330
	TYSON - HOPE	240
	TYSON - HOPE	300
	TYSON - HOPE	330
	TYSON - HOPE	225
	TYSON - HOPE	240
	TYSON - HOPE	330
	TYSON - HOPE	330
	TYSON - HOPE	275
	TYSON - HOPE	245
	TYSON - HOPE	250
	TYSON - HOPE	150
	00444 70741	0 0 0 0
	20111 TOTAL	9,930
12298/50150		
12298/50150	12298 HEAVY DUTY ALKALINE DEGREASER	QTY
12298/50150	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE	QTY 660
12298/50150	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE	QTY 660 55
12298/50150	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE TYSON - HOPE	QTY 660 55 55
12298/50150	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE	QTY 660 55
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE TYSON - HOPE 50150 TOTAL	QTY 660 55 55 770
12298/50150 11108/50024	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE TYSON - HOPE	QTY 660 55 55
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER	QTY 660 55 55 770 QTY
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE	QTY 660 55 55 770 QTY 250
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE TYSON - HOPE TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300 450
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE TYSON - HOPE TYSON - HOPE TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300 450 330
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE TYSON - HOPE TYSON - HOPE TYSON - HOPE TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300 450 330 330
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300 450 330 330 325
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300 450 330 330 325 -330
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300 450 330 330 325 -330 330
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300 450 330 330 325 -330 330 250
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300 450 330 330 325 -330 330 250 250
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300 450 330 325 -330 330 250 250 250 330
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300 450 330 330 325 -330 330 250 250 330 330 330
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300 450 330 325 -330 330 250 250 330 330 330 330 330 330 330 330
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300 450 330 325 -330 330 250 250 330 330 330 330 330 330 330 330 330 3
	12298 HEAVY DUTY ALKALINE DEGREASER TYSON - HOPE TYSON - HOPE 50150 TOTAL 11108 HEAVY DUTY FOAMING ALKALINE CLEANER TYSON - HOPE TYSON - HOPE	QTY 660 55 55 770 QTY 250 250 300 450 330 330 325 -330 330 250 250 330 330 330 330 330 330 330

TYSON - HOPE	330
TYSON - HOPE	280
TYSON - HOPE	300
TYSON - HOPE	330
TYSON - HOPE	330
TYSON - HOPE	300
TYSON - HOPE	330
TYSON - HOPE	330
TYSON - HOPE	400
TYSON - HOPE	400
TYSON - HOPE	400
TYSON - HOPE	200
TYSON - HOPE	275
TYSON - HOPE	200
TYSON - HOPE	450
TYSON - HOPE	300
TYSON - HOPE	660
TYSON - HOPE	500
TYSON - HOPE	500
TYSON - HOPE	330
TYSON - HOPE	500
TYSON - HOPE	330
TYSON - HOPE	460
TYSON - HOPE	450
TYSON - HOPE	400
TYSON - HOPE	330
TYSON - HOPE	550
TYSON - HOPE	330
TYSON - HOPE	330
TYSON - HOPE	300
50024 TOTAL	17,135

Piece of Equipment

10689/918115-NH 10689 HPSS FOAMER (NO HOSE)

TYSON - HOPE 3

TYSON - HOPE 7

QTY

- 98115-NH TOTAL 10
- 11599/ENTECH FOG10-4/11599 INSECTICIDE, FOGGING, 1% PYRETHERIN QTY
 - TYSON HOPE 1
 - TYSON HOPE 1
 - TYSON HOPE 1
 - ENTECH FOG10-4 TOTAL 3

12313/57201	12313	NF ALL METAL SAFE CIP	QTY
		TYSON - HOPE	175
		TYSON - HOPE	190
		TYSON - HOPE	-190

TYSON - HOPE 330

		TYSON - HOPE	165
		TYSON - HOPE	200
		TYSON - HOPE	175
		TYSON - HOPE	175
		TYSON - HOPE	200
		TYSON - HOPE	285
		TYSON - HOPE	275
		TYSON - HOPE	220
		TYSON - HOPE	220
		57201 TOTAL	2,420
	12276/3998	12276 NON FOAMING CAUSTIC	QTY
		TYSON - HOPE	110
		TYSON - HOPE	165
		TYSON - HOPE	550
		3998 TOTAL	825
			010
10547/31	101 10547	NON-FOAMING CHLORINATED CLEANER	QTY
		TYSON - HOPE	120
		TYSON - HOPE	130
		TYSON - HOPE	120
		TYSON - HOPE	100
		TYSON - HOPE	100
		TYSON - HOPE	175
		TYSON - HOPE	220
		TYSON - HOPE	150
		TYSON - HOPE	100
		TYSON - HOPE	295
		TYSON - HOPE	120
		TYSON - HOPE	125
		TYSON - HOPE	225
		TYSON - HOPE	230
		TYSON - HOPE	300
		TYSON - HOPE	300
		TYSON - HOPE	190
		TYSON - HOPE	200
		TYSON - HOPE	200
		TYSON - HOPE	250
		TYSON - HOPE	220
		TYSON - HOPE	220
		TYSON - HOPE	330
		TYSON - HOPE	140
		TYSON - HOPE	275
		TYSON - HOPE	300
		TYSON - HOPE	250
		TYSON - HOPE	150
		TYSON - HOPE	220
		TYSON - HOPE	130
		TYSON - HOPE	150
		TYSON - HOPE	150
		TYSON - HOPE	175
		TYSON - HOPE	130
		TYSON - HOPE	120
			120

	TYSON - HOPE	120
	TYSON - HOPE	130
	TYSON - HOPE	100
	TYSON - HOPE	180
	3101 TOTAL	7,140
11042/8315 11042	2 RAIL AND CHAIN CLEANER	QTY
	TYSON - HOPE	55
	8315 TOTAL	55
	Not Sold to Tyson any longer	
11335/55SGPLUS 11335 SHA	CKLE GLIDE PLUS CHAIN LUBE-55 DRU	QTY
	TYSON - HOPE	55
	55SGPLUS TOTAL	55
10027/3020 1002	7 SODIUM HYDROXIDE 50%	QTY
	TYSON - HOPE	55
	3020 TOTAL	55

								VOC		H∤
UNIT \$	EXTENDED \$	DATE	INV#	VOC%	HAP %	Density	lbs/yr	tpy	lbs/hr	
\$6.14	\$921.00	1/8/2021	13471100	0%		-	-	0	0	0
\$6.14	\$921.00	3/12/2021	13650100							
\$6.14	\$982.40	4/23/2021	13770600							
\$6.14	\$1,228.00	6/4/2021	13894800							
\$6.14	\$1,842.00	8/6/2021	14098900							
\$6.14	\$1,043.80	9/10/2021	14187300							
\$6.14	\$1,228.00	11/5/2021	14366800							
\$6.14	\$1,535.00	12/21/2021	14499700							
	\$9,701.20									
								VOC		117
UNIT \$	EXTENDED \$	DATE	INV#	VOC%	HAP %	Density	lhs/vr	tpy	lbs/hr	H≯
\$1,100.00	\$2,200.00	3/17/2021	13647100		NA	Density	issiyi	0	0	0
\$1,100.00	\$1,100.00	3/17/2021	13647000	1111	1111			0	0	0
\$1,100.00	\$3,300.00	5/1//2021	15047000							
	<i>vvvvvvvvvvvvvv</i>							VOC		H∤
UNIT \$	EXTENDED \$	DATE	INV#	VOC%	HAP %	Density	lbs/yr	tpy	lbs/hr	
\$6.50	\$1,300.00	8/30/2021	14140400	1%				551 0.07	4878	0
\$6.50	\$812.50	9/10/2021	14187300							
\$6.50	\$1,072.50	9/24/2021	14226100							
\$6.50	\$975.00	10/8/2021	14273600							
\$6.50	\$975.00	10/22/2021	14319200							
\$6.50	\$975.00	11/5/2021	14366800							
\$6.50	\$975.00	11/19/2021	14405500							
\$6.50	\$1,137.50	12/3/2021	14443100							
\$6.50	\$1,170.00	12/17/2021	14492200							
\$6.50	\$1,170.00	12/30/2021	14524400							
	\$10,562.50									
UNIT \$	EXTENDED \$	DATE	INV#					VOC		H∤
\$4.71	\$1,554.30	1/4/2021	13454600	VOC%	HAP %	Density	lbs/yr		lbs/hr	
\$4.71	\$2,119.50	1/8/2021	13471100	0%	6 0			0	0	0
\$4.71	\$1,884.00	1/15/2021	13488900							
\$4.71	\$1,884.00	1/22/2021	13511300							
\$4.71	\$1,648.50	1/29/2021	13534300							
\$4.71	\$1,554.30	2/5/2021	13554500							
\$4.71	\$2,355.00	2/12/2021	13577900							
\$4.71	-\$1,554.30	2/16/2021	13585500							
\$4.71	\$1,554.30	2/16/2021	13585600							
\$4.71	-\$1,050.33	2/16/2021	13608400							
\$4.71	\$1,554.30	2/26/2021	13604700							
\$4.71	\$2,119.50	3/5/2021	13627100							
\$4.71	\$2,590.50	3/12/2021	13650100							
\$4.71	\$1,884.00	3/19/2021	13670000							
\$4.71	\$1,884.00	3/26/2021	13686500							
\$4.71 \$4.71	\$1,884.00	4/2/2021	13713000							
\$4.71 \$4.71	\$2,119.50	4/9/2021	13733400							
\$4.71 \$4.71	\$1,884.00 \$1,554.30	4/16/2021	13753100							
\$4.71 \$4.71	\$1,334.30	4/23/2021 4/30/2021	13770600 13793200							
\$4.71 \$4.71	\$1,884.00	5/7/2021	13795200							
Φ 4 ./1	\$1,004.00	5/1/2021	13010700							

\$3.70 \$3.70	-\$1,369.00 \$1,221.00 \$1,110.00 \$1,221.00	2/16/2021 2/26/2021 3/5/2021	13608400 13604700 13627100 13670000							
	\$1,221.00	2/26/2021	13604700							
\$3.70										
\$3.70			1 27 00 400							
\$3.70	\$2,220.00	2/16/2021	13585600							
\$3.70	-\$1,110.00	2/16/2021	13585500							
\$3.70	\$1,110.00	2/5/2021	13554500							
\$3.70	\$1,591.00	1/29/2021	13534300							
\$3.70	\$1,480.00	1/15/2021	13488800	19	0	0 8.43174	+ 03/.2	718 0.418	3030	0
\$3.70	\$1,017.50	1/4/2021	13454600							
UNIT \$	EXTENDED \$	DATE	INV#	VOC%	HAP %	Density	lbelur		lbs/h	
LINIT ¢	EXTENDED ¢	DATE	181//#					VOC		H≠
	\$9,112.30									
\$6.22	\$2,052.60	12/17/2021	14492300							
\$6.22	\$1,244.00	10/15/2021	14298900							
\$6.22	\$1,679.40	8/30/2021	14140500							
\$6.22	\$1,088.50	6/25/2021	13957400							
\$6.22	\$933.00	5/14/2021	13836100							
\$6.22	\$1,181.80	4/2/2021	13712900							
\$6.22	\$933.00	2/5/2021	13554400	0%	0	0		0	0	0
UNIT \$	EXTENDED \$	DATE	INV#		HAP %		ibs/yr	tpy	lbs/h	
LINIT ¢		DATE	INI\/#	VOC%		Density	lbehr	VOC	lbc/b	H≠
	\$71,672.07							VOC		II.
\$4.71	\$329.70	12/21/2021	14499700							
\$4.71 \$4.71	\$800.70 \$220.70	12/17/2021	14492200							
\$4.71 \$4.71		12/10/2021	14470900							
	\$800.70									
\$4.71 \$4.71	\$1,177.50	12/3/2021	14403300							
\$4.71 \$4.71	\$1,036.20	11/12/2021	14385200							
\$4.71	\$942.00	11/12/2021	14383200							
\$4.71	\$894.90	11/5/2021	14366800							
\$4.71	\$1,059.75	10/29/2021	14340800							
\$4.71	\$1,413.00	10/22/2021	14319200							
\$4.71	\$1,978.20	10/15/2021	14298900							
\$4.71	\$1,554.30	10/1/2021	14259700							
\$4.71	\$1,554.30	10/8/2021	14273600							
\$4.71	\$1,177.50	9/17/2021	14203600							
\$4.71	\$1,554.30	9/10/2021	14187300							
\$4.71 \$4.71	\$1,554.30	9/3/2021	14176400							
\$4.71	\$1,554.30	8/30/2021	14140400							
\$4.71	\$1,554.30	8/18/2021	14098900							
\$4.71	\$1,413.00	8/6/2021	14098100							
\$4.71	\$1,554.30	8/12/2021	14090200							
\$4.71	\$942.00	7/28/2021	14050200							
\$4.71	\$1,177.50	7/16/2021	14036200							
\$4.71	\$1,177.50	7/9/2021	13993700							
\$4.71	\$1,177.50	7/2/2021	13991800							
\$4.71	\$1,836.90	6/25/2021	13956500							
\$4.71	\$1,554.30	6/18/2021	13939100							
\$4.71	\$1,413.00	6/11/2021	13913100							
\$4.71	\$1,413.00	6/4/2021	13894800							
\$4.71	\$1,059.75	5/27/2021	13872400							
\$4.71	\$1,413.00	5/21/2021	13855200							
\$4.71	\$1,884.00	5/14/2021	13836000							

\$3.70	\$925.00	3/26/2021	13686500							
\$3.70	\$925.00	4/9/2021	13733400							
\$3.70	\$592.00	4/23/2021	13770600							
\$3.70	\$925.00	4/30/2021	13793200							
\$3.70	\$1,017.50	5/7/2021	13816700							
\$3.70	\$1,221.00	5/21/2021	13855200							
\$3.70	\$1,017.50	5/27/2021	13872400							
\$3.70	\$1,480.00	6/18/2021	13939100							
\$3.70	\$1,221.00	7/2/2021	13991800							
\$3.70	\$1,221.00	7/9/2021	13993700							
\$3.70	\$1,221.00	7/16/2021	14036200							
\$3.70	\$1,221.00	8/12/2021	14098100							
\$3.70	\$1,221.00	8/18/2021	14119000							
\$3.70	\$2,035.00	8/30/2021	14140400							
\$3.70	\$1,221.00	9/10/2021	14187300							
\$3.70	\$888.00	9/17/2021	14203600							
\$3.70	\$1,110.00	10/8/2021	14273600							
\$3.70	\$1,221.00	10/1/2021	14259700							
\$3.70	\$832.50	10/22/2021	14319200							
\$3.70	\$888.00	11/5/2021	14366800							
\$3.70	\$1,221.00	11/19/2021	14405500							
\$3.70	\$1,221.00	11/24/2021	14420800							
\$3.70	\$1,017.50	12/3/2021	14443100							
\$3.70	\$906.50	12/10/2021	14470900							
\$3.70	\$925.00	12/17/2021	14492200							
\$3.70	\$555.00	12/21/2021	14499700							
	\$36,741.00									
	\$30,741.00									
				1000				VOC		H₽
UNIT \$	EXTENDED \$	DATE	INV#	VOC%	HAP %	-	lbs/yr	tpy	lbs/hr	
\$5.98	EXTENDED \$ \$3,946.80	9/24/2021	14226000	VOC% 0%		Density	lbs/yr		lbs/hr 0	H≠ 0
\$5.98 \$5.98	EXTENDED \$ \$3,946.80 \$328.90	9/24/2021 11/19/2021	14226000 14405500			-	lbs/yr	tpy		
\$5.98	EXTENDED \$ \$3,946.80 \$328.90 \$328.90	9/24/2021	14226000			-	lbs/yr	tpy		
\$5.98 \$5.98	EXTENDED \$ \$3,946.80 \$328.90	9/24/2021 11/19/2021	14226000 14405500			-	lbs/yr	tpy 0		0
\$5.98 \$5.98 \$5.98	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60	9/24/2021 11/19/2021 12/21/2021	14226000 14405500 14499700	0%		0		tpy 0 VOC	0	
\$5.98 \$5.98 \$5.98 UNIT \$	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$	9/24/2021 11/19/2021 12/21/2021 DATE	14226000 14405500 14499700 INV#	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021	14226000 14405500 14499700 INV# 13454600	0%	HAP %	0		tpy 0 VOC	0	0
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18 \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021	14226000 14405500 14499700 INV# 13454600 13471100	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18 \$6.18 \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,545.00 \$1,854.00	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/15/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18 \$6.18 \$6.18 \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,854.00 \$2,781.00	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/15/2021 1/22/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,854.00 \$2,781.00 \$2,039.40	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/15/2021 1/22/2021 1/22/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300 13534300	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,545.00 \$1,854.00 \$2,781.00 \$2,039.40 \$2,039.40 \$2,039.40	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/15/2021 1/22/2021 1/29/2021 2/5/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300 13534300 13554500	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,854.00 \$2,781.00 \$2,039.40 \$2,039.40 \$2,008.50	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/22/2021 1/22/2021 2/5/2021 2/12/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300 13534300 13554500 13577900	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,545.00 \$1,854.00 \$2,781.00 \$2,039.40 \$2,039.40 \$2,008.50 -\$2,039.40	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/22/2021 1/22/2021 2/5/2021 2/12/2021 2/16/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300 13534300 13554500 135575900 13585500	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,854.00 \$2,781.00 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/4/2021 1/15/2021 1/22/2021 1/29/2021 2/5/2021 2/12/2021 2/16/2021 2/16/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300 13534300 13554500 13577900 13585500 13608400	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,545.00 \$2,781.00 \$2,039.40 \$3,545.00 \$3,555.00 \$3,555.00 \$3,555.00 \$3,555.00 \$3,555.00 \$3,555.00 \$3,555.00 \$3,555.00 \$3,555.00 \$3,555.00 \$3,555.00 \$3,555.00 \$3,555.0	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/15/2021 1/22/2021 2/5/2021 2/12/2021 2/16/2021 2/16/2021 2/26/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300 13534300 13554500 13554500 13577900 13585500 13608400 13604700	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,545.00 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$1,545.00 \$1,545.00	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/15/2021 1/29/2021 2/5/2021 2/12/2021 2/16/2021 2/16/2021 2/26/2021 3/5/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300 13534300 13554500 13554500 13555500 13608400 13604700 13627100	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,545.00 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$1,545.00 \$1,545.00 \$1,545.00 \$1,545.00 \$1,545.00	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/22/2021 1/29/2021 2/5/2021 2/12/2021 2/16/2021 2/16/2021 2/26/2021 3/5/2021 3/12/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300 13534300 13554500 13554500 135577900 13585500 13608400 13604700 13627100 13650100	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18 \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$1,545.00 \$1,545.00 \$1,545.00 \$1,545.00 \$1,545.00 \$2,039.40 \$2,039.	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/15/2021 1/22/2021 2/5/2021 2/12/2021 2/16/2021 2/16/2021 2/26/2021 3/5/2021 3/12/2021 3/19/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300 13534300 13554500 13577900 13585500 13608400 13604700 13627100 13650100 13670000	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,545.00 \$2,781.00 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$1,545.00 \$1,545.00 \$1,545.00 \$1,545.00 \$2,039.4	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/15/2021 1/22/2021 2/5/2021 2/12/2021 2/16/2021 2/16/2021 2/26/2021 3/5/2021 3/12/2021 3/19/2021 3/26/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300 13534300 13554500 13554500 13555500 13608400 13604700 13627100 13650100 13670000 13686500	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,545.00 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$1,545.00 \$1,545.00 \$1,545.00 \$1,545.00 \$2,039.40 \$2,039.	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/15/2021 1/29/2021 2/5/2021 2/12/2021 2/16/2021 2/16/2021 2/26/2021 3/5/2021 3/12/2021 3/19/2021 3/26/2021 4/2/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300 13534300 13554500 13554500 13555500 13608400 13608400 13604700 13650100 13650100 13650000 13686500 13713000	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,545.00 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$1,545.00 \$1,545.00 \$1,545.00 \$2,039.40 \$2,039.	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/15/2021 1/22/2021 2/5/2021 2/12/2021 2/16/2021 2/16/2021 2/26/2021 3/5/2021 3/12/2021 3/19/2021 4/2/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300 13534300 13554500 13554500 13577900 13585500 13608400 13604700 13627100 13627100 13650100 13650100 13670000 13686500 13713000	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠
\$5.98 \$5.98 \$5.98 UNIT \$ \$6.18	EXTENDED \$ \$3,946.80 \$328.90 \$328.90 \$4,604.60 EXTENDED \$ \$1,545.00 \$1,545.00 \$1,545.00 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$2,039.40 \$1,545.00 \$1,545.00 \$1,545.00 \$1,545.00 \$2,039.40 \$2,039.	9/24/2021 11/19/2021 12/21/2021 DATE 1/4/2021 1/8/2021 1/15/2021 1/29/2021 2/5/2021 2/12/2021 2/16/2021 2/16/2021 2/26/2021 3/5/2021 3/12/2021 3/19/2021 3/26/2021 4/2/2021	14226000 14405500 14499700 INV# 13454600 13471100 13488900 13511300 13534300 13554500 13554500 13555500 13608400 13608400 13604700 13650100 13650100 13650000 13686500 13713000	0% VOC%	HAP %	0 Density		tpy 0 VOC tpy	0 Ibs/hr	0 H≠

\$6.18	\$2,039.40	4/30/2021	13793200
\$6.18	\$1,730.40	5/7/2021	13816700
\$6.18	\$1,854.00	5/14/2021	13836000
\$6.18	\$2,039.40	5/21/2021	13855200
\$6.18	\$2,039.40	5/27/2021	13872400
\$6.18	\$1,854.00	5/26/2021	13870600
\$6.18	\$2,039.40	6/4/2021	13894800
\$6.18	\$2,039.40	6/11/2021	13913100
\$6.18	\$2,472.00	6/18/2021	13939100
\$6.18	\$2,472.00	6/25/2021	13956500
\$6.18	\$2,472.00	7/2/2021	13991800
\$6.18	\$1,236.00	7/9/2021	13993700
\$6.18	\$1,699.50	7/16/2021	14036200
\$6.18	\$1,236.00	7/28/2021	14050200
\$6.18	\$2,781.00	8/12/2021	14098100
\$6.18	\$1,854.00	8/6/2021	14098900
\$6.18	\$4,078.80	8/18/2021	14119000
\$6.18	\$3,090.00	8/30/2021	14140400
\$6.18	\$3,090.00	9/3/2021	14176400
\$6.18	\$2,039.40	9/10/2021	14187300
\$6.18	\$3,090.00	10/8/2021	14273600
\$6.18	\$2,039.40	10/1/2021	14259700
\$6.18	\$2,842.80	10/15/2021	14298900
\$6.18	\$2,781.00	10/22/2021	14319200
\$6.18	\$2,472.00	10/29/2021	14340800
\$6.18	\$2,039.40	11/5/2021	14366800
\$6.18	\$2,039.40	11/12/2021	14383200
\$6.18	\$2,039.40	11/19/2021	14405500
\$6.18	\$2,039.40	11/24/2021	14420800
\$6.18	\$2,039.40	12/3/2021	14443100
\$6.18	\$3,399.00	12/10/2021	14470900
\$6.18	\$2,039.40	12/17/2021	14492200
\$6.18	\$2,039.40	12/21/2021	14499700
\$6.18	\$1,854.00	12/30/2021	14524400

\$105,894.30

UNIT \$	EXTENDED \$	DATE	INV#									
\$400.00	\$1,200.00	4/30/2021	13785000									
\$400.00	\$2,800.00	12/3/2021	14437700									
	\$4,000.00											
UNIT \$	EXTENDED \$	DATE	INV#	VOC%								
\$303.32	\$303.32	7/16/2021	14007100									
\$303.32	\$303.32	9/24/2021	14218300									
\$303.32	\$303.32	10/8/2021	14270100									
	\$909.96											
UNIT \$	EXTENDED \$	DATE	INV#						V	DC		H≠
\$4.97	\$869.75	1/8/2021	13471100	VOC%		HAP %	,	Density	lbs/yr	tpy	lbs/hr	
\$4.97	\$944.30	2/16/2021	13585600		1%		0	8.78202	212.5249	0.106262		0
\$4.97	-\$944.30	2/16/2021	13608400									
\$4.97	\$1,640.10	3/17/2021	13661600									

\$4.97	\$820.05	4/16/2021	13753100								
\$4.97	\$994.00	5/21/2021	13855200								
\$4.97	\$869.75	6/11/2021	13913100								
\$4.97	\$869.75	7/9/2021	13993700								
\$4.97	\$994.00	7/28/2021	14050200								
\$4.97	\$1,416.45	9/3/2021	14176400								
\$4.97	\$1,366.75	10/15/2021	14298900								
\$4.97	\$1,093.40	11/19/2021	14405500								
\$4.97	\$1,093.40	12/21/2021	14499700								
	\$12,027.40										
	,								VOC		H≠
UNIT \$	EXTENDED \$	DATE	INV#	VOC%	HAP %	Dei	nsitv	lbs/yr	tpy	lbs/	
				0%		0	isity	105/91		0	
\$4.20	\$462.00	1/22/2021	13511400	07	/0	0			0	0	0
\$4.20	\$693.00	1/25/2021	13517900								
\$4.20	\$2,310.00	1/29/2021	13534300								
	\$3,465.00								Nog		
				1000					VOC		H≁
UNIT \$	EXTENDED \$	DATE	INV#	VOC%	HAP %		nsity	lbs/yr	tpy	Ibs/	
\$3.95	\$474.00	1/4/2021	13454600	0%	/0	0			0	0	0
\$3.95	\$513.50	1/8/2021	13471100								
\$3.95	\$474.00	1/15/2021	13488900								
\$3.95	\$395.00	1/22/2021	13511300								
\$3.95	\$395.00	1/29/2021	13534300								
\$3.95	\$691.25	2/12/2021	13577900								
\$3.95	\$869.00	3/5/2021	13627100								
\$3.95	\$592.50	3/19/2021	13670000								
\$3.95	\$395.00	4/2/2021	13713000								
\$3.95	\$1,165.25	4/9/2021	13733400								
\$3.95	\$474.00	4/16/2021	13753100								
\$3.95	\$493.75	4/23/2021	13770600								
\$3.95	\$888.75	5/7/2021	13816700								
\$3.95	\$908.50	5/21/2021	13855200								
\$3.95	\$1,185.00	5/27/2021	13872400								
\$3.95	\$1,185.00	6/4/2021	13894800								
\$3.95	\$750.50	6/11/2021	13913100								
\$3.95	\$790.00	6/18/2021	13939100								
\$3.95	\$790.00	6/25/2021	13956500								
\$3.95	\$987.50	7/2/2021	13991800								
\$3.95	\$869.00	7/9/2021	13993700								
\$3.95	\$869.00	7/16/2021	14036200								
\$3.95	\$1,303.50	7/28/2021	14050200								
\$3.95	\$553.00	8/12/2021	14098100								
\$3.95	\$1,086.25	8/6/2021	14098900								
\$3.95	\$1,185.00	8/30/2021	14140400								
\$3.95	\$987.50	9/3/2021	14176400								
\$3.95	\$592.50	9/10/2021	14187300								
\$3.95	\$869.00	9/24/2021	14226100								
\$3.95	\$513.50	10/8/2021	14273600								
\$3.95	\$592.50	10/1/2021	14273000								
\$3.95 \$3.95	\$592.50	10/15/2021	14239700								
		10/10/2012	14270700								
\$3.95	\$691.25	10/29/2021	14340800								

\$3.95	\$474.00	11/19/2021	14405500
\$3.95	\$513.50	11/24/2021	14420800
\$3.95	\$395.00	12/3/2021	14443100
\$3.95	\$711.00	12/17/2021	14492200
	\$28,203.00		

 UNIT \$ \$4.78
 EXTENDED \$ \$262.90
 DATE 4/9/2021
 INV#
 INV#
 VOC
 HAP %
 Density
 Ibs/yr
 tpy
 Ibs/hr
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 \$262.90
 13733500
 VOC%
 HAP %
 Density
 Ibs/yr
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 Ibs/hr
 0

UNIT \$ \$14.45	EXTENDED \$ \$794.75 \$794.75	DATE 3/26/2021	INV# 13681300							
								VOC		H₽
UNIT \$	EXTENDED \$	DATE	INV#	VOC%	HAP %	Density	lbs/yr	tpy	lbs/hr	
\$4.00	\$220.00 \$220.00	7/2/2021	13999800	0%	6 C)		0	0	0

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АР **tpy** 0

				CY2021 Purchases
Cost Center	Cost Elem.	Year	Purch.Doc.	Name
				CHEM, ANTIMICROB
				CHEM, ANTIMICROB
				CHEM,CITRIC,HYDR
				CHEM, PH ADJUSTEF
				CHEM, SODIUM, HYD
				CHEM, SULFURIC AC

Grand Total

Material description

HAL,300GAL 0000249204-SAFE FOODS CO Total HAL,AJUST 0000249204-SAFE FOODS COR Total OCLORIC A 0000249204-SAFE FOODS CO Total CAUSTIC, 0000249204-SAFE FOODS CO Total ROXIDE,50P 0000249204-SAFE FOODS CO Total ID/SODIUM 0000249204-SAFE FOODS CO Total

Safe Foods Name	Quantity %VOC	Content
Promoat (PAA)	113,400.000 See PA	A Calcs
Ajust	520.000	0
Citralow Plus	18,150.000	0
Ajust pH	27,820.000	0
Phocus	14,560.000	0
Assist	5,940.000	0

%HAP Content

Exempt	maintenance	Purple Primer Cleaner	Oatey
Exempt	maintenance	Oil Eater Degreaser	Oil Eater
Exempt	maintenance	Big Orange Degreaser	Zep
Exempt	maintenance	Contact Cleaner	CRC
		CLEANERS	
		Product	Mfr

Comfort Heaters

	Equipment	MMBtu/hr
Existing	Production Office Unit	0.183
Existing	Upstairs Offices Unit #1	0.135
Existing	Upstairs Offices Unit #2	0.135
Existing	Breakroom Unit-West	0.180
Existing	Breakroom Unit-East	0.180
Existing	Nurse's Station Unit	0.125
Existing	Personnel Offices Unit	0.125
Existing	Shipping Office Unit	0.090
Existing	Purchasing Office Unit	0.075
Existing	Maintenance Shop Heater	0.300
Existing	Fab. Shop Heater	0.200
Existing	Offal Office Unit #1	0.075
Existing	Offal Office Unit #2	0.075
Existing	USDA Office Unit	0.080
Existing	Conf. Room Unit	0.150
Existing	David Keith's Office Unit	0.090
Existing	Maintenance Unit	0.080
New	Live Hang Break Room 2017	0.070
New	Mechanical Room 2017	0.105
New	Parts Room 2017	0.105
	Total	2.56





SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Identifier

Product Name: ASSIST

Product Type: Sulfuric Acid and Sodium Sulfate in Water

Relevant Identified Uses of the Substance or Mixture

Intended Use: Processing Aid

Details of the Supplier of the Safety Data Sheet:

Safe Foods Corporation 1501 E 8th Street North Little Rock, AR 72114

Telephone: (501) 758-8500

Emergency Telephone Number:

(800) 424-9300 (CHEMTREC)

2. HAZARDS IDENTIFICATION

Appearance:

Liquid

Classification of the Substance or Mixture GHS - Classification

Skin Corrosion/Irritation: Category 2 Serious Eye Damage/Eye Irritation: Category 2A Substances/mixtures corrosive to metal- Category 1

Label Elements

Signal Word: Hazard Statements: Warning H319 - Causes serious eye irritation H315 - Causes skin irritation H290 - May be corrosive to metals



SAFETY DATA SHEET

Precautionary Statements:	P280 - Wear protective gloves/protective clothing/eye protection/face protection
	P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
	P264 - Wash hands thoroughly after handling
	P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
	P310 - Immediately call a POISON CENTRE or doctor/physician
	P302+ P352 - IF ON SKIN: Wash with plenty of soap and water
	P332 + P313 - If skin irritation occurs: Get medical advice/attention
	P362 - Take off contaminated clothing and wash before reuse
	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
	P501 Dispass of contents/container in accordance with all local and national regulations

P501 - Dispose of contents/container in accordance with all local and national regulations



Other Hazards Short Term: Long Term:

Note:

May be harmful if swallowed. May be harmful to aquatic organisms. (based on components) Occupational exposure to strong-inorganic-acid mists containing sulfuric acid is carcinogenic to humans. See section 11 for further explanation.

This document has been prepared in accordance with standards for workplace safety, which require the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warnings included may not apply in all cases. Your needs may vary depending upon the potential for exposure in your workplace.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredient CAS Number EU **EU Classification** GHS EINECS/ELINCS Classification List Skin Corr. 1A 37.0-43.0 Sulfuric acid 7664-93-9 231-639-5 C; R35 (H314) Sodium sulfate anhydrous 7757-82-6 231-820-9 Not Listed Not Listed 0.0 - 7.0

Ingredient	CAS Number	EU EINECS/ELINCS List	EU Classification	GHS Classification	%
Water	7732-18-5	231-791-2	Not Listed	Not Listed	47 - 51

Additional Information:

Ingredient(s) indicated as hazardous have been assessed under standards for workplace safety. In accordance with 29 CFR 1910.1200, the exact percentage composition of this mixture has been withheld as a trade secret.

For the full text of the R phrases and CLP/GHS abbreviations mentioned in this Section, see Section 16

%



4. FIRST AID MEASURES

Description of First Aid Measures Eye Contact:	Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention immediately.
Skin Contact:	Remove contaminated clothing. Flush area with large amounts of water. Use soap. Seek medical attention.
Ingestion:	In the event of swallowing this material, seek immediate medical attention. DO NOT INDUCE VOMITING.
Inhalation:	Remove to fresh air and keep patient at rest. Seek medical attention immediately.
Most Important Symptoms and Effe Symptoms and Effects of Exposure: Medical Conditions Aggravated by Exposure:	cts, Both Acute and Delayed For information on potential signs and symptoms of exposure, See Section 2 - Hazards Identification and/or Section 11 - Toxicological Information. Individuals with a history of hypersensitivity to this material or other materials in its chemical class, individuals with other allergic conditions or diseases (asthma, eczema, etc.).
Indication of the Immediate Medical Notes to Physician:	Attention and Special Treatment Needed None
	5. FIRE-FIGHTING MEASURES
Extinguishing Media:	Extinguish fires with CO2, extinguishing powder, foam, or water.
Special Hazards Arising from the Su	ubstance or Mixture
Hazardous Combustion Products:	Toxic or corrosive gases including oxides of carbon and oxides of sulfur
Fire / Explosion Hazards:	Fine particles (such as dust and mists) may fuel fires/explosions.
Advice for Fire-Fighters During all fire fighting activities,	wear appropriate protective equipment, including self-contained breathing apparatus.
6.	ACCIDENTAL RELEASE MEASURES
Avoid dust and mist generation.	uipment and Emergency Procedures Avoid contact with skin, eyes and clothing . Ensure adequate ventilation. Personnel involved in te personal protective equipment (see Section 8). Minimize exposure.
Environmental Precautions	

Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release.

Methods and Material for Containment and Cleaning Up

Measures for Cleaning /
Collecting:Contain the source of spill if it is safe to do so. Collect spill with absorbent material. Clean spill
area thoroughly.

Additional Consideration for	Non-essential personnel should be evacuated from affected area. Report eme	rgency
Large Spills:	situations immediately. Clean up operations should only be undertaken by train	ned personnel.

7. HANDLING AND STORAGE

Precautions for Safe Handling



7. HANDLING AND STORAGE

When handling, use appropriate personal protective equipment (see Section 8). Minimize generating airborne mists and vapors. Use with adequate ventilation. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Releases to the environment should be avoided.

Conditions for Safe Storage, Including any Incompatibilities

 Storage Conditions:
 Store tightly covered away from heat, acids, bases, and oxidizers. Protect from freezing.

 Storage Temperature:
 < 50 °C/122 °F</td>

 Incompatible Materials:
 Metals , Strong alkalis , Reducing agents

 Specific end use(s):
 No data available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Refer to available public information for specific member state Occupational Exposure Limits.

Sulfuric acid

ACGIH Threshold Limit Value (TWA)	0.2 mg/m ³
Australia STEL	3 mg/m ³
Australia TWA	1 mg/m ³
Austria OEL - MAKs	0.1 mg/m ³
Belgium OEL - TWA	1 mg/m ³
Bulgaria OEL - TWA	0.05 mg/m ³
Cyprus OEL - TWA	0.05 mg/m ³
Czech Republic OEL - TWA	1 mg/m ³
•	0.05 mg/m ³
Denmark OEL - TWA	0.05 mg/m ³
Estonia OEL - TWA	0.05 mg/m ³
Finland OEL - TWA	0.05 mg/m ³
France OEL - TWA	0.05 mg/m ³
Germany - TRGS 900 - TWAs	0.1 mg/m ³
Germany (DFG) - MAK	0.1 mg/m ³
Greece OEL - TWA	0.05 mg/m ³
Hungary OEL - TWA	0.05 mg/m ³
Ireland OEL - TWAs	1 mg/m ³
Japan - OELs - Ceilings	1 mg/m ³
Latvia OEL - TWA	0.05 mg/m ³
Lithuania OEL - TWA	0.05 mg/m ³
Luxembourg OEL - TWA	0.05 mg/m ³
Malta OEL - TWA	0.05 mg/m ³
Netherlands OEL - TWA	0.05 mg/m ³
Vietnam OEL - TWAs	1 mg/m ³
OSHA - Final PELS - TWAs:	1 mg/m ³
Poland OEL - TWA	1 mg/m ³
	0.05 mg/m ³
Portugal OEL - TWA	0.2 mg/m ³
Romania OEL - TWA	0.05 mg/m ³
Slovakia OEL - TWA	0.1 mg/m ³
Slovenia OEL - TWA	0.05 mg/m ³
Spain OEL - TWA	0.05 mg/m ³
Sweden OEL - TWAs	0.1 mg/m ³
Switzerland OEL -TWAs	0.1 mg/m ³



8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Sodium sulfate anhydrous				
Latvia OEL - TWA	10 mg/m ³			
Lithuania OEL - TWA	10 mg/m ³			
Exposure Controls				
Engineering Controls:	Engineering controls should be used as the primary means to control exposures. Keep airborne contamination levels below the exposure limits listed above in this section.			
Personal Protective	Refer to applicable national standards and regulations in the selection and use of personal			
Equipment:	protective equipment (PPE).			
Hands:	Wear impervious gloves if skin contact is possible.			
Eyes:	Wear safety goggles if eye contact is possible (face shield recommended if splashing is possible).			
Skin:	Wear impervious protective clothing to prevent skin contact.			
Respiratory protection:	Whenever excessive air contamination (dust, mist, vapor) is generated, respiratory protection, with appropriate protection factors, should be used to minimize exposure. If the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEL.			

9. PHYSICAL AND CHEMICAL PROPERTIES

	1		
Physical State:	Liquid	Color:	Clear, colorless to amber
Odor:	None	Odor Threshold:	No data available.
Molecular Formula:	Mixture	Molecular Weight:	Mixture
Solvent Solubility:	No data available		
Water Solubility:	Soluble		
pH:	<1		
Melting/Freezing Point (°C):	-18		
Boiling Point (°C):	121		
Partition Coefficient: (Method, pH, E No data available	Endpoint, Value)		
Decomposition Temperature (°C):	No data available.		
Evaporation Rate (Gram/s):	No data available		
Vapor Pressure (kPa):	No data available		
Vapor Density (g/ml):	No data available		
Relative Density:	No data available		
Specific Gravity:	1.35 - 1.40 @ 25C/77F		
Viscosity:	No data available		
Flammablity:			
	Autoignition Temperature (Solid) (°C):		
Flammability (Solids):			
Flash Point (Liquid) (°C):		No data available	
Upper Explosive Limits (Liqu	id) (% by Vol.):	No data available	
Lower Explosive Limits (Liqu		No data available	
Polymerization:	, (,,.	Will not occur	
C		69999000009979777777700	



10. STABILITY AND REACTIVITY

Reactivity: Chemical Stability: Possibility of Hazardous Reactions Oxidizing Properties: Conditions to Avoid: Incompatible Materials: Hazardous Decomposition Products:

No data available Stable under normal conditions of use.

Oxidizer

Keep away from excessive heat and flames. Avoid contact with Alkalies , Strong caustics Metals , Strong alkalis , Reducing agents

Thermal decomposition can lead to release of irritating gases and vapours. Thermal decomposition products may include oxides of sulfur

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

General Information:

Toxicological properties of the formulation have not been fully investigated. The information in this section describes the potential hazards of the individual ingredients and the formulation. Routes of exposure: eye contact, skin contact, inhalation

Industrial hygiene monitoring for airborne concentrations of sulfuric acid has been conducted in an area where this product was in use. Results of this monitoring indicated airborne sulfuric acid levels were well below the OSHA PEL for this substance. These results are available upon request. Each individual situation, however, should be evaluated separately.

Acute Toxicity: (Species, Route, End Point, Dose)

Sulfuric acid

Rat Oral LD50 2140 mg/kg Rat Inhalation LC50 (2 hr) 510mg/m³

Sodium sulfate anhydrous

Mouse Oral LD50 5989 mg/kg Rabbit IV LD50 1220mg/kg

Irritation / Sensitization: (Study Type, Species, Severity)

Sulfuric acid

Eye Irritation Severe Skin Irritation Severe

Carcinogen	Status:
------------	---------

The International Agency for Research on Cancer (IARC) and the United States National Toxicology Program (NTP) have classified 'occupational exposure to strong inorganic acid mists containing sulfuric acid' as a known human carcinogen. This classification applies only to sulfuric acid when generated as a mist. This classification is debated within the scientific community and there is disagreement as to whether or not a cause and effect relationship between cancer and 'occupational exposure to strong inorganic acid mists containing sulfuric acid' exists.

Sulfuric acid IARC:

Group 1 (Carcinogenic to Humans)

Product Level Toxicity Data



11. TOXICOLOGICAL INFORMATION

Irritation / Sensitization Study Type	Species	Result	
Skin Irritation	Rabbit	Moderate	
Irritation / Sensitization Commo	based on availab redness, blurred	Contact with this product is expected to cause eye and skin irritation, but not skin corrosion, based on available data. Signs and symptoms of eye exposure may include burning, tearing, redness, blurred vision, and swelling of the eyelids. Signs and symptoms of skin exposure may include redness, cracking or flaking of the skin, color change, and swelling of the affected area.	
	12. ECOLO	DGICAL INFORMATION	
Environmental Overview:		roperties of the formulation have not been investigated. The following ailable for the individual ingredients. Releases to the environment should be	
Toxicity:			
Aquatic Toxicity: (Species, Met	hod, End Point, Durati	on, Result)	
	LC50 96 Hours > C50 24 Hours 29 r	0	
Persistence and Degradability:	No data available	e	
Bio-accumulative Potential:	No data available	e	

Mobility in Soil: No data available

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods: Waste of this product may qualify as a RCRA Hazardous Waste. Status should be confirmed by testing for RCRA hazardous characteristics (i.e. corrosivity, toxicity, reactivity, or ignitability). Waste may be classified as hazardous due to the ph/corrosivity. Dispose of waste in accordance with all applicable laws and regulations. Member State specific and Community specific provisions must be considered. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater.

14. TRANSPORT INFORMATION

The following refers to all modes of transportation unless specified below.

This material is regulated for transportation as a hazardous material/dangerous good. For US DOT, refer to the applicable RQ below.

UN number:	UN 3264
UN proper shipping name:	Corrosive Liquid, Acidic, Inorganic, n.o.s. (Sulfuric acid)



SAFETY DATA SHEET

Transport hazard class(es):	8
Packing group:	11

For small quantities packed in combination packaging, exceptions may apply.

U.S. DOT Reportable Quantity (RQ), 49 CFR 172.101 Appendix A:

Sulfuric acid

CERCLA/SARA Hazardous Substances	1000 lb
and their Reportable Quantities:	454 kg

15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

Canada - WHMIS: Classifications

WHMIS hazard class:

Class D, Division 2, Subdivision B

This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.



Sulfuric acid

oundrie uolu	
CERCLA/SARA 313 Emission reporting	1.0 %
CERCLA/SARA Hazardous Substances	1000 lb
and their Reportable Quantities:	454 kg
CERCLA/SARA - Section 302 Extremely Hazardous TPQs	1000 lb
CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs	1000 lb
California Proposition 65	Not Listed
Inventory - United States TSCA - Sect. 8(b)	Present
Australia (AICS):	Present
Standard for the Uniform Scheduling	Schedule 6
for Drugs and Poisons:	
EU EINECS/ELINCS List	231-639-5
Sodium sulfate anhydrous	
CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
Inventory - United States TSCA - Sect. 8(b)	Present
Australia (AICS):	Present
EU EINECS/ELINCS List	231-820-9



15. REGULATORY INFORMATION

CERCLA/SARA 313 Emission reporting California Proposition 65 Inventory - United States TSCA - Sect. 8(b) Australia (AICS): REACH - Annex IV - Exemptions from the obligations of Register: EU EINECS/ELINCS List Not Listed Not Listed Present Present Present

231-791-2

16. OTHER INFORMATION

Text of R phrases and GHS Classification abbreviations mentioned in Section 3

Skin corrosion/irritation-Cat.1A; H314 - Causes severe skin burns and eye damage

C - Corrosive

R35 - Causes severe burns.

Data Sources:

The data contained in this SDS may have been gathered from confidential internal sources, raw material suppliers, or from the published literature.

Creation Date: 3/31/2017

Safe Foods Corporation believes that the information contained in this Safety Data Sheet is accurate, and while it is provided in good faith, it is without warranty of any kind, expressed or implied. If data for a hazard are not included in this document there is no known information at this time.

End of Safety Data Sheet