



State of Utah

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Department of  
Environmental Quality

Kimberly D. Shelley  
*Executive Director*

DIVISION OF AIR QUALITY  
Bryce C. Bird  
*Director*

DAQE-IN154370006-21

October 21, 2021

Harry Chen  
ChampionX LLC  
11177 S, Stadium Dr.  
Sugar Land, TX 77478  
harry.chen@ecolab.com

Dear Mr. Chen:

Re: Intent to Approve:  
Modification to Approval Order DAQE-AN154370004-20 to Update Emissions  
Project Number: N154370006

The attached document is the Intent to Approve (ITA) for the above-referenced project. The ITA is subject to public review. Any comments received shall be considered before an Approval Order (AO) is issued. The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final AO.

Future correspondence on this ITA should include the engineer's name, **Jake Ries**, as well as the DAQE number as shown on the upper right-hand corner of this letter. Jake Ries, can be reached at (385) 306-6530 or jries@utah.gov, if you have any questions.

Sincerely,

  
Jon Black (Oct 13, 2021 14:52 MDT)

Jon L. Black, Manager  
New Source Review Section

JLB:JR:sa

cc: TriCounty Health Department

**STATE OF UTAH**  
**Department of Environmental Quality**  
**Division of Air Quality**

**INTENT TO APPROVE**  
**DAQE-IN154370006-21**  
**Modification to Approval Order DAQE-AN154370004-20**  
**to Update Emissions**

**Prepared By**  
**Jake Ries, Engineer**  
**(385) 306-6530**  
**jries@utah.gov**

**Issued to**  
**ChampionX LLC - Vernal Facility**

**Issued On**  
**October 21, 2021**

  
Jon Black (Oct 13, 2021 14:52 MDT)

**New Source Review Section Manager**  
**Jon L. Black**

## TABLE OF CONTENTS

<b>TITLE/SIGNATURE PAGE .....</b>	<b>1</b>
<b>GENERAL INFORMATION .....</b>	<b>3</b>
CONTACT/LOCATION INFORMATION .....	3
SOURCE INFORMATION .....	3
General Description .....	3
NSR Classification.....	3
Source Classification .....	3
Applicable Federal Standards .....	3
Project Description.....	3
SUMMARY OF EMISSIONS.....	4
<b>PUBLIC NOTICE STATEMENT.....</b>	<b>4</b>
<b>SECTION I: GENERAL PROVISIONS .....</b>	<b>4</b>
<b>SECTION II: PERMITTED EQUIPMENT .....</b>	<b>5</b>
<b>SECTION II: SPECIAL PROVISIONS .....</b>	<b>6</b>
<b>PERMIT HISTORY .....</b>	<b>6</b>
<b>ACRONYMS .....</b>	<b>7</b>

**GENERAL INFORMATION****CONTACT/LOCATION INFORMATION****Owner Name**

ChampionX LLC

**Source Name**

ChampionX LLC - Vernal Facility

**Mailing Address**11177 S. Stadium Dr.  
Sugar Land, TX 77478**Physical Address**1465 East 1650 South  
Vernal, UT 84078**Source Contact**Name Harry Chen  
Phone (281) 632-8121  
Email harry.chen@ecolab.com**UTM Coordinates**627,201 m Easting  
4,476,736 m Northing  
Datum NAD83  
UTM Zone 12**SIC code** 5169 (Chemicals & Allied Products, NEC)**SOURCE INFORMATION****General Description**

ChampionX LLC (ChampionX) has a chemical distribution facility in Vernal, Utah. Emissions are primarily associated with the blending and loading of chemicals and storage tanks. The Vernal facility takes a variety of organic materials, including xylene, ethylbenzene, methanol, ethylene glycol, and other materials from trucks delivering it to the plant. The facility has storage tanks, blending and mixing facilities, and product loading. ChampionX employs the bottom-fill method at the Vernal Facility.

**NSR Classification**

Minor Modification at Minor Source

**Source Classification**Located in Uinta Basin O3 NAA  
Uintah County  
Airs Source Size: B**Applicable Federal Standards**

None

**Project Description**

ChampionX has requested to add new chemical formulations for storage, blending, and loading operations, and to increase annual throughput. Facility-wide PTE was re-evaluated as part of this modification based on updated operations.

### **SUMMARY OF EMISSIONS**

The emissions listed below are an estimate of the total potential emissions from the source. Some rounding of emissions is possible.

<b>Criteria Pollutant</b>	<b>Change (TPY)</b>	<b>Total (TPY)</b>
Volatile Organic Compounds	1.54	3.41

<b>Hazardous Air Pollutant</b>	<b>Change (lbs/yr)</b>	<b>Total (lbs/yr)</b>
Ethyl Benzene (CAS #100414)	0	160
Ethylene Glycol (CAS #107211)	100	120
Methanol (CAS #67561)	1160	4620
Naphthalene (CAS #91203)	4	20
Toluene (CAS #108883)	0	40
Xylenes (Isomers And Mixture) (CAS #1330207)	100	140
	<b>Change (TPY)</b>	<b>Total (TPY)</b>
Total HAPs	0.68	2.55

### **PUBLIC NOTICE STATEMENT**

The NOI for the above-referenced project has been evaluated and has been found to be consistent with the requirements of UAC R307. Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an AO by the Director.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notification of the ITA will be published in the Vernal Express on October 27, 2021. During the public comment period the proposal and the evaluation of its impact on air quality will be available for the public to review and provide comment. If anyone so requests a public hearing within 15 days of publication, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated. The proposed conditions of the AO may be changed as a result of the comments received.

### **SECTION I: GENERAL PROVISIONS**

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

I.1	All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
I.2	The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
I.3	Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]

I.4	All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401-8]
I.5	At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
I.6	The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]
I.7	The owner/operator shall comply with UAC R307-150 Series. Emission Inventories. [R307-150]
I.8	The owner/operator shall submit documentation of the status of construction or modification to the Director within 18 months from the date of this AO. This AO may become invalid if construction is not commenced within 18 months from the date of this AO or if construction is discontinued for 18 months or more. To ensure proper credit when notifying the Director, send the documentation to the Director, attn.: NSR Section. [R307-401-18]

## SECTION II: PERMITTED EQUIPMENT

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

### II.A THE APPROVED EQUIPMENT

II.A.1	<b>Vernal Specialty Chemical Distribution Center</b>
II.A.2	<b>Storage Tanks</b> Twenty (20) vertical fixed-roof storage tanks Capacity: Nine (9) 6,014-gallon tanks Eight (8) 8,809-gallon tanks Three (3) 12,920-gallon tanks
II.A.3	<b>Drums</b> Various one-barrel drums for delivering product to customers
II.A.4	<b>Totes</b> Various units having a maximum capacity of 18 barrels each
II.A.5	<b>Truck Loading</b> Fugitive emissions arising from the loading to and from delivery trucks, and the mixing and blending of products to the customers specifications.

## SECTION II: SPECIAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

### **II.B      REQUIREMENTS AND LIMITATIONS**

<b>II.B.1</b>	<b>Site-Wide Requirements</b>
II.B.1.a	The owner/operator shall not allow visible emissions from any stationary point or fugitive emission source on site to exceed 10% opacity. [R307-401-8]
II.B.1.a.1	Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-201-3]
II.B.1.b	<p>The plant-wide emissions of VOCs and HAPs from the product load out and associated operations shall not exceed the following:</p> <p>3.41 tons per rolling 12-month period for VOCs  0.06 tons per rolling 12-month period for ethylene glycol  2.31 tons per rolling 12-month period for methanol,  0.07 tons per rolling 12-month period for xylene,  0.01 tons per rolling 12-month period for naphthalene,  0.08 tons per rolling 12-month period for ethylbenzene,  0.02 tons per rolling 12-month period for toluene, and  2.55 tons per rolling 12-month period for all HAPs combined</p> <p>[R307-401-8]</p>
II.B.1.b.1	<p>The owner/operator shall calculate a new 12-month throughput total by the 20th day of each month using data from the previous 12 months using the most current TANKS program. Records of throughput and TANKS runs shall be kept for all periods when the plant is in operation. Throughput shall be determined by invoice records, delivery tickets, bills of lading, and/or batch tickets. The records shall be kept on a monthly basis by the 20th day of each month.</p> <p>[R307-401-8]</p>
<b>II.B.2</b>	<b>Tank Requirements</b>
II.B.2.a	The owner/operator shall load the tanker trucks on site by the use of submerged loading. [R307-401-8]
II.B.2.b	The owner/operator shall inspect the thief hatches at least once every six (6) months to ensure the thief hatches are closed, latched, and the associated gaskets, if any, are in good working condition. Records of thief hatch inspections shall include the date of the inspection and the status of the thief hatches. [R307-401-8]

## PERMIT HISTORY

This Approval Order shall supersede or will be based on the following documents:

Supersedes  
Is Derived From  
Incorporates  
Incorporates  
Incorporates

AO DAQE-AN154370004-20 dated March 24, 2020  
NOI dated December 18, 2020  
Additional Information dated January 14, 2021  
Additional Information dated September 8, 2021  
Additional Information dated September 22, 2021

## ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by Environmental Protection Agency to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2e</sub>	Carbon Dioxide Equivalent - Title 40 of the Code of Federal Regulations Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ/UDAQ	Division of Air Quality
DAQE	This is a document tracking code for internal Division of Air Quality use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - Title 40 of the Code of Federal Regulations 52.21 (b)(49)(i)
GWP	Global Warming Potential - Title 40 of the Code of Federal Regulations Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/YR	Pounds per year
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO <sub>x</sub>	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM <sub>10</sub>	Particulate matter less than 10 microns in size
PM <sub>2.5</sub>	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO <sub>2</sub>	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
VOC	Volatile organic compounds