

Instructions for Using DEP's Approved Chemical Additives List

These instructions are intended to provide permittees with guidance on using the Approved List of Chemical Additives (Approved List). The instructions include guidance for finding a chemical additive on the Approved List and using DEP's PENTOXSD model to calculate a Water Quality Based Effluent Limitation (WQBEL) for the chemical additive.

The [Approved Chemical Additives List](#) ("Approved List") is to be used in situations where the NPDES permit requires that chemical additives be listed on a DEP-approved list before usage (i.e., "new chemical additives permit language"). The language can be found in Attachment A of the [Standard Operating Procedure \(SOP\) for Chemical Additives](#).

I. Introduction

A chemical additive is a chemical product (including products of disassociation and degradation, collectively "products") introduced into a waste stream that is used for cleaning, disinfecting, or maintenance and which may be detected in effluent discharged to waters of the Commonwealth. The term generally excludes chemicals used for the production of goods or chemicals used in the treatment of wastewater.

If your permit addresses the use of chemical additives but is not the new chemical additives permit language, you should continue to follow the existing permit requirements. However, you should consider reviewing the list and verifying that the chemicals you are using are on the list. When your permit is reissued and the new chemical additives permit language takes effect, you will only be authorized to use chemicals on DEP's Approved List.

If you would like to request that a new chemical additive be added to the Approved List, complete the New Chemical Additive Request form ([3800-FM-BCW0486](#)) and submit the form along with a valid MSDS and relevant attachments to RA-EPNPDES_Permits@pa.gov. If submissions cannot be sent via email send the form and MSDS to:

DEP Bureau of Clean Water
NPDES Permitting Division
PO Box 8774
Harrisburg, PA 17105-8774

DEP Central Office staff will contact you if necessary. Please provide up to 60 days for review, depending on the number of requests received.

If a chemical additive you are using or plan to use is on the Approved List, the next step is to complete and submit the Chemical Additives Notification form ([3800-FM-BCW0487](#)) to the DEP regional office that issued the NPDES permit. This notification form must be completed in full and submitted prior to using chemical additives that are on the Approved List.

NOTE - If, following submission of the Chemical Additives Notification form, you intend to increase usage beyond that which was reported previously on the form, the submission of a new Chemical Additives Notification form is required. In general, this would be considered appropriate only where (1) there was a mistake with the original submission, (2) the maximum usage rate reported on the form was not the maximum allowable determined by calculations, or (3) new aquatic life or human health criteria are posted on the Approved List.

Completion of the Chemical Additives Notification form will involve the use of DEP's Toxics Management Spreadsheet (TMS), which can be accessed through DEP's website, using aquatic life and human health effect levels that are provided in the Approved List. The WQBEL calculated by the TMS is considered to be the

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concentration that should not be exceeded when using the chemical additive. Completion of the form will also require the calculation of the maximum safe usage rate using the calculated WQBEL and other factors including but not limited to dilution, settling, partitioning, etc. TMS results and calculations must be attached to the Chemical Additives Notification form.

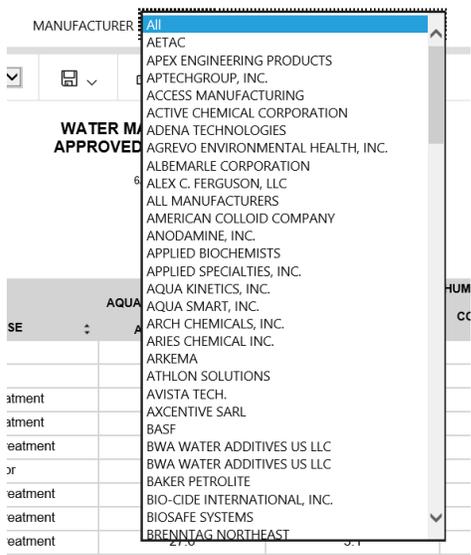
II. Instructions for Reviewing the Approved List

The Approved List, which was previously in Excel spreadsheet format, automatically generates with the full list of chemical additives upon clicking the hyperlink to the Approved List. The results display in a web browser. Features of the report are described below.

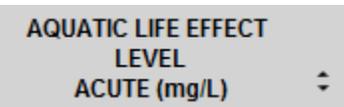
- A. A specific chemical additive can be found by unchecking 'Null' and typing in the name of the chemical additive.

CHEMICAL ADDITIVE NAME NULL

- B. To view a list of chemical additives by manufacturer use the drop down menu to select the manufacturer’s chemical additives you would like to view.



- C. The Approved List is sorted alphabetically by chemical additive name. The data can be sorted using the arrows next the column headers.



- D. The following controls are available to manage the Approved List:

- **Navigation Bar** – Allows the user to navigate through the pages of a report.



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- **Zoom** – Allows the user to change the display size of the report within the browser.

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- **Find Text in Report** – Allows the user to search for specific terms within the report data.

 Find | Next

- **Export** – Allows the user to export (save) the report. Click on the Export button for a list of file formats.

Sewage	
Word	
Excel	
PowerPoint	
PDF	
TIFF file	14 5)
MHTML (web archive)	47 1C
CSV (comma delimited)	7
XML file with report data	16 4C
Data Feed	6C 8E

If the user intends to sort or filter the data, DEP recommends using CSV. Clicking on CSV generates a popup that asks whether the user wants to save or open the file. Select "Open".

Hint: To save the CSV file, the "Save as type" must be changed from the default "Unicode Text" to "Excel Workbook" so that the file will be saved as an excel document.

File name:	<input type="text"/>	▼
Save as type:	Excel Workbook	▼

- **Refresh** – Allows the user to refresh the report. 
- **Export to Data Feed** – Allows the user to open or save the report in a data feed format. 
(advanced)

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III. Instructions for Using Approved Chemical Additives List with Toxics Management Spreadsheet

- A. Open the Toxics Management Spreadsheet (TMS) and on the Discharge Worksheet enter the Facility Name, the NPDES Permit No., Outfall No. to which the chemical additives will be discharged, and Wastewater Description. Select “Custom/Additives” from the dropdown menu for Evaluation Type.

Facility:

Evaluation Type:

- B. Select the Reference Worksheet at the bottom of the workbook. At the bottom of the Pollutant Name column type the chemical additive name as it appears on the Approved List in the ‘Other’ row that is shaded yellow:

188	Vinyl Chloride	
189	Other (TYPE HERE)	
190	Other (TYPE HERE)	
191	Other (TYPE HERE)	

Enter an AFC, CFC, THH, and CRL, as applicable, using the ALELs and HHSUC values from the Approved List:

- For AFC, enter the value in the approved list for Aquatic Life Effect Levels - Acute Conc. Be sure to enter the value in terms of micrograms per liter (µg/L) (the approved list concentration values are milligrams per liter (mg/L)).
- For CFC, enter the value in the approved list for Aquatic Life Effect Levels - Chronic Conc. Be sure to enter the value in terms of µg/L.
- For THH, enter the value in the approved list for Human Health Safe Usage Conc. IF "CRL" column = "No". Otherwise leave the column blank.
- For CRL, enter the value in the approved list for Human Health Safe Usage Conc. IF "CRL" column = "Yes". Otherwise leave the column blank.

AQUATIC LIFE EFFECT LEVEL ACUTE (mg/L)	AQUATIC LIFE EFFECT LEVEL CHRONIC (mg/L)	HUMAN HEALTH SAFE USAGE CONCENTRATION (mg/L)	CRL
0.0038	0.0004	5	No

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Pollutant Name	Most Stringent Criterion (µg/L)	AFC WQC (µg/L)	CFC WQC (µg/L)	THH WQC (µg/L)	CRL WQC (µg/L)
Trichlorofluoromethane					
Vinyl Chloride	0.025				0.025
Chemical Additive Name	0.4	3.8	0.4	5000	
Other (TYPE HERE)					
Other (TYPE HERE)					

- C. Return to the Discharge Worksheet. Any chemical additive(s) added to the Reference Worksheet will now be available for selection in the Discharge Pollutant column. Manually entered chemical additives will appear at the bottom of the dropdown list.

Discharge Pollutant	Units
Chemical Additive Name	
Trichloroethylene	
Trichlorofluoromethane	
Vinyl Chloride	
Chemical Additive Name	
Other (TYPE HERE)	

After the chemical additive(s) is selected in the Discharge Pollutant column, use the [TMS Instructions](#) to run the TMS and develop a WQBEL for the chemical additive(s).

NOTE: A value must be entered in the Max Discharge Conc column, however, this value will not affect the WQBEL.

- D. The WQBEL will either be found under the 'Recommend WQBELs & Monitoring Requirements' or the 'Other Pollutants without Limits or Monitoring' section.

Recommended WQBELs & Monitoring Requirements

No. Samples/Month:

Pollutants	Mass Limits		Concentration Limits				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			
Chemical Additive Name	0.92	1.44	110	172	276	µg/L	110	AFC	Discharge Conc ≥ 50% WQBEL (RP)

Other Pollutants without Limits or Monitoring

The following pollutants do not require effluent limits or monitoring based on water quality because reason concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently s

Pollutants	Governing WQBEL	Units	Comments
Chemical Additive Name	110	µg/L	Discharge Conc ≤ 25% WQBEL

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For questions on the Approved List, please contact the NPDES Permitting Division at (717) 787-5017 or RA-EPNPDES_Permits@pa.gov.