Training on FracFocus 3.0
Overview of Presentation

• Purpose
• Background on FracFocus
• Categories of users and roles
• Features and mechanisms
• Case example
Purpose

• This workshop is intended for use in training individuals who have responsibility for using FracFocus 3.0
• The presentation materials can also be used by individuals who have responsibility for training others in their organizations on how to properly use FracFocus 3.0
Background on FracFocus

• With the rapid growth of shale gas development using high-volume hydraulic fracturing technologies, the media and public became aware of the fracturing process
  – The industry showed reluctance to disclose information about the chemicals used
  – This led to great concern over the types and quantities of chemical additives used in frac fluids

• In April 2011, the Ground Water Protection Council (GWPC) and the Interstate Oil and Gas Compact Commission (IOGCC) opened a new online system (FracFocus) to host information about the chemical additives used in frac fluids and their ingredients
  – The key feature was a chemical disclosure registry
Initially, chemical data entry into the Registry by the oil and gas companies was voluntary, but over the next year, several states adopted regulations requiring data on the chemicals used in frac fluids to be disclosed.

- Many of those states specifically referenced FracFocus as the mechanism for submitting those data.

The number of wells for which chemical information was entered grew quickly:

- At the end of 2012, data had been entered on more than 34,000 wells, representing 342 companies.
FracFocus History Timeline

- April 11, 2011 – FracFocus is Live! - Site began with 37 participating companies voluntarily submitting 444 hydraulic fracturing disclosures.
- June 2011 – After two months, FracFocus reaches 1,000 disclosures
- July 2011 – Montana issues a rule and Texas passes a law allowing operators to meet state reporting requirements by submitting chemical information through FracFocus. Louisiana begins discussion.
- September 2011 – FracFocus begins using GIS interfaces for disclosure search (check date)
- June 2013 – FracFocus 2.0 released allowing users to more efficiently search for well site chemical information. The new and improved XML platform, users had the option to search and pull reports by date ranges, chemical names or CAS numbers.
- July 2015 - Due to public demand, FracFocus begins the release of disclosure data to the public in machine-readable (SQL) format. This allows FracFocus users and researchers to more easily search and aggregate data.
- June 2016 – FracFocus 3.0 goes live! 3.0 provides a stronger validation processes to improve data integrity, which in turn makes the data more valuable for researchers and the public; a new format for reporting company data entry, which should decrease the use of trade secrets in disclosures, thereby providing more public transparency; newly designed forms to improve the company and regulatory agency user experiences when checking and completing disclosures.
Frac Fluids

- Different formulations used in different geological settings
- Common form is “slickwater frac fluid”
  - ~90% water
  - ~10% sand
  - <0.5% of all other chemical additives combined

Source: GWPC and AH Consulting, 2009
Material Safety Data Sheets (MSDSs)

• U.S. Occupational Safety and Health Administration (OSHA) requires MSDSs for any product that contains hazardous or carcinogenic materials of specific threshold values (1.0% and 0.1% respectively)

• MSDSs are required for hazardous or carcinogenic chemicals but not for all chemical products
  – Some products have multiple ingredients, some of which are considered hazardous or carcinogenic chemicals, while other ingredients are considered non-hazardous or inert

• FracFocus 2.0 has separate sections for entering information on chemicals requiring an MSDS and those not requiring an MSDS
What is XML?

- Xtensible Markup Language (XML) is a standard language used for data exchange
- Allows the FracFocus system to check many more data elements for errors than the Excel spreadsheet
- Allows exchange of data between different categories of users

Note: Knowledge of XML is essential for IT personnel who may be programming or converting existing company documents into XML files for submission to the FracFocus system.

However, the persons directly involved with entering data into FracFocus 2.0 do not need to know how to create XML documents – the screens programmed into the FracFocus 2.0 interface do the conversion automatically.
Categories of FracFocus 3.0 Users with Data Access Capabilities (does not include the general public)

Operators (oil and gas producers)
- Representative
- Supervisor
- Data Submitter

Service Companies (companies that conduct frac jobs and prepare reports on chemical usage)
- Representative
- Supervisor
- User

Registered Agents (consultants who perform data review and entry on behalf of operators)
- Representative
- User

Regulatory Agencies
- Representative
- User
Data Entry
Flow Path – FracFocus 3.0
Data Flow Path for Regulatory Agencies

Operator or Registered Agent submits .pdf file to agency → State Regulatory Agency → FracFocus 2.0 Database

Agency downloads disclosures for a state within a date range

Agency uploads disclosure to FF 2.0 system
Public Output of FracFocus 3.0

- External FracFocus users (the public) can search for wells using a map or a standard interface (standard is faster)
Use Standard Search

Find a Well

SEARCH OPTIONS

STATE: Pennsylvania
COUNTY: Bradford
OPERATOR: VE Producer

API WELL NUMBER: ________
WELL NAME: 

SEARCH  RESET (Note: One search option is required to do a search.)
Results of Search

Find a Well

Back To Search

<table>
<thead>
<tr>
<th>API No.</th>
<th>Job Date</th>
<th>State</th>
<th>County</th>
<th>Operator</th>
<th>WellName</th>
<th>Well Type</th>
<th>Latitude</th>
<th>Longitude</th>
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- Click on .pdf icon

### Hydraulic Fracturing Fluid Product Component Information Disclosure

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<th>Field</th>
<th>Value</th>
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<tr>
<td>Job End Date</td>
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<tr>
<td>Indian Well</td>
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<tr>
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### Hydraulic Fracturing Fluid Composition:

| Trade Name | Supplier | Purpose | Ingredients | Chemical Abstract Number (CAS #) | Maximum Ingredient in Additive
<table>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
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<tr>
<td>Water</td>
<td>Operator</td>
<td>Carrier</td>
<td></td>
<td></td>
<td>7732-18-5</td>
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<tr>
<td>Sand</td>
<td>Operator</td>
<td>Proppant</td>
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<td>GW-3LDF</td>
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<td>J RW-11</td>
<td>Company 3</td>
<td>Friction Reducer</td>
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</tr>
</tbody>
</table>

### Note:

- Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water.
- Information is based on the maximum potential for concentration and thus the total may be over 100%.
- If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line.

For Fluid Development Products products that begin with FDP, MSDS level any information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200(c) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS).
# View of Disclosure Report: MSDS+

## Hydraulic Fracturing Fluid Product Component Information Disclosure

<table>
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### Hydraulic Fracturing Fluid Composition:

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<th>Trade Name</th>
<th>Supplier</th>
<th>Purpose</th>
<th>Ingredeints</th>
<th>Chemical Abstract Service Number (CAS #)</th>
<th>Minimum Ingredient Concentration in Additive (% by mass)**</th>
<th>Maximum Ingredient Concentration in HF Fluid (% by mass)**</th>
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</table>

**Ingredients shown above are subject to 29 CFR 1910.1200g) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.**

**Total Water Volume sources may include fresh water, produced water, and/or recycled water.**

**Information is based on the maximum potential for concentration and thus the total may be over 100%.**

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**Note:** For Field Development Products products that begin with FDP, MSDS level only information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200g) and Appendix C are obtained from suppliers Material Safety Data Sheets (MSDS).
Options Available for Each User Group

• We will examine the FracFocus screens and functions that can be accessed by each of the four user groups
  – Operators
  – Registered agents
  – Service companies
  – Regulatory agencies

• Individuals with different roles at each user group will have a different set of things they are allowed to do

• Many of the screens look similar and have the same types of data entry and editing features
Need to Register

• For any of the four user types, it is necessary to register first
  – If you are already registered in FracFocus, you do not need to register again

• Go to main FracFocus page and click on the Register a Reporting Company tab on the dark blue bar at the top of the page
• Enter information into the boxes as requested
• Choose a validation question and answer
• Provide a password
  – Must contain at least one special character
• Enter the two skewed words in the red Captcha box.
• You must agree to the terms and conditions of the website
• Choose to be registered as an operator, service company, registered agent, or regulatory agency
  – You can register for only one of these categories for each email address
• You will need to wait until GWPC approves your registration
  – Usually within 2 working days
• Go to main FracFocus page and click on the Login tab on the dark blue bar at the top of the page
Logging In (2)

- Enter your email and password
- Click on Show Validation Question
- Enter the correct response, and click on the Log In button
Lead Person at Each Organization

- The person who makes the initial registration for a user organization becomes the **representative**
- The representative has the authority to assign other functions to himself/herself or can approve other individuals within the organization
Using Frac Focus as an Operator

- After logging in, users at an operator will see the operator dashboard screen that includes icons activating different functions (*all icons are reviewed in later slides*)
Dashboards for Other Operator Users

- Supervisors (top) and data submitters (bottom) see subsets of the icons
Add & Manage Supervisors

- Clicking on the icon leads to this screen
- You must have at least one person identified as a supervisor. That can be you or someone else
- Click on the Create New Supervisor button to enter a new name
Adding a New Supervisor

- Enter name and email address
- Click on Create Account and Email Supervisor button
- After a successful entry, the new supervisor’s name is added to the list of authorized supervisors
Add & Manage Data Submitters

- Clicking on the icon leads to the screen shown below.
- The screen, information requested, and the process is very similar to what was shown previously for adding supervisors.
- You can add yourself or someone else. You must be first listed as a supervisor in order to add someone as a submitter.
Add & Manage Service Companies

- Clicking on the icon leads to this screen
- A supervisor or the representative has the authority to allow a service company to upload disclosure reports to a work queue where the supervisor’s company can review the disclosures.
- Service companies must be identified by name
Selecting a Service Company

- Type a full or partial company name (as little as one letter) into the box at the bottom of the screen
  - one or more options are displayed
  - Select the one you want and it is added to the current approved service company list
Add & Manage Agents

• Clicking on the icon leads to this screen
• Registered agents are consultants who can be authorized to support an operator by preparing, reviewing, and editing disclosure reports
• The supervisor or representative must first approve a registered agent through this screen
• The screens and the process are the same as used for selecting a service company
Confirmation

- As confirmation, the system automatically sends an email reminder to the agent and to the supervisor who approved the agent.

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From: no-reply@hydraulicfracturingdisclosure.org
To: jfh@veenvironmental.com
Cc: john@veenvironmental.com
Subject: You have been approved...

Dear John Veil,

This is to inform you that John Veil of VE Producer has approved your company to upload Hydraulic Fracturing Disclosures via XML Data format to the FracFocusData.org website. For a successful submission to VE Producer you must include their operator number in the Disclosure upload.

That number is: V1210393

Number - Name: V1210393 - VE Producer

Please note: Do not reply to this message; this e-mail address does not accept incoming e-mail.
• Clicking on this icon opens a box that shows a default value for the density of water that is used in some internal FracFocus 3.0 calculations

• FracFocus 3.0 is built to allow for other future default values. However, at this time, there are no additional user inputs or edits that can be made
• Clicking on this icon takes you to a screen that allows operators to move files already in XML format and stored elsewhere on your computer to your operator’s disclosure queue
• Use the Browse line to find the files you want, then click on the Submit button
Upload XML Files (2)

- This step does not constitute fully uploading a reviewed and approved record to FracFocus 3.0
- Instead, it allows the operator to bring in disclosure records that were prepared by someone else and get them into the system for review
  - The files are moved into the operator’s queue
- After you have uploaded an XML file successfully, you will see an acknowledgment screen like the one shown below:
Add New Disclosure

- Clicking on this icon leads to a screen that allows the user to create a new disclosure report.
- Use of this screen is described later in the presentation.
• Clicking on this icon leads to a screen used to enter chemicals on a separate list where they can be accessed by the operator to streamline entry on future disclosure reports.

• The sample screen shown below lists one additive already – water.
  – In this case, water contains only a single ingredient (H₂O).
  – If the additive contained other ingredients, they would be added by entering data then clicking on the Add box below the Edit and Delete buttons.
  – The name, CAS (Chemical Abstract Service) number, and percent high additive data are entered into the boxes.
  – If the ingredient is a chemical for which an MSDS has been created, that box would be checked.

• Both MSDS and non-MSDS ingredients can be entered for the same main additive.
Entering a New Additive

• If you wanted to enter a completely new additive, you would click the New Additive button near the top of the screen
  – The example shows special sand
• Click on the Save button, then fill in information on the next screen
Download Chemical Disclosures

- Clicking on this icon leads to a screen that allows operators to download to their computers disclosure reports that they have already submitted into FracFocus 3.0
- Enter a start and end date, and the system downloads all record submitted during that range of dates
- The download is made to the user’s computer in XML format

*Note that this icon appears only on the representative’s dashboard and is not available to supervisors or data submitters*
• Clicking on this icon takes users to a screen that looks like the screen used to submit a registration
• Operators can edit the information on their accounts (name, address, company name, phone, email)
  – Only representatives can edit company name
• Operators can also change their validation question/answer or password
Disclosure Lists

• Clicking on this icon takes you to a screen that lists all the disclosure reports in the operator’s queue
  – There are four tabs above the list of reports
  – The current view shows the All tab and includes 5 disclosure reports
Disclosure Lists (2)

- Two of the five disclosure reports have already been submitted to FracFocus 3.0 -- these would be displayed on the Submitted tab.
- Note the buttons allowing the operator to edit or delete each of the reports or view them as finished .pdf files.
- The other three disclosure reports are still in Pending status (i.e., they have not yet been reviewed and approved) and are displayed on the Pending tab.
  - For those reports, the Edit and Delete buttons are shown, but not the .pdf files.
Reviewing, Editing and Approving Disclosure Reports by Operators

- The next set of slides shows how operators work with disclosure reports already in the operators queue
- Start with the Disclosure Lists icon and choose a record
  - In this case, choose the third one and click on Edit

<table>
<thead>
<tr>
<th>Disclosure Lists -</th>
<th>New Disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pending (3)</td>
<td>Submitted (2)</td>
</tr>
<tr>
<td></td>
<td>Amending (0)</td>
</tr>
<tr>
<td></td>
<td>All (5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company</th>
<th>API Number</th>
<th>Well Name</th>
<th>Job Start Date</th>
<th>Job End Date</th>
<th>TVD</th>
<th>Water Use</th>
<th>Date Mod</th>
</tr>
</thead>
<tbody>
<tr>
<td>VE Producer</td>
<td>42-127-34700-00-00</td>
<td>CMWW A 104H</td>
<td>6/7/2012</td>
<td>6/7/2012</td>
<td>7,400</td>
<td>2,838,827</td>
<td>12/7/2012</td>
</tr>
<tr>
<td>Edit</td>
<td>Delete</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edit</td>
<td>Delete</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edit</td>
<td>Delete</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VE Producer</td>
<td>25-025-02000-00-02</td>
<td>ReCalc Based on Ingredient Mass</td>
<td>10/1/2012</td>
<td>10/4/2012</td>
<td>8,345</td>
<td>8,123,456</td>
<td>12/7/2012</td>
</tr>
<tr>
<td>VE Producer</td>
<td>19-000-99999-00-00</td>
<td>Schema 2-Test</td>
<td>11/26/2012</td>
<td>11/26/2012</td>
<td>5,429</td>
<td>2,858,265</td>
<td>12/12/2011</td>
</tr>
</tbody>
</table>
Reviewing an Existing Disclosure (1)

• You see a screen with data about the well shown in the top portion, and data about the additives and ingredients in the bottom portion
• Start with the top part (known as the header material) and click on any field to edit.

Prepare Disclosure for FracFocus Submission

Validate  Preview Disclosure PDF

- You must validate the disclosure before submitting

Save

Entry Method: MSDS + Disclosure

Job Start Date  02/02/2016  Job End Date  02/08/2016
API Number  05-123-36121-00-00
State & County  Colorado --- Weld

Well Name  well
Latitude  15  Longitude  -180
Datum  WGS84

Total Water Vol (gal)  199.999
Total Non Water Vol  99.999
Total Mass (lbs)  Total Mass
Reviewing Header Material

• If any of that information is incorrect or not filled in, you can click on the field to edit.

• Review data elements
  – The Job Start Date and End Date boxes are self-explanatory. You can use the calendar widget next to the field for easy data entry or enter it manually. **You do not need to follow a rigid DD/MM/YYYY format – the system converts other common forms of date entries automatically**
The API number must be in 14-digit format. Often you will receive an API number in a shorter 10-digit format. For most wells, the last 4 digits are “0” unless the well is a new lateral or new completion. If additional digits are needed, try adding four zeros at the end. Do not enter the “-” between the sets of numbers – these are added automatically. If the “-” is added, it could lead to errors in processing the file.

The State & County information is automatically filled in based on the codes in the API number. If you do need to add digits in the previous box, make sure you add them to the end of the number, not to the front of the number. Entering the API number correctly is critical in getting the state and country info accurate.
• The Well Name box is self-explanatory
• The Longitude and Latitude should be entered with the as many digits as possible to give a precise location for the well. **Longitude and Latitude must be entered in decimal degrees. Do not enter as degrees, minutes and seconds**
• The Datum box has a drop-down list. The choice should correspond with the coordinate system used to locate your company’s well.
Reviewing Header Material (4)

- The boxes marked Federal Well and Indian Well is clicked if the well is located on Federal Or Indian Lands or has Federal/Indian mineral interests, such that information would be reported to the U.S. Department of Interior’s Bureau of Land Management (BLM).
- The True Vertical Depth and Total Water Volume are entered based on information for each well. **Make sure to use feet for the depth and gallons for the volume**
- If other carrier fluids besides water are used in large amounts (e.g., CO₂ or nitrogen), the volume of the other carrier fluid should be entered in the Total Non Water Vol box.
- The Total Mass box is normally left blank. Information can be entered here if you need to recalculate the % HF Mass information on the bottom (ingredients) portion of the screen.
Review Additive Information

- The bottom portion of the screen displays the additives and their component ingredients.
- They are split into two separate lists depending on whether the chemicals require preparation of an MSDS or not.
- Typically carrier fluid (water) and proppant (sand) are included in the MSDS Ingredients portion of the disclosure because of their high percentages of the overall mass, even though they do not require an MSDS.
Editing an Additive: Systems Approach

• To edit anything within the form, simply click on the field.
• Let’s review the fields:
  – The **trade name** and **supplier** boxes are self-explanatory
  – Enter the functional use of the product in the **Purpose** box
  – If you want to remove an additive or ingredient from the disclosure report, click on the Remove button
  – Under Ingredients List, you can remove a specific ingredient by clicking the Remove button, edit an existing ingredient, or add a new ingredient
The CAS number can be obtained from the MSDS or by a quick internet search. Make sure data are entered in the specified format of digits or FracFocus may flag your entry and not allow the operator to proceed without a proper CAS.

Often the MSDS shows the percentage of each ingredient as a range. You should enter the high end of the percentage range here. Enter as a percentage, not as a decimal (i.e., use 85%, not 0.85).

The % HF Job box should have been entered by the service company. They have already done a mass balance calculation before creating the disclosure report.
The ingredient Mass box is generally left blank. It is used, however, when a new additive is entered onto an existing disclosure report.

The screen includes an empty row at the end of each list. Users can add another ingredient here if necessary. If more new rows are needed, users can click on the Add Row button.

Editing an Additive (3)
Entering New Additives

• In some situations, the operator receives a disclosure report from a service company that contains most, but not all the additives

• The operator will need to enter the new additive in either of two ways
  – Choose chemical from 3rd Party Chemicals List previously created
  – Enter information on additive and ingredients manually

• Both are described in the following slides
Choose an Additive from the 3rd Party Chemical List

- Click on the Select Additive box
- Choose a new additive from the drop down list and it will auto populate the additive information on the form
3rd Party Chemical List (3)

- Because the original %HF job numbers were based on the total of the other additives before entering Breaker 2, you need to add the mass (lbs) of that additive into the Mass box.
- Then click on the Save This Additive box.
Creating a New Disclosure Report

- Start at the main Disclosure Lists screen and click on the New Disclosure button
- You see the same screens shown previously
Creating a New Disclosure Report (2)

- At a minimum, the Job Start and End Dates and API number must be entered before moving on.
How to Enter Mass Information

• The entry screen on the previous slide has boxes for %HF Job and ingredient mass
• Generally the disclosure reports coming from service companies will show the %HF Job for each ingredient
• If the reports do not %HF Job, but do show the mass for each ingredient, you can enter the mass directly
Multiple Water Types

• Some frac jobs use water from more than one source (e.g., river water, reused flowback water, municipal water)
Alternate Way to Deal with Mass

- The operator can create a spreadsheet outside of FracFocus 3.0 that sums all the ingredients, then calculates the percentage made up by each ingredient in the whole frac fluid.
- In that case, the resulting percentages can be entered into the %HF Job boxes for each ingredient.
Converting Volume to Mass

• If the amounts of the additives are expressed in gallons rather than pounds, it will be necessary to convert to pounds
  – This is an easy calculation, but you must know the density or specific gravity of each ingredient (available from the MSDSs) and make the calculation separately for each ingredient. Use either of these formulas:

\[(1) \ \text{Mass (lbs)} = \text{Volume (gallons)} \times \text{density (lbs/gallon)} \quad \text{or} \quad \]

\[(2) \ \text{Mass (lbs)} = \text{Volume (gallons)} \times \text{specific gravity} \times 8.34 \text{ lbs/gallon} \]

• Water has a density of 8.34 lbs/gallon
• Specific gravity is the ratio of the density of one substance divided by the density of water. So if the specific gravity is shown as 1.2, the density would be 1.2 \times 8.34 = 10.01 \text{ lbs/gallon}
Entering Data into the %HF Job Box

• For nearly all the ingredients other than water and sand, the %HF Job numbers will be very small (having several zeros behind the decimal point)

• **When entering %HF Job numbers, it is important to enter the percentage version rather than a decimal version of the number**

• For example, if the actual % HF is 0.00056%, that number should be entered. If the decimal version is entered (0.0000056), the result will underestimate that ingredient’s contribution by a factor of 100
Submitting a Completed Disclosure Report

• When an operator is satisfied that a disclosure report is complete, it is time to submit it for inclusion in FracFocus 3.0
• Start back on the opening sheet for a disclosure report as shown below
• To check a disclosure to see if it meets submittal requirements, click on the Validate Disclosure button
The screen now shows two new messages. The first message appears at the top of the page. It indicates that the validation check on this well was successful.

It is supplemented by additional information at the bottom of the page regarding a warning. This warning does not inhibit the ability to submit a disclosure report, but it does give an indication that the %HF values may not have been calculated accurately.

**Prepare Disclosure for FracFocus Submission**

- Validate
- Preview Disclosure PDF
- Submit To FracFocus

*Validation Passed with warnings*  
Click here to view validation messages

[Warning] Sum of %HF Job of Ingredients is not within 3% of 100%
Disclosure Submittal

- At this point, the disclosure can be submitted by clicking on the Submit to FracFocus button
  - Note that the validation step must be successfully completed before the Submit to FracFocus button becomes activated
  - In some cases, when no errors or warnings are identified, the user sees no grey information box above the three buttons, but the Submit to FracFocus button changes from shadowed to active status

- The successfully submitted disclosure report now appears under the Submitted tab on the Disclosures List screen
Sometimes after clicking on the Validate Disclosure button, the resulting screen indicates some irregularities in the entered information:

- Errors – will block validation
- Warnings – will allow validation to continue

![Prepare Disclosure for FracFocus Submission](image)

- [Error] Supplier must not be empty for Purpose: Proppant
- [Warning] Sum of %HF Job of Ingredients is not within 3% of 100%
- [Warning] CASNumber has an invalid format. for Ingredient: Alphatic Alcohols 1 in Purpose: Corrosion Inhibitor
- [Warning] CASNumber has an invalid format. for Ingredient: Other Chemical 1 in Purpose: Other Purpose
- [Warning] CASNumber does not pass Digit Verification. for Ingredient: Other 2 in Purpose: Other Purpose
- [Warning] CASNumber does not pass Digit Verification. for Ingredient: Other 3 in Purpose: Other Purpose
Errors and Warnings (2)

• In this case, after the name of a supplier was entered into the screen for that additive, the validation procedure was run again, and passed

• The warning messages relating to CAS numbers do appear frequently

• Although they do not block submittal of a disclosure report to FracFocus 3.0, they show that at least some CAS numbers are not entered using the required format (the correct format for a CAS number includes three groups of numbers separated by hyphens – the first group contains from two to seven digits, the second contains two digits, and the third contains a single digit – This may create a problem later on as FracFocus 2.0 is expanded to allow searching for records by CAS number
CAS Number Entry for Confidential Data

- In many instances, companies claim that their additives and/or ingredients contain chemicals that are considered confidential business information, proprietary, or otherwise not subject to full public disclosure.

- To avoid the type of CAS number warning message shown on a previous slide, users should enter ‘Proprietary’, ‘CBI’, ‘Confidential’, ‘Trade Secret’ or ‘Not Assigned’ and also contact info must be provided for each proprietary claim.

- If these values are entered, FracFocus 3.0 will not display the warning message relating to CAS number format.
When a disclosure report is successfully submitted, it will appear in the Disclosure List screen under the Submitted tab.

Clicking on the .pdf icon opens up the full public version of the disclosure. This is the exact same type of report as shown previously.

The Final Result

### Disclosure Lists

<table>
<thead>
<tr>
<th>Company</th>
<th>API Number</th>
<th>Well Name</th>
<th>Job Start Date</th>
<th>Job End Date</th>
<th>TVD</th>
<th>Water Use</th>
<th>Date Mod</th>
</tr>
</thead>
<tbody>
<tr>
<td>VE Producer</td>
<td>34-081-20514-00-00</td>
<td>Cain 16-12-4-3H</td>
<td>12/1/2012</td>
<td>12/5/2012</td>
<td>8,086</td>
<td>2,971,332</td>
<td>12/7/2012</td>
</tr>
<tr>
<td>VE Producer</td>
<td>37-015-22148-00-00</td>
<td>Test Well #1</td>
<td>12/3/2012</td>
<td>12/6/2012</td>
<td>6,692</td>
<td>6,290,802</td>
<td>12/6/2012</td>
</tr>
</tbody>
</table>
## Hydraulic Fracturing Fluid Product Component Information Disclosure

### Final Results - .pdf Output

<table>
<thead>
<tr>
<th>Trade Name</th>
<th>Supplier</th>
<th>Purpose</th>
<th>Ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Company Supplier</td>
<td>Carrier/Base Fluid</td>
<td>Water, 75.9-18.6, 100.000%, 8.264%, None</td>
</tr>
<tr>
<td>Sand (Propellant)</td>
<td>Apache</td>
<td>Propellant</td>
<td>Quartz, 48.88-63.7, 39.000%, 10.595%, None</td>
</tr>
<tr>
<td>FracFocus 587 LCB</td>
<td>Shermplex</td>
<td>Surfactant</td>
<td>N,N-Dimethyl-2-aminoethane, 7412-47-3, 70.000%, 0.365%, None</td>
</tr>
<tr>
<td>FracFocus 61</td>
<td>Shermplex</td>
<td>Surfactant</td>
<td>N,N-Dimethyl-2-aminoethane, 7412-47-3, 70.000%, 0.365%, None</td>
</tr>
<tr>
<td>Ammonium Persulfate</td>
<td>Shermplex</td>
<td>Breaker</td>
<td>Peroxydisulfuric Acid, 727-54-6, 100.000%, 0.111%, None</td>
</tr>
<tr>
<td>GreenOil 519</td>
<td>Shermplex</td>
<td>Scale Inhibitor</td>
<td>No hazardous ingredients per MSDS, Proprietary, 100.000%, 0.042%, None</td>
</tr>
<tr>
<td>Naxar 101</td>
<td>Shermplex</td>
<td>Corrosion Inhibitor</td>
<td>No hazardous ingredients per MSDS, Proprietary, 100.000%, 0.059%, None</td>
</tr>
<tr>
<td>Naxar 101</td>
<td>Shermplex</td>
<td>Corrosion Inhibitor</td>
<td>Potassium Metaborate, 13799-94-3, 30.000%, 0.063%, None</td>
</tr>
</tbody>
</table>

### Ingredients

- **Ethylene Glycol**: 107-21-1, 18.000%, 0.014%, None
- **Potassium Hydroxide**: 1310-58-3, 5.000%, 0.012%, None
- **Methyl Alcohol**: 67-56-1, 12.000%, 0.010%, None
- **Sodium Dodecyl Sulfate**: 141-78-5, 30.000%, 0.025%, None
- **Cetyl Alcohol**: 153-44-4, 24.000%, 0.006%, None
- **Sodium Hydroxide**: 1310-73-2, 4.000%, 0.0011%, None
- **Sodium Hydroxide**: 1310-73-2, 4.000%, 0.0011%, None
- **Sodium Hydroxide**: 1310-73-2, 4.000%, 0.0011%, None

**Ingredients shown above are subject to Title 29 CFR 1910.130 (e) and require Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.**

**Note:** For Field Development Products (products that begin with FDP), MSDS level only information has been provided. Ingredient information for chemicals subject to Title 29 CFR 1910.1200 (d) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS).
Using Frac Focus as a Registered Agent

- After logging in, users at a registered agent will see the agent dashboard screen that includes icons activating different functions.

- There are two roles at a registered agent:
  - Representative
  - User

- Representatives see all the icons (shown below)
Dashboards for Agent Users

- Users see 4 of the 5 icons

---

**Dashboard**

- Upload Disclosures in XML Format
- Disclosure Lists
- Operator Approvals
- Edit Account
Add & Manage Agent Users

• This works the same as the Add & Manage Data Submitters function under the Operator dashboard

Add & Manage Agent Users

Account
Name: John Veil  
Email: ff2@veilenvironmental.com
Agent: Veil Environmental, LLC  
Phone: 410-212-0950

Agent FracFocus Users - Create New User

<table>
<thead>
<tr>
<th>Is Agent User</th>
<th>First Name</th>
<th>Last Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>True</td>
<td>John</td>
<td>Veil</td>
<td><a href="mailto:ff2@veilenvironmental.com">ff2@veilenvironmental.com</a></td>
</tr>
</tbody>
</table>
Upload Disclosures in XML Format

• This follows exactly the same procedure described previously for the operators
• The screens and the steps are the same
Disclosures List

- The screens and procedures are the same as shown for operators.
- Since a registered agent may work on behalf of more than one operator, the resulting disclosure lists could contain large numbers of disclosure reports.
- Note the numbers at the bottom of the figure:
  - Each screen shows only 20 records.
**Operator Approvals**

- Clicking on this icon provides a list of those operators who have authorized a registered agent to upload, review, edit, and submit disclosures on their behalf.
- In this case, two operators (VE Producer and ALL Consulting-Mark) are shown.

<table>
<thead>
<tr>
<th>Operator</th>
<th>Operator Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>VE Producer</td>
<td>V1210393</td>
</tr>
<tr>
<td>ALL Consulting - Mark</td>
<td>A1210036</td>
</tr>
</tbody>
</table>
Edit Account

- The edit account function works the same as described for the operators
Using Frac Focus as a Service Company

• After logging in, users at a service company will see the service company dashboard screen that includes icons activating difference functions

• There are three roles at a service company
  – Representative
  – Supervisor
  – User

• Representatives see all the icons (shown below)
Dashboards for Other Service Company Users

- Supervisors (top) and users (bottom) see subsets of the icons.
Add & Manage Supervisors

- The screens and procedures are the same as used for the operators.
- You must have at least one person identified as a supervisor. That can be you or someone else.
Add & Manage Users

- The screens and procedures are the same as used for adding and managing data submitters at the operators.
- You can add yourself or someone else. You must be first listed as a supervisor in order to add someone as a user.
Upload XML to Users

- This icon is unique to the service company dashboard
- Clicking on the icon leads to this screen
- Service company representatives and users can browse the folders on their own computers to find disclosure records that have already been created in XML format
- After selecting a file, click on Submit, and the file is uploaded to an operator’s queue
Acknowledgment

• After a successful upload, an acknowledgment note is added to the screen
Operator Approvals

- Clicking on this icon provides a list of those operators who have authorized a service company to upload disclosures to that operator’s queue
- The screen looks like the operator approval screen described for registered agents

<table>
<thead>
<tr>
<th>Operator</th>
<th>Operator Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL Consulting - Mark</td>
<td>A1210036</td>
</tr>
<tr>
<td>VE Producer</td>
<td>V1210393</td>
</tr>
</tbody>
</table>
Edit Account

• The edit account function works the same as described for the operators
Using Frac Focus as a Regulatory Agency

• After logging in, users at a regulatory agency will see the agency dashboard screen that includes icons activating difference functions

• There are two roles at a regulatory agency
  – Representative
  – User

• Representatives see all the icons (shown below)
Dashboards for Agent Users

- Users see 3 of the 4 icons

Dashboard:

- Upload a HF Disclosure
- Download Chemical Disclosures
- Edit Account
The screens and procedures are the same as used for adding and managing data submitters at the operators.
Edit Account

- The edit account function works the same as described for the operators
Download Chemical Disclosures

• Clicking on this icon allows the agency to download any disclosure reports from the state in which the agency is located in XML format
• The representative or user must enter a start and end date to designate a range, then click the Download Now button

Agency Download Chemical Disclosures

Use the form below to download Chemical Disclosures for your state. Choose the appropriate filters settings and click the "Download Now" button.

Filter Your Download

Submission Date From: 10/1/2012
Submission Date To: 12/13/2012

Download Now

You may download up to 183 days worth of disclosure data at a time. Download XML Schema
Downloads Filtered to State of User

- This portion of FracFocus is programmed to filter the whole universe of submitted disclosures within the date range to allow access only to those records coming from the state in which the agency user is registered.
- For example, if you are registered as an agency user in Texas, you cannot download reports from wells in Pennsylvania.
Output in XML Format

- The results of the search downloads a report to the agency representative or user in XML format.
- Each agency will need to have its IT staff develop programming to convert the XML report to a more readily viewable format.
- **Note:** Future FracFocus enhancements may include a utility to convert the XML file to a simple database structure to assist states with importation of the data into their existing data systems.
Upload an HF Disclosure

- This is a new icon not seen on any previous dashboards
- The purpose of this screen is to allow agencies to directly upload well disclosure data that they had received from operators in .pdf format to be housed in FracFocus 2.0
Use of This Function

- While FracFocus is adding a data entry screen that may be used by states to enter disclosures in XML format directly to the FracFocus database, the ability to upload data as a .pdf file will also be available.
- Let’s look at an example:
  - Take an actual disclosure report for a Pennsylvania well that had previously been downloaded through the Find a Well utility in FracFocus and saved as a .pdf file.
  - Enter header data from that record into the screen shown above.
  - Click on the Choose a PDF File to Upload button to upload a browse box so that the specific file could be added.

![Agency Upload Chemical Disclosure](image)
Use of This Function (2)

- Choose a file, then click on the Upload Disclosure button
- If successful, you get a confirmation note
Final Thoughts

• For new users, there is likely to be a learning curve as the persons at each operator, registered agent, service company, and regulatory agency gain familiarity with the system.

• This training presentation and the guidance manual that was developed as a companion to the presentation are based on the features and mechanisms included in FracFocus 3.0 as of July 2016.

• They describe the main features and mechanisms, but cannot anticipate every possible situation or complication that users may experience.
Final Thoughts (2)

• It is likely that new features will be added to FracFocus 3.0 over time
• As more users spend time working with FracFocus 3.0, it may be necessary to fix minor glitches or make other changes to promote efficiency
• The guidance manual and training presentations will be updated as new features and mechanisms become part of FracFocus 3.0
Final Thoughts

• Questions relating to this training should be addressed to William Blackwell, the IT and FracFocus Specialist for GWPC
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