



# Wyoming AQD – New Process for Collecting and Managing Oil and Gas Production Site Emissions Inventories

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## Background...

Until relatively recently, we managed air facility data in four data management systems: AQDS, WISE View, OGER and IMPACT (new).

OGER (Oil and Gas Emissions Reporting) system was used only for production site emissions inventories. Designed to aggregate data to county-level for nonpoint submission via our EN node, so relatively little facility inventory granularity captured from emissions inventory workbooks.

Now, internal drivers to consolidate all air program work streams into our integrated IMPACT (“Inventory, Monitoring, Permitting And Compliance Tracking”) system.

## Issues confronting us ...

- IMPACT is designed for working only on a single facility object at a time; i.e., there are no front-end “batch upload” features.
- We need to get roughly 30,000 production-site facility inventories into IMPACT, that meet the system’s strict validation standards designed for point source inventories (i.e., all the required data fields associated with emission units >> processes >> control equipment >> release points).
- SO, how to make it work for an oil and gas operator who has 1,000+ facility inventories and emissions inventories to put in...?



Let's assume all the facility inventories have been created\* in IMPACT and get to the important stuff:

## **EMISSIONS INVENTORIES**

# IMPACT System – Facility Data Information Home Page



**Facility ID:** F004597      **Facility Name:** Sand Draw Federal 13-12 Central Facility      **District:** District 5      **Version Start Date:** 7/3/2019  
**Facility Type:** Production Site      **Company Name:** Jonah Energy LLC      **County:** Sublette      **Version End Date:** Current

Collapse Facility Tree

- F004597
    - DHY001
      - PRC001
        - CON001
          - FLA001
            - VER001
    - FLR001
      - PRC002
        - VER001
    - FUG001
      - PRC003
        - AVL002
    - HET001
      - PRC004
        - VER002
    - HET002
      - PRC005
        - VER003
    - HET003
      - PRC006
        - VER004
    - HET004
      - PRC007

## Facility Information

**Facility ID:** F004597  
**Facility Name:** Sand Draw Federal 13-12 Central Facility  
**Facility Description:**

**Facility Class:** Minor      **Facility Type:** Production Site  
**CERR Class:** NON      **Associated Monitor Group ID:**  
**Operating Status:** Operating      **AFS:**

## Location

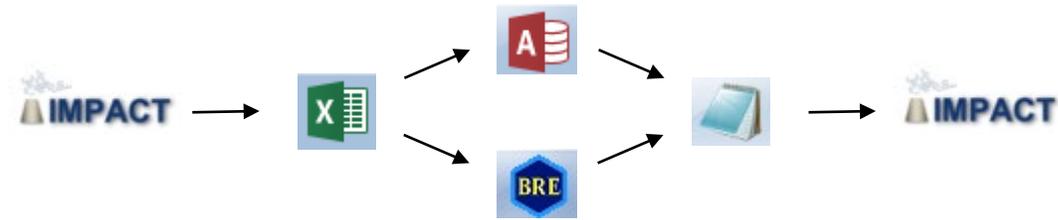
ID	Physical Address	City	County	Lat/Long	PLSS	Effective Date
<a href="#">215002</a>	Section 12, 29N, 108W	Sublette County	Sublette	<a href="#">42.49167/-109.67222</a>	S12-T29N-R108W	6/1/2017

[Printable view](#)      [Export to excel](#)

## API

API	Link
<a href="#">3521644</a>	<a href="#">Show in WOGCC</a>
<a href="#">3530926</a>	<a href="#">Show in WOGCC</a>
<a href="#">3530955</a>	<a href="#">Show in WOGCC</a>
<a href="#">3530956</a>	<a href="#">Show in WOGCC</a>
<a href="#">3530957</a>	<a href="#">Show in WOGCC</a>
<a href="#">3530958</a>	<a href="#">Show in WOGCC</a>

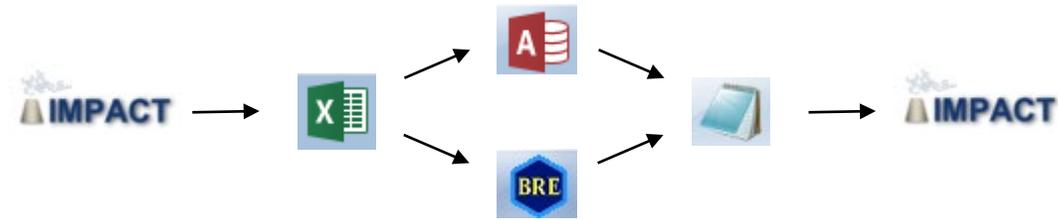
[Add API](#)      [Printable view](#)      [Export to excel](#)



# New EI Process

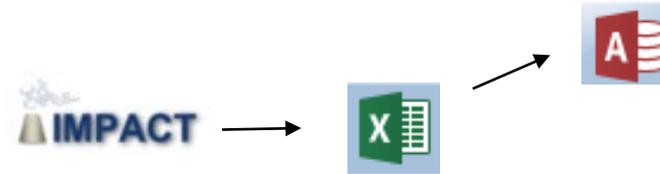
1. Facility Profile Information Extracted from IMPACT
2. Company Provides Operating Parameters
3. AQD Generates the Emissions
4. Emissions Imported to IMPACT
5. Company Review of Emissions





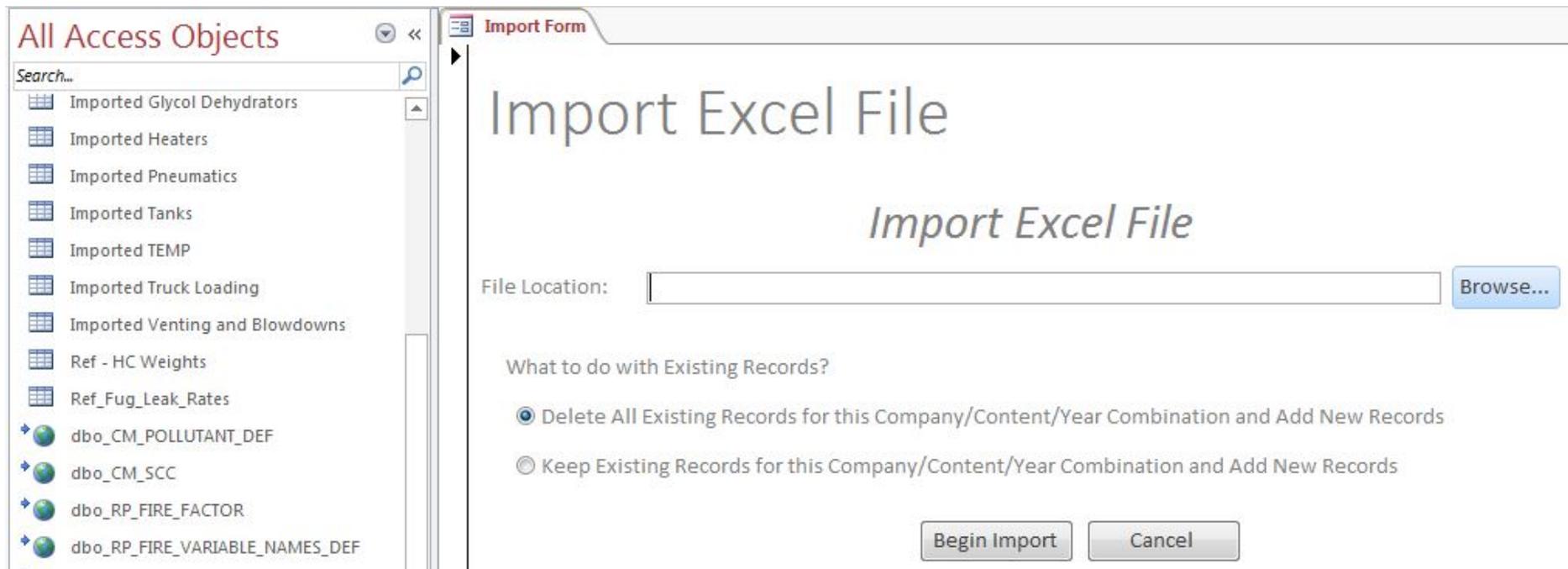
## New EI Process

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# New Calculation Procedures

- Straightforward Throughput Calculations in Access



**All Access Objects**

Search...

- Imported Glycol Dehydrators
- Imported Heaters
- Imported Pneumatics
- Imported Tanks
- Imported TEMP
- Imported Truck Loading
- Imported Venting and Blowdowns
- Ref - HC Weights
- Ref\_Fug\_Leak\_Rates
- dbo\_CM\_POLLUTANT\_DEF
- dbo\_CM\_SCC
- dbo\_RP\_FIRE\_FACTOR
- dbo\_RP\_FIRE\_VARIABLE\_NAMES\_DEF

**Import Form**

## Import Excel File

*Import Excel File*

File Location:  [Browse...](#)

What to do with Existing Records?

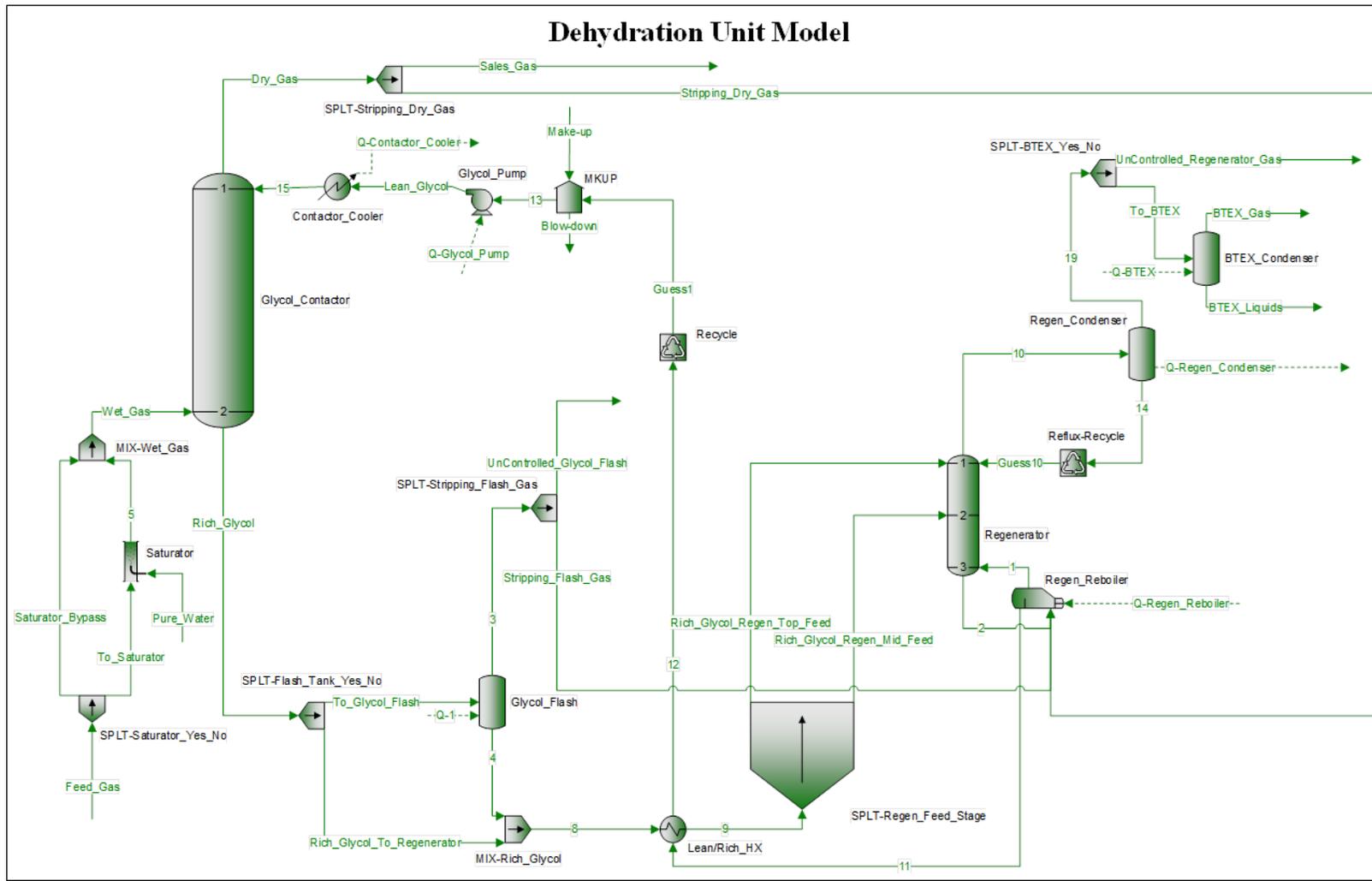
- Delete All Existing Records for this Company/Content/Year Combination and Add New Records
- Keep Existing Records for this Company/Content/Year Combination and Add New Records

[Begin Import](#) [Cancel](#)

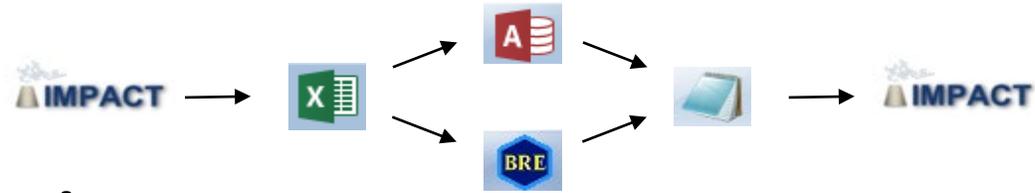


# New Calculation Procedures

- ProMax for Tanks, Dehydration and Truck Loading







# IMPACT EI Data for Operator Review

▶ PRC001: Source Classification Code (SCC) is 3-10-003-01

▼ Material Information, Annual Average Operating Schedule & Throughput Percent

Maximum Hours Per Day: 24	Winter (Jan-Feb, Dec)%: 25
Maximum Days Per Week: 7	Spring (Mar-May)%: 25
Maximum Weeks Per Year: 52	Summer (Jun-Aug)%: 25
Actual Hours: 1,320.00	Fall (Sep-Nov)%: 25

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Material Action	Throughput Units
Gas Produced	38.9435 MILLION CUBIC FEET

Variable Amount in Gas Units & Meaning

The variables table is empty because there are no variables in the formula associated with the FIRE rows for this process.

▶ Explanation

▼ Process Emissions

Criteria Air Pollutants/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Explanation
					Fugitive Amount	Stack Amount	Total Units	
Pollutant								
PM Primary (includes filterables > 10 microns + condensibles)	AQD Generated				0	0	0 TONS	
PM10 Primary (includes filterables + condensibles)	AQD Generated				0	0	0 TONS	
PM2.5 Primary (includes filterables + condensibles)	AQD Generated				0	0	0 TONS	
CO - Carbon Monoxide	AQD Generated				0	0.001704869	0.00170487 TONS	
NOx - Nitrogen Oxides	AQD Generated				0	0.006819475	0.00681948 TONS	
SO2 - Sulfur Dioxide	AQD Generated				0	0	0 TONS	
VOC - Volatile Organic Compounds	AQD Generated				0	0.039422182	0.0394222 TONS	
Ammonia	AQD Generated				0	0	0 TONS	

Printable view    Export to excel

The following information was developed using Wyoming DEQ-generated pollutant emission calculations. The values may be provided to USEPA by the Wyoming DEQ. You may modify these Wyoming DEQ-generated emission calculations if you have more accurate information.

Hazardous Air Pollutants/Greenhouse Gases/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Explanation
					Fugitive Amount	Stack Amount	Total Units	
Pollutant								
Benzene	AQD Generated				0	0.004486904	0.0044869 TONS	
Carbonyl Sulfide	AQD Generated				0	0	0 TONS	
Ethyl Benzene	AQD Generated				0	0.000592867	5.92867E-04 TONS	

# **User Options for Submitting Emissions inventories**

- 1. This new EI process just described.**
- 2. Using the IMPACT interface to create individual emissions inventories for each production site.**
- 3. Operator-generated CSV file after AQD approval of calculation methodologies.**



**THANK YOU!**

**Questions, Comments ...?**