NATCARD B in viewer

Building towards a Virtual Subsurface to improve data access, discoverability, and analytics for the CS community



Research & Innovation Center

Jennifer Bauer¹, Jennifer DiGiulio², Aaron Barkhurst³, Michael Sabbatino², Patrick Wingo², Chad Rowan⁴, Katherine Jones⁵, and Kelly Rose¹

¹U.S. DOE NETL, ²AECOM, NETL; ³ MATRIC, NETL; ⁴ ATTAIN, NETL; ⁵ORISE, NETL

The updated Natcarb Viewer is an

interactive, online collection of spatial

data layers describing carbon capture,

use, and storage (CCUS) across the

U.S. integrated within EDX's GeoCube



thership longitude_wgs84 latitude_wgs84 source_name

ity state_prov... source_type_common epa_ind_subpart epa_sector co2_tonne year data_source



SECARB	-88.1668	31.14353	TURKEY TROT LANDHLL, ELC	CITRONELLE	AL	WASTE MANAGEMENT	HH	Waste	2013	U.S. EPA GHG Reporting Program
SECARB	-87.05891	31.05736	TIMBERLANDS LANDFILL	BREWTON	AL	WASTE MANAGEMENT	нн	Waste	2013	U.S. EPA GHG Reporting Program
SECARB	-88.535833	30.506917	MACLAND DISPOSAL CENTER COMMERCIAL AND INDUSTRIAL LANDFILL	MOSS POINT	MS	WASTE MANAGEMENT	HH	Waste	2013	U.S. EPA GHG Reporting Program
SECARB	-87.380556	30.598056	INTERNATIONAL PAPER ROCK CROSSING LANDFILL	CANTONME	FL	WASTE MANAGEMENT	Π	Waste	2013	U.S. EPA GHG Reporting Program
SECARB	-88.054862	30.751683	INTERNATIONAL PAPER MOBILE CLOSED LANDFILL	MOBILE	AL	WASTE MANAGEMENT	π	Waste	2013	U.S. EPA GHG Reporting Program
- SECARB	-88.195522	30.885739	INTERNATIONAL PAPER - CHUNCHULA LANDFILL	CHUNCHULA	AL	WASTE MANAGEMENT	π	Waste	2013	U.S. EPA GHG Reporting Program
CECADD	00 0957	91 N/E1	CHACTANIC CANITADY I ANIDEI I	MOUNTY/E	61	MACTE MANNAGENENIT	uu	Marta	2012	ILS EDA GUG Ponorting Drogrom



F	ield	Projects Layers	* ×		•
L	ayers	Field Projects Tools & Results FP Boo	okmarks		8
H	8	Layer Name			
	Univ	ersity of Kansas (2 Items)			
۵	8	Fault Line	Ē	*	-
0	V	Wells	=	*	
	Univ	ersity of Kansas (Small Scale) (6 items)		1000	8
0	Ø	CO2 Wells	E	*	\square
0	Ø	Type Wells	=	*	44 11
۵	S	Wellington Field	=	*	
	Ø	Model Area	=	*	
0	Ø	Oil and Gas Fleids	田	*	THE REAL
0	Ø	Study Area Boundary	=	*	S. A
L	iyers	Field Projects Tools & Results FP Boo	okmarks		
		Smail-Scale Field Test Demonstrating CO2 S			
Ti	tle:	Saline Aquifer and by CO2-EOR at Wellington Kansas	n Field, Sumner County		

This effort is being undertaken to investigate geologic storage of CO2 in a saline aquifer as part of a miscible CO2-enhanced oil recovery project. The goals are to inject, monitor, and track CO2 plumes in both the Arbuckle Group saline aquifer and the overlying oil-bearing Mississippian Formation of the Wellington Oilfield, both located in Sumner County, Kansas. The project goal is to inject at least 40,000 metric tons of CO2 under supercritical Access additional CCUS data, for sources including:

- *Energy Data Exchange (EDX)*
- *O* U.S. DOE Carbon Storage Atlas
- Regional Carbon Storage Partners
- Easily discover new data
- Coordinate & collaborate with colleagues online
- Download data layers for local use
- Upload spatial & tabular data
- Export maps for communication

ENHANCED FUNCTIONALITY

- **Q** Responsive Interface
 - Rapidly view & interact with hundreds of data layers
 - Quickly query 1000's of features
- **Q** Improved Data Visualization
 - Interactive symbology
 - Cached data layers
 - 2D & 3D viewer

FUTURE ENHANCEMENTS

- Additional data & resources from RCSPs and project-specific CCUS sites (e.g., Kimberlina, FutureGen, etc.)
- ③ 3D & 4D visualization & analytics
- Spatial and Statistical Insights & dashboards
- Plug and Play Tools & Models (like VGM and STA)
- Integration with NETL's big data cluster for rapid analytics



Acknowledgment: This technical effort was preformed in support of the National Energy Technology Laboratory's ongoing research under the RES contract DE-FE0004000.

Disclaimer: This project was funded by the Department of Energy, National Energy Technology Laboratory, an agency of the United States Government, through a support contract with AECOM. Neither the United States Government nor any agency thereof, nor any of their employees, nor AECOM, nor any of their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

For more information on NETL's Carbon Storage

portfolio, data, and tools visit:



Science & Engineering To Power Our Future

POC: Jennifer Bauer, jennifer.bauer@netl.doe.gov