STATEMENT OF BASIS
SOUTHERN NATURAL GAS COMPANY
GALLION COMPRESSOR STATION
GALLION, HALE COUNTY, ALABAMA
FACILITY NO. 406-0003

This draft Title V Major Source Operating Permit (MSOP) 4th renewal is issued under the provisions of ADEM Admin. Code r. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit. The renewal application was due to the Air Division no later than June 13, 2021. It was originally submitted on June 11, 2021, and was deemed complete on June 21, 2021. The current MSOP was originally issued on November 10, 2016, and is scheduled to expire on December 13, 2021. There have been no modifications or additions of significant emission sources at this facility since the issuance of the current MSOP.

Southern Natural Gas Company (SNGC) operates a compressor station that is designed to transport natural gas along the pipeline by compressing natural gas to increase the pressure in the pipeline and maintain the downstream flow. The significant sources of air pollutants at this facility are six natural gas-fired reciprocating engines: two 1,960 hp Worthington engines (Emission Unit Nos. 001 and 002/SNGC Engine Nos. C004 and C005); one 1,750 hp Worthington engine (Emission Unit No. 003/SNGC Engine No. C006); two 4,000 hp Dresser Rand engine (Emission Unit Nos. 004 and 005/SNGC Engine Nos. C008 and C009); one 751 hp Caterpillar natural gas-fired emergency generator (Emission Unit No. 006/SNGC No. G003); and one 0.25 MMBtu/hr Sivalls SB-16-6, natural gas-fired fuel gas heater (No. 1 Fuel Gas Heater). Insignificant emission sources at this station include one 9,995-gallon lubricating oil tank; two 500-gallon used oil tanks; one 2,000-gallon condensate tank; one electric air compressor; one natural gas-fired space heater; and natural gas-fired water heaters.

The current MSOP has undergone one change since the issuance of the previous permit. During the review process for the current renewal application, it was discovered that the emergency generator is actually a rich-burn reciprocating internal combustion engine (RICE) instead of a lean-burn reciprocating internal combustion engine. The current renewal application calculations were updated to reflect a rich-burn reciprocating internal combustion engine. However, no changes in requirements will be needed.

Applicability: Federal Regulations

Title V

This facility is a major source under Title V regulations because the potential emissions for nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) exceed the 100 TPY major source threshold. It is also a major source of Hazardous Air Pollutants (HAP) because individual HAP potential emissions are greater than 10 TPY (formaldehyde has a potential to emit of 29.70 TPY) and the total HAP potential emissions are greater than 25 TPY.

Prevention of Significant Deterioration (PSD)

The facility operations are not one of the 28 listed major source categories and this facility is located in an attainment area for all criteria pollutants. Therefore, the applicable major source threshold is 250 TPY for criteria pollutants. The facility is a major source under PSD regulations because the facility-wide potential emissions for NO_x and CO exceed 250 TPY. Emission Unit Nos. 001 – 003 were installed prior to the PSD applicability date and have not been modified since installation; therefore, there are no applicable emission limits. Emission Unit No. 004 is subject to an applicable Best Available Control Technology (BACT) limit for NO_x. A PSD permit for its initial construction was issued on May 26, 1981. Emission Unit No. 005 is subject to applicable BACT limits for NO_x, CO, and VOC. A PSD permit for its initial construction was issued on February 19, 1988, with NO_x and CO limits. The engine underwent PSD review again in 2001 for VOC after stack testing indicated the engine's VOC potential to emit had been underestimated and exceeded the significant emission rate. The BACT limit for VOC was incorporated into a PSD permit issued on June 19, 2001. The emergency generator (Emission Unit No. 006) is limited to 500 hr/yr to restrict its NO_x potential to emit to below the PSD significance levels.

NSPS

Emission Unit Nos. 001, 002, 003, 004, 005, and 006 at this facility are not subject to 40 CFR Part 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (Subpart JJJJ), based on the date these engines were manufactured (1952, 1952, 1959, 1982, 1989, and 2007 respectively), all of which are prior to each unit's applicability date.

Based on their size and the vapor pressure of the product stored, the storage tanks do not meet the applicability criteria for 40 CFR Part 60, Subparts K, Ka, or Kb. The water and space heaters do not meet the applicability criteria for 40 CFR Part 60, Subparts D, Db, or Dc.

MACT

This facility is a major source for HAP and operates five (5) 2-stroke lean-burn (2SLB) reciprocating engines (Emission Unit Nos. 001 - 005) that were installed between 1952 and 1989. These units are affected sources under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (Subpart ZZZZ). These engines are considered existing units because they were manufactured prior to the applicability date. In accordance with 40 CFR §63.6590(b)(3), SNGC does not have any applicable requirements under Subpart ZZZZ or Subpart A for the five 2SLB engines.

The emergency generator is also an affected source under Subpart ZZZZ. Because its site rating exceeds 500 hp, 40 CFR §63.6590(b)(1)(i) specifies that except for the requirement to submit an initial notification as required by 40 CFR §63.6645(f) and the usage limitations found in 40 CFR §63.6640(f), SNGC does not have to meet the requirements of 40 CFR Part 63, Subpart ZZZZ or Subpart A. SNGC's application to construct this emergency RICE satisfies this requirement.

The fuel gas heater located at this facility is considered an affected source under 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (Subpart DDDDD). This unit is considered an existing affected source as defined by 40 CFR §63.7490 since it was manufactured prior to the June 4, 2010, applicability date. Because this unit has a heat input capacity less than 5 MMBtu/hr and burns only natural gas, SNGC is required to perform subsequent tune-ups every 5 years in accordance with 40 CFR §63.7500(e).

Applicability: State Regulations

Although the compressor engines and the emergency generator are fuel combustion sources, they are not subject to any particulate matter (as TSP) emission limitation of ADEM Admin. Code 335-3-4 or any sulfur dioxide (SO_2) emission limitation of ADEM Admin. Code 335-3-5 because they do not meet the definition of fuel burning equipment nor is the facility considered one of the process industries, general or specific. The compressor engines and the emergency generator are, however, subject to the visible emissions requirements of ADEM Admin. Code r. 335-3-4-.01(1). Since these units would be fired exclusively with natural gas, they would be expected to be able to comply with this standard.

Because the fuel gas heater is considered fuel burning equipment, it would be subject to the particulate matter (as TSP) emission limitation of ADEM Admin. Code r. 335-3-4, the SO_2 emission limitation of ADEM Admin. Code r. 335-3-5, and the visible emissions standards of ADEM Admin. Code r. 335-3-4-.01(1). However, since this unit is fired exclusively with natural gas, it is expected to be able to comply with these standards.

Emission Testing and Monitoring

SNGC is required to certify on a semiannual basis that only natural gas was burned in the engines, the emergency generator, and the fuel gas heater as a method for demonstrating compliance with the visible emission requirements of ADEM Admin. Code r. 335-3-4-.01(1) since opacity is negligible while combusting natural gas.

To monitor compliance with the applicable BACT and SMS limits for NO_x for Emission Unit No. 004 and limits for NO_x, CO, and VOC for Emission Unit No. 005, emission testing would be required twice per calendar year at a frequency of once per semiannual period (Jan 1st – Jun 30th and Jul 1st – Dec 31st), with a minimum of three calendar months elapsing between tests. The first emission testing conducted following the effective date of this renewal permit shall be conducted using the appropriate EPA Reference Method. Emission testing for the remainder of the permit term may be conducted using either the appropriate EPA Reference Method or an alternate method with a portable analyzer if approved in advance by the Air Division.

Compliance Assurance Monitoring (CAM)

The compressor engines do not use an active control device as defined in the CAM regulations to meet the applicable emission standards. As such, the facility is not subject to CAM

requirements**.**

Recordkeeping and Reporting

As part of the Semiannual Monitoring Report, SNGC is required to include a statement addressing whether only natural gas was fired in the engines, the emergency generator, and the fuel gas heater during the respective reporting period. SNGC would be required to submit the results of all emission tests conducted to the Air Division within 30 days of the actual completion of the test.

SNGC is required to record the hours of operation for the emergency generator on a monthly and 12-month rolling total basis to ensure that SNGC operates the engine as an emergency stationary RICE in accordance with 40 CFR §63.6640(f). These records are required to be maintained in a permanent form suitable for inspection and made available upon request.

SNGC is required to submit a Notification of Compliance for the fuel gas heater containing the information specified in 40 CFR §63.7545(e)(1) and (8) within 60 days of completing the required tune-ups. SNGC is required to submit a compliance report for the fuel gas heater every five years containing the information specified in 40 CFR §63.7550(c). In addition, SNGC is required to keep copies of all documentation submitted for the fuel gas heater.

Environmental Justice

ADEM utilized EJSCREEN screening tool to perform an analysis of the area. Please refer to Appendix A.

Public Notice

The renewal of this Title V MSOP would require a 30-day public comment period and a 45-day EPA review period.

Recommendation

Based on the above analysis, I recommend that the Title V Major Source Operating Permit (406-0003) be renewed with the conditions noted above pending the resolution of any comments received during the 30-day public comment period and the 45-day EPA review.

Brandon Cranford

Brandon R. Cranford
Chemical Branch
Air Division

June 22, 2021
Date

Appendix A

Southern Natural Gas Company, LLC

Gallion Compressor Station

Facility No. 406-0003

EJ Screen Report

EJSCREEN Report (Version 2020)

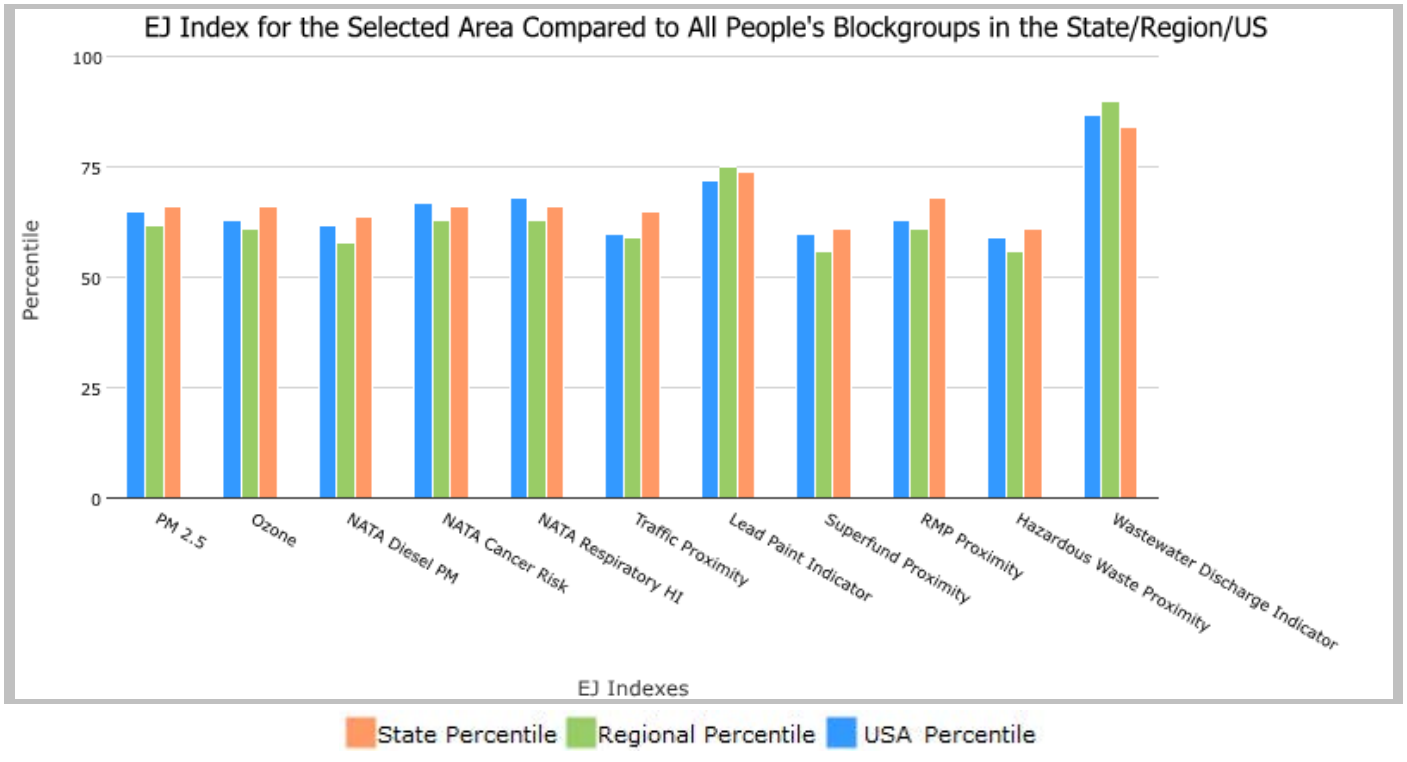
1 mile Ring Centered at 32.499628,-87.714500, ALABAMA, EPA Region 4

Approximate Population: 92

Input Area (sq. miles): 3.14

Gallion Compressor Station

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	66	62	65
EJ Index for Ozone	66	61	63
EJ Index for NATA* Diesel PM	64	58	62
EJ Index for NATA* Air Toxics Cancer Risk	66	63	67
EJ Index for NATA* Respiratory Hazard Index	66	63	68
EJ Index for Traffic Proximity and Volume	65	59	60
EJ Index for Lead Paint Indicator	74	75	72
EJ Index for Superfund Proximity	61	56	60
EJ Index for RMP Proximity	68	61	63
EJ Index for Hazardous Waste Proximity	61	56	59
EJ Index for Wastewater Discharge Indicator	84	90	87



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJSCREEN Report (Version 2020)

1 mile Ring Centered at 32.499628,-87.714500, ALABAMA, EPA Region 4

Approximate Population: 92

Input Area (sq. miles): 3.14

Gallion Compressor Station

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJSCREEN Report (Version 2020)

1 mile Ring Centered at 32.499628,-87.714500, ALABAMA, EPA Region 4

Approximate Population: 92

Input Area (sq. miles): 3.14

Gallion Compressor Station

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	8.98	9.31	35	8.57	71	8.55	63
Ozone (ppb)	34.7	38	10	38	28	42.9	9
NATA* Diesel PM (µg/m^3)	0.168	0.346	13	0.417	<50th	0.478	<50th
NATA* Cancer Risk (lifetime risk per million)	44	43	53	36	90-95th	32	90-95th
NATA* Respiratory Hazard Index	0.69	0.65	59	0.52	90-95th	0.44	90-95th
Traffic Proximity and Volume (daily traffic count/distance to road)	16	220	26	350	19	750	14
Lead Paint Indicator (% Pre-1960 Housing)	0.23	0.18	74	0.15	78	0.28	55
Superfund Proximity (site count/km distance)	0.0081	0.054	0	0.083	2	0.13	2
RMP Proximity (facility count/km distance)	0.17	0.41	51	0.6	39	0.74	32
Hazardous Waste Proximity (facility count/km distance)	0.048	0.82	5	0.91	5	5	5
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.0061	1.2	74	0.65	84	9.4	76
Demographic Indicators							
Demographic Index	51%	36%	76	37%	73	36%	74
People of Color Population	55%	34%	77	39%	71	39%	69
Low Income Population	47%	38%	68	36%	70	33%	76
Linguistically Isolated Population	0%	1%	71	3%	51	4%	45
Population With Less Than High School Education	21%	14%	75	13%	79	13%	80
Population Under 5 years of age	0%	6%	5	6%	5	6%	4
Population over 64 years of age	14%	16%	40	17%	45	15%	50

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN Report (Version 2020)

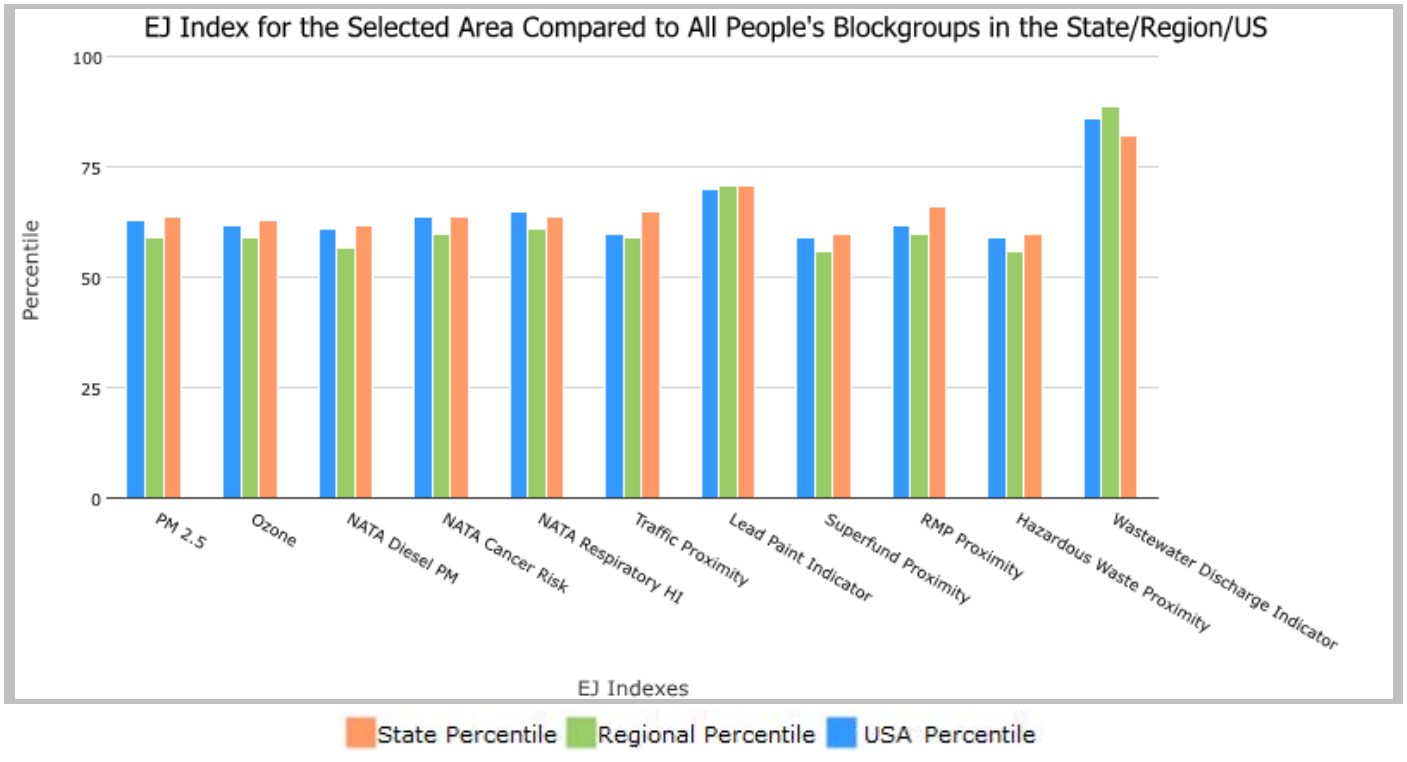
3 miles Ring Centered at 32.499628,-87.714500, ALABAMA, EPA Region 4

Approximate Population: 455

Input Area (sq. miles): 28.27

Gallion Compressor Station

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	64	59	63
EJ Index for Ozone	63	59	62
EJ Index for NATA* Diesel PM	62	57	61
EJ Index for NATA* Air Toxics Cancer Risk	64	60	64
EJ Index for NATA* Respiratory Hazard Index	64	61	65
EJ Index for Traffic Proximity and Volume	65	59	60
EJ Index for Lead Paint Indicator	71	71	70
EJ Index for Superfund Proximity	60	56	59
EJ Index for RMP Proximity	66	60	62
EJ Index for Hazardous Waste Proximity	60	56	59
EJ Index for Wastewater Discharge Indicator	82	89	86



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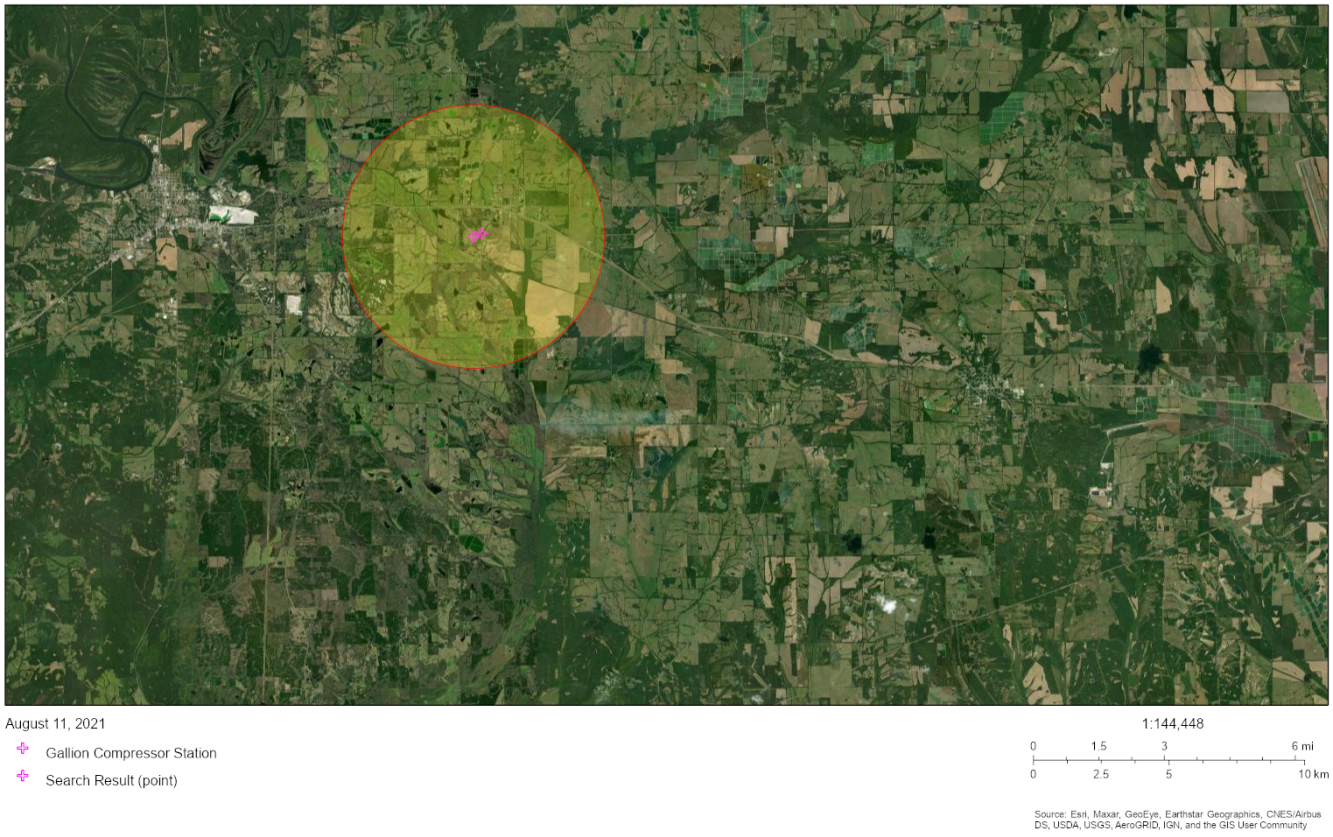
Gallion Compressor Station



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJSCREEN Report (Version 2020)

3 miles Ring Centered at 32.499628,-87.714500, ALABAMA, EPA Region 4

Approximate Population: 455

Input Area (sq. miles): 28.27

Gallion Compressor Station

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	8.99	9.31	36	8.57	72	8.55	64
Ozone (ppb)	34.7	38	10	38	27	42.9	9
NATA* Diesel PM (µg/m^3)	0.196	0.346	25	0.417	<50th	0.478	<50th
NATA* Cancer Risk (lifetime risk per million)	45	43	57	36	90-95th	32	90-95th
NATA* Respiratory Hazard Index	0.7	0.65	65	0.52	95-100th	0.44	95-100th
Traffic Proximity and Volume (daily traffic count/distance to road)	36	220	37	350	29	750	21
Lead Paint Indicator (% Pre-1960 Housing)	0.24	0.18	76	0.15	79	0.28	57
Superfund Proximity (site count/km distance)	0.008	0.054	0	0.083	1	0.13	2
RMP Proximity (facility count/km distance)	0.52	0.41	78	0.6	67	0.74	61
Hazardous Waste Proximity (facility count/km distance)	0.042	0.82	4	0.91	4	5	4
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.0041	1.2	71	0.65	82	9.4	74
Demographic Indicators							
Demographic Index	46%	36%	72	37%	68	36%	69
People of Color Population	51%	34%	75	39%	68	39%	66
Low Income Population	41%	38%	56	36%	60	33%	68
Linguistically Isolated Population	1%	1%	77	3%	58	4%	51
Population With Less Than High School Education	24%	14%	82	13%	85	13%	84
Population Under 5 years of age	1%	6%	7	6%	7	6%	6
Population over 64 years of age	17%	16%	59	17%	62	15%	66

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

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EJSCREEN Report (Version 2020)

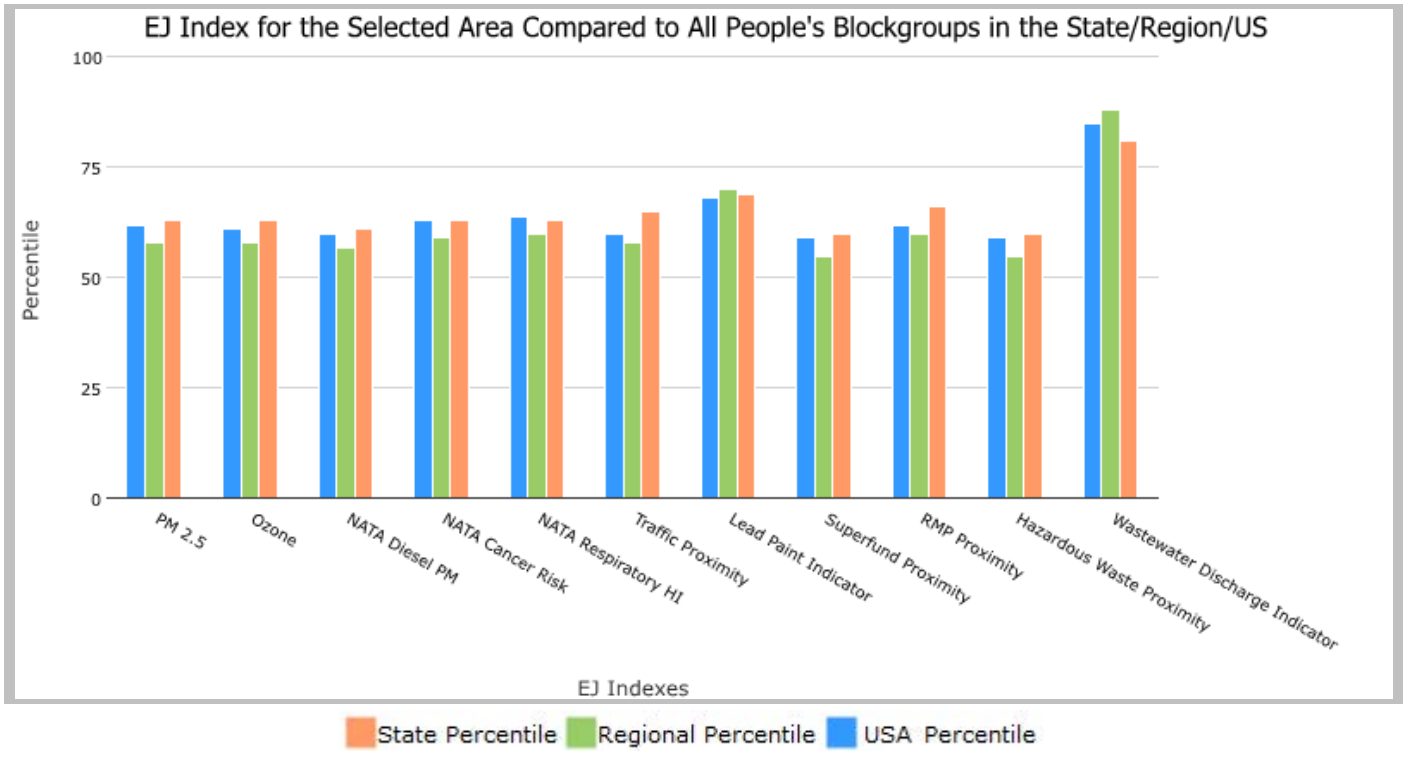
5 miles Ring Centered at 32.499628,-87.714500, ALABAMA, EPA Region 4

Approximate Population: 868

Input Area (sq. miles): 78.53

Gallion Compressor Station

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	63	58	62
EJ Index for Ozone	63	58	61
EJ Index for NATA* Diesel PM	61	57	60
EJ Index for NATA* Air Toxics Cancer Risk	63	59	63
EJ Index for NATA* Respiratory Hazard Index	63	60	64
EJ Index for Traffic Proximity and Volume	65	58	60
EJ Index for Lead Paint Indicator	69	70	68
EJ Index for Superfund Proximity	60	55	59
EJ Index for RMP Proximity	66	60	62
EJ Index for Hazardous Waste Proximity	60	55	59
EJ Index for Wastewater Discharge Indicator	81	88	85



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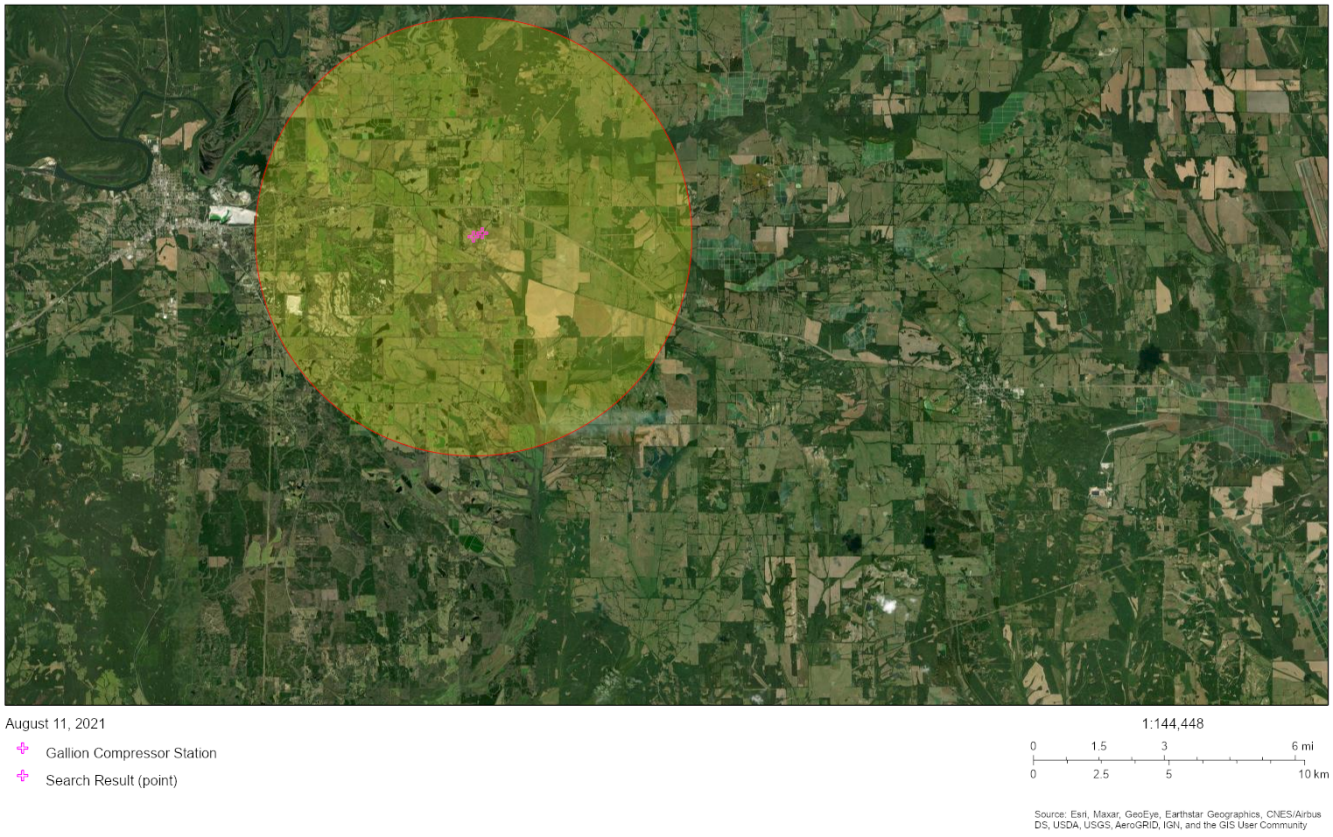
Gallion Compressor Station



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJSCREEN Report (Version 2020)

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Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	8.99	9.31	36	8.57	72	8.55	64
Ozone (ppb)	34.6	38	10	38	27	42.9	9
NATA* Diesel PM (µg/m^3)	0.205	0.346	27	0.417	<50th	0.478	<50th
NATA* Cancer Risk (lifetime risk per million)	45	43	59	36	90-95th	32	90-95th
NATA* Respiratory Hazard Index	0.71	0.65	67	0.52	95-100th	0.44	95-100th
Traffic Proximity and Volume (daily traffic count/distance to road)	43	220	40	350	32	750	23
Lead Paint Indicator (% Pre-1960 Housing)	0.24	0.18	76	0.15	79	0.28	57
Superfund Proximity (site count/km distance)	0.008	0.054	0	0.083	1	0.13	2
RMP Proximity (facility count/km distance)	0.64	0.41	81	0.6	72	0.74	65
Hazardous Waste Proximity (facility count/km distance)	0.039	0.82	3	0.91	3	5	3
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.0033	1.2	70	0.65	81	9.4	73
Demographic Indicators							
Demographic Index	44%	36%	70	37%	66	36%	68
People of Color Population	49%	34%	73	39%	66	39%	65
Low Income Population	39%	38%	53	36%	57	33%	66
Linguistically Isolated Population	2%	1%	80	3%	62	4%	54
Population With Less Than High School Education	25%	14%	84	13%	86	13%	85
Population Under 5 years of age	1%	6%	9	6%	9	6%	8
Population over 64 years of age	19%	16%	67	17%	68	15%	71

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

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