

STATEMENT OF BASIS
Magnolia Sanitary Landfill
Facility No. 501-0033

Introduction

On January 5, 2022, the Baldwin County Commission submitted a Title V Major Source Permit renewal application for their municipal solid waste landfill (SIC #4953) located at 15140 County Road 49, Summerdale, Alabama. The renewal of the Major Source Operating Permit (MSOP) does not authorize any new construction or expansion of the landfill. Magnolia Sanitary Landfill currently has a MSOP for a Municipal Solid Waste Landfill with a design capacity of greater than 2.5×10^6 Megagrams (Mg) with a gas collection and control system (GCCS) and flare.

Magnolia Sanitary Landfill was first issued a MSOP on October 5, 2000. Renewal MSOPs were issued on October 4, 2005, September 13, 2011, and again on June 21, 2017. On August 21, 2007 an Air Permit was issued for the installation and operation of a gas collection system and flare.

There are no current or ongoing enforcement actions against Magnolia Sanitary Landfill necessitating additional requirements to achieve compliance with permit conditions. Baldwin County is currently listed in attainment with all National Ambient Air Quality Standards (NAAQS).

Potential emissions are as follows:

Pollutant	Potential Emissions (tpy)
NO _x	13.69
Ammonia	53.48
CO	195.00
PM ₁₀	5.82
NMOC (Uncontrolled)	71.28
VOC	73.98
HAP	25.71
CO _{2e}	177,708

No other criteria pollutants are emitted in sufficient quantities, actually or potentially, to exceed the major source threshold of 100 tons per year.

Requirements

The facility was previously subject to Standards of Performance for New Stationary Sources (NSPS), 40 CFR 60, Subpart WWW-Standards of Performance for Municipal Solid Waste Landfills. Magnolia is currently subject to 40 CFR 62, Subpart OOO-Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014, because it has a design capacity greater than 2.5×10^6 Megagrams. It will become subject to ADEM Admin. Rule R. 335-3-19, Control of Municipal Solid Waste Landfill Gas Emissions, upon final approval of that chapter by the Environmental Protection

Agency (EPA) because it has a design capacity greater than 2.5×10^6 Megagrams. Magnolia is also subject to 40 CFR 63, Subpart AAAA-National Emission Standards for Hazardous Air Pollutants (NESHAP): Municipal Solid Waste Landfills, because its uncontrolled Non-Methane Organic Compounds (NMOC) emissions have exceeded the 50 Megagrams per year threshold, and the landfill has installed a gas collection and control system and is subject to the operational standards, and monitoring, recordkeeping, and reporting requirements for a GCCS.

As of September 27, 2021, Magnolia is subject to the operational standards and monitoring, recordkeeping, and reporting requirements for a GCCS contained in the Subpart AAAA. Subpart AAAA was revised in March 2020 to provide uniform operational standards and monitoring, recordkeeping, and reporting requirements for all landfills whose NMOC emissions have exceeded 50 Mg per year. Subpart AAAA raises the maximum operating temperature for gas field wells from the 131 °F of NSPS WWW to 145 °F. The landfill must still monitor oxygen or nitrogen, but there is no longer an operational limit. The procedures for instances in which an exceedance in an operating parameter of a gas well occurs have also been changed. A landfill no longer needs to request an alternative timeline. Instead, if a well exceedance cannot be corrected within 15 days, the landfill must conduct a root cause analysis. If the exceedance cannot be corrected within 60 days, the site must also conduct a corrective action analysis and develop an implementation schedule. These items must then be submitted with the next semi-annual report. If corrective action may take longer than 120 days to complete the root cause analysis, corrective action analysis, and implementation schedule must be submitted to the Department, and Magnolia must receive approval of the implementation schedule. The standards of AAAA still apply during Startup, Shut-down, and Maintenance (SSM), and instances of SSM will be reported in the semiannual report instead of a separate SSM report. Alternatives approved under WWW can still be used to comply with AAAA. Because Magnolia has accepted waste containing asbestos in the past, the facility is also subject to the NESHAP, 40 CFR 61, Subpart M, National Emission Standard for Asbestos. This requires the landfill to either prohibit visible emissions from an active waste disposal site where asbestos had been deposited or cover the material containing asbestos at least once per 24-hour period. The landfill is also required to keep detailed records on asbestos containing waste, including the quantity and location of asbestos containing waste. Magnolia must also provide 45 days' notice to the Department prior to disturbing any waste containing material.

In addition to the requirements of the NSPS and NESHAP, the flare is also subject to the requirements of 40 CFR 60.18 covering general control device and work practice requirements.

The potential Volatile Organic Compounds (VOC) emissions from the landfill are less than 250 tons per year; therefore, the facility is not subject to the Prevention of Significant Deterioration (PSD).

Monitoring of emissions

Magnolia Landfill maintains records on site of design capacity, waste in place, and year to year waste acceptance rates and other records to show compliance with 40 CFR 62, Subpart OOO-Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014; ADEM Admin. Rule R. 335-3-19, Control of Municipal Solid Waste Landfill Gas Emissions; and Subpart AAAA, NESHAP: Municipal Solid Waste Landfills.

The flare is monitored to ensure the continuous presence of a flame. Also, the gas flow rate to the flare is monitored. The flare is operated in accordance with the requirements of 40 CFR 60.18.

Compliance Assurance Monitoring (CAM) is not applicable as Magnolia is subject to MACT standards which were promulgated after November 15, 1990. According to 40 CFR 64.2(b)(1)(i), on exemptions from CAM, emission limitations or standards proposed after November 15, 1990 pursuant to section 111 or 112 of the Clean Air Act are exempt from CAM requirements, and there are no other source specific standards applicable to this facility.

Environmental Justice

ADEM utilized EJSCREEN screening tool to perform an analysis of the area. (Appendix A).

Recommendation:

I recommend that the Magnolia Sanitary Landfill be issued the enclosed Title V permit 501-0033 with Units 001 and 002 for a Municipal Solid Waste Landfill with a design capacity of greater than 2.5×10^6 Megagrams with a gas collection system and flare.

John Robert Gill
Chemical Branch
Air Division

April 25, 2022

Appendix A

EJSCREEN Report

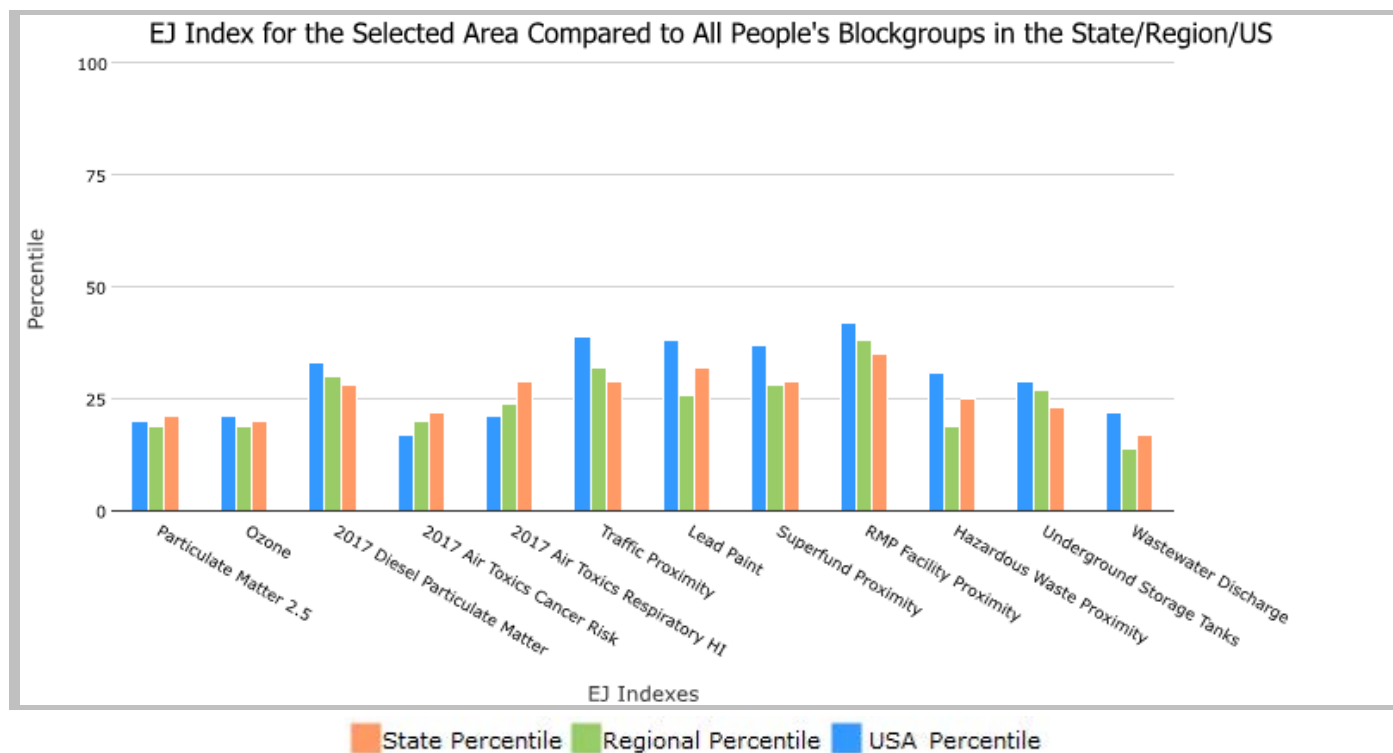
3 miles Ring Centered at 30.446642,-87.772337, ALABAMA, EPA Region 4

Approximate Population: 5,620

Input Area (sq. miles): 28.27

Magnolia Sanitary Landfill

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
Environmental Justice Indexes			
EJ Index for Particulate Matter 2.5	21	19	20
EJ Index for Ozone	20	19	21
EJ Index for 2017 Diesel Particulate Matter*	28	30	33
EJ Index for 2017 Air Toxics Cancer Risk*	22	20	17
EJ Index for 2017 Air Toxics Respiratory HI*	29	24	21
EJ Index for Traffic Proximity	29	32	39
EJ Index for Lead Paint	32	26	38
EJ Index for Superfund Proximity	29	28	37
EJ Index for RMP Facility Proximity	35	38	42
EJ Index for Hazardous Waste Proximity	25	19	31
EJ Index for Underground Storage Tanks	23	27	29
EJ Index for Wastewater Discharge	17	14	22



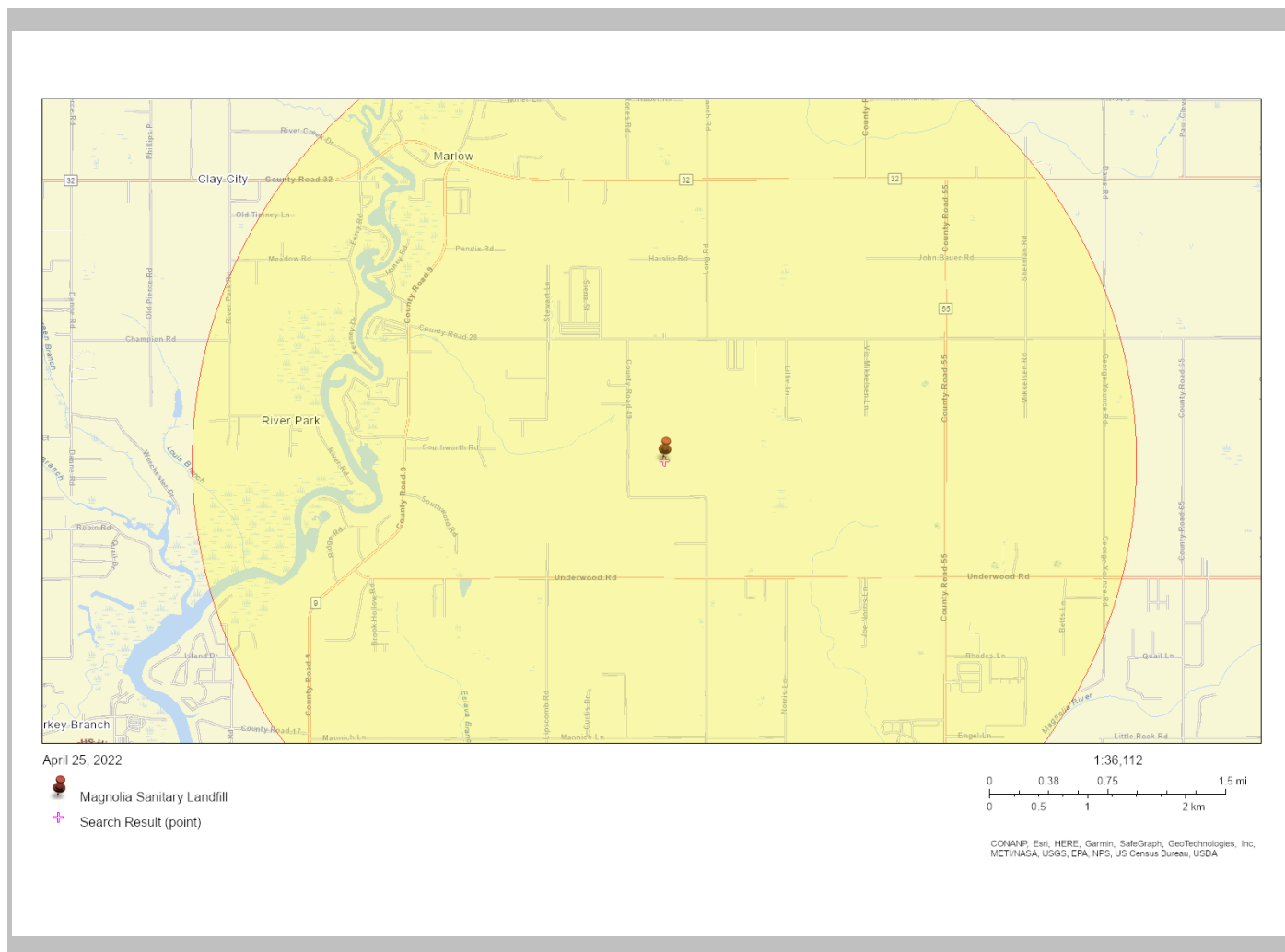
This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective 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.

3 miles Ring Centered at 30.446642,-87.772337, ALABAMA, EPA Region 4

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Magnolia Sanitary Landfill



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

EJScreen Report (Version 2.0)

3 miles Ring Centered at 30.446642,-87.772337, ALABAMA, EPA Region 4

Approximate Population: 5,620

Input Area (sq. miles): 28.27

Magnolia Sanitary Landfill

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Pollution and Sources							
Particulate Matter 2.5 ($\mu\text{g}/\text{m}^3$)	8.07	8.9	2	8.18	45	8.74	35
Ozone (ppb)	38.6	39.1	47	37.9	51	42.6	24
2017 Diesel Particulate Matter* ($\mu\text{g}/\text{m}^3$)	0.116	0.216	23	0.261	<50th	0.295	<50th
2017 Air Toxics Cancer Risk* (lifetime risk per million)	29	34	49	31	70-80th	29	70-80th
2017 Air Toxics Respiratory HI*	0.3	0.47	4	0.4	<50th	0.36	<50th
Traffic Proximity (daily traffic count/distance to road)	37	230	32	430	26	710	19
Lead Paint (% Pre-1960 Housing)	0.044	0.18	27	0.15	40	0.28	27
Superfund Proximity (site count/km distance)	0.021	0.054	29	0.083	33	0.13	18
RMP Facility Proximity (facility count/km distance)	0.075	0.41	19	0.6	11	0.75	9
Hazardous Waste Proximity (facility count/km distance)	0.23	0.83	41	0.62	53	2.2	33
Underground Storage Tanks (count/km ²)	0.42	1.7	43	3.5	34	3.9	34
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0019	0.42	61	0.45	68	12	55
Socioeconomic Indicators							
Demographic Index	19%	36%	23	37%	22	36%	29
People of Color	15%	34%	31	39%	26	40%	29
Low Income	23%	37%	27	35%	31	31%	42
Unemployment Rate	6%	6%	59	6%	60	5%	63
Linguistically Isolated	1%	1%	73	3%	53	5%	47
Less Than High School Education	11%	14%	46	13%	52	12%	58
Under Age 5	4%	6%	34	6%	34	6%	32
Over Age 64	21%	17%	77	17%	76	16%	78

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's 2017 Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

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

EJScreen is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. 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. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJScreen outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.