Environmental Justice Impact Statement Project ID #34105263

Safety-Kleen Systems, Inc.

Linden Recycle Center at 1200 Sylvan Street Linden, New Jersey

December 2023



59 Elm Street New Haven, CT 06510



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1 Executive Summary

The Safety-Kleen Systems, Inc. ("Safety-Kleen") facility at 1200 Sylvan Street in Linden, New Jersey (the "Linden Recycle Center") is submitting this Environmental Justice Impact Statement pursuant to N.J.A.C. 7:1C-3.2 to the New Jersey Department of Environmental Protection (NJDEP) for its proposed facility expansions. The project ID number for this Environmental Justice Impact Statement is 3410563. The Linden Recycle Center is located within census block group 340390354001, which has been designated as an overburdened community (OBC) by the NJDEP because over 40% of the population within this block group identify as minorities or members of a state-recognized tribal group.

Safety-Kleen's Linden Recycle Center specializes in the reclamation, recovery, and recycling of spent or previously used organic solvents. As named a "Recycle Center", the facility operations are for industrial and commercial wastes, not household waste. This facility has been recycling solvents since 1942 and has been owned and operated by Safety-Kleen since 1989. Efforts from the recycling of solvents has a positive sustainability measure for conserving non-renewable resources. The facility is permitted under the Resource Conservation and Recovery Act (RCRA) for the storage and treatment of hazardous waste. The facility is also permitted for the storage and transfer of non-hazardous solid waste. Additionally, the facility maintains multiple minor source air permits for its industrial activities. All permits mentioned have been approved and issued by the NJDEP. The facility is planning to expand its operations by adding two enclosed mix pits for the stabilization and/or solidification of hazardous and non-hazardous wastes and permitting three existing truck stations and a newly constructed building as container storage units for hazardous and non-hazardous wastes. In order to expand operations at the Linden Recycle Center, Safety-Kleen has applied for one RCRA class 3 permit modification for program interest number NJD002182897, and one minor source air pollution control permit for program interest number 40097 and permit activity number PCP230003. The air pollution control permit application was submitted to the NJDEP on September 13, 2023. The RCRA permit modification was first submitted on September 14, 2023, and then re-submitted on December 8, 2023 to include the Solid Waste Permit modification.

The proposed expansion is expected to result in a small increase in traffic entering and exiting the facility, as well as a minor increase in air emissions. The facility will minimize air emissions by installing a dust collector and a carbon absorption bed, as well as using ultra-low sulfur diesel for fleet vehicles and minimizing idling times. An air quality risk screening using the NJDEP Division of Air Quality's Risk Screening Worksheet indicated that impacts to air quality would be negligible. The facility will also aim to reduce unemployment in the surrounding community by hiring two to five additional full-time employees and recruiting for these opportunities locally and elsewhere. The Linden Recycle Center will be taking measures to minimize disproportionate impacts to the surrounding community.

This report includes an analysis of the setting of Linden and the land surrounding the Linden Recycle Center, the facility's current and proposed operations, as assessment of potential impacts on environmental and public health stressors, and a public participation plan designed to inform the surrounding community about proposed changes to the facility.



2 Municipal and Neighborhood Setting

2.1 City of Linden

2.1.1 Physical Description

The Linden Recycle Center is within the city limits of Linden, New Jersey, which is a part of Union County. The City of Linden is about 10.7 square miles in size and bordered by the Rahway River and the municipalities of Elizabeth; Roselle; Cranford; Clark; Winfield; Rahway; Woodbridge; and Carteret, New Jersey. Linden is in the northeast region of the state and is an eight-mile drive from Newark Liberty International Airport. A figure showing the location of the facility within the City of Linden is included as <u>Appendix A</u>.

2.1.2 Demographic Information

The City of Linden has a population of 43,352 according to the 2022 U.S. Economic Census. Its population is 34.5% White (not Hispanic or Latino), 29.7% Black or African American, 3.6% Asian, and 0.3% American Indian or Alaskan Native. 31.4% of the population identifies as Hispanic or Latino. 14.3% of the population is over the age of 65, while 20.3% of the population is under the age of 18. Among individuals aged five years and older, 52% speak a language other than English at home. The most prominent secondary language spoken in Linden is Spanish.

2.1.3 Economic Information

Over the five-year period between 2017 and 2021, the median value of owner-occupied homes was \$307,200, the median gross rent was \$1,414 per month, and the median household income was \$80,200 according to the 2022 Economic U.S. Census. In 2022, 68.8% of individuals aged 16 and older were in the labor force.

2.1.4 Zoning Information

The city of Linden has a wide range of commercial, industrial and residential zoning districts, which can be seen in its official zoning map at <u>https://linden-nj.gov/wp-content/uploads/2020/03/Zoning-</u><u>Map_2020-GIS.pdf.</u> Most of the southern and eastern areas of Linden surrounding the project site are zoned as either heavy industrial or light industrial. Most residential neighborhoods are in the northwest region of the city.

2.2 Neighborhood Setting

2.2.1 Physical Description

The site covers 11.4 acres, approximately five of which are utilized for hazardous waste management. The Linden Recycle Center is on primarily flat terrain and is not located in the 100-year floodplain of King's Creek, which flows 1,500 feet away from the southwest corner of the facility.



Most of the areas surrounding the Linden Recycle Center are used for commercial or industrial uses. In order to analyze the neighborhood setting of the Linden Recycle Center, we observed the specific land uses within a one-mile radius of the facility. A figure illustrating this radius is included as <u>Appendix B</u>.

- Immediately to the north and northeast of the project site is the Linden Airport (LDJ).
- To the northwest of the project site (across West Edgar Road) is a cluster of large commercial structures with surrounding parking lots.
- To the west (across West Edgar Road) is a residential neighborhood of approximately 65 homes along Smith, Hampden, Pleasant, and Rebecca Streets.
- To the southwest of the site is the large Merck Pharmaceuticals manufacturing facility.
- To the south of the project site (across Avenue C) is a cluster of large commercial structures with surrounding parking lots.
- To the southeast is a complex of industrial uses including warehouses, chemical and fuel storage tanks, and manufacturing facilities.

2.2.2 Demographic Information

According to data from 2020 Census Tracts, the number of individuals living within a one-mile radius of the Linden Recycle Center is 7,660. Within this population, 28.4% of individuals are White (not Hispanic or Latino), 28.2% are Black or African America, and 1.1% are American Indian or Alaskan Native. The remainder of the population identifies with two-or-more races. 37.4% of individuals that live within one mile of the facility identify as Hispanic or Latino.

The area has a percentage of population with high school diploma of approximately 80%, which is 10% lower than the rate for the state of New Jersey of 90%. The area has a median home value of approximately \$300,000, which is 14% lower than the median home value for the state of New Jersey of \$350,000.

2.2.3 Economic Information

The project site is located within Census Tract 354. The median household income for this area is approximately \$78,000, which is 9% lower than the state-wide median household income of \$86,000. The percentage of households below the poverty line in this area is 8.9%, which is slightly lower than the state-wide rate of 9.2%.

2.2.4 Zoning Information

Within a one-mile radius of the project site, there is a wide range of existing land uses, most of which are in general compliance with existing zoning designations. Zoning districts range from heavy industrial, light industrial and manufacturing, commercial (of all densities) and small-lot residential neighborhoods.



2.3 Facilities Within One Mile of Project Site

2.3.1 Dwellings

As noted in *Section 2.2.1*, one residential neighborhood with a population of 302 residents is located 900 feet northwest of the Linden Recycle Center. Larger neighborhoods with populations of over 1,000 residents each are located to the north, east, west, and southwest of the facility. The demographic information for residents within one mile of the Linden Recycle Center is detailed in *Section 2.2.2*.

2.3.2 Hospitals

There are no hospitals within one mile of the Linden Recycle Center.

2.3.3 Nursing Homes

There are no nursing homes within one mile of the Linden Recycle Center.

2.3.4 Parks

Parks within one mile of the facility include the Memorial Field Park, Linden Memorial Park, John Russel Wheeler Park, Hawk Rise Sanctuary, Lexington Park, Flannagan Field, Joseph Medwick Park, Linden Memorial Park, Merck Athletic Field, and Buchannan Park.

2.3.5 Schools

Schools within one mile of the Linden Recycle Center include School No. 2 (a public elementary school), Grover Cleveland Elementary School, and Linden Elementary School Number 8.

2.3.6 Roadways

The Linden Recycle Center lies about 515 feet east of West Edgar Road, which is a segment of U.S. Route 1. No other major roadways are within one mile of the facility.

2.3.7 Transportation Facilities

- Roadways: The facility is separated from the airport by Wildcat Way. The facility is located adjacent to Route 9 and Route 1, and 1.4 miles from Interstate 95.
- Air travel facilities: The Linden Recycle Center is located less than 100 feet from the southwest corner of the Linden Airport.
- Rail Facilities: The facility is located 0.6 miles from Amtrak's Northeast Corridor and the associated commuter rail and freight lines. There is also an on-site rail spur as well as an adjacent freight line that runs 30 feet south of the facility.



2.3.8 Businesses

Commercial and industrial businesses within one mile of the Linden Recycle Center include a diverse group of businesses, reflecting the density of retail, service, warehousing, manufacturing and industrial processing uses. Specific businesses include My Sign Center, Grand Home Enterprises Inc, T-Mobile, CheckOutStore, Pro Plastics, Merck & Co., Born to Fly America, Sightseeing Tours of America, Phenix Salon Suites, ShopRite of Linden, Ashley Store, Exxon, The Home Depot, Staples, the Linden Shopping Mall, LA Fitness, Mattress Firm, Foot Locker, Dollar Zone, G-Force Logistics Group, ALDI, Penske Truck Rental, the Linden Warehouse and Distribution Company, Astra Surfaces, DBL Tank Services, Walmart Supercenter, Hampton Inn Linden, Bank of America, Target, Krauser's Food Stores, Universal Food Markets, Wayfair, Hampton Inn Linden, Klein Automotive Parts, and the Bentley Motel.

Restaurants and fast-food businesses within one mile of the Linden Recycle Center include Buffalo Wild Wings, Moe's Southwest Grill, Planet Smoothie, Taco Bell, Burger King, Panera Bread, Chick-fil-A, Checkers, Starbucks, Applebee's Grill and Bar, McDonald's, and Ill Amici Ristorante.

3 Current and Proposed Operations

3.1 Current Operations

Safety-Kleen's Linden Recycle Center specializes in the reclamation, recovery and recycling of spent or previously used organic solvents. The Linden Recycle Center operates with the flexibility to use any combination of handling, processing, and management of waste received at the facility. Upon receiving a container of waste, the facility determines which activity or combination of activities will be utilized to best handle the waste materials. This flexibility is necessary for the facility to best accomplish and improve its recycling efforts, which ultimately results in better protection of human health and the environment. The facility's recycling operations also create a more sustainable waste management option for its customers by reclaiming non-renewable resources for re-use. As an example, as opposed to disposing of mineral spirits (also known as Stoddard solvent), from degreasing operations, the mineral spirits are accepted at the Linden Recycle Center where the facility will recover the mineral spirits as part of its distillation/fractionation process and return the mineral spirits to commerce. This process is as follows:

The Linden Recycle Center operations generally run seven days per week, 24 hours per day in 12-hour shifts. Shipping and receiving are typically run 7am to 7pm Monday through Friday. Materials for recycling are received and shipped by truck and rail. The facility accepts a wide variety of spent (used) solvent waste streams, hazardous and non-hazardous waste streams. The sources of the wastes generally come from industrial/commercial generators. Safety-Kleen requires that all waste generators complete a Material Profile Sheet. The Safety-Kleen/Clean Harbors Central Profile Group, which oversees the Safety-Kleen Material Profile Sheet approval process, reviews each Material Profile Sheet before approving waste shipments. These wastes are stored and processed on site.

The Linden Recycle Center uses gravity separation, distillation, fractionation and blending to recycle, recover or reclaim used organic solvents and similar materials (non-renewable resources contained in waste materials). An explanation of equipment is presented below. Processes at the facility are vented



through a Regenerative Thermal Oxidizer System (RTO) which reduces the volatile organic and hazardous air pollutant emissions by 95%. This RTO system stack is monitored by a Continuous Emission Monitoring System (CEMS). The Linden facility currently has two distillation columns and a thin-film evaporator which separates the liquid from its impurities from boiling/evaporation and condensation of the material. The waste solvents are heated to varying temperatures for different chemicals to become gases and cooled and collected as a recovered product. Hazardous waste treatment in tanks includes phase separation, neutralization, filtration and fuel blending. The image below shows the location of the RTO system, distillation columns, storage tanks, and the thin film evaporator.



Using a combination of processes including distillation, fractionation, blending, etc., the Linden Recycle Center recovers, and either returns the recycled material to its customers or markets it as a recovered solvent. The facility processes any waste not suitable for recycling into waste fuel for off-site energy recovery in properly permitted industrial boilers and furnaces. Any wastewater generated by the Linden Recycle Center is either treated and discharged in accordance with the facility's wastewater discharge permit, or properly disposed of off-site.

The Linden Recycle Center also operates as a used oil as well as hazardous and non-hazardous waste transfer terminal for a variety of waste types from industrial and commercial generators. This operation allows for the collection of used oil, anti-freeze, and hazardous and non-hazardous wastes for shipment by truck or rail to approved off-site facilities.



The facility also receives bulk products such as lube oils, antifreeze/coolants and windshield washer fluids via truck and rail. The products are re-packaged on-site for distribution into commerce for the northeast corridor of the United States.

A detailed site map of the facility is included as <u>Appendix C.</u>

3.1.1 Facility Held Permits

- NJDEP Solid & Hazardous Waste Facility Permit No. HWP170003
- Publicly Owned Treatment Works: Linden Roselle Sewerage Authority (LRSA) Permit No.: 036
- Air Permits (Numerous Synthetic Minor Source Permits) Facility ID No.: 40097
- TTB Permit No.: SDS-NJ-15022
- NJPDES Multi-Sector General Stromwater Permit No.: NJG0122718

The facility is inspected at least weekly by the NJDEP and periodically by USEPA to assure compliance with RCRA. NJDEP regulatory inspections are conducted annually for compliance evaluations relative to air operating permits and reporting, and periodically by USEPA for compliance with air emission standards. Other inspections occur on a routine basis by NJDEP to examine DPCC/DCR Plan and NJPDES stormwater permit compliance among other things. The facility receives on average approximately 52 regulatory inspections per year.

3.2 **Purpose of Permit Applications**

Utility companies responsible for operating and maintaining surrounding electrical grids are generating more wastes due to increased maintenance activities and environmental events attributed to adverse weather and changing climatic conditions. These companies are experiencing waste treatment capacity issues with existing local waste management companies currently handling their wastes. As such, these companies have requested that storage and treatment capacities for their wastes be built at the Linden Recycle Center. The purpose of the permit applications is to approve construction and use of two onsite enclosed mix pits to treat hazardous waste in a purpose-built building, which will also serve as a new container storage area, as well as to permit three existing truck stations as container storage units for hazardous wastes. These additions to the Linden Recycle Center will allow the facility to provide treatment, via stabilization and solidification, for hazardous waste being generated by utility companies and other industrial and commercial businesses. The newly permitted container storage areas will be used to support mix pit operations as well as other on-site activities, such as recycling and other treatment processes. Construction of the mix pits is expected to take approximately 43 weeks. A construction schedule including the estimated duration for each phase of the expansion is included as *Appendix D*.

3.3 Proposed Processes

The Linden Recycle Center is proposing to construct two enclosed mix pits for the stabilization and/or solidification of low-level metal-bearing characteristic hazardous (RCRA heavy metals) and non-hazardous waste. The mix pits will consist of steel-lined in-ground concrete structures designed to



contain liquids and detect leaks in the secondary containment system, which is underlaid with a HPDE liner. The building enclosing the mix pits (i.e., Container Storage Area 3) will be designed to control dust and other potential air emissions. Proposed air emission controls are further discussed in *Section 3.3.2.* A facility site plan showing the location of the proposed mix pits and truck stations is included as <u>Appendix C</u>. A simplified process flow diagram for mix pit operations is included as <u>Appendix E</u>.

Operations for the new process will also be on various shifts, possibly 24-hours, seven (7) days a week at certain times of need. Consistent with current operations, the majority of truck traffic will remain at the peak hours of 6 am to 6 pm. The loading, unloading, and temporary storage of hazardous waste, hazardous secondary materials, and non-hazardous wastes will take place at existing and proposed truck stations. Some hazardous wastes received by the Linden Recycle Center will be managed under 10-day transfer terms. All containers will continue to be inspected during pick-up at the generator's location, during unloading at the Linden Facility, and during storage at the Linden Facility. Safety-Kleen will continue to require that all waste generators complete a Material Profile Sheet, which will be reviewed by the company's Central Profile Group before shipments are approved.

Upon receiving a shipment of waste, the facility lab will determine whether the waste requires stabilization. If stabilization is not necessary, the waste will be solidified in a mix pit (see solidification process below). If stabilization is necessary, the lab will determine the types and amounts of chemical reagents best suited for stabilizing the waste.

Once wastes have been placed in a mix pit, excess free liquids may be pumped-out via an appropriate pump truck or other pumping means (e.g., an air operated pump). A backhoe or other mechanized equipment (e.g., excavator fitted with a mixing blade, robotic arm, etc.) will be used to mix the waste with the chemical reagents (e.g., Portland Cement). Following the stabilization procedure, two grab samples (randomly collected from opposite locations in the mix pit) will typically be taken to a NJDEP certified environmental laboratory for analysis. Any waste that fails the analytical test will receive additional treatment and mixing before being tested again to ensure proper treatment. Once the waste has been stabilized, any remaining free-flowing liquid may be pumped out.

To solidify non-hazardous waste in the mix pit, solidification media, such as calcium sulfate, cement dust, kiln dust, fly ash envirite (burnt rice husks and silica), speedi-dri, sawdust, paper pulp, diaper dust, and/or pozzolanic materials, will be mixed into the material to ensure no free-liquids remain.

After stabilization and/or solidification, the waste will be transferred to properly labeled/marked DOT approved bulk containers and held in a permitted waste container storage area. A final analytical test will be done on the waste material to confirm that it is below the regulatory thresholds for any relevant parameters. For treated hazardous waste, after the waste is determined to be non-hazardous it will be shipped off-site to a facility authorized to accept the waste.



3.3.1 Onsite Equipment

The proposed applications for air, RCRA and solid waste will add a new process for the treatment of hazardous wastes via stabilization and solidification, as well as non-hazardous waste in an enclosed Mix Pit. The proposed equipment will consist of:

- A Mix Pit Building and associated air pollution control equipment (see below at 4.3.2)
- The addition of 4 new Container Storage Areas with capacities as follows:
 - Truck Station 11 67,500 gallons of hazardous waste. This is a staging area prior to entering the Mix Pit and for temporary storage of other hazardous and non-hazardous wastes.
 - Truck Station 12 82,500 gallons of hazardous waste. This is also a staging area prior to entering the Mix Pit and for temporary storage of other hazardous and non-hazardous wastes.
 - Truck Station 13 600 cubic yards hazardous waste. This location will be the treated wastes from the Mix Pit waiting for laboratory results.
 - Mix Pit Building/Container Storage Area 3 18,000 gallons hazardous waste
 - Mix Pit 1 This is for treating wastes by removing free liquids and mixing remaining materials with an appropriate reagent
 - Mix Pit 2 This is for treating wastes by removing free liquids and mixing remaining materials with an appropriate reagent
 - Baghouse/dust collector The baghouse/dust collector system pulls air from within the Mix Pit Building and removes greater than 99% of the dust particulates that are generated from the process.
 - Carbon adsorber The carbon adsorber is set after the baghouse/dust collector which then removes 95% of the volatile organic compounds that may be generated from the mixing process.
 - Backhoes For mixing wastes in the mix pits.

A site map showing the location of the new equipment is included as <u>Appendix C</u>.

3.3.2 Pollution and Environmental Control Measures and Monitoring Instruments

The Linden Facility will employ the necessary measures to eliminate or minimize pollution and disturbances to neighboring communities. All stabilization and solidification of waste will be performed within the mix pit building, which will be enclosed by a building that will also serve as Container Storage Area 3. Container Storage Area 3 will have a storage capacity of 18,000 gallons and will be built with a sloped concrete floor surrounded by a curb. In the event of a spill, material will flow towards the curb and into blind floor sumps.

The mix pit building will be equipped with a baghouse dust collector and a carbon absorption bed. The baghouse is estimated to remove 99.9% of particulate matter (PM), and the carbon absorption bed is estimated to remove 95% of volatile organic compounds and hazardous air pollutants.



The loading, unloading, and temporary storage of hazardous waste, hazardous secondary materials, and non-hazardous wastes will take place at designated truck stations, all of which will be concrete or asphalt with curbs and containment able to hold the nominal capacity of the largest compartment of a truck, plus the required rainfall capacity. Exterior run-off materials will be prevented from entering the truck stations by the presence of ramps that slope upwards toward the loading area. The three new truck stations will be built on asphalt, and those designated for handling liquid and semi-liquid waste will be bordered by dikes on all sides. Land immediately around truck stations and containment areas is graded to provide drainage away from the area. The facility is not located on a floodplain, so flood management practices are not necessary.

3.3.3 Traffic Routes

Trucks can access the Linden Recycle Center through two different entrances. The primary entrance is via Wildcat Way Street, which is maintained by the city of Linden and is designed to provide adequate load-bearing capacity for truck traffic. Trucks from outside facilities generally approach the facility from US Route 1 and proceed 500 feet east to reach the facility gate. Trucks will also generally exit via Wildcat Way. The second entrance is via Sylvan Street, which also stems from US Route 1.

The facility anticipates total semi-trailer, tanker, and service truck traffic to increase by less than 10% and does not anticipate changes to traffic routes.

3.3.4 Number of Employees

There are currently 74 employees at the Linden Recycle Center. It is estimated that the proposed operations will require the addition of two to five new full-time employees from the surrounding community and elsewhere.

4 Permits

The following sections list all permits that will be required for the construction and operation of the mix pits and container storage areas.

4.1 Federal

No additional federal permits are required at this time for the construction and operation of the mix pit and container storage areas.

4.2 State

Safety-Kleen must obtain the following permits from NJDEP:

• One (1) RCRA Class 3 permit modification for program interest number NJD002182897. This permit modification application was submitted on September 14, 2023. The RCRA Class 3 Permit Modification was re-submitted on December 8, 2023, and includes the Solid Waste Permit modification.



• One (1) minor source Air Pollution Control permit for program interest number 40097, and permit activity number PCP230003. The application for this permit was submitted on September 13, 2023.

The facility has ten (10) NJDEP Air Pollution Control permits for current operations on site. The proposed expansion will require an 11^{th} Air Pollution Control permit (noted above), for a slight increase of particulate, volatile organic compounds (VOC), and hazardous air pollutant (HAP) emissions. Air emissions calculations for proposed mix pit operations are included in the air permit application noted above. Air emission increases associated with mix pit operations are also discussed in *Section 7* of this impact statement. An air quality risk screening using the NJDEP Division of Air Quality's Risk Screening Worksheet found that air quality would not be negatively impacted by the proposed expansion. This screening is available as <u>Appendix F</u>.

4.3 Local

Safety-Kleen previously obtained approval for the mix pit solid waste process from Union County as a Solid Waste Management Plan amendment. Safety-Kleen must obtain all required building permits from the City of Linden, as well as post-construction approvals from the City of Linden Fire Department.

5 Local Environmental Justice and Cumulative Impact Analysis Ordinances

We have reviewed the City of Linden municipal code and there appear to be no local environmental justice or cumulative impact analysis ordinances that would affect this specific project for the Linden Recycle Center

6 Initial Screening Information

The following table compiles 26 environmental and public health stressors and identifies the magnitude of each stressor within the block group that includes the Linden Recycle Center. For each stressor, the table also lists the state and county non OBC 50th percentile magnitudes, as well as the geographic point of comparison, which is the lower of the state and county non OBC 50th percentiles. This table was obtained from the NJDEP EJMAP tool on November 30, 2023.



Block Group: 340390354001

Overburdened Community Stressor Summary Municipality: Linden City County: Union OBC Criteria: Minority

 Combined Stressor Total

 Block Group Value: Combined Stressor Total
 21

 Greatest Stressed OBC Neighbor CST Value if applicable
 NA

 County
 14

 State
 13

 Geographic Point of Comparison
 13

 Adverse Cumulative Stressors
 Higher than 50th Percentile

Concentrated Areas of Air Pollution								
Stressor	Block	County Non	State Non	Geographic	Adverse Stressor			
	Group	OBC 50th	OBC 50th	Point of				
	Value			Comparison				
Ground-Level Ozone (3-year average days above standard)	1.843	0.333	0.999	0.333	Yes			
Fine Particulate Matter (PM2.s) (3-year average days above standard)	0.333	0.333	0.333	0.333	No			
Cancer Risk from Diesel Particulate Matter (estimated cancer risk/million)	165.109	118.984	82.459	82.459	Yes			
Cancer Risk from Air Toxics Excluding Diesel Particulate Matter (estimated cancer risk/million)	50.569	44.412	37.728	37.728	Yes			
Non-Cancer Risk from Air Toxics (Combined Hazard Quotient)	3.087	2.311	1.663	1.663	Yes			

Mobile Sources of Air Pollution									
Stressor	Block Group	County Non OBC 50th	State Non OBC 50th	Geographic Point of	Adverse Stressor				
	Value			Comparison					
Traffic – Cars, Light- and Medium-Duty Trucks (Annual Average									
Daily Traffic (AADT)-mile/square mile)	108464.193	25905.961	23004.559	23004.559	Yes				
Traffic – Heavy-Duty Trucks (AADT-mile/square mile)	12616.948	175.989	417.954	175.989	Yes				
Railways (rail mile/square mile)	1.956	0.001	0.000	0.000	Yes				

Contaminated Sites									
Stressor	Block Group Value	County Non OBC 50th	State Non OBC 50th	Geographic Point of Comparison	Adverse Stressor				
Known Contaminated Sites (weighted sites/square mile)	7.419	4.375	1.401	1.401	Yes				
Soil Contamination Deed Restrictions (percent area)	10.252	0.000	0.000	0.000	Yes				
Ground Water Classification Exception Area/Currently Known Extent Restrictions (percent area)	40.372	0.000	0.000	0.000	Yes				

Transfer Stations, or Other Solid Waste Facilities, Recycling Facilities, Scrap Metal Facilities									
Stressor	Block	County Non	State Non	Geographic	Adverse Stressor				
	Group	OBC 50th	OBC 50th	Point of					
	Value			Comparison					
Solid Waste Facilities (sites/square mile)	0.422	0.000	0.000	0.000	Yes				
Scrap Metal Facilities (sites/square mile)	0.263	0.000	0.000	0.000	Yes				

Point-Sources of Water Pollution									
Stressor	Block Group Value	County Non OBC 50th	State Non OBC 50th	Geographic Point of Comparison	Adverse Stressor				
Surface Water (percent of uses impaired)	73.226	100.000	92.056	92.056	No				
Combined Sewer Overflows (count)	0.000	NA	NA	NA	No				

May Cause Potential Public Health Impacts								
Stressor	Block	County Non	State Non	Geographic	Adverse Stressor			
	Group	OBC 50th	OBC 50th	Point of				
	Value			Comparison				
Drinking Water (count of public drinking water violations or	0	NA	NA	NA	No			
exceedances, or percent of private well testing exceedances)	•		1005					
Potential Lead Exposure (percent houses older than 1950)	45.122	30.385	14.133	14.133	Yes			
Lack of Recreational Open Space (population/acre of open space	16 918	22,823	19 154	19 154	No			
within 0.25 mile)	10.010	ALCOLD .	10.104					
Lack of Tree Canopy (percent lack of tree canopy)	89.054	64.352	61.640	61.640	Yes			
Impervious Surface (percent impervious surface)	60.828	40.715	34.880	34.880	Yes			
Flooding (Urban Land Cover) (percent urban land use area	72.255	2.321	2.338	2.321	Yes			
Readed								

Density/Proximity Stressors									
Stressor	Block	County Non	State Non	Geographic	Adverse Stressor				
	Group	OBC 50th	OBC 50th	Point of					
	Value			Comparison					
Emergency Planning Sites (sites/square mile)	1.812	0.110	0.041	0.041	Yes				
Permitted Air Sites (sites/square mile)	2.800	1.480	0.792	0.792	Yes				
NJPDES Sites (sites/square mile)	0.353	0.000	0.000	0.000	Yes				

Social Determinants of Health									
Stressor	Block Group Value	County Non OBC 50th	State Non OBC 50th	Geographic Point of Comparison	Adverse Stressor				
Unemployment (percent unemployed)	11.686	4.520	3.950	3.950	Yes				
Education (percent without high school diploma)	15,695	2.633	3.282	2 633	Yes				



Data Source: Environmental Justice (EJ) Law Combined Stressor Summary for New Jersey, published 3/30/2023



7 Assessment of Impacts on Environmental and Public Health Stressors

This section provides an assessment of the estimated impacts that the proposed expansion at the Linden Recycle Center will have on each of the stressors listed in the table in *Section 6*. Current operations at this facility are already accounted for in this stressor table.

Concentrated Areas of Air Pollution

As discussed in *Section 4.2*, Safety-Kleen is applying for an air permit for air emissions associated with the proposed expansion. Expected increases in regulated air pollutants are accounted for in this permit application, which will be submitted to the Linden City Clerk's Office.

- Ground-Level Ozone (3-year average days above standard).
 - Project impacts: Volatile organic compounds (VOCs) interact with nitrous oxides (NOx) in the presence of sunlight to produce ground-level ozone. With emission controls in place, mix pit operations are expected to have the potential to emit 1.58 tons per year (tpy) of VOCs, which represents a 7.3% increase in facility-wide potential to emit for VOCs. This estimate is calculated using maximum throughput conditions and worst-case pollutant concentration and moisture content which means that the actual amount of VOC emissions associated with mix pit operations are expected to be lower than 1.58 tpy. This is supported by the fact that while potential VOC emissions for current operations are calculated to be 21.52 tpy, actual emissions in 2022 amounted to only 3.83 tons. The Linden Recycle Center monitors and reports its actual VOC emissions annually to the NJDEP. Mix pit operations are not expected to emit NOx. The facility will continue to monitor technological advances to ensure that the most effective emission control devices are being utilized to control VOC emissions. An air quality risk screening using the NJDEP Division of Air Quality's Risk Screening Worksheet found that air quality would not be negatively impacted by the proposed expansion. This screening is available as <u>Appendix F</u>. Based on the information from this screening, the facility expansion is not expected to have a significant impact on this stressor.
- Fine Particulate Matter (PM_{2.5}) (3-year average days above standard)
 - Project impacts: Mix pit operations are expected to emit fine particulate matter (PM_{2.5}), which includes particles of dust and sand that are 2.5 or fewer micrometers in diameter. However, the Linden Recycle Center will ensure that the most effective emission controls available are being used. The facility will install a baghouse filter in Container Storage Area 3, which controls over 99% of particulate matter emissions associated with mix pit operations. The following are estimates of potential fine particulate matter (PM_{2.5}) emissions from mix pit operations under maximum throughput conditions:
 - Loading stabilization material into building: 0.00014 tpy
 - loading solidification material into building: 0.0000004 tpy
 - Loading of RCRA hazardous waste material into mix pit: 0.0000019 tpy
 - Loading non-hazardous waste material into mix pit: 0.00000 tpy



- Loading of reagent for stabilization into mix pit: 0.00005 tpy
- Loading of solidification media into mix pit: 0.0000004 tpy
- Mixing of reagent or media and waste material: 0.109 tpy
- Loading stabilized waste material into trucks: 0.2174 tpy
- The total estimated sum of potential PM_{2.5} emissions from mix pit operations is 0.327 tpy after emission controls, which represents a 24% increase in the facility-wide potential to emit for all particulate matter. The potential-to-emit estimate is based on worst-case and maximum throughput conditions, which means that the level of actual emissions is expected to be lower than 0.327 tpy. This level of fine particulate matter emissions is not expected to have a significant impact on the 3-year average number of days above the United States Environmental Protection Agency's standard for PM_{2.5}, and a screening of potential emissions from mix pit operations at the Linden Recycle Center found that air quality would not be negatively impacted by the expansion. This screening is available as <u>Appendix F</u>. Potential-to-emit calculations for mix pit operations, which is available upon request. Under current conditions, this expansion is not expected to impact this stressor, as determined by the air risk screening in <u>Appendix F</u>.
- Cancer Risk from Diesel Particulate Matter (estimated cancer risk/million)
 - 0 Project impacts: Particulate matter from diesel exhaust is known to contain carcinogens, including arsenic, cadmium, and chromium. According to calculations done by the United States Department of Transportation's Bureau of Transportation Statistics, heavy-duty trucks running on diesel are estimated to emit 0.065 grams per mile of exhaust PM_{2.5} in 2020, and light-duty diesel trucks are estimated to emit 0.044 grams per mile. These estimates are included as *Appendix G*. Trucks exiting highways I-95 and U.S. Route 278 to the north of the Linden Recycle Center travel 2 miles south through the City of Linden to get to the facility. A figure showing this route from the highway to the facility is included as *Appendix H*. To calculate the effect the proposed facility expansion may have on cancer risk from diesel particulate matter, we calculated how much diesel particulate matter would be emitted from trucks taking this route through the city. While this route is not the only one that can be taken by trucks entering and exiting the facility, it serves as an example for the sake of calculating exhaust emissions that will affect this block group. The volume of heavy-duty trucks (tanker trucks, semi-trailers, vacuum trucks, and single box trucks) entering and exiting the facility is expected to increase by a maximum of 15 heavy-duty trucks per day and up to 10 light-duty trucks per day during mix pit operations. Assuming trucks drive 4 miles total through the City of Linden (round trip), maximum potential exhaust PM_{2.5} emissions from mix pit operations are expected to be 0.00157 tpy for heavy-duty trucks, and 0.00071 tpy for light-duty trucks (assuming all trucks use diesel fuel, and the facility operates 365 days per year). Safety-Kleen currently has approximately 22 heavyduty trucks and 8 light-duty trucks on average entering and exiting the facility daily. Of that number approximately 6-10 heavy-duty trucks will be utilized for mix pit operations. As such, fleet size (and therefore diesel particulate matter emissions) are not expected to immediately increase by the amounts noted above. However, Safety-Kleen is including the provision for additional truck usage in its RCRA permit modification to



account for the potential of their customer base increasing in the future. To mitigate its effect on cancer risk from diesel particulate matter, the Linden Recycle Center will take measures to mitigate the amount of diesel particulate matter emissions associated with its operations, including using ultra-low sulfur diesel (ULSD) in all diesel-fueled fleet vehicles, and minimizing idling times. Safety-Kleen's diesel dispensing operation utilizes ULSD to comply with all applicable state and federal regulations for diesel fuel purchase, storage, and use. Trucks associated with mix pit operations will primarily be ones owned and operated by Safety-Kleen, and therefore are subject to the company's diesel dispensing operations. Based on the information above, the proposed expansion is not expected to have a significant impact on this stressor.

- Cancer Risk from Air Toxics Excluding Diesel Particulate Matter (estimated cancer risk/million)
 - Project impacts: Hazardous air pollutants (HAPs) are expected to be emitted when waste material is being mixed within the mix pit, and a trace amount of hazardous air pollutants are expected to be emitted when hazardous waste is being loaded into the mix pit. The hazardous air pollutants expected to be emitted from mix pit operations include ones that have been classified as known carcinogens, such as PCBs, arsenic, nickel, benzene, cadmium, and toluene. Based on potential-to-emit calculation in the facility's Mix Pit Air Permit application, mix pit operations have the potential to emit up to 1.58 tpy of hazardous air pollutants with emission controls. This estimate is based on the potential to emit 1.58 tpy of VOCs, which could include as a worst-case scenario 0.001 tpy of polychlorinated biphenyls (PCBs), 1.58 tpy of methylene chloride, and 0.009 tpy of tetrachloroethylene. As noted above, this represents a 7.3% increase in facility-wide potential to emit for VOCs. The facility monitors and reports annual emissions for benzene and cadmium, which amounted to a total of 0.0049 tons in 2022. The loading and mixing of waste in mix pits is controlled by the baghouse filter and carbon absorption bed, as discussed in Section 3.3.2, and the Linden Recycle Center will continue to monitor technological advances in emission control technology. An air quality risk screening using the NJDEP Division of Air Quality's Risk Screening Worksheet was conducted as part of the application process for the additional minor source air permit required for the proposed expansion. This screening indicated that there would be no air quality impacts associated with this project. The screening worksheet is included as <u>Appendix F</u>. Potential-to-emit calculations are included in the facility's Mix Pit Air Permit application, which is discussed in Section 4.2. Under current conditions, the proposed expansion is not expected to have a significant impact on this stressor, as determined by the air risk screening in <u>Appendix F</u>.
- Non-Cancer Risk from Air Toxics (combined Hazard Quotient)
 - Project impacts: As discussed in the previous section, mix pit operations are expected to emit toxic air pollutants, which have been classified by the United States Environmental Protection Agency as being known to cause cancer or other serious health impacts. The increased hazardous air pollutant emissions associated with mix pit operations will be minimal, and a risk screening for air quality indicated that there would be no significant air quality impacts associated with this expansion. The Linden Recycle Center will take measures to minimize the non-cancer risk from air toxics by utilizing state-of-the-art emission control equipment and performing mix pit operations within an enclosed building. Under current conditions, the proposed expansion is not



expected to have a significant impact on this stressor, as determined by the air risk screening in <u>Appendix F</u>.

Mobile Sources of Air Pollution

- Traffic Cars. Light- and Medium-Duty Trucks (Annual Average Daily Traffic (AADT)mile/square mile)
 - Project impacts: Operation of the mix pits and hazardous waste container storage areas is estimated to cause a maximum increase in car and light-and medium-duty truck traffic of 5 to 10 vehicles per day, which will not have a significant impact on the current AADT-mile per square mile of 108,464 in this block group (as noted in the table in *Section 6*). The Linden Recycle Center will continue to minimize unnecessary traffic entering and exiting the facility, and the proposed expansion is not expected to have a significant impact on this stressor under current conditions.
- Traffic Heavy-Duty Trucks (AADT-mile/square mile)
 - Project impacts: Operation of the mix pits and hazardous waste container storage areas is estimated to cause a maximum increase in heavy-duty truck traffic of 10 to 15 trucks per day, which will not have a significant impact on the current AADT-mile per square mile of 12,617 in this block group (as noted in the table in Section 6)... However, because the facility is adding the capability to store and treat hazardous waste, trucks transporting this waste will no longer have to make an additional trip to a third-party waste processing facility in Kearny, over 13 miles away from the Linden Recycle Center. Trucks currently drive from the Linden Recycle Center to pick up wastes from a customer, transport the wastes to the third-party processing facility, and return to the Linden facility. With the proposed expansion, trucks will only travel between the Linden facility and the customer, and between the Linden facility and a solid waste landfill to deposit treated, non-hazardous waste. While total mileage depends on the location of the customer, the proposed expansion has the potential to decrease the number of miles traveled by heavy-duty trucks, especially in surrounding communities. The Linden Recycle Center will continue to minimize unnecessary heavy-duty truck traffic entering and exiting the facility. The use of the Linden facility's rail transportation capability for offsite shipping of wastewater and treated solid wastes generated by mix pit operations is a potential transportation alternative. If rail capabilities are used the facility anticipates an increase in 1 rail car/day with an approximate reduction of 4-6 trucks/day. Based on the information above, the proposed expansion is not expected to have a significant impact on this stressor in this block group, and may decrease the magnitude of this stressor in surrounding communities.
- Railways (rail mile/square mile)
 - Project impacts: Under current conditions, this facility is not expected to increase the number of rail miles per square mile in this block group, as no additional railways will be constructed for the purpose of this expansion.



Contaminated Sites

- Known Contaminated Sites (weighted sites/square mile)
 - Project impacts: The Linden Recycle Center is a known contaminated site and will continue to operate as a permitted hazardous waste management facility. As a result, the planned facility expansion will not increase the number of known contaminated sites per square mile in this block group. Sixty-five groundwater monitoring wells exist both on-and off-site, as well as a site-wide groundwater pump-and-treat (GWP&T) system to contain and mitigate groundwater impacts. Groundwater flow modeling results have indicated that the GWP&T system is effectively capturing groundwater impacts and containing migration of such impacts. Under current conditions, the proposed facility expansion is not expected to increase this stressor, as no additional known contaminated sites will be created because of this project.
- Soil Contamination Deed Restrictions (percent area)
 - Project impacts: There are no soil contamination deed restrictions associated with the current or planned operations at the Linden Recycle Center. As such, the facility is not expected to impact this stressor under current conditions.
- Ground Water Classification Exception Area/Currently Known Extent Restrictions (percent area)
 - Project impacts: There is no ground water Classification Exception Area associated with the current or planned operations at the Linden Recycle Center. The facility will continue to perform groundwater monitoring and operate the GWP&T system, which has successfully removed over 30,000 pounds of VOCs since the year 2004. Under current conditions, this project is not expected to impact this stressor.

Transfer Stations, or Other Solid Waste Facilities, Recycling Facilities, Scrap Metal Facilities

- Solid Waste Facilities (sites/square mile)
 - Project impacts: The Linden Recycle Center currently operates as a solid waste facility. The facility possesses a hazardous waste permit, which contains a provision for handling solid waste. This solid waste permit will be modified for the purpose of the facility expansion to include processing of up to 99 tons of solid waste per day. The expansion will occur within the facility's existing footprint; no additional solid waste facilities will be created because of this project. As such, the facility is not expected to impact this stressor under current conditions.
- Scrap Metal Facilities (sites/square mile)
 - Project impacts: The Linden Recycle Center is not a scrap metal facility and will not begin handling scrap metal as a result of the planned facility expansion. As such, the facility is not expected to impact this stressor under current conditions.

Point-Sources of Water Pollution

- Surface Water (percent of uses impaired)
 - Project impacts: There is no point-source discharge to surface water associated with the current or planned operations at this facility. Stormwater discharged under the existing



General Industrial Stormwater Permit will not be impacted by this expansion. As such, the facility is not expected to impact this stressor under current conditions.

- Combined Sewer Overflows (count)
 - Project impacts: The facility expansion is not expected to increase the occurrence of combined sewer overflows. All current and proposed sewer outflows at the Linden Recycle Center discharge directly to the Linden Roselle Sewerage Authority (LRSA). While the facility is permitted to discharge wastewater directly to the LRSA, any wastewater generated by onsite mix pit operations for stabilization and solidification of hazardous and non-hazardous waste will be shipped offsite for treatment/disposal at properly permitted facilities. As such, the facility is not expected to impact this stressor under current conditions.

May Cause Potential Public Health Impacts

- Drinking Water (count of public drinking water violations or exceedances, or percent of private well testing exceedances)
 - Project impacts: The proposed facility expansion is not expected to cause any public drinking water or private well testing violations or exceedances. As noted in previous sections, the Linden Recycle Center will continue to monitor and control groundwater contamination and will not discharge to surface waters. As such, the facility is not expected to impact this stressor under current conditions.
- Potential Lead Exposure (percent houses older than 1950):
 - Project impacts: The proposed facility expansion will not have any impact on the number of houses built before 1950 within this block group. No lead paint will be used during the construction or operation of this project. As such, the facility is not expected to impact this stressor under current conditions.
- Lack of Recreational Open Space (population/acre of open space within 0.25 miles)
 - Project impacts: The proposed facility expansion will not have any negative impact on the amount of recreational open space within this block group, or within the City of Linden. As such, the facility is not expected to impact this stressor under current conditions.
- Lack of Tree Canopy (percent lack of tree canopy)
 - Project impacts: No trees will be removed because of this proposed facility expansion. As such, the facility is not expected to impact this stressor under current conditions.
- Impervious Surface (percent impervious surface)
 - Project impacts: The facility is not expected to impact this stressor under current conditions, as the amount of impervious surface at the Linden Recycle Center will not increase because of the proposed expansion.
- Flooding (Urban Land Cover) (percent urban land use area flooded)
 - Project impacts: The proposed facility expansion will not increase the percentage of urban land use area that is flooded. The Linden Recycle Center is not located on a floodplain, and typically does not flood during heavy rain events. The proposed expansion and operations will not cause changes to the existing urban land cover, and therefore is not expected to impact this stressor under current conditions.



Density/Proximity Stressors:

- Emergency Planning Sites (sites/square mile)
 - Project impacts: The Linden Recycle Center is not currently classified as an Emergency Planning site, and the proposed expansion is not expected to cause a change to this classification. As such, the facility is not expected to impact this stressor under current conditions.
- Permitted Air Sites (sites/square mile)
 - Project impacts: The Linden Recycle Center is already classified as a permitted air site. Therefore, the proposed expansion will not have an impact on the number of permitted air sites per square mile in this block group. The facility has ten (10) NJDEP Air Pollution Control permits for current operations on site. The proposed expansion will require an 11th Air Pollution Control permit, with a slight increase of particulate, volatile organic compounds (VOC), and hazardous air pollutants (HAPs). A risk screening for air quality for long term carcinogenic and non-carcinogenic affects was conducted as part of the application process, which indicated that air quality impacts associated with this project would be negligible. The NJDEP screening worksheet is available as <u>Appendix F</u>. Under current conditions, the facility expansion is not expected to impact this stressor.
- NJPDES Sites (sites/square mile)
 - Project impacts: The proposed facility expansion does not require an additional NJPDES permit. The Linden Recycle center currently maintains a NJPDES Multi-Sector General Stormwater Permit. The facility continues to monitor and control groundwater contamination and does not discharge to surface waters. As such, the facility is not expected to impact this stressor under current conditions.

Social Determinants of Health

- Unemployment (percent unemployed)
 - Project impacts: The proposed facility expansion will require that the Linden Recycle Center hires two to five additional full-time employees, which may decrease the number of unemployed individuals within this block group. These employment opportunities will be recruited for locally in efforts to reduce unemployment stress within this block group. As such, the proposed facility expansion has the potential to decrease the magnitude of this stressor within this overburdened community.
- Education (percent without high school diploma)
 - Project impacts: The proposed expansion is not expected to have an impact on the percentage of individuals without high school diplomas in this block group. As such, the facility is not expected to impact this stressor under current conditions.



8 Public Participation Plans

Upon authorization from NJDEP to proceed with the public participation process, Safety-Kleen personnel will design and carry out a public engagement procedure that complies with the requirements set forth in N.J.A.C. 7:1C Subchapter 4. All forms of public notification, as well as the public hearing presentation, will be translated into Spanish. A Spanish translator will also be present at the public information hearing. Upon completion of the public notification requirements detailed below, there will be a period of at least 60 days before the public information hearing is held. There will also be a public comment period of at least 60 days, which will extend at least 30 days after the public hearing. The start and end date of the public comment period is pending authorization from the NJDEP and will be included on all public notice documents.

To complete public notification requirements, Safety-Kleen personnel will:

- i. Provide a copy of this EJIS and all permit applications discussed in *Section 4.2* to the Linden City Clerk's office located at 301 North Wood Avenue in Linden, New Jersey.
- ii. Publish notice of the public hearing in the following local newspapers:
 - a. English language: Star Ledger (1 Gateway Ctr, Newark, NJ 07102, (888) 782-7533)
 - b. Spanish language: Reporte Hispano (42 Doran Ave, Princeton, New Jersey 08540, (609) 924-5392).
- Provide notice of the hearing to NJDEP, the Linden City Clerk's office, Mayor Derek Armstead, City Council President Michele Yamakaitis, 6th Ward Councilman John Francis Roman, and 7th Ward Councilman Ralph Strano.
- Provide notice of the hearing through certified mail to all persons owning or residing on land within 200 feet of the facility. There are no residences within 200 feet of the Linden Recycle Center, but notice will be provided to the following entities which reside on land within 200 feet of the facility: T-Mobile, Zenith Roofing, CheckOutStore, and Pro Plastics.
- v. Post two signs (one in English and one in Spanish) in legible condition on the site of the facility until the public comment period is concluded that advises the public of the public hearing and the opportunity for public comment. Such signs will be located in a prominent location(s) viewable by the public and contain sufficient detail in a language or language representative of the residents of the overburdened community as to inform of the application, and the method by which the public may obtain information about such proposed application. The proposed sign in English is included as <u>Appendix I</u>.
- vi. Provide notice through other methods identified by the applicant to ensure direct and adequate notice to individuals in the overburdened community (e.g., providing information directly to active community groups or organizations, automated phone, voice, or electronic notice, flyers, and/or utilization of other publications utilized within the overburdened community).
- vii. Inviting NJDEP, the Linden City Clerk's office, Mayor Derek Armstead, City Council President Michele Yamakaitis, 6th Ward Councilman John Francis Roman, 7th Ward



Councilman Ralph Strano, and New Jersey Environmental Justice Alliance to participate in the public hearing.

Following the completion of the items listed above, Safety-Kleen personnel will provide the following to the NJDEP:

- i. Proof of publication of the notice of public hearing in both newspapers named above.
- ii. A dated copy of the notice published in both newspapers named above.
- iii. Copies of and mailing receipts for written notices.
- iv. Photos providing proof of the posting and maintenance two signs on site at the facility.

A written public notice example for the proposed facility expansion is included as <u>Appendix J</u>. This notice will also be translated into Spanish.

This notice will include the information required by N.J.A.C. 7:1C-4.1(b), including:

- i. The name of the applicant and the date, time, and location of the hearing, as well as a link to register for the virtual component (information about hearing is pending authorization from the NJDEP).
- ii. A description of the proposed expansion.
- iii. A map indicating the location and street address of the facility, tax map block and lot, and the size of the property.
- iv. A summary of the EJIS and information on how one may review a copy of the complete EJIS.
- v. An invitation to participate in the public hearing and notification of the public comment period, which will be at least 60 days and extend no less than 30 days after the public hearing, and an invitation to email facility general manager Bill Greenlaw at greenlaw.william@cleanharbors.com with written comments.
- vi. Any other information deemed appropriate by the NJDEP.

All public participation documents will also be translated into Spanish and will include a link to register for the online component of the public hearing.

Safety-Kleen personnel will schedule the public hearing as follows:

- i. The proposed hearing location is the Linden Free Public Library, 31 East Henry Street, Linden, NJ 07036.
- The hearing will be conducted on a weekday no earlier than 6:00 P.M. Eastern Standard Time/Eastern Daylight Time. Exact date and time of the public hearing is pending authorization from the NJDEP to proceed with the public participation process.



At the public hearing, Safety-Kleen personnel will provide a clear, accurate, and complete presentation of the information contained in this EJIS and will accept written and oral comments from any interested parties. Safety-Kleen will also adhere to public hearing best practices set forth by the NJDEP by including a Spanish translation in all presentations and including a virtual component. This hearing will be recorded and transcribed.

The public comment period will begin upon completion of the notification requirements listed above, and will remain open at least 30 days following the public hearing. After the close of the public comment process, Safety-Kleen personnel will:

- i. Provide a written transcription of the public hearing,
- ii. Provide a summary of the public comments and associated responses made at the public hearing, and a copy of the comments provided in writing during the public comment period along with responses made by Safety-Kleen personnel.

9 Avoidance of Disproportionate Impacts

Consistent with current operations, the Linden Recycle Center will be taking measures to minimize disproportionate impacts to the surrounding community. The site has been in operation for 81 years and has a positive sustainability measure for conserving non-renewable resources with their recycling of hazardous and non-hazardous wastes. The proposed expansion will take place within the facility's existing footprint with proper air pollution control devices. Traffic entering and exiting the facility is expected to have a minimal increase of 7 to 15 total vehicles per day, which would have a negligible impact on the average annual daily traffic in this block group and in Linden. Traffic routes and hours of operation are not expected to change because of this project. While a minor increase in air pollution is expected, an air quality risk screening using the NJDEP Division of Air Quality's Risk Screening Worksheet indicated that impacts to air quality would be negligible. The NJDEP screening worksheet is available as <u>Appendix F</u>. The Linden Recycle Center plans to hire two to five additional full-time employees as part of this expansion and will recruit for these opportunities locally and elsewhere in an effort to reduce unemployment levels in the surrounding community.



Appendix A

Locus Map containing Linden Recycle Center





Appendix B

Locus Map showing One-Mile Radius Around Site



Map created on October 26, 2023



Appendix C

Facility Site Map





Appendix D

Mix Pit Construction Schedule

Construction Schedule Mix Pit Structure Safety-Kleen Linden, NJ

	Duration	
Task	(weeks)	
City of Linden Bldg Permit	10	
Mobilization	2	
Site Work	3	
Footings, Foundations & Slabs	5	
Mix Pit Steel Liner	2	
Pre-engineered Metal Building Erection	6	
Electrical & Lighting	4	
Doors & Overhead Doors	1	
Bag Filter & Carbon Absorber	4	
Final Paving	1	
Start-up & Commissioning	2	
Punch List Items	1	
Final Inspections & Certification	2	
Total Weeks	43	



Appendix E

Mix Pit Simplified Process Flow Diagram





BATCH CONTAINERS FROM BULK & VARIOUS INDUSTRIAL & COMMERCIAL GENERATORS

> С RE∨ISE NDT В REVISE NOT Α NEW ISSUE DESCRIPTI ND.



GENERAL NOTES

WASTE COMES FROM UTILITY MANHOLE CLEANOUTS, OIL/WATER SEPARATOR CLEANOUTS, MAINTENANCE GARAGE TRENCH CLEANINGS, ETC.

*NOTE: PAPER PULP, WOOD FLOUR, DIAPER RESIDUALS, SWELL-GEL, PORTLAND CEMENT, KILN DUST, FLY ASH, LIME, FERROUS SULFATE, SAW DUST ETC.

PROPRIETARY STATEMENT

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					TITLE					
					MIX PIT process flow diagram					
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TES	JEK	DDP	DDP	082620	PHOP	ONGWATER	R DR. NOF 92-5000	WELL, MA. 0200	51	
E	JEK	DDP	DDP	041620	SCALE 1/8" = 1'-0"	BY JEK	CHKD DDP	P.E. APPR DDP	DP. APPR DDP	DATE 4/6/20
[ON	BY	СНК	APPR	DATE	STANDARD BRANCH LOCATION STD-DWG-RE				STD-DWG-REV	′ ND.
REVISIONS					LINDEN, N.J.				M-100	



Appendix F

NJDEP Division of Air Quality Risk Screening Worksheet



79		615054	Diaminoanisole (2,4-)			6.6E-06										
80	*	124481	Dibromochloromethane			2.7E-05			0.2	-						
82		764410	Dichloro-2-butene (1,4-)			4.2E-03			0.2							
83		95501	Dichlorobenzene (1,2-)			1 45 05			200							
84	*	91941	Dichlorobenzene (1,4-) Dichlorobenzidine (3,3'-)			1.1E-05 3.4E-04			800							
86		75718	Dichlorodifluoromethane						100							
87 88	*	111444 542756	Dichloroethyl ether Dichloropropene (1 3-)			3.3E-04 4.0E-06			20							
89	*	62737	Dichlorvos			8.3E-05			0.5							
90		77736	Dicyclopentadiene			4.65.02			0.3							
91		60571	Diesel particulate matter			4.6E-03 3.0E-04			5							
93	*	111422	Diethanolamine						3							
94 95		112345	Diethylene glycol monobutyl ether Difluoroethane (1.1-)						40000							
96	*	77781	Dimethyl sulfate			4.0E-03			10000							
97	*	60117	Dimethylaminoazobenzene (4-)			1.3E-03										
99	*	68122	Dimethylformamide (N,N-)			3.7E-05			30							
100	*	57147	Dimethylhydrazine (1,1-)			1 (5 01			0.002							
101	*	121142	Dinitrotoluene (2,4-)			1.6E-01 8.9E-05										
103	*	123911	Dioxane (1,4-)			5.0E-06			30					3000		
104	*	122667	Dioxin Diphenylhydrazine (1.2-)			2.2F-04			See foo	tnote "a"						
106	*	106898	Epichlorohydrin			1.2E-06			1					1300		
107	*	106887	Epoxybutane (1,2-) Ethyd acndato						20							
100	*	140885	Ethylbenzene			2.5E-06			0					1000		
110	*	51796	Ethyl carbamate			2.9E-04								10000		
111 112	*	/5003 106934	Ethylene dibromide			6.0E-04			0.8					10000		
113	*	107062	Ethylene dichloride			2.6E-05			400	a			10			
114	*	107211	Ethylene glycol Ethylene glycol monobutyl ether	1.6E+00	1.5E+01				400 87	3.7E-02	Negl.	2.7E+00	1945.833	4700		
116	**	110805	Ethylene glycol monoethyl ether						200					370		
117	**	111159	Ethylene glycol monoethyl ether acetate						300					140		
118	**	110496	Ethylene glycol monomethyl ether acetate						20					93		
120	*	75218	Ethylene oxide			5.0E-03			30					42		
121	*	96457 151564	Ethylene thiourea Ethyleneimine			1.3E-05 1.9E-02										
123	*	75343	Ethylidene dichloride			1.6E-06			500							
124	*	16984488	Fluoride			1 25-05			13					55		
125		98011	Furfural			1.52-05			50					55		
127		111200	Gasoline vapors			1.0E-06			15							
128		765344	Glycidaldehyde						0.08					4.1		
130	*	76448	Heptachlor			1.3E-03										
131	*	10245/3	Heptachlor epoxide Hexachlorobenzene			2.6E-03 4.6E-04					-					
133	*	87683	Hexachlorobutadiene			2.2E-05										
134	**	319846	Hexachlorocyclohexane (alpha-) Hexachlorocyclohexane (beta-)			1.8E-03 5 3E-04										
136	*	58899	Hexachlorocyclohexane (gamma-)			3.1E-04										
137	**	608731	Hexachlorocyclohexane (technical grade)			5.1E-04			0.2							
130		19408743	Hexachlorodibenzo-p-dioxin, mixture			1.3E+00			0.2							
140	*	67721	Hexachloroethane			1.1E-05			30							
141	*	110543	Hexamethylene dilsocyanate Hexane (N-)						700					0.3		
143	*	302012	Hydrazine			4.9E-03			0.2					10		
144	*	10034932	Hydrazine sulfate Hydrogen chloride			4.9E-03			20					2100		
146	**	74908	Hydrogen cyanide						0.8					340		
147	*	7664393	Hydrogen fluoride						14					240		
140		7783064	Hydrogen sulfide						2					98		
150	*	78591	Isophorone						2000					2200		
151	*	67630	Lead	4.0E-04	3.7E-03	1.2E-05	4.5E-08	Negi.				3.4E-04	0.098012	3200	9.8E-01	Negl.
153	*	108316	Maleic anhydride						0.7							
154	*		Manganese Mercury (elemental)						0.05					0.17		
156	*	7439976	Mercury (inorganic)						0.03					0.6		
157	*	126987	Methanol	1.6E+00	1.5E+01				0.7 4000	3.7F-03	Neal	2 7E+00	1945 822	28000	6.9F-02	Neal
159	*	74839	Methyl bromide	1.02100					5		gı.	2.7 2 100		31000		
160	*	74873	Methyl chloroform			1.8E-06			90		-			0000		
161		78933	Methyl ethyl ketone	1.6E+00	1.5E+01				5000	2.9E-03	Negl.	2.7E+00	1945.833	13000	1.5E-01	Negl.
163	*	108101	Methyl isobutyl ketone	1.6E+00	1.5E+01							2.7E+00	778.3333	3000	2.6E-01	Negl.
164 165	*	624839 80626	Methyl methacrylate						1 700							
166		25013154	Methyl styrene (mixed isomers)						40							
167 168	*	1634044	Methyl tert butyl ether Methylcyclohexane			2.6E-07			3000							
169	*	101144	Methylene bis(2-chloroaniline) (4,4'-)			4.3E-04			5000							
170	*	75092	Methylene chloride	1.6E+00	1.5E+01	1.3E-08	1.9E-07	Negl.	600	2.4E-02	Negl.	2.7E+00	1945.833	14000	1.4E-01	Negl.
171	*	101779	Methylenediphenyl diisocyanate (4,4'-)			4.oE-04			20					12		
173	*	60344	Methylhydrazine			1.0E-03			0.02							
174	*	90948	Mineral fibers (<1% free silica)			2.5E-04			24							
176	*	91203	Naphthalene			3.4E-05			3							
177	*	1313001	Nickel and compounds Nickel oxide	2.0E-04	1.9E-03	4.8E-04	8.9E-07	Negl.	0.014	1.3E-01	Negi.	1.7E-04	0.123957	0.2	6.2E-01	Negl.
179	**	1313991	Nickel refinery dust			2.4E-04			0.02							
180	**	10005700	Nickel, soluble salts			4 05 04			0.2							
181	-*	12035722 7697372	Nitric acid			4.8E-04								86		
183	*	88744	Nitroaniline (o-)						0.05							
184 185	*	98953 79469	Nitropenzene Nitropropane (2-)			4.0E-05 2.7F-03			9 20							
186		55185	Nitrosodiethylamine (N-)			4.3E-02										
187	*	62759	Nitrosodimethylamine (N-)			1.4E-02										
189		621647	Nitrosodi-n-propylamine (N-)			2.0E-03										
190		86306	Nitrosodiphenylamine (N-)			2.6E-06					_					
. 171		100102				0.35-00										

102	r	10505056	Nitrosomethylethylamine (N-)			6 3E-03			1		r					
102	*	E0902	Nitrosomernholino (NL)			1.0E-03	-									
195		39092				1.92-03										
194		/59/39	Nitroso-n-etnylurea (N-)			7.7E-03										
195	Ŧ	684935	Nitroso-n-methylurea (N-)			3.4E-02										
196		100754	Nitrosopiperidine (N-)			2.7E-03										
197		930552	Nitrosopyrrolidine (N-)			6.1E-04										
198	*	87865	Pentachlorophenol			5.1E-06										
199	*	108952	Phenol	1.6E+00	1.5E+01				200	7.3E-02	Negi.	2.7E+00	1945.833	5800	3.4E-01	Negl.
200	*	75445	Phosgene						0.3					4		
201	*	7803512	Phosphine						0.3					70		
202	*	7664382	Phosphoric acid						10							
203	*		Phosphorus (white)						0.07							
204	*	85449	Phthalic anhydride						20							
205	*	1336363	Polychlorinated biphenyls (PCBs)	1.0E-03	9.3F-03	1.0F-04	9.3E-07	Neal.				1.2E-01	84,75185			
206	*		Polycylic aromatic hydrocarbons (PAHs)				0.02 0.									
207	*		Polycylic organic matter (POM)	-					See foo	otnote "b"						
207		7750012	Potaccium bromato	-		1 4E-04		1	r							
200	*	1120714	Propago cultono (1.2-)			1.4L-04 6.0E-04										
209	*	1120/14	Proparle suitorie (1,5-)			0.92-04										
210	- -	5/5/8	Propiolactone (beta-)			4.0E-03										
211	*	123386	Propiorialdenyde						8							
212		115071	Propylene						3000							
213	*	78875	Propylene dichloride			1.0E-05			4							
214		107982	Propylene glycol monomethyl ether						2000							
215	*	75569	Propylene oxide			3.7E-06			30					3100		
216	**		Selenium and compounds	4.0E-04	3.7E-03				20	1.9E-04	Negl.	3.4E-04	0.247193			
217		7631869	Silica (crystalline, respirable)						3							
218		1310732	Sodium hydroxide											8		
219	*	100425	Styrene			5.7E-07			1000					21000		
220	*	96093	Styrene oxide			4.6E-05										
221			Sulfates											120		
222		7664939	Sulfuric acid						1					120		
222	***	2600708	Sulfund fluoride						150					4170		
223	*	17/6016	Totrachlorodihonzo(n)diovin (2.2.7.9-)			2 9E+01	-		0.00004					11/0		
224		620206	Tetrachloroothano (1,1,1,2,)			7 45 06			0.00004							
225	*	030200	Tetrachioroethane (1,1,2,2)			7.4E-06										
226	- T	/9345	Tetrachioroethane (1,1,2,2-)	1 05 00	0.05.00	5.8E-05			10					10		
227	*	12/184	letrachioroethylene	1.0E-02	9.3E-02	6.1E-06	5./E-0/	Negl.	40	2.3E-03	Negl.	1.6E-02	4.612346	40	1.2E-01	Negl.
228		811972	Tetrafluoroethane (1,1,1,2-)						80000							
229		109999	Tetrahydrofuran						2000							
230		62555	Thioacetamide			1.7E-03										
231	*	7550450	Titanium tetrachloride						0.1							
232	*	108883	Toluene	1.6E+00	1.5E+01				420	3.5E-02	Negl.	2.7E+00	1945.833	5000	3.9E-01	Negi.
233	*	584849	Toluene diisocyanate (2,4-)			1.1E-05			0.02					0.07		
234	*	26471625	Toluene diisocyanate (2,4-/2,6-)			1.1E-05			0.02					0.07		
235	*	91087	Toluene diisocyanate (2,6-)			1.1E-05			0.02					0.07		
236	*	95807	Toluene-2,4-diamine			1.1E-03			1							
237	*	95534	Toluidine (o-)			5,1F-05			t							-
238	*	8001352	Toxaphene			3,2F-04			t							-
239		76131	Trichloro-1.2.2-trifluoroethane (1.1.2-)			5.22.01			30000							
240	*	120821	Trichlorobenzene (1 2 4-)						20000							
241	*	70005	Trichloroethane (1 1 2-)			1 65-05								200		
242	*	70016	Trichloroethylene	3 2E.02	2 0F-02	1.00-00	1 4F-07	Negi	2	1 5E-02	Nog	5 0E-02	1 441350	200	7 2E-01	Nogl
242		79010	Trichlorofluoromothano	J.2L-03	2.5L-02	7.02-00	1.46-07	weyl.	700	1.51-02	negi.	3.02-03	1.11100	2	7.22-01	Negi.
243	*	/5694	Trichlerenhonel (2.4.6.)			3 15 00		<u> </u>	/00							
244	*	88062	Trictionophenol (2,4,6-)			3.1E-06								2000	L	
245	*	121448	Trietnylamine						7	ļ				2800		
246	*	1582098	Irifluralin			2.2E-06			L							
247		526738	I rimethyibenzene (1,2,3-)						60							
248		95636	Trimethylbenzene (1,2,4-)						60							
249		108678	Trimethylbenzene (1,3,5-)						60							
250		25551137	Trimethylbenzene (1,2,3-/1,2,4-/1,3,5-)						60							
251		7440622	Vanadium						0.1					0.8		
252		1314621	Vanadium pentoxide											30		
253	*	108054	Vinyl acetate						200							
254	*	593602	Vinyl bromide			3.2E-05			3							
255	*	75014	Vinyl chloride			8.8F-06			100					180000		
256	*	75354	Vinvlidene chloride						200							
									100	1 55 01	Negl	2 75 100	104E 022	22000	0 0E 03	Nogl
257	*		Xylene (m-,o-,p-, or mixed isomers)	1.6E+00	1.5E+01				100	1.36-01	negi.	2.76+00	1940.000	22000	0.05-02	negi.

If any calculated long-term or short-term effects for an air toxic result in "Further Evaluation Required" (FER) on this Risk Screening Worksheet, a Refined Risk Assessment is required for that air toxic.

NOTE:

** ***

Clean Air Act hazardous air pollutant Clean Air Act hazardous air pollutant, but not listed individually (part of a group) In addition to the Federally listed HAPs, the Department proposes to regulate hydrogen sulfide (H2S), 1-Bromopropane (1-BP), otherwise known as n-propyl bromide (n-PB), and sulfuryl fluoride, as State-specific hazardous air pollutants

Dioxins may be considered to be all 2,3,7,8-tetrachlorodibenzo(p)dioxin), or separated into congeners (contact AQEv). PAH or POM may be considered to be all benzo(a)pyrene, or separated into individual PAHs (contact AQEv). a b

The results are determined by comparing the long-term and short-term effects to the single-source thresholds, listed below. The threshold value of negligible risk for incremental risk (IR) is 1 in a million (1.0E-06). An IR value less than or equal to 1 in million is considered negligible. The threshold value of negligible risk for long-term hazard quotient (HQ) for non-carcinogenic risk is 1.0. An HQ less than or equal to 1.0 is considered negligible. The threshold value of negligible risk for short-term hazard quotient (HQ) for non-carcinogenic risk is 1.0. An HQ less than or equal to 1.0 is considered negligible.



Appendix G

U.S. Department of Transportation Estimated National Average Vehicle Emissions

Ubbol Ubbol <th< th=""><th></th><th>(R) 2000</th><th>(R) 2001</th><th>(R) 2002</th><th>(R) 2003</th><th>(R) 2004</th><th>(R) 2005</th><th>(R) 2006</th><th>(R) 2007</th><th>(R) 2008</th><th>(R) 2009</th><th>(R) 2010</th><th>(R) 2011</th><th>(R) 2012</th><th>(R) 2013</th><th>(R) 2014</th><th>(R) 2015</th><th>(R) 2016</th><th>(R) 2017</th><th>(R) 2018</th><th>2019</th><th>2020</th><th>(P) 2021</th><th>(P) 2022</th><th>(P) 2023</th><th>(P) 2024</th><th>(P) 2025</th><th>(P) 2026</th><th>(P) 2027</th><th>(P) 2028</th><th>(P) 2029</th><th>(P) 2030</th></th<>		(R) 2000	(R) 2001	(R) 2002	(R) 2003	(R) 2004	(R) 2005	(R) 2006	(R) 2007	(R) 2008	(R) 2009	(R) 2010	(R) 2011	(R) 2012	(R) 2013	(R) 2014	(R) 2015	(R) 2016	(R) 2017	(R) 2018	2019	2020	(P) 2021	(P) 2022	(P) 2023	(P) 2024	(P) 2025	(P) 2026	(P) 2027	(P) 2028	(P) 2029	(P) 2030
	GASOLINE																															
	Light-duty vehicles																															
Lend M M M M	Total HC	1.953	1.861	1.711	1.603	1.445	1.297	1.187	1.080	1.009	0.935	0.851	0.755	0.591	0.529	0.482	0.433	0.388	0.354	0.328	0.302	0.280	0.263	0.251	0.241	0.228	0.218	0.195	0.187	0.175	0.166	0.159
	Exhaust CO	20.360	19.275	17.597	16.411	14.852	13.456	12.464	11.334	10.545	9.848	9.280	8.441	7.070	6.533	6.212	5.763	5.224	4.875	4.646	4.396	4.152	3.956	3.812	3.664	3.534	3.359	3.171	3.005	2.845	2.668	2.508
Parter Parter Parter Parter Parter Parter Parter Parter Parter Parter Parter Parter Parter Parter Parter Parter <th< td=""><td>Exhaust NOx</td><td>2.173</td><td>2.086</td><td>1.971</td><td>1.870</td><td>1.668</td><td>1.475</td><td>1.350</td><td>1.200</td><td>1.133</td><td>1.048</td><td>0.951</td><td>0.828</td><td>0.630</td><td>0.562</td><td>0.479</td><td>0.401</td><td>0.343</td><td>0.290</td><td>0.256</td><td>0.215</td><td>0.192</td><td>0.173</td><td>0.157</td><td>0.143</td><td>0.117</td><td>0.103</td><td>0.088</td><td>0.081</td><td>0.070</td><td>0.063</td><td>0.054</td></th<>	Exhaust NOx	2.173	2.086	1.971	1.870	1.668	1.475	1.350	1.200	1.133	1.048	0.951	0.828	0.630	0.562	0.479	0.401	0.343	0.290	0.256	0.215	0.192	0.173	0.157	0.143	0.117	0.103	0.088	0.081	0.070	0.063	0.054
near near near near ne	Exhaust PM2.5	0.022	0.022	0.020	0.019	0.017	0.016	0.015	0.014	0.013	0.012	0.011	0.010	0.008	0.007	0.006	0.006	0.005	0.005	0.005	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
Theorem Colu Colu Colu Colu <th< td=""><td>Brakewear PM2.5</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td><td>0.003</td></th<>	Brakewear PM2.5	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
	Tirewear PM2.5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Tabelic 244 345 456 456 456 456 456<	Light-duty trucks																															
Lease List Join Join Join Join J	Total HC	2.454	2.246	1.964	1.754	1.511	1.297	1.165	1.024	0.925	0.869	0.804	0.761	0.737	0.678	0.630	0.574	0.503	0.458	0.418	0.377	0.339	0.317	0.299	0.281	0.261	0.246	0.220	0.207	0.195	0.184	0.175
Lame List Matrix Matrix Matrix Matrix	Exhaust CO	30.622	27.970	24.476	21.987	19.453	17.119	15.616	13.790	12.348	11.660	11.088	10.677	10.351	9.768	9.344	8.663	7.506	6.934	6.448	5.955	5.422	5.046	4.770	4.507	4.253	4.013	3.697	3.501	3.269	3.054	2.883
Line Line <thlin< th=""> Line Line Li</thlin<>	Exhaust NOx	3.304	3.116	2.855	2.629	2.305	2.002	1.841	1.628	1.512	1.433	1.333	1.243	1.182	1.059	0.938	0.817	0.703	0.607	0.533	0.445	0.376	0.334	0.298	0.266	0.227	0.201	0.164	0.145	0.127	0.103	0.089
besc besc <th< td=""><td>Exhaust PM2.5</td><td>0.028</td><td>0.026</td><td>0.022</td><td>0.020</td><td>0.018</td><td>0.016</td><td>0.014</td><td>0.013</td><td>0.012</td><td>0.012</td><td>0.011</td><td>0.010</td><td>0.010</td><td>0.009</td><td>0.008</td><td>0.008</td><td>0.007</td><td>0.007</td><td>0.007</td><td>0.007</td><td>0.007</td><td>0.006</td><td>0.006</td><td>0.006</td><td>0.006</td><td>0.006</td><td>0.006</td><td>0.005</td><td>0.005</td><td>0.005</td><td>0.005</td></th<>	Exhaust PM2.5	0.028	0.026	0.022	0.020	0.018	0.016	0.014	0.013	0.012	0.012	0.011	0.010	0.010	0.009	0.008	0.008	0.007	0.007	0.007	0.007	0.007	0.006	0.006	0.006	0.006	0.006	0.006	0.005	0.005	0.005	0.005
Theore Theore Theore Theore Theore <td>Brakewear PM2.5</td> <td>0.003</td>	Brakewear PM2.5	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
	Tirewear PM2.5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
mix state s	Heavy-duty vehicles																															
brance brance brance brance brane brane bra	Total HC	3.947	3.845	3.628	3.507	3.171	2.933	2.656	2.564	2.262	2.216	2.202	2.030	1.941	1.834	1.734	1.631	1.539	1.476	1.375	1.264	1.161	1.110	1.077	1.023	0.980	0.955	0.880	0.854	0.812	0.792	0.755
beak 1.0. 5.0. 5.0. 5.0. 5.0. 6.0. 6.0. 6.0. 6	Exhaust CO	54.487	54.663	52.865	52.833	47.925	44.217	40.458	38.097	34.093	32.537	32.115	29.579	28.280	26.627	25.227	23,140	21.148	19.847	18.407	16.408	14.894	14.104	13.459	12.894	12.406	12.044	11.636	11.257	10.727	10.546	10.319
besize besize<	Exhaust NOx	6.042	5.879	5.633	5.472	4.997	4.628	4.401	4,167	3.991	3.847	3.743	3,404	3.205	2.953	2.564	2.228	1.954	1,714	1.490	1.165	0.875	0.772	0.687	0.612	0.548	0.499	0.450	0.410	0.368	0.342	0.311
Besinswert PAS 0.00 0.00	Exhaust PM2.5	0.097	0.091	0.082	0.077	0.069	0.064	0.057	0.055	0.051	0.049	0.048	0.041	0.040	0.038	0.035	0.034	0.033	0.031	0.029	0.028	0.026	0.025	0.024	0.023	0.022	0.022	0.021	0.020	0.020	0.019	0.019
mase M2 0.00 0.	Brakewear PM2.5	0.006	0.006	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
between between <t< td=""><td>Tirewear PM2.5</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td><td>0.002</td></t<>	Tirewear PM2.5	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
marce vis Mode Mode </td <td>Motorcycles</td> <td></td>	Motorcycles																															
beam beam <th< td=""><td>Total HC</td><td>4 739</td><td>4 903</td><td>4 772</td><td>4 727</td><td>3 946</td><td>3 738</td><td>3 257</td><td>3 006</td><td>2 952</td><td>2 893</td><td>3 055</td><td>2 975</td><td>2 767</td><td>2 773</td><td>2 801</td><td>2 819</td><td>2 728</td><td>2 716</td><td>2 668</td><td>2 640</td><td>2 624</td><td>2 618</td><td>2 6 1 6</td><td>2 6 1 5</td><td>2 614</td><td>2 610</td><td>2 602</td><td>2 591</td><td>2 545</td><td>2 526</td><td>2 504</td></th<>	Total HC	4 739	4 903	4 772	4 727	3 946	3 738	3 257	3 006	2 952	2 893	3 055	2 975	2 767	2 773	2 801	2 819	2 728	2 716	2 668	2 640	2 624	2 618	2 6 1 6	2 6 1 5	2 614	2 610	2 602	2 591	2 545	2 526	2 504
besit besit <th< td=""><td>Exhaust CO</td><td>36 277</td><td>38 267</td><td>30 080</td><td>39.661</td><td>33 261</td><td>27 764</td><td>25 538</td><td>22 409</td><td>19.840</td><td>18 518</td><td>18 887</td><td>17 462</td><td>16 731</td><td>16 283</td><td>15 874</td><td>15 500</td><td>14 992</td><td>14 484</td><td>14 026</td><td>13 685</td><td>13 411</td><td>13 200</td><td>13 020</td><td>12 848</td><td>12 719</td><td>12 570</td><td>12 431</td><td>12 302</td><td>12 180</td><td>12.020</td><td>11 948</td></th<>	Exhaust CO	36 277	38 267	30 080	39.661	33 261	27 764	25 538	22 409	19.840	18 518	18 887	17 462	16 731	16 283	15 874	15 500	14 992	14 484	14 026	13 685	13 411	13 200	13 020	12 848	12 719	12 570	12 431	12 302	12 180	12.020	11 948
Endate Dist Dist <thdist< th=""> Dist Dist <t< td=""><td>Exhaust NOv</td><td>0.277</td><td>1 021</td><td>1 072</td><td>1 106</td><td>0.968</td><td>0.841</td><td>0.805</td><td>0 717</td><td>0 707</td><td>0.696</td><td>0 712</td><td>0.686</td><td>0.682</td><td>0.677</td><td>0.677</td><td>0.671</td><td>0.663</td><td>0.654</td><td>0.650</td><td>0.646</td><td>0.642</td><td>0.640</td><td>0.638</td><td>0.636</td><td>0.634</td><td>0.632</td><td>0.631</td><td>0.629</td><td>0.628</td><td>0.626</td><td>0.625</td></t<></thdist<>	Exhaust NOv	0.277	1 021	1 072	1 106	0.968	0.841	0.805	0 717	0 707	0.696	0 712	0.686	0.682	0.677	0.677	0.671	0.663	0.654	0.650	0.646	0.642	0.640	0.638	0.636	0.634	0.632	0.631	0.629	0.628	0.626	0.625
Between PM25 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.001 0.01 0.01 0.01 <	Exhaust PM2 5	0.027	0.026	0.026	0.025	0.000	0.041	0.000	0.022	0.022	0.000	0.012	0.000	0.002	0.071	0.020	0.021	0.000	0.004	0.000	0.040	0.042	0.040	0.000	0.000	0.004	0.002	0.001	0.023	0.020	0.020	0.020
Treeware PAL2 0.001	Brakewear PM2 5	0.020	0.020	0.020	0.020	0.024	0.020	0.022	0.022	0.022	0.022	0.022	0.021	0.021	0.021	0.020	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021
Dest Col Col <td>Tirewear PM2 5</td> <td>0.002</td>	Tirewear PM2 5	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Under stress Under stres Under stres Un	DIESEI	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Total Network Total Network Subscription Total Network Subscription Subscrint Subscription Subscription<	Light duty vehicles																															
behase Cond 1 abs 1 abs <th< td=""><td>Total HC</td><td>2 202</td><td>2 221</td><td>2.051</td><td>1 012</td><td>1 707</td><td>1 600</td><td>1 464</td><td>1 264</td><td>1 2 2 7</td><td>1 200</td><td>1 100</td><td>1 007</td><td>0.007</td><td>0 520</td><td>0.244</td><td>0.266</td><td>0 170</td><td>0 170</td><td>0.142</td><td>0 1 4 5</td><td>0 1 4 2</td><td>0 146</td><td>0 127</td><td>0 121</td><td>0 125</td><td>0 122</td><td>0 112</td><td>0 105</td><td>0.007</td><td>0.001</td><td>0.096</td></th<>	Total HC	2 202	2 221	2.051	1 012	1 707	1 600	1 464	1 264	1 2 2 7	1 200	1 100	1 007	0.007	0 520	0.244	0.266	0 170	0 170	0.142	0 1 4 5	0 1 4 2	0 146	0 127	0 121	0 125	0 122	0 112	0 105	0.007	0.001	0.096
Endbact Oc 9898 0.440 0.401 0.440 0.440 0.401	Exhaust CO	2.203	2.221	2.001	21 722	20.206	27 257	22 700	1.304	21 662	20 092	10.401	17.045	16 242	0.020	0.344	0.200 E 029	2 509	2 7 7 7	2 240	2 500	2 640	2 704	2 661	2 506	2.445	2 204	2 020	0.103	0.037	0.091	1 002
Lendes (NAZ) Lob Lob Lob Lob <th< td=""><td>Exhaust NOx</td><td>2 0 0 0 2</td><td>2 6 9 4</td><td>0 260</td><td>2 224</td><td>20.005</td><td>1 026</td><td>1 600</td><td>1 602</td><td>1 642</td><td>1 404</td><td>1 2 2 2</td><td>1 1 2 1</td><td>0.047</td><td>0.760</td><td>0.0476</td><td>0.221</td><td>0.102</td><td>0.201</td><td>0.127</td><td>0.125</td><td>0.120</td><td>0.122</td><td>0.112</td><td>0.100</td><td>0.097</td><td>0.004</td><td>0.070</td><td>0.059</td><td>0.051</td><td>2.001</td><td>0.025</td></th<>	Exhaust NOx	2 0 0 0 2	2 6 9 4	0 260	2 224	20.005	1 026	1 600	1 602	1 642	1 404	1 2 2 2	1 1 2 1	0.047	0.760	0.0476	0.221	0.102	0.201	0.127	0.125	0.120	0.122	0.112	0.100	0.097	0.004	0.070	0.059	0.051	2.001	0.025
Lenders Influst 0003 0004	Exhaust DM2 6	0.052	0.054	0.054	0.052	2.033	0.051	0.044	0.040	0.020	0.029	0.026	0.027	0.094	0.016	0.470	0.021	0.133	0.201	0.107	0.133	0.123	0.100	0.112	0.100	0.007	0.001	0.070	0.000	0.001	0.041	0.000
bit words bit	Exilaust Filiz.5	0.003	0.004	0.004	0.003	0.002	0.001	0.044	0.040	0.009	0.030	0.000	0.027	0.024	0.010	0.009	0.003	0.003	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Internal Park Bool	Tirowoor PM2 5	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Legand Legand Linds Linds <thlinds< th=""> Linds Linds <t< td=""><td>light duty trucks</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td><td>0.001</td></t<></thlinds<>	light duty trucks	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Indir L Indir L <t< td=""><td>Total HC</td><td>1 417</td><td>1 2 2 0</td><td>1 106</td><td>1 1 / 0</td><td>1 105</td><td>1 097</td><td>1 056</td><td>1 002</td><td>0.052</td><td>0.050</td><td>0.054</td><td>0.022</td><td>0.022</td><td>0.942</td><td>0 792</td><td>0 600</td><td>0 570</td><td>0.495</td><td>0 417</td><td>0.261</td><td>0 200</td><td>0.260</td><td>0.224</td><td>0.206</td><td>0 176</td><td>0 160</td><td>0.144</td><td>0 121</td><td>0 1 1 7</td><td>0 115</td><td>0 106</td></t<>	Total HC	1 417	1 2 2 0	1 106	1 1 / 0	1 105	1 097	1 056	1 002	0.052	0.050	0.054	0.022	0.022	0.942	0 792	0 600	0 570	0.495	0 417	0.261	0 200	0.260	0.224	0.206	0 176	0 160	0.144	0 121	0 1 1 7	0 115	0 106
Lexinglabe CO 10.302 10.303 12.30 13.30 12.30 11.61	Exhaust CO	10 262	16 4 40	12 060	10.140	11 176	10 297	0.271	0 557	7 757	7 505	7 261	7 017	0.933	7 200	6 920	0.000 E 70E	0.575	2 6 4 7	2.050	2 9 1 4	0.300	0.200	2 014	1 942	1 616	1 547	1 464	1 410	1.074	1 267	1 226
Exhalls fWX 6.262 0.462 0.462 0.460 0.479 0.480 0.424 0.424 0.424 0.424 0.424 0.424 0.424 0.424 0.424 0.424 0.424 0.424 0.424 0.424 0.424 0.224 0.226 0.035 0.034 0.003	Exhaust CO	10.302	10.440	13.900	12.302	11.1/0	10.207	9.371	0.007	1.101	7.505	7.301	1.01/	0.049	1.322	0.020	5.795	4.440	3.547	3.059	2.014	2.400	2.211	2.014	1.042	1.010	1.547	1.404	1.410	1.274	1.207	1.220
Lexalist Miles 0.3.5 0.3.25 0.3.25 0.3.25 0.3.26 0.2.24 0.2.04 0.2.24 0.2.05 0.1.64 0.1.64 0.1.64 0.1.64 0.1.64 0.1.64 0.1.64 0.0.62 0.0.27 0.0.23<	Exhaust NUX	0.282	0.452	0.000	0.3/1	0.130	5.939	5.739	5.488	5.217	5.097	4.930	4.724	4.527	4.287	4.003	3.033	3.230	2.818	2.450	2.106	1.804	1.543	1.330	1.101	1.001	0.880	0.780	0.097	0.592	0.5/3	0.509
Instrument PML2.5 0.003 <td>Exhaust PM2.5</td> <td>0.320</td> <td>0.335</td> <td>0.320</td> <td>0.320</td> <td>0.323</td> <td>0.322</td> <td>0.010</td> <td>0.300</td> <td>0.204</td> <td>0.201</td> <td>0.200</td> <td>0.252</td> <td>0.237</td> <td>0.223</td> <td>0.205</td> <td>0.104</td> <td>0.100</td> <td>0.130</td> <td>0.110</td> <td>0.095</td> <td>0.070</td> <td>0.002</td> <td>0.052</td> <td>0.044</td> <td>0.039</td> <td>0.033</td> <td>0.020</td> <td>0.023</td> <td>0.010</td> <td>0.010</td> <td>0.013</td>	Exhaust PM2.5	0.320	0.335	0.320	0.320	0.323	0.322	0.010	0.300	0.204	0.201	0.200	0.252	0.237	0.223	0.205	0.104	0.100	0.130	0.110	0.095	0.070	0.002	0.052	0.044	0.039	0.033	0.020	0.023	0.010	0.010	0.013
Interview PML25 0.002	Brakewear PM2.5	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Preservancy ventices Total HC 939 0.394 0.944 0.946 0.855 0.820 0.808 0.74 0.666 0.602 0.530 0.464 0.408 0.369 0.30 0.246 0.266 0.266 0.226 0.200 0.145	Tirewear PM2.5	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Intell HC 0.935 0.936 0.936 0.936 0.936 0.936 0.936 0.936 0.936 0.936 0.936 0.936 0.936 0.936 0.936 0.936 0.936 0.936 0.936 0.236	Heavy-duty vehicles	0.005	0.000	0.004	0.040	0.004	0.000	0.040	0.055	0.000	0.000	0.700	0.700	0.000	0.000	0.500	0.404	0.400	0.000	0 000	0.000	0.000	0.040	0.000	0.000	0.405	0.400	0.474	0.405	0.457	0.450	0.445
Exhaust CO 4.589 4.582 4.681 4.792 4.681 4.792 4.681 4.793 1.395 3.747 3.606 3.515 3.183 3.043 2.290 2.190 2.192 2.000 1.923 1.846 1.723 1.724 1.717 1.526 1.540 1.517 1.442 Exhaust N0x 24.929 2.390 2.2902 2.100 1.923 1.846 1.749 1.626 1.540 1.517 1.442 Exhaust N0x 24.92 3.947 0.907 0.625 0.511 0.420 0.610 0.625 0.211 0.409 0.033 0.029 0.009	Total HC	0.935	0.930	0.934	0.948	0.981	0.969	0.940	0.855	0.820	0.808	0.796	0.729	0.000	0.602	0.530	0.464	0.408	0.369	0.330	0.296	0.269	0.246	0.226	0.209	0.195	0.183	0.174	0.165	0.157	0.150	0.145
Exhaust NOx 24.99 23.901 22.902 21.409 20.000 18.397 16.46 14.994 13.46 12.409 11.11 10.07 6.949 7.857 6.923 6.133 5.615 5.059 4.500 4.160 3.822 3.516 3.269 3.060 2.883 2.742 2.616 2.039 2.315 Exhaust PM2.5 0.010 0.009	Exhaust CO	4.599	4.582	4.603	4.651	4.792	4.661	4.411	3.955	3.743	3.647	3.606	3.351	3.183	3.043	2.803	2.599	2.438	2.317	2.193	2.092	2.000	1.923	1.846	1.783	1.724	1.671	1.626	1.586	1.549	1.517	1.492
Exhaust PM2.5 1.407 0.998 0.47 0.997 0.882 0.835 0.757 0.626 0.591 0.616 0.487 0.422 0.364 0.306 0.255 0.211 0.126 0.106 0.096	Exhaust NOx	24.929	23.901	22.902	21.409	20.080	18.397	16.646	14.994	13.956	13.146	12.409	11.311	10.057	8.949	7.857	6.923	6.133	5.615	5.059	4.580	4.169	3.822	3.518	3.269	3.060	2.883	2.742	2.616	2.501	2.396	2.315
Brakeweer PM2.5 0.10 0.010 0.009	Exhaust PM2.5	1.047	0.998	0.947	0.907	0.882	0.835	0.783	0.675	0.625	0.591	0.561	0.487	0.422	0.364	0.306	0.255	0.211	0.182	0.151	0.126	0.106	0.090	0.076	0.065	0.057	0.049	0.043	0.038	0.033	0.029	0.026
Trewear PM2.5 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.	Brakewear PM2.5	0.010	0.010	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
Average Emissions Per Vehicle; Gasoline and Diseal Fluest Scale in and Disea F	Tirewear PM2.5	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.004	0.004	0.003	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003
Gasoline and Duesel Fleet Gasoline and Duesel Fleet Total HC 2.074 1.949 1.766 1.632 1.460 1.296 1.186 1.067 0.986 0.926 0.857 0.785 0.702 0.638 0.533 0.474 0.434 0.398 0.362 0.301 0.293 0.278 0.261 0.248 0.241 0.210 0.128 0.216 0.218 0.216 0.218 0.216 0.218 0.218 0.216 0.218 0.218 0.216 0.218 <td>Average Emissions Per Vehicle,</td> <td></td>	Average Emissions Per Vehicle,																															
Total HC 2.074 1.949 1.766 1.622 1.400 1.296 1.186 1.067 0.986 0.926 0.857 0.728 0.638 0.533 0.474 0.434 0.398 0.362 0.300 0.210 0.293 0.281 0.248 0.224 0.214 0.210 0.192 0.184 Exhaust CO 23.167 21.665 19.522 17.982 16.211 14.520 13.08 11.986 10.924 2.418 8.228 6.247 7.650 7.106 6.288 5.846 5.473 5.044 4.024 4.418 4.025 4.003 3.805 3.607 3.893 3.198	Gasoline and Diesel Fleet																															
Exhaust CO 23.187 21.665 19.522 17.982 16.211 14.520 13.378 11.986 10.922 10.315 9.786 9.241 8.622 8.024 7.650 7.106 6.288 5.846 5.473 5.994 4.702 4.418 4.205 4.00 3.805 3.607 3.369 3.198 3.010 2.832 2.681 Exhaust NOx 4.613 4.467 4.221 4.010 3.627 3.269 3.024 2.762 2.681 1.317 1.148 1.426 1.237 1.086 0.979 0.876 0.71 0.686 0.623 0.59 0.447 0.410 0.402 0.377 0.328 3.010 2.832 0.301 Exhaust PM2.5 0.117 0.114 0.103 0.00	Total HC	2.074	1.949	1.766	1.632	1.460	1.296	1.186	1.067	0.986	0.926	0.857	0.785	0.702	0.638	0.588	0.533	0.474	0.434	0.398	0.362	0.330	0.310	0.293	0.278	0.261	0.248	0.224	0.214	0.201	0.192	0.184
Exhaust NOx 4.613 4.467 4.221 4.010 3.627 3.269 3.054 2.762 2.386 2.386 2.386 1.618 1.426 1.237 1.086 0.979 0.876 0.771 0.686 0.623 0.569 0.54 0.475 0.440 0.402 0.377 0.322 0.328 0.310 Exhaust PM2.5 0.117 0.114 0.107 0.003	Exhaust CO	23.187	21.665	19.522	17.982	16.211	14.520	13.378	11.986	10.922	10.315	9.786	9.241	8.622	8.024	7.650	7.106	6.288	5.846	5.473	5.094	4.702	4.418	4.205	4.000	3.805	3.607	3.369	3.198	3.010	2.832	2.681
Exhaust PM2.5 0.117 0.114 0.107 0.003	Exhaust NOx	4.613	4.467	4.221	4.010	3.627	3.269	3.054	2.762	2.626	2.396	2.238	1.996	1.801	1.618	1.426	1.237	1.086	0.979	0.876	0.771	0.686	0.623	0.569	0.524	0.475	0.440	0.402	0.377	0.352	0.328	0.310
Brakewear PM2.5 0.003	Exhaust PM2.5	0.117	0.114	0.107	0.104	0.099	0.093	0.091	0.081	0.077	0.070	0.066	0.055	0.049	0.043	0.037	0.032	0.027	0.024	0.021	0.019	0.016	0.014	0.013	0.012	0.011	0.010	0.009	0.009	0.008	0.007	0.007
Tirewear PM2.5 0.002 0.002 0.002 0.002 0.001 0.001 0.001 0.002 0.002 0.002 0.001	Brakewear PM2.5	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.004
	Tirewear PM2.5	0.002	0.002	0.002	0.002	0.001	0.001	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.002

NOTES

Estimates are by calendar year. Vehicles types are defined as follows: light-duty vehicles (passenger cars); light-duty trucks (two axle, four tire); heavy-duty vehicles (trucks with more than two axles or four tires); motorcycle (highway only).

Emissions factors are averages based on the national average age distributions, vehicle activity (speeds, operating modes, vehicle-miles traveled fractions, starts and iding), temperatures, inspection/maintenance and antitanpering programs, and average gasoline fuel properties in that calendar year. Total HC includes exhaust and evaporative emissions. Average emissions for evaluations per vehicle activity and the comprised exclusively of gasoline and devaporative emissions. Average emissions per vehicle tracts assume a fleet comprised exclusively of gasoline and devaluations are accounted for in the values for gasoline vehicles.

This table was generated using MOVES3, the U.S. Environmental Protection Agency's (EPA) mobile source emissions model. More information on MOVES is available at www.epa.gov/moves. Data for this update are based on new estimation models and are not comparable to previous releases. MOVES3 includes updates to historical data and methods as well as updates to future year projections and thus provides the current best estimates of emissions for all calendar years. Data for 2021 and later are projections.

SOURCE U.S. Environmental Protection Agency, Office of Transportation and Air Quality, personal communication, Apr. 30, 2021.



Appendix H

Traffic Route from Highway to Site (Approximately 2 Miles)



Map created on October 27, 2023



Appendix I

Example Sign to be Posted On-Site

<u>NJAC 7:1C-4.1 Public notice</u> Safety-Kleen Systems, Inc. (Facility) 1200 Sylvan Street Linden, NJ 07036

- A public hearing concerning a proposed Facility expansion and associated Environmental Justice Impact Statement (EJIS) and environmental permit applications will be held on: {date/time, and location of the hearing}
- The public is invited to participate in the public hearing. Be advised that for a time period of no less than 30 days after the hearing and 60 days total written comments may be submitted to: Bill Greenlaw (Facility General Manager) at greenlaw.william@cleanharbors.com or mailed to the Facility address noted above.
- To view a copy of the EJIS go to: {insert DEP webpage address pursuant to 7:1C-3.4(c)}. A copy of the EJIS and permit applications can be viewed and copied at: Linden Free Public Library, 31 East Henry Street, Linden, NJ 07036. For additional information contact David DeSha at desha.david@cleanharbors.com



Appendix J Example Written Public Notice



NJAC 7:1C-4.1 Public notice

Safety-Kleen Systems, Inc. (Facility) 1200 Sylvan Street Linden, NJ 07036

- A public hearing concerning the proposed Facility expansion will be held on: {date/time} at the Linden Free Public Library, 31 East Henry Street, Linden, NJ 07036.
- The Facility is an existing operation permitted under the Resource Conservation and Recovery Act (RCRA), Clean Act (CA) and Clean Water Act amongst other governing laws and regulations. The Facility presently conducts hazardous and non-hazardous waste storage in containers and tanks in support of industrial recycling processes as well as waste treatment and storage prior to shipment offsite to authorized locations for final disposition. The facility plans to expand its hazardous and non-hazardous waste treatment processes by constructing a purpose-built enclosed building for waste treatment via stabilization and solidification processes at a maximum capacity of 200 tons/day of hazardous wastes and 99 tons/day of non-hazardous wastes. Also, to support operations the Facility plans to add 3 new hazardous waste container storage areas for a capacity increase 168,000 gallons and 1 other container storage areas for an additional capacity increase of 600 cubic yards. A RCRA permit modification and CA permit applications have been submitted to the the NJ Department of Environmental Protection (NJDEP) for this facility expansion.
- See attached map indicating the location of the facility, including the street address, as applicable, municipality, county, tax map block and lot, and size of the property.
- The Facility has prepared an Environmental Justice Impact Statement (EJIS) that covers information required by NJAC 7:1C-3.2 to include executive summary; description of the municipal and neighborhood setting of the facility; description of the facility's current and proposed operations; list of all the Federal, State, and local permits that are required; evidence of satisfaction of any local environmental justice or cumulative impact analysis ordinances; initial screening information obtained pursuant to N.J.A.C. 7:1C-2.3; assessment of the impacts both positive and negative of the facility on each environmental and public health stressor in the overburdened community; public participation plan; and demonstration including any necessary operational conditions and control measures that the facility will avoid a disproportionate impact that would occur by creating adverse cumulative stressors in the overburdened community. The EJIS has been submitted to NJDEP. To view a copy of the EJIS go to: https://dep.nj.gov/ej/meetings/#njdep-ej-publicmeeting. A copy of the EJIS and associated permit applications can be viewed and copied at: Linden Free Public Library, 31 East Henry Street, Linden, NJ 07036. Copies may also be viewed at https://www.safety-kleen.com/support/technical/regulatory-information
- The public is invited to participate in the public hearing. This is also an announcement of a 60-day public comment period beginning {date}. Be advised that for a time period of no less than 30 days after the hearing and 60 days total written comments may be submitted to: Bill Greenlaw (Facility General Manager) at greenlaw.william@cleanharbors.com or mailed to the Facility address noted above.