

Environmental Justice Impact Statement
Project ID #34105263
Safety-Kleen Systems, Inc.

Linden Recycle Center at 1200 Sylvan Street
Linden, New Jersey

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59 Elm Street
New Haven, CT 06510

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Table of Contents

Environmental Justice Impact Statement Safety-Kleen Systems, Inc., Linden, NJ

1	Executive Summary	1
2	Municipal and Neighborhood Setting	3
2.1	City of Linden.....	3
2.1.1	Physical Description	3
2.1.2	Demographic Information	3
2.1.3	Economic Information	3
2.1.4	Zoning Information	3
2.2	Neighborhood Setting.....	4
2.2.1	Physical Description	4
2.2.2	Demographic Information	4
2.2.3	Economic Information	5
2.2.4	Zoning Information	5
2.3	Facilities Within One Mile of Project Site.....	5
2.3.1	Dwellings.....	5
2.3.2	Hospitals.....	5
2.3.3	Nursing Homes	5
2.3.4	Parks.....	5
2.3.5	Schools.....	5
2.3.6	Roadways.....	6
2.3.7	Transportation Facilities	6
2.3.8	Businesses.....	6
3	Current and Proposed Operations	6
3.1	Current Operations.....	6
3.1.1	Facility Held Permits	9
3.2	Purpose of Permit Applications	9
3.3	Proposed Processes	10
3.3.1	Onsite Equipment	12
3.3.2	Pollution and Environmental Control Measures and Monitoring Instruments	13
3.3.3	Traffic Routes.....	14
3.3.4	Number of Employees.....	15
4	Permits	15
4.1	Federal.....	15
4.2	State	15
4.3	Local.....	16
5	Local Environmental Justice and Cumulative Impact Analysis Ordinances	16

Table of Contents

Environmental Justice Impact Statement Safety-Kleen Systems, Inc., Linden, NJ

6	Initial Screening Information	16
7	Assessment of Impacts on Environmental and Public Health Stressors.....	18
8	Public Participation Plans	26
9	Avoidance of Disproportionate Impacts.....	29
10	Supplemental Information (N.J.A.C. 7:1C-3.3).....	29

Appendices

End of Report

- A. Locus Map containing Linden Recycle Center
- B. Locus Map showing One-Mile Radius Around Site
- C. Facility Site Map
- D. Mix Pit Construction Schedule
- E. Mix Pit Simplified Process Flow Diagram
- F. NJDEP Division of Air Quality Risk Screening Worksheet/Mix Pit Emission Calculations
- G. U.S. Department of Transportation Estimated National Average Vehicle Emissions
- H. Traffic Route from Highway to Site
- I. Example Sign to be Posted On-Site
- J. Example Written Public Notice
- K. Supplemental Information (NJAC 7:1C-3.3)
 - 1. Site mapping
 - 2. Onsite Contamination Information
 - 3. Ambient Air Quality Data/Information
 - 4. Subsurface Hydrology Information
 - 5. Localized Climate and Flooding Impacts' Information
 - 6. Traffic Study
 - 7. Sewage Facilities' Information
 - 8. Stormwater Management System Information
 - 9. Water Supply Information
 - 10. Energy Supply System Information
 - 11. Reasonable Design Alternatives' Information
 - 12. Odor, Dust, and/or Noise Mitigation or Management Plan
 - 13. Detailed Compliance History
 - 14. Analysis and Proposal of Control Measures
- L. Union County Solid Waste Management Plan Amendment
- M. Flood Map

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 34105263. 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.

This facility has been recycling solvents since 1942 and has been owned and operated by Safety-Kleen since 1989. Safety-Kleen’s Linden Recycle Center specializes in the reclamation, recovery, and recycling of spent or previously used organic solvents. Generally, organic solvents are substances capable of dissolving other substances. Organic solvents are chemical compounds having a carbon-based molecular structure and are widely used in dissolving material in order to create a solution or extract a material from another material. Organic solvents are used in manufacturing, refining, maintenance, cleaning processes, etc. As named a “Recycle Center”, the facility operations are for industrial and commercial wastes, not household waste. Industrial and commercial wastes can be hazardous or non-hazardous wastes, have a liquid, solid or gaseous physical state, and result from all types of manufacturing, refining, marketing, maintenance, shipping, etc., activities as well as from services provided by the government.

Solvent recycling is a process that extracts useful materials from previously used materials. Solvent recycling reduces the amount of new solvent manufactured while lessening the amount disposed of as waste. The recycling of used/spent solvents involves columns/towers for fractionation distillation and thin-film evaporators for simple distillation. These processes utilize some of the same type of equipment used to originally manufacture the solvent products. Recycling solvents via distillation involves heating a chemical mixture (e.g., alcohol and water) to known boiling temperatures at which the chemicals in the mixture separate into gaseous states that are separately collected and then condensed/cooled into a liquid state. This process can be repeated over and over again until the desired quality of a product(s) is produced. Separated/removed contaminants are then properly disposed (e.g., wastewater that is generally shipped or discharged to a wastewater treatment plant), or fuel blended prior to being sent offsite for the burning for energy recovery at authorized facilities that manufacture cement, produce steam, generate electricity, etc. Fuel blending involves mixing wastes in a tank to create a fuel of the proper heating value and chemical content.

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 treatment via 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:

- A RCRA class 3 permit modification for program interest number NJD002182897, permit number HW190002; and
- One (1) 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 in order to construct and operate the proposed mix pit operation. The RCRA permit modification was first submitted on September 14, 2023, and then re-submitted on December 8, 2023 to include a solid waste permit modification. The combined RCRA/solid waste permit modifications are for the operation of the mix pits, three (3) existing truck stations for hazardous and non-hazardous waste storage, and the yet to be constructed Mix Pit Building for hazardous and non-hazardous waste storage.

The proposed expansion is expected to result in an increase in truck traffic for vehicles servicing utility companies and other needs entering and exiting the facility. Ultra-low sulfur diesel fuel is used for company fleet vehicles and idling times are minimized for all vehicles onsite. Overall truck traffic increase will be minor compared to current traffic levels within the City of Linden due to the fact presently most company vehicles to be involved with the mix pit operations are already traveling through the City of Linden/Union County to deliver wastes to a third-party location that is farther away in another county. In essence, the addition of the mix pit operation at the Linden Recycle Center will reduce company vehicle driving times and distances as well as associated exhaust emissions. Additionally, the facility expects an increase in employee and visitor traffic onsite as it expands its operations and consolidates other business activities into the Linden Recycle Center, however most of that traffic is already occurring at other company locations within the state. So, increases in onsite employee and visitor traffic is not new for the area but merely relocated.

The facility will minimize air emissions created by the mix pit operations by installing a baghouse dust collector/filter for the removal of air-borne particulate matter and a carbon absorption bed/filter for the removal of low-levels of volatile organic compounds (VOCs) created from the mix pits within the fully enclosed Mix Pit Building. A baghouse dust collector/filter is a widely used engineered air filtering system that removes particulate in the Mix Pit Building which is under negative pressure created by an induced draft fan that draws air through the filter. The removed particulate matter is collected in a hopper and properly disposed offsite, or potentially reused in the mix pit operation. Carbon absorption involves the use of carbon to remove waste and other substances from air or water and is also widely used as an air pollution control measure. Low level VOCs are also drawn through the carbon filter under negative pressure in the Mix Pit Building created by the induced draft fan. VOCs are absorbed by the carbon and once the carbon becomes saturated/spent it is properly disposed offsite. An air quality risk screening using the NJDEP Division of Air Quality's Risk Screening Worksheet indicated that impacts to air quality resulting from the mix pit operations are not expected to be significant and will not result in any disproportionate impact to the surrounding overburdened community.

The Linden Recycle Center will also aim to reduce unemployment in the surrounding community by hiring two (2) to five (5) additional full-time employees and recruiting for these opportunities locally and elsewhere. Also, approximately 43 positions presently domiciled at other company locations in New Jersey will relocate to the facility for routine environmental services in support of the mix pit operations.

The relocation of those existing employees overall will reduce driving time and distances associated with company vehicles used to service customers in the area for a potential net decrease in vehicle exhaust emissions.

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. Supplemental information required by N.J.A.C. 7:1C-3.3 is included in [Appendix K](#). The Linden Recycle Center will be taking measures to minimize disproportionate impacts to the surrounding community.

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 [Appendix A](#).

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 https://linden-nj.gov/wp-content/uploads/2020/03/Zoning-Map_2020-GIS.pdf. 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 (5) of which are presently utilized for solid (i.e., non-hazardous) and hazardous waste management as well as recycled product production and storage. Waste management processes include the storage of liquid wastes and products in purpose-built tanks and containers in secondary containments to prevent the release of any leaks or spills. Additionally, the storage of hazardous and solid (non-hazardous) wastes in containers is conducted in enclosed buildings also with secondary containment. Hazardous waste management processes also include the recycling of solvents and the fuel blending of liquid hazardous wastes for shipment offsite to be burned for energy recovery at authorized facilities. 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. A flood map of the area surrounding the facility is included as [Appendix M](#). 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 [Appendix B](#).

- 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 (approximately 302 residents) 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 Buchanan 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 facility currently stores hazardous and non-hazardous wastes as well as chemical, lube oil, antifreeze/coolant and windshield washer fluid products in tanks and containers in secured and contained structures and warehouses. Such storage is conducted prior to any material recycling, treatment and/or product packaging as well as offsite transfer operations. The Linden Recycle Center operates with the flexibility to use any combination of its authorized and regulated material handling, processing, and management operations approved for hazardous and non-hazardous wastes received at the facility.

The Linden Recycle Center is currently permitted to store, recycle and treat a multitude of hazardous wastes as mentioned above and accept 50 tons per day of solid (non-hazardous) wastes for storage and transfer offsite. 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. Distillation/fractionation involves the heating of chemical compounds in a purpose-built tower (vertical segmented metal tube) and collecting the different "fractions" as they form in a gaseous state according to their boiling point/temperature. Thin-film evaporation utilizes the same principle as fractionation, however instead of utilizing a tower a smaller vessel/pot is heated. The collected fractions/products are then cooled to reform in a liquid state prior to additional refining or placed in tank storage as an intermediate or final product.

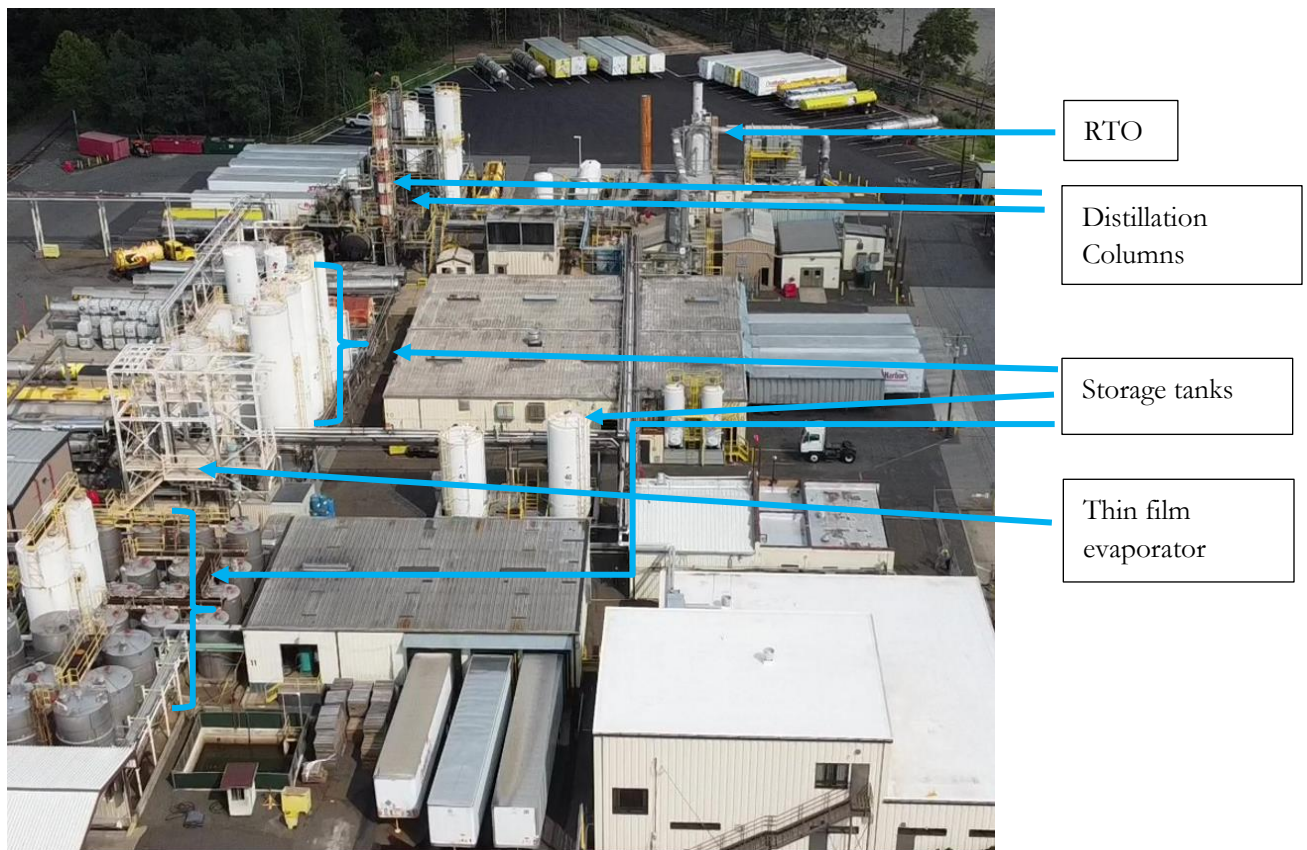
The Linden Recycle Center operations run seven days per week, 24 hours per day in varying shifts to include 12-hour operational shifts. Shipping and receiving are typically run 7am to 7pm Monday through Friday. Office hours are generally 8am to 5pm Monday through Friday. Materials for recycling are received and shipped by truck and rail. The facility currently receives a wide variety of spent (used) solvent waste streams as well as a variety of other hazardous and non-hazardous waste approved for facility acceptance by NJDEP. The sources of the wastes generally come from industrial/commercial generators from various aspects of manufacturing, production, distribution, etc., segments of commerce. Safety-Kleen requires that all waste generators complete a Material Profile Sheet which describes the physical and chemical properties of a waste as well as known hazards. 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 hazardous and non-hazardous wastes are presently stored and processed on site.

The Linden Recycle Center uses gravity separation, distillation, fractionation and blending (see above) to recycle, recover or reclaim used organic solvents and similar materials (i.e., non-renewable resources contained in waste materials). Gravity separation is when mixtures of liquid wastes or chemical compounds are allowed to settle-out in a tank, container, or other vessel for a period of time during which heavier materials will separate and settle to the bottom and lighter ones will float on top. The heavy materials may be drained or pumped from the bottom of the tank or container, or the lighter materials may be skimmed or pumped from the top of the tank or container. Blending involves the combining of various wastes or products into a final mixture of a desired chemical concentration, consistency, and quality.

An explanation of current equipment is presented below. Processes at the facility are vented through a Regenerative Thermal Oxidizer (RTO) which is a contained and controlled furnace that incinerates vapors generated by recycling operations collected in a closed-vent system. The RTO reduces the

volatile organic and hazardous air pollutant emissions by 95%. This RTO stack exhaust is monitored by a Continuous Emission Monitoring System (CEMS). Additionally, pursuant to NJDEP requirements every 5-years the facility conducts testing on stack gas exhaust emissions in order to demonstrate compliance with limitations for contaminants being emitted into the air.

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/cooling 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 gravity separation, neutralization (i.e., changing physical or chemical properties or removal of contaminants to render a material less hazardous), filtration and fuel blending (defined elsewhere herein). The image below shows the location of the RTO system, distillation columns, storage tanks, and the thin film evaporator.



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

A detailed site map of the facility is included as [Appendix C](#).

3.1.1 Facility Held Permits

- NJDEP Solid & Hazardous Waste Facility Permit No.: HWP190002
- Publicly Owned Treatment Works: Linden Roselle Sewerage Authority (LRSA) Permit No.: 036
- Air Permits (10 Synthetic Minor Source Permits) Facility ID No.: 40097
 - GEN150001: Generator
 - PCP110004: Boilers
 - PCP130002: LRSA Tank
 - PCP130004: Tank Farm
 - PCP140001: Tank Farm
 - PCP180002: Mineral Spirit tanks
 - PCP190002: Tanks 213, 214 and 215
 - PCP190001: Tank Farm 4
 - PCP220002: Tank Farm 6
 - PCP220003: RTO Permit
- TTB Permit No.: SDS-NJ-15022
- NJPDES Multi-Sector General Stormwater 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 on-site 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 (3) existing truck stations as container storage units for hazardous and non-hazardous wastes. These additions to the Linden Recycle Center will allow the facility to provide treatment, via stabilization and solidification prior to offsite landfilling for hazardous and non-hazardous wastes being generated by utility companies and other industrial and commercial businesses. Such treatment is not presently being done at this location but is done elsewhere in NJ. However, the capacity for the treatment of hazardous and non-hazardous wastes generated by utility companies performing maintenance services is limited in NJ, and requires longer driving distances and waiting/idling times than what would be experienced by a more central location like at the Linden facility.

Hazardous waste treatment by stabilization is conducted in a containment vessel such as a fully enclosed mix pit in order to bind-up contaminants (e.g., heavy metals) in liquid wastes. A binding compound like Portland cement is used in a mixing process via backhoe to eliminate the potential for contaminants to enter the environment from landfills through a process called leaching.

Hazardous or non-hazardous waste solidification involves changing the liquid state of a waste into a solid state in a containment vessel like a fully enclosed mix pit using kiln dust, saw dust, etc., so it can be placed in a landfill.

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. Three (2) of the four (4) proposed hazardous waste container storage areas already exist as truck stations with secondary containment and will be used to temporarily store vehicles loaded with hazardous and non-hazardous wastes that could contain free liquids. One (1) of the four (4) proposed hazardous waste container storage areas already exists as a truck station for vehicles/trailers loaded with hazardous and non-hazardous wastes that do not contain free liquids. The fourth proposed container storage area will be the enclosed Mix Pit Building which will have adequate secondary containment to store up to 18,000 gallons of hazardous wastes in various container configurations including roll-off boxes, tankers, drums, tote/portable tanks, etc. Non-hazardous wastes may also be stored in the Mix Pit Building.

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 currently permitted to store, recycle and treat a multitude of hazardous wastes as mentioned above and accept 50 tons per day of solid (non-hazardous) wastes for storage and transfer offsite. However, the facility is not presently permitted to treat hazardous and non-hazardous waste via stabilization and solidification. The facility is proposing to modify its permits in order to process 200 tons per day of hazardous wastes via stabilization and solidification. Additionally, the facility is modifying its permits to receive up to 99 tons of solid (non-hazardous) wastes per day and of that process up to 84 tons per day of ID72 (non-hazardous liquid waste) via solidification and store/transfer offsite up to 15 tons per day of ID27 (dry solid non-hazardous waste). In order to do so the Linden Recycle Center will construct two (2) enclosed mix pits for the stabilization and/or solidification of low-level metal-bearing characteristic hazardous (RCRA heavy metals) and solid/non-hazardous wastes. 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 high density polyethylene (HDPE) 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 [Appendix C](#). A simplified process flow diagram for mix pit operations is included as [Appendix E](#).

The Linden Recycle Center has been operating and will continue to operate various shifts 24-hours per day, 7-days per week. Operations for the new process will also be on various shifts, and possibly 24-hours, seven (7) days a week at certain times of need as well. Such times of needs are determined when a utility or other essential service company experiences overwhelming adverse conditions such as flooding, fire, equipment malfunction, etc., that could interrupt critical operations like those within the electrical grid. 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 dedicated backhoe or other mechanized equipment (e.g., excavator fitted with a mixing blade, robotic arm, etc.) isolated in the Mix Pit Building will be used to mix the waste with the chemical reagents (e.g., Portland Cement). The backhoe will not be removed from the mix pit operations for servicing/maintenance, etc., unless all contamination has been removed and affected parts/equipment has been decontaminated. 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 liquid wastes using a backhoe or similar equipment to ensure no free-liquids remain and that its physical state is that of a solid material that can be landfilled.

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.

Incoming shipments of liquid wastes destined for treatment in the mix pit operation will have varying units of measure determined and/or measured by the shipper/customer/generator to include but not be limited to gallons, pounds, tons, etc., indicated on properly completed shipping papers/manifests/bills of ladings. Since treated wastes resulting from mix pit operations being shipped offsite by the facility will be typically free of liquids, units of weight (e.g., pounds, tons, etc.) will be primarily used however other units of measure could be used (e.g., cubic yards) on properly completed shipping papers/manifests/bills of ladings.

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 Building. The proposed equipment will consist of:

- A Mix Pit Building and associated air pollution control equipment (see below at *Section 3.3.2*)
- 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 storage. Also the building will house and be used for operations for:
 - Mix Pit 1 – A 8,372 gallon steel-lined inground concrete structure for treating wastes by removing free liquids and mixing remaining materials with an appropriate reagent to stabilize/bind hazardous wastes containing heavy metals. Hazardous and non-hazardous wastes will be solidified by removing free liquids and mixing remaining materials with an appropriate reagent.
 - Mix Pit 2 - A 8,372 gallon steel-lined inground concrete structure for treating wastes by removing free liquids and mixing remaining materials with an appropriate reagent to stabilize/bind hazardous wastes containing heavy metals. Hazardous and non-hazardous wastes will be solidified 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.
 - Dedicated backhoes – For mixing wastes in the mix pits.

Proposed container storage areas (i.e., Truck Stations 11-13 and the Mix Pit Building/Container Storage Area 3) will be used for storage of wastes in containers prior to being placed in a mix pit for treatment or being processed by other onsite operations like recycling or fuel blending. The mix pits are neither designed nor intended to hold the entire contents of any container storage area. Wastes being placed in the mix pits generally are delivered directly to the operation via vacuum tanker transportation vehicles that can hold 3,000 to 6,000 gallons of liquid wastes. The mix pits will not be overfilled prior to, during or after treatment operations are conducted.

A site map showing the location of the new equipment is included as [Appendix C](#).

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. Potential pollution resulting from the proposed mix pit operation will be in the form of air emissions primarily consisting of particulate dust and low-levels of volatile organic compounds (VOCs). All stabilization and solidification of waste will be performed within the Mix Pit Building, which will be fully enclosed and will also serve as Container Storage Area 3. Container Storage Area 3 will have a hazardous waste container (e.g., roll-off boxes, tankers, 55-gallon drums, tote/portable tanks) 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 fully contained floor sumps. The floor sumps are then pumped-out to remove the spilled materials and no wastes are released into the environment.

The facility will minimize air emissions created by the mix pit operations by installing a baghouse dust collector/filter for the removal of air-borne particulate matter and a carbon absorption bed/filter for the removal of low-levels of volatile organic compounds (VOCs) created from the mix pits within the fully enclosed Mix Pit Building. A baghouse dust collector/filter is a widely used engineered air filtering system that removes particulate in the Mix Pit Building which is under negative pressure created by an induced draft fan that draws air through the filter. The removed particulate matter is collected in a hopper and properly disposed offsite, or potentially reused in the mix pit operation. Carbon absorption involves the use of carbon to remove waste and other substances from air or water and is also widely used as an air pollution control measure. Low level VOCs are also drawn through the carbon filter under negative pressure in the Mix Pit Building created by the induced draft fan. VOCs are absorbed by the carbon and once the carbon becomes saturated/spent it is properly disposed offsite. The baghouse is estimated to remove 99.9% of particulate matter (PM) greater than 10 microns and remove 99% of particulate matter less than 10 microns, and the carbon absorption bed is estimated to remove 95% of volatile organic compounds and hazardous air pollutants. Additionally monitors to measure concentrations of VOCs in the air within the enclosed Mix Pit Building will be installed to ensure those vapors do not exceed allowable levels.

The loading, unloading, and temporary storage of hazardous waste, hazardous secondary materials, and non-hazardous wastes currently takes place at designated truck stations to include the three (3) for which the RCRA Class 3 Permit modification requests approval for longer-term storage, 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 six (6) inches of rainfall capacity within any 24-hour period.

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 stormwater drainage away from the area. The Mix Pit Building which is proposed for hazardous and non-hazardous waste treatment will also be used to store wastes in various size containers such as roll-of boxes, tanker trucks, 55-gal drums, tote/portable tanks, etc. The Mix Pit Building is fully enclosed and has secondary containment to prevent any spills or leaks from entering the environment. Since the Mix Pit Building is fully enclosed it will not be subject to stormwater run-on or run-off.

The facility is not located on a floodplain, so flood management practices are not necessary. However, in the event an unusual extreme climatic event that could cause abnormal flooding at the facility is forecasted, the company's extensive fleet of vehicles could be dispatched to move wastes to other company locations not affected by such potential flooding. Pursuant to existing NJDEP regulations and permit conditions as well as company policies, secondary containments, sumps, and other structures at the facility in which rainfall can collect provide for 6 inches of rainfall during any 24-hour period. All such areas where rainfall collects are pumped-out at least every 24-hours when liquids are present and more frequently as needed to remove accumulated rainfall and maintain adequate secondary containment capacities. When removed from operational areas, rainfall that could potentially contain contaminants is discharged to the sewer system under a permit issued by the local sewer authority. Stormwater run-off from parking lots flows into rainfall catchments that drain into King's Creek.

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 1/9 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 and is maintained by the city of Linden and is designed to provide adequate load-bearing capacity for truck traffic.

The facility anticipates total vehicle traffic to increase by less than 1% of the current traffic presently occurring on Route 1/9 and does not anticipate changes to traffic routes. Additional information on traffic impacts is included as [Attachment K6](#). The facility anticipates an increase in truck traffic entering the site as an additional 15 heavy trucks and 10 light trucks per day. The following table provides a comparison of current onsite vehicle traffic to anticipated future levels:

Type of Vehicle	Daily Current Onsite Traffic	Daily Future Onsite Traffic
Heavy-Duty Trucks	22	37
Light-Duty Trucks	8	18
Personal Vehicles	77	123

Overall truck traffic increase will be minor compared to current traffic levels within the City of Linden due to the fact presently most company vehicles to be involved with the mix pit operations are already

traveling through the City of Linden/Union County to deliver wastes to a third-party location that is farther away in another county. In essence, the addition of the mix pit operation at the Linden Recycle Center will reduce company vehicle driving times and distances as well as associated exhaust emissions.

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 (2) to five (5) new full-time employees from the surrounding community and elsewhere. Additionally, approximately 43 employees will be relocated from other company locations within New Jersey.

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; permit number: HWP190002. 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. This permit modification is for the proposed mix pit operation, the permitting of 3 existing truck stations for hazardous and non-hazardous waste storage and to permit the Mix Pit Building to store containers of hazardous and non-hazardous wastes.
- 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. This permit modification is for the proposed mix pit operation.

The facility has ten (10) NJDEP Air Pollution Control permits for current operations on site – see *Section 3.1.1*. The proposed expansion will require an 11th 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 and in [Appendix F](#). 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 [Appendix F](#).

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 – see [Appendix L](#). The associated solid waste permit modification is included within the facility's December 8, 2023 RCRA (hazardous waste) permit modification application presently pending with NJDEP (see above at 4.2). 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 March 22, 2024, and can be obtained through the following link: [NJ Environmental Justice Mapping, Assessment and Protection Tool \(EJMAP\) \(arccgis.com\)](#).

Overburdened Community Stressor Summary

Block Group: 340390354001

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 Group Value	County Non OBC 50th	State Non OBC 50th	Geographic Point of Comparison	Adverse Stressor
Ground-Level Ozone (3-year average days above standard)	1.843	0.333	0.999	0.333	Yes
Fine Particulate Matter (PM _{2.5}) (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 Value	County Non OBC 50th	State Non OBC 50th	Geographic Point of Comparison	Adverse Stressor
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 Group Value	County Non OBC 50th	State Non OBC 50th	Geographic Point of Comparison	Adverse Stressor
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 Group Value	County Non OBC 50th	State Non OBC 50th	Geographic Point of Comparison	Adverse Stressor
Drinking Water (count of public drinking water violations or exceedances, or percent of private well testing exceedances)	0	NA	NA	NA	No
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 within 0.25 mile)	16.918	22.823	19.154	19.154	No
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 flooded)	72.255	2.321	2.338	2.321	Yes

Density/Proximity Stressors					
Stressor	Block Group Value	County Non OBC 50th	State Non OBC 50th	Geographic Point of Comparison	Adverse Stressor
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

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 currently holds ten (10) NJDEP Air Pollution Control permits and is applying for an 11th 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.
 - Current Permitted and fugitive emissions have the potential to emit VOCs as follows:
 - GEN150001: Generator – 0.001 tpy of VOCs
 - PCP110004: Boilers – 0.64 tpy of VOCs
 - PCP130002: LRSA Tank – minimal VOCs below reporting requirements
 - PCP130004: Tank Farm 2 – 1.95 tpy VOCs
 - PCP140001: Tank Farm 1 – 3.84 tpy VOCs
 - PCP180002: Mineral Spirit Tanks – minimal VOCs below reporting requirements
 - PCP190002: Tanks 213, 214 and 215 – 2.27 tpy VOCs
 - PCP190001: Tank Farm 4 – 2.96 tpy VOC
 - PCP220002: Tank Farm 6 – 1.85 tpy VOC
 - PCP220003: RTO Permit – 5.51 tpy VOC
 - Fugitive emissions from plant wide operations: Below reporting requirements but estimated at 2.5 tpy VOCs.
 - **Total Facility Wide Potential to Emit: 21.52**
 - This is further 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 [Appendix F](#). Based on the information from this screening, the facility expansion is not expected to have a significant impact on this stressor.

Current VOC Potential to Emit	Future VOC Potential to Emit
21.52 Tons per Year	23.1 Tons per Year

- 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
 - Total Mix Pit PM_{2.5} Potential to Emit: 0.327 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.
 - Current Permitted potential to emit PM_{2.5} as follows:
 - GEN150001: Generator – 0.001 tpy of PM_{2.5}
 - PCP110004: Boilers – 0.93 tpy of PM_{2.5}
 - PCP220003: RTO Permit – 0.44 tpy of PM₂
 - **Total Facility Wide Potential to Emit: 1.37**
 - 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 [Appendix F](#). Emission calculations for mix pit operations can be found in the Linden Recycle Center's Mix Pit Air Permit application, as well as in [Appendix E](#). Under current

conditions, this expansion is not expected to impact this stressor, as determined by the air risk screening in [Appendix E](#).

Current Fine Particulate Matter (PM_{2.5}) Potential to Emit	Future Fine Particulate Matter (PM_{2.5}) Potential to Emit
1.37 Tons per year	1.70 Tons per year

- Cancer Risk from Diesel Particulate Matter (estimated cancer risk/million)
 - 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). Currently, there are approximately 22 heavy-duty and 8 light-duty company-owned trucks entering and exiting the facility daily. 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 for operation of the mix pits. Overall truck traffic increase will be minor compared to current traffic levels within the City of Linden due to the fact presently most company vehicles to be involved with the mix pit operations are already traveling through the City of Linden/Union County to deliver wastes to a third-party location that is farther away in another county. In essence, the addition of the mix pit operation at the Linden Recycle Center will reduce company vehicle driving times and distances as well as associated exhaust emissions. 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. The company'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 company-owned and operated, 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. Pursuant to the Occupational Safety and Health Administration's (OSHA) requirements for hazardous waste workers, training for all employees involved with the mix pit operations is conducted in accordance with 29 CFR 1910.120 commonly known as HAZWOPER. In order to limit the potential for employee exposure and provide required measures for the protection of employees from HAPs and other contaminants that might be present, during the planning phases for the project the process for the Management of Change (MOC) is followed which identifies potential hazards associated with any new process(es). During the MOC evaluation that involves corporate engineering, environmental and health and safety staff in addition to representatives of facility management and operations' staff needed engineering and administrative controls are identified as well as employee Personal Protective Equipment (PPE). As part of the MOC evaluation the facility follows OSHA's guidelines for a Job Hazard Analysis (JHA). The JHA will focus on potential physical, chemical, and environmental hazards associated with the new process and/or associated operating procedures. The facility will document the MOC and associated JHA, train employees on written Standard Operating Procedures (SOPs) as well as emergency procedures and evaluate employee competency before the start of any new tasks. Waste Analysis Plan procedures to include compatibility testing to ensure no reaction will occur will be performed before stabilizing and/or solidifying multiple different waste streams at the same time. An Industrial Hygiene survey (i.e., for VOCs, respirable dust, and noise) will be performed to identify the required level of PPE to be provided to employees, and if needed additional engineering controls will be installed. Typically, Level C air purifying respirator for dusty conditions or nuisance odors within the enclosed work space will be used. Also, portable and fixed area LEL monitoring will alarm if VOC levels exceed 1%.

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 [Appendix F](#). Potential-to-emit calculations are included in the facility's Mix Pit Air Permit application (discussed in *Section 4.2*) as well as in [Appendix E](#). 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 [Appendix F](#).

- 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 emission control equipment in the form of a baghouse dust collector and a carbon absorption bed, 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 [Appendix F](#).

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 56 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*). Of the 56 vehicles noted above, approximately 43 are associated with positions presently domiciled at other company locations in New Jersey that will relocate to the facility for routine environmental services in support of the mix pit operations and 3 are for anticipated new positions for operating the mix pits. The relocation of those existing employees overall will reduce driving time and distances associated with light-duty company vehicles used to service customers in the area for a potential net decrease in vehicle exhaust emissions. 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 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 treat hazardous and non-hazardous wastes via the mix pits, trucks transporting this waste will no longer have to make an additional trip to a third-party waste processing facility in Kearny, over 15 miles away from the Linden Recycle Center. Trucks currently drive from a company location in South Plainfield to pick up wastes from a customer, transport the wastes to the third-party processing facility, and return to the South Plainfield location. 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 presently permitted for the acceptance of 50 tons of solid waste per day. This combined hazardous/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 with authorization to treat 84 tons per day via solidification. The permit already allows for the receipt and storage of hazardous wastes. However, treatment via stabilization and solidification is currently not conducted at the Linden facility. The combined hazardous/solid waste permit will also be modified for the purpose of the facility expansion to include treating up to 200 tons of hazardous 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 are 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 (i.e., all hazardous emissions associated with this site expansion were projected to be below the NJDEP's threshold value for negligible long-term and short-term carcinogenic and non-carcinogenic effects). The NJDEP screening worksheet is available as [Appendix F](#). 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: El Especialito (3711 Hudson Ave, Union City, New Jersey 07087, (201) 348-1959).
- iii. 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.
- iv. 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 [Appendix I](#).
- 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 [Appendix J](#). 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.
- ii. 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. Since the facility has been operating for decades 24-hours per day, 7-days a week, traffic entering and exiting the facility is expected to have an increase of 15 heavy trucks per day, which would have a negligible impact on the average annual daily traffic in this block group and within the City of Linden. Traffic routes and hours of operation are not expected to change because of this project. While a minor increase in air pollution from mix pit operations 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 (i.e., all hazardous emissions associated with this site expansion were projected to be below the NJDEP's threshold value for negligible long-term and short term carcinogenic and non-carcinogenic effects). The NJDEP screening worksheet is available as [Appendix F](#). 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.

10 Supplemental Information (N.J.A.C. 7:1C-3.3)

Because the Linden Recycle Center is located in an overburdened community that is subject to adverse cumulative stressors, Safety-Kleen has supplemented this EJIS with additional information, as required by N.J.A.C. 7:1C-3.3. The following information is included in *Appendices K1* through *K14*:

1. Site mapping showing topographic conditions, contour data, drainage patterns, and areas regulated by the Department ([Appendix K1](#))
2. Onsite contamination information ([Appendix K2](#))
3. Ambient air quality data and information ([Appendix K3](#))
4. Subsurface hydrology information ([Appendix K4](#))
5. Localized climate and flooding impacts ([Appendix K5](#))
6. A traffic study describing traffic routes, patterns, and volumes associated with the facility ([Appendix K6](#))
7. A description of sewage facilities associated with the facility ([Appendix K7](#))
8. A description of the facility's stormwater management system ([Appendix K8](#))
9. A description of the facility's water supply ([Appendix K9](#))
10. A description of the facility's energy supply system ([Appendix K10](#))
11. A comparison of reasonable design alternatives ([Appendix K11](#))
12. Odor, dust, and noise management plans ([Appendix K12](#))
13. A description of the facility's compliance history ([Appendix 13](#))

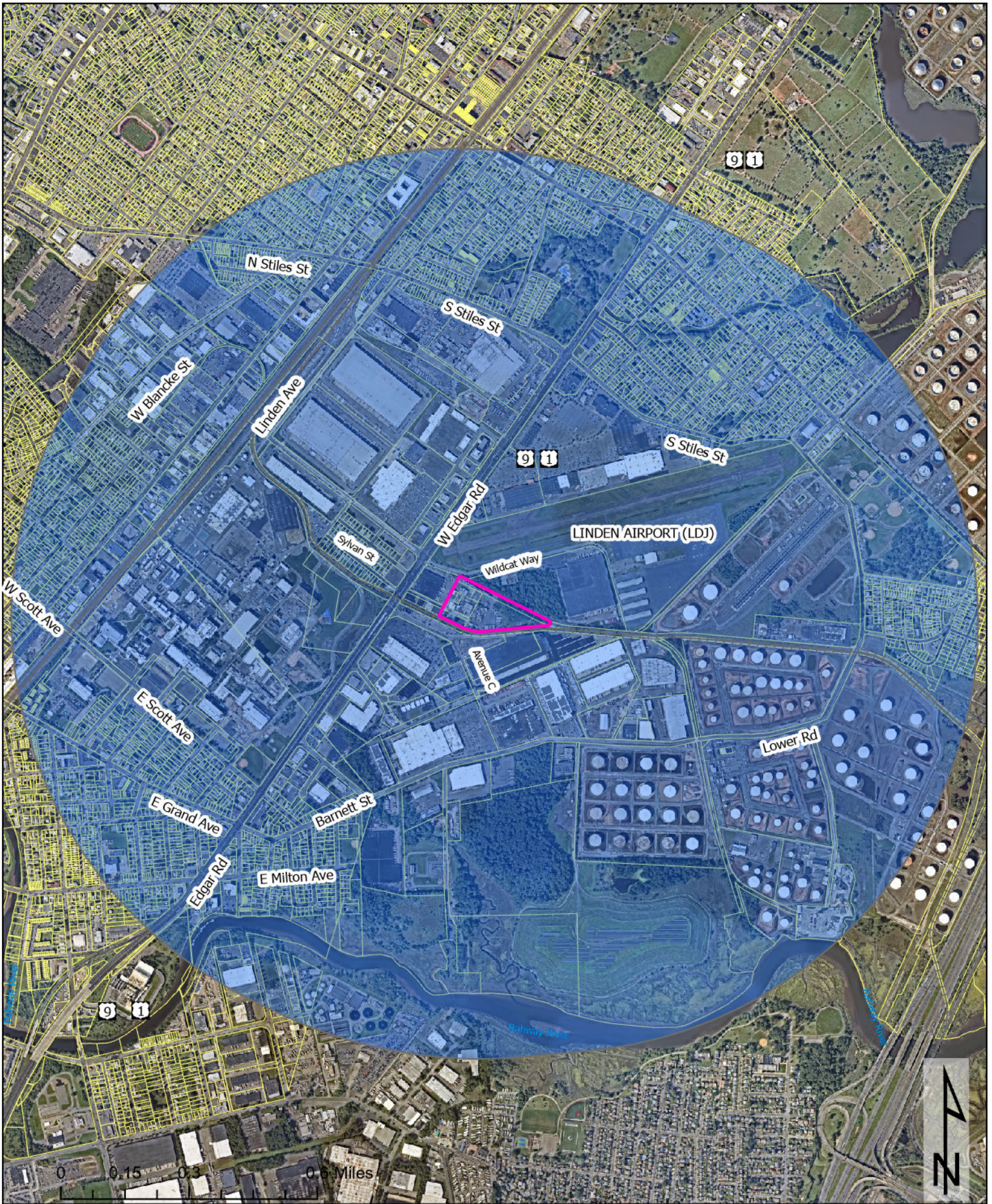
14. An analysis of control measures to address contributions to environmental and public health stressors ([Appendix 14](#))

Appendix A

Locus Map containing Linden Recycle Center

Appendix B

Locus Map showing One-Mile Radius Around Site



++++ Railway line

▭ Parcels

▭ Property boundary

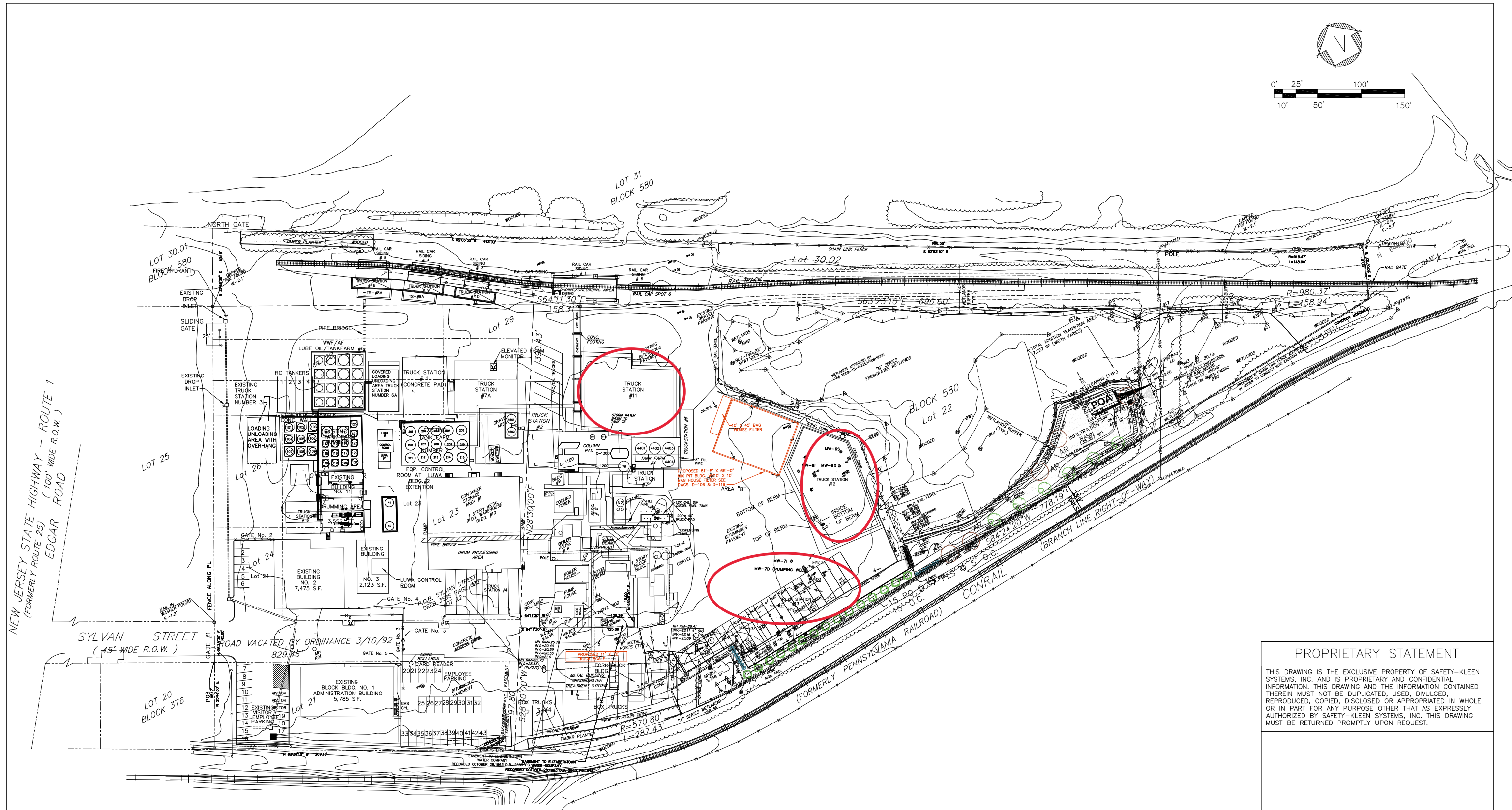
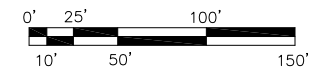
▭ 1 mile radius from property boundary

Safety Kleen Facility, Linden, NJ: Neighborhood Setting

Map created on October 26, 2023

Appendix C

Facility Site Map



LOT AREA
 SQUARE FEET - 478,444.29
 ACRES - 10.98
 BLDG SQUARE FOOTAGE - 33,689

LEGEND

- PROPERTY BOUNDARY
- - - - - CHAINLINK FENCE
- ==== RAILROAD TRACKS
- HAZARDOUS WASTE STORAGE/TREATMENT

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TITLE
 PROPOSED SITE PLAN
 1200 SYLVAN ST.
 LINDEN, N.J. 07036

SAFETY-KLEEN SYSTEMS, INC.
 42 LONGWATER DRIVE, NORWELL, MA. 02061
 PHONE: 781-792-5000

NO.	DESCRIPTION	BY	CHK	APPR	DATE
A	ISSUED FOR REVIEW	JEK	DDP	DDP	11/15/23
REVISIONS					

SCALE	BY	CHKD	APPROVAL	OP. APPR	DATE
1"=50'-0"	JEK	KJM	DP		11/15/23
SERVICE CENTER LOCATION		SC-DWG NUMBER		REV. NO.	
LINDEN, N.J.		C-205		A	

Appendix D

Mix Pit Construction Schedule

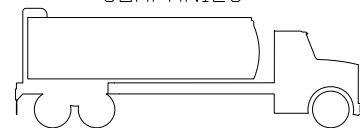
Construction Schedule
Mix Pit Structure
Safety-Kleen
Linden, NJ

Task	Duration (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	

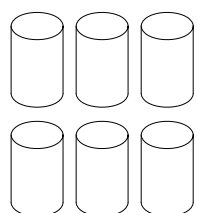
Appendix E

Mix Pit Simplified Process Flow Diagram

INCOMING SLUDGE WASTE
FROM PUBLIC & PRIVATE
UTILITY & TRANSIT
AUTHORITIES AND/OR
COMPANIES

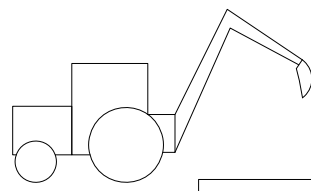


VIA VAC TRUCK/CUSCO

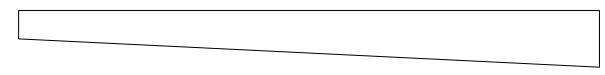


BATCH CONTAINERS FROM
BULK & VARIOUS INDUSTRIAL &
COMMERCIAL GENERATORS

STABILIZATION/
SOLIDIFICATION MATERIALS*



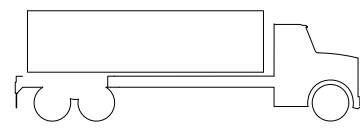
BACKHOE



STABILIZATION/
SOLIDIFICATION MIX PIT

SOLIDIFIED
WASTE

STABILIZED/
SOLIDIFIED WASTE
SHIPPED TO AUTHORIZED
LANDFILL



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.

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TITLE
MIX PIT
PROCESS FLOW DIAGRAM

SAFETY-KLEEN SYSTEMS, INC.
42 LONGWATER DR. NORWELL, MA. 02061
PHONE 781-792-5000

NO.	DESCRIPTION	BY	CHK	APPR	DATE
C	REVISE NOTES	JEK	DDS	DDP	083123
B	REVISE NOTES	JEK	DDP	DDP	082620
A	NEW ISSUE	JEK	DDP	DDP	041620

SCALE	BY	CHKD	P.E. APPR	DP. APPR	DATE
1/8" = 1'-0"	JEK	DDP	DDP	DDP	4/6/20

STANDARD BRANCH LOCATION: LINDEN, N.J. STD-DWG-REV NO. M-100

Appendix F

NJDEP Division of Air Quality Risk Screening Worksheet/Mix Pit Emission Calculations

VOC/HAP Emissions (Carbon Adsorption)
LIN Mix Pit Operations
Safety-Kleen Systems Inc., Linden NJ Facility

Table 1

OS7

Process: Mixing of Waste Material in Mix Pit ^(a)

Pollutant	Worst Case Concentration ^(b) (ppm)	Pollutant Concentration (%)	Moisture Content ^(b) (%)	Maximum Hourly Throughput (lb/hr)	Maximum Annual Throughput (lb/year)	Uncontrolled Hourly Emissions (lb/hr)	Uncontrolled Annual Emissions (ton/yr)	Controlled Hourly Emissions ^(c) (lb/hr)	Controlled Annual Emissions ^(c) (ton/yr)	Controlled Annual Emissions (lb/yr)	Reporting Threshold ^(d) (lbs/yr)
VOC	500	0.05%	10%	120,000	140,000,000	54.0	31.5000	2.70	1.575000		
PCB ^(e)	49	0.0049%	40%	120,000		3.528		0.1764			
	7	0.0007%	40%		10,000,000	0.000	0.0210		0.001050	2.10	2.1
Benzene	1	0.0001%	10%	120,000	140,000,000	0.108	0.0630	0.0054	0.003150	6.30	6
Chlorobenzene	500	0.05%	10%	120,000	140,000,000	54.0	31.5000	2.70	1.575000	3150.0	2000
Cumene	500	0.05%	10%	120,000	140,000,000	54.0	31.5000	2.70	1.575000	3150.0	2000
Ethylene Glycol	500	0.05%	10%	120,000	140,000,000	54.0	31.5000	2.70	1.575000	3150.0	2000
Methanol	500	0.05%	10%	120,000	140,000,000	54.0	31.5000	2.70	1.575000	3150.0	2000
Methylene Chloride	500	0.05%	10%	120,000	140,000,000	54.0	31.5000	2.70	1.575000	3150.0	2000
Methyl Ethyl Ketone	500	0.05%	10%	120,000	140,000,000	54.0	31.5000	2.70	1.575000	3150.0	2000
Methyl Isobutyl Ketone	500	0.05%	10%	120,000	140,000,000	54.0	31.5000	2.70	1.575000	3150.0	2000
Phenol	500	0.05%	10%	120,000	140,000,000	54.0	31.5000	2.70	1.575000	3150.0	2000
Tetrachloroethylene	3	0.0003%	10%	120,000	140,000,000	0.3	0.1890	0.016	0.009450	18.900000	180
Toluene	500	0.05%	10%	120,000	140,000,000	54.0	31.5000	2.70	1.575000	3150.0	2000
Trichloroethylene	1	0.0001%	10%	120,000	140,000,000	0.108	0.0630	0.005	0.003150	6.300000	8
Xylene	500	0.05%	10%	120,000	140,000,000	54.0	31.5000	2.70	1.575000	3150.0	2000

Basis for Emissions:

- (a) Hourly, Daily, and Annual emissions based on the assumptions listed below.
- (b) Worst case concentration and moisture content of waste material based on Waste Profile information.
- (c) Controlled emissions based on the estimated volatile organic compound removal efficiency for the carbon adsorption system: 95%
- (d) Reporting Threshold as indicated in NJAC 7:27-17.9 (b) Table 3A
- (e) PCB concentrations are established on a worst-case short term basis of 49 ppm (non-TSCA facility cannot accept greater). Typical concentration will be less than 7 ppm for overall annual basis. Analysis for PCBs is conducted on incoming loads.

Assumptions:

RCRA Hazardous Waste

Daily Waste Throughput (Max)	200 tons
Hourly Waste Throughput (Max)	60 tons

Max Daily Operating Schedule	24 hrs/day
Annual Operating Schedule	365 days/yr
Annual RCRA Hazardous Waste	70,000 tons/yr
Annual Non-Hazardous Waste	36,000 tons/yr
Annual PCB Sludge Waste	5,000 tons/yr
Total Annual Waste Processed	111,000 tons/year

Assumptions:

Non Hazardous Waste

Daily Waste Throughput (Max)	60 tons
Hourly Waste Throughput (Max)	40 tons

Particulate Matter and Lead Emissions (Baghouse Control)

LIN Mix Pit Operations

Safety-Kleen Systems Inc., Linden NJ Facility

Table 2

OS1

Process: Loading Stabilization Material to Building ^(a) (Front end loader to bunker)

Pollutant	Moisture Content ^(b) (%)	k ^(c)	U ^(d) (mph)	Emission Factor ^(a) (lb/ton)	Maximum Hourly Throughput ^(e,f) (ton/hr)	Maximum Annual Throughput ^(e) (ton/yr)	Uncontrolled Hourly Emissions (lb/hr)	Uncontrolled Annual Emissions (ton/yr)	Controlled Hourly Emissions ^(g) (lb/hr)	Controlled Annual Emissions ^(g) (ton/yr)
PM	0.25	0.74	2.0	1.32E-02	30	29250	0.3967	0.1934	0.0003967	0.000193
PM 10	0.25	0.35	2.0	6.25E-03	30	29250	0.1876	0.0915	0.00188	0.00091
PM 2.5	0.25	0.053	2.0	9.47E-04	30	29250	0.0284	0.0139	0.000284	0.00014

OS2

Process: Loading Solidification Material to Building ^(a) (Front end loader to bunker)

Pollutant	Moisture Content ^(h) (%)	k ^(c)	U ^(d) (mph)	Emission Factor ^(a) (lb/ton)	Maximum Hourly Throughput ^(e,f) (ton/hr)	Maximum Annual Throughput ^(e) (ton/yr)	Uncontrolled Hourly Emissions (lb/hr)	Uncontrolled Annual Emissions (ton/yr)	Controlled Hourly Emissions ^(g) (lb/hr)	Controlled Annual Emissions ^(g) (ton/yr)
PM	11	0.74	2.0	6.62E-05	30	18000	0.0020	0.0006	0.0000020	0.0000006
PM 10	11	0.35	2.0	3.13E-05	30	18000	0.0009	0.0003	0.000009	0.0000028
PM 2.5	11	0.053	2.0	4.74E-06	30	18000	0.00014	0.00004	0.0000014	0.0000004

OS3

Process: Loading of Waste Material into Mix Pit ^(h) RCRA Hazardous Waste

Pollutant ⁽ⁱ⁾	Moisture Content ⁽ⁱ⁾ (%)	k ^(c)	U ^(d) (mph)	Emission Factor ^(a) (lb/ton)	Maximum Hourly Throughput ^(e) (ton/hr)	Maximum Annual Throughput ^(e) (ton/yr)	Uncontrolled Hourly Emissions (lb/hr)	Uncontrolled Annual Emissions (ton/yr)	Controlled Hourly Emissions ^(g) (lb/hr)	Controlled Annual Emissions ^(g) (ton/yr)
PM	10	0.74	2.0	7.56E-05	60	70000	0.0045	0.0026	0.0000045	0.000003
PM 10	10	0.35	2.0	3.58E-05	60	70000	0.0021	0.0013	0.00002	0.00001
PM 2.5	10	0.053	2.0	5.41E-06	60	70000	0.0003	0.0002	0.000003	0.0000018950
Arsenic	10	0.74	2.0	7.56E-05	0.030	35.0	0.0000023	0.0000013	0.000000023	0.0000000132
Barium	10	0.74	2.0	7.56E-05	0.600	700.0	0.0000454	0.0000265	0.000000454	0.0000002646
Beryllium	10	0.74	2.0	7.56E-05	0.060	70.0	0.0000045	0.0000026	0.000000045	0.0000000265
Cadmium	10	0.74	2.0	7.56E-05	0.030	35.0	0.0000023	0.0000013	0.000000023	0.0000000132
Chromium	10	0.74	2.0	7.56E-05	0.006	7.0	0.0000005	0.0000003	0.000000005	0.0000000026
Nickel	10	0.74	2.0	7.56E-05	0.300	350.0	0.0000227	0.0000132	0.000000227	0.0000001323
Selenium	10	0.74	2.0	7.56E-05	0.600	700.0	0.0000454	0.0000265	0.000000454	0.0000002646
Silver	10	0.74	2.0	7.56E-05	0.600	700.0	0.0000454	0.0000265	0.000000454	0.0000002646
Lead	10	0.74	2.0	7.56E-05	0.60	700.0	0.00005	0.000026	0.00000005	0.0000000265

Particulate Matter and Lead Emissions (Baghouse Control)

LIN Mix Pit Operations

Safety-Kleen Systems Inc., Linden NJ Facility

Table 2

OS4

Process: Loading of Waste Material into Mix Pit ^(a)

Non-Hazardous Waste

Pollutant	Moisture Content ⁽ⁱ⁾ (%)	k ^(c)	U ^(d) (mph)	Emission Factor ^(a) (lb/ton)	Maximum Hourly Throughput ^(e) (ton/hr)	Maximum Annual Throughput ^(e) (ton/yr)	Uncontrolled Hourly Emissions (lb/hr)	Uncontrolled Annual Emissions (ton/yr)	Controlled Hourly Emissions ^(g) (lb/hr)	Controlled Annual Emissions ^(g) (ton/yr)
PM	10	0.74	2.0	7.56E-05	40	36000	0.0030	0.0014	0.0000030	0.000001
PM 10	10	0.35	2.0	3.58E-05	40	36000	0.0014	0.0006	0.00001	0.00001
PM 2.5	10	0.053	2.0	5.41E-06	40	36000	0.0002	0.0001	0.000002	0.00000

OS5

Process: Loading of Reagent for Stabilization in Mix Pit ^(a)

Pollutant	Moisture Content ^(b) (%)	k ^(c)	U ^(d) (mph)	Emission Factor ^(a) (lb/ton)	Maximum Hourly Throughput ^(e,f) (ton/hr)	Maximum Annual Throughput ^(e,f) (ton/yr)	Uncontrolled Hourly Emissions (lb/hr)	Uncontrolled Annual Emissions (ton/yr)	Controlled Hourly Emissions ^(g) (lb/hr)	Controlled Annual Emissions ^(g) (ton/yr)
PM	0.25	0.74	2.0	1.32E-02	9	10500	0.1190	0.0694	0.00012	0.00007
PM 10	0.25	0.35	2.0	6.25E-03	9	10500	0.0563	0.0328	0.0006	0.0003
PM 2.5	0.25	0.053	2.0	9.47E-04	9	10500	0.0085	0.0050	0.0001	0.00005

OS6

Process: Loading of Media for Solidification in Mix Pit ^(a)

Pollutant	Moisture Content ^(h) (%)	k ^(c)	U ^(d) (mph)	Emission Factor ^(a) (lb/ton)	Maximum Hourly Throughput ^(e,f) (ton/hr)	Maximum Annual Throughput ^(e,f) (ton/yr)	Uncontrolled Hourly Emissions (lb/hr)	Uncontrolled Annual Emissions (ton/yr)	Controlled Hourly Emissions ^(g) (lb/hr)	Controlled Annual Emissions ^(g) (ton/yr)
PM	11	0.74	2.0	6.62E-05	30	18000	0.0020	0.0006	0.000002	0.000001
PM 10	11	0.35	2.0	3.13E-05	30	18000	0.0009	0.0003	0.00001	0.000003
PM 2.5	11	0.053	2.0	4.74E-06	30	18000	0.0001	0.0000	0.000001	0.0000004

Particulate Matter and Lead Emissions (Baghouse Control)

LIN Mix Pit Operations

Safety-Kleen Systems Inc., Linden NJ Facility

Table 2

OS7

Process: Mixing of Reagent/Media and Waste Material ^(k)

Pollutant ⁽ⁱ⁾	Uncontrolled Emission Factor (lb/ton) ^(k)	Maximum Hourly Throughput ^(e) (ton/hr)	Maximum Annual Throughput ^(e) (ton/yr)	Uncontrolled Hourly Emissions (lb/hr)	Uncontrolled Annual Emissions (ton/yr)	Controlled Hourly Emissions ^(l) (lb/hr)	Controlled Hourly Emissions ^(g) (lb/hr)	Controlled Annual Emissions ^(g) (ton/yr)
PM	0.572	60	140250	34.3200	40.1115	0.03432		0.04011
PM 10	0.156	60	140250	9.3600	10.9395	0.09360		0.10940
PM 2.5	0.156	60	140250	9.3600	10.9395	0.09360		0.10940
Arsenic	0.572	0.030	70.13	0.0172	0.0201	0.000017	0.040112	0.000020
Barium	0.572	0.600	1402.50	0.3432	0.4011	0.000343	0.802230	0.000401
Beryllium	0.572	0.060	140.25	0.0343	0.0401	0.000034	0.080223	0.000040
Cadmium	0.572	0.030	70.13	0.0172	0.0201	0.000017	0.040112	0.000020
Chromium	0.572	0.006	14.03	0.0034	0.0040	0.000003	0.008022	0.000004
Nickel	0.572	0.300	701.25	0.1716	0.2006	0.000172	0.401115	0.000201
Selenium	0.572	0.600	1402.50	0.3432	0.4011	0.000343	0.802230	0.000401
Silver	0.572	0.600	1402.50	0.3432	0.4011	0.000343	0.802230	0.000401
Lead	0.572	0.600	1403	0.3432	0.4011	0.00034	0.80223	0.00040

OS8

0.9301

0.0009

Process: Loading of Stabilized Waste Material to Trucks ^(m)

Pollutant	Uncontrolled Emission Factor (lb/ton) ^(m)	Maximum Hourly Throughput ^(e) (ton/hr)	Maximum Annual Throughput ^(e) (ton/yr)	Uncontrolled Hourly Emissions (lb/hr)	Uncontrolled Annual Emissions (ton/yr)	Controlled Hourly Emissions ^(g) (lb/hr)	Controlled Annual Emissions ^(g) (ton/yr)
PM	1.118	90	140250	100.6200	78.3998	0.1006	0.0784
PM 10	0.310	90	140250	27.9000	21.7388	0.2790	0.2174
PM 2.5	0.310	90	140250	27.9000	21.7388	0.2790	0.2174

Particulate Matter and Lead Emissions (Baghouse Control)
LIN Mix Pit Operations
Safety-Kleen Systems Inc., Linden NJ Facility

Table 2

Total Particulate Emissions

Total	Combined Uncontrolled Maximum Annual Emissions (ton/yr)	Combined Controlled Annual Emissions (ton/yr)	Combined Controlled Annual Emissions (lbs/yr)	Reporting Threshold ⁽ⁿ⁾ (lbs/yr)
PM	118.78	0.1188		
PM 10	32.81	0.3281		
PM 2.5	32.70	0.3270		
Arsenic	0.02006	0.000020	0.040138	0.01
Barium	0.40114	0.000401	0.802759	NA
Beryllium	0.04011	0.000040	0.080276	0.02
Cadmium	0.02006	0.000020	0.040138	0.01
Chromium	0.00401	0.000004	0.008028	1000
Nickel	0.20057	0.000201	0.401380	0.6
Selenium	0.40114	0.000401	0.802759	925
Silver	0.40114	0.000401	0.802759	NA
Lead	0.40114	0.000401	0.802283	2

Particulate Matter and Lead Emissions (Baghouse Control)

LIN Mix Pit Operations

Safety-Kleen Systems Inc., Linden NJ Facility

Table 2

Basis for Emissions:

- (a) Emission factor based on USEPA AP-42 Section 13.2.4 (Rev. 11/06) and the equation below.
- (b) Various reagents/media may be utilized for the stabilization and/or solidification of waste materials, in bagged form. For the purposes of this estimate, the moisture content for cement dust was selected as it represents the "worst case scenario" for particulate emissions due to low moisture content.
- (c) Assumed average particle size diameter for PM and metals < 30 microns for particle size multiplier (k)
- (d) Mean wind speed (U) estimated at 2 mph within the building (maximum).
- (e) Hourly, Daily, and Annual emissions based on the assumptions listed below.
- (f) Maximum hourly throughput based on the maximum amount of treatment reagent assuming rate of 15% by weight per hour for stabilization and 50% by weight per hour for solidification.
- (g) Controlled baghouse emissions based on the estimated particulate removal efficiency for the system: PM and metals = 99.9%, PM10 and PM2.5 = 99%.
- (h) Various media may be utilized for the solidification of waste materials, in bulk form. For the purposes of this estimate, the moisture content for "Miscellaneous materials" was selected and appeared to be an average of all materials represented in AP-42 Section 13.2.4.
- (i) Worst case metal-bearing concentration of RCRA hazardous waste:

	ppm	% by weight		ppm	% by weight
Arsenic	500	0.05%	Nickel	5000	0.50%
Barium	10000	1%	Selenium	10000	1%
Beryllium	1000	0.10%	Silver	10000	1%
Cadmium	500	0.05%	Lead	10000	1%
Chromium	100	0.01%			

- (j) Moisture content of waste material based on Waste Profile information % water.
- (k) Emissions created during the mixing of the waste material and the reagent are based on the emission factors for mixer loading, found in USEPA AP-42 Table 11.12-2 (Rev. 6/06, updated 2/11).
- (l) Controlled emissions based on the use of water spray to suppress the generation of fugitive dust during the mixing process, and controlled baghouse emissions based on the estimated particulate removal efficiency for the system: PM and Pb = 99.9%, PM10 and PM2.5 = 99%.
- (m) Emissions created during the loading of waste are based on the emission factors for truck loading, found in USEPA AP-42 Table 11.12-2 (Rev. 6/06, updated 2/11).
- (n) Reporting Threshold as indicated in NJAC 7:27-17.9 (b) Table 3A

Equation for Unloading of Waste Material and Reagents (a):

$$E = k (0.0032) \frac{(U/5)^{1.3}}{(M/2)^{1.4}}$$

where:

- E = emission factor
- k = particle size multiplier
- U = mean wind speed (mph)
- M = material moisture content (%)

Assumptions (e): RCRA Hazardous Waste

Daily Waste Throughput (Max)	200	Max Daily Operating Schedule	24 hrs/day
Hourly Waste Throughput (Max)	60	Annual Operating Schedule	365 days/yr
Reagent/Media rate	15%	Annual RCRA Hazardous Waste	70,000 tons/yr
Particulate Removal Efficiency (≤PM-10)	99%	Annual Non-Hazardous Waste	36,000 tons/yr
Particulate Removal Efficiency (>PM-10)	99.99%	Annual Lead Sludge Waste	5,000 tons/yr
		Total Annual Waste Processed	111,000 tons/year
		Total Annual Reagent Usage	29,250 tons/year
<u>Assumptions:</u> Non Hazardous Waste			
Daily Waste Throughput (Max)	60		
Hourly Waste Throughput (Max)	40		
Reagent rate	50%		
Particulate Removal Efficiency (≤PM-10)	99%		
Particulate Removal Efficiency (>PM-10)	99.99%		

Appendix G

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

Table 4-43: Estimated National Average Vehicle Emissions Rates per Vehicle by Vehicle Type using Gasoline and Diesel (Grams per mile)

	(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																																
Total HC	1.953	1.861	1.717	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	17.511	16.411	14.852	13.456	12.464	11.334	10.549	9.848	9.280	8.445	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	3.258	3.171	3.005	2.845	2.668	2.508	
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	
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	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	
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		
Light-duty trucks																																
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	
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	
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	
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	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.005	0.005	0.005	0.005	
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	
Heavy-duty vehicles																																
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	
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	
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	
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	0.019	0.019	0.019	
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	0.005	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	
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	
Motorcycles																																
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	2.616	2.615	2.614	2.610	2.602	2.591	2.545	2.526	2.504	
Exhaust CO	36.277	38.267	39.089	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	12.062	11.948	
Exhaust NOx	0.927	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	
Exhaust PM2.5	0.026	0.026	0.026	0.025	0.024	0.023	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	
Brakewear 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	
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	
DIESEL																																
Light-duty vehicles																																
Total HC	2.283	2.221	2.051	1.912	1.787	1.688	1.464	1.364	1.327	1.288	1.190	1.097	0.997	0.520	0.344	0.266	0.170	0.179	0.142	0.145	0.143	0.145	0.137	0.131	0.125	0.122	0.113	0.105	0.097	0.091	0.086	
Exhaust CO	39.892	38.140	34.440	31.722	29.396	27.357	23.790	22.252	21.663	20.982	19.401	17.945	16.342	9.831	6.647	5.028	3.508	3.727	3.349	3.590	3.640	3.784	3.661	3.596	3.445	3.384	3.030	2.671	2.362	2.081	1.902	
Exhaust NOx	2.863	2.684	2.362	2.224	2.095	1.926	1.688	1.602	1.543	1.404	1.223	1.131	0.947	0.760	0.476	0.321	0.193	0.201	0.137	0.135	0.129	0.133	0.112	0.100	0.087	0.081	0.070	0.058	0.051	0.041	0.035	
Exhaust PM2.5	0.053	0.054	0.054	0.053	0.052	0.051	0.044	0.040	0.039	0.038	0.036	0.027	0.024	0.016	0.009	0.005	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	
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	
Light-duty trucks																																
Total HC	1.417	1.328	1.186	1.148	1.105	1.087	1.056	1.003	0.953	0.950	0.954	0.923	0.933	0.842	0.782	0.688	0.579	0.485	0.417	0.361	0.308	0.268	0.234	0.206	0.176	0.160	0.144	0.131	0.117	0.115	0.106	
Exhaust CO	18.362	16.440	13.960	12.352	11.176	10.287	9.371	8.557	7.757	7.505	7.361	7.817	8.849	7.322	6.820	5.795	4.440	3.547	3.059	2.814	2.458	2.211	2.014	1.842	1.616	1.547	1.464	1.410	1.274	1.267	1.226	
Exhaust NOx	6.282	6.452	6.563	6.371	6.130	5.939	5.739	5.488	5.21																							

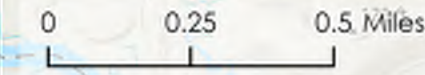
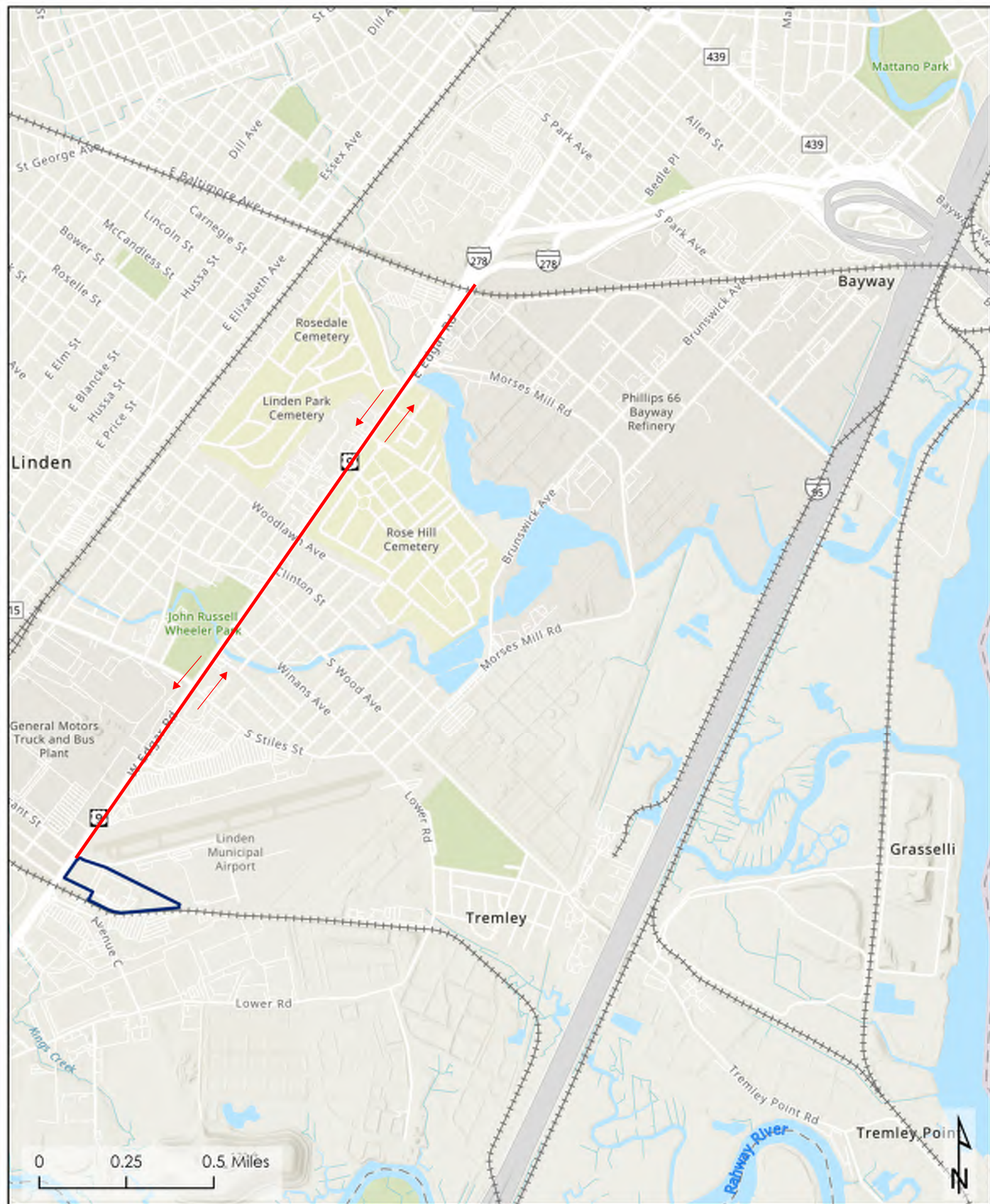
This table was generated using MOVES3, the U.S. Environmental Protection Agency's (EPA) mobile source emissions model. More information on MOVES is available at www.epa.gov/moves. Data for this update are based on new estimation models and are not comparable to previous releases. MOVES3 includes updates 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)



**Traffic Flow from Highway to Site
(Approx. 2 miles)**

Appendix I

Example Sign to be Posted On-Site

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

- A public hearing concerning a proposed Facility expansion, associated Environmental Justice Impact Statement (EJIS) and environmental permit applications will be held on April 15, 2024 at 6pm at the Linden Free Public Library, 31 East Henry Street, Linden, NJ 07036.
- The public is invited to participate in the public hearing. A public comment period begins on March 15, 2024. For a time period of no less than 30 days after the hearing and 60 days total written comments may be submitted to the company via email at SafetyKleenLindenEJIS@CleanHarbors.com or mailed to the Facility address noted above, Attention: General Manager.
- 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 also be viewed and copied at the Linden Free Public Library, 31 East Henry Street, Linden, NJ 07036 or at <https://www.safety-kleen.com/support/technical/regulatory-information>. 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
Program Interest ID #: 40097; NJDEP Project ID #: 34105263
Facility EPA ID #: NJD002182897

Solid & Hazardous Waste Facility Permit #: HWP190002; Air Permit Application #: PCP230003

- A public hearing concerning the proposed Facility expansion will be held on April 15, 2024, at 6pm at the Linden Free Public Library, 31 East Henry Street, Linden, NJ 07036. The meeting can also be attended by logging on to <https://cleanharbors.webex.com> then:
Click-on the grey box under “Join a Meeting” and enter the access code: 2430 730 5314; Enter your name and e-mail address; Click-on Join Meeting (you may have to click Join Meeting a second time); To get audio for the WebEx meeting (or if you want to attend by audio only) you will need to dial in at: 1 (415) 655-0003, Access Code 2430 730 5314# (participant ID is not required)
- 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 in two (2) in-ground steel-lined concrete structures 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 Resource Conservation and Recovery Act (RCRA) permit modification and Clean Air Act (CA) permit application have been submitted to 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 also be viewed and copied at the Linden Free Public Library, 31 East Henry Street, Linden, NJ 07036. Additionally, 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 on March 15, 2024. 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 the company via email at SafetyKleenLindenEJIS@CleanHarbors.com, or mailed to the Facility address noted above, Attention: General Manager.

Appendix K

Supplemental Information (NJAC 7:1C-3.3)

K1. Site mapping

- Wetlands (2012)
- EPA Priority Wetlands
- CAFRA Coastal Planning Areas

The nearest wetlands in relation to the Site are located 60 feet North of the eastern portion of the site. No EPA Priority Wetlands or CAFRA Coastal Planning Areas are mapped within a one mile radius of the Site Boundary

Surface flow direction was derived by examining elevation data collected by the USGS in 2014. The 1-foot contours depict a relatively flat site sloping down to the west toward US Rt 1. On both the southern and northern boundaries of the site exists berms.

Source:
GIS data was referenced between the dates of 3/10/2024 and 3/21/2024 for the production of this map.

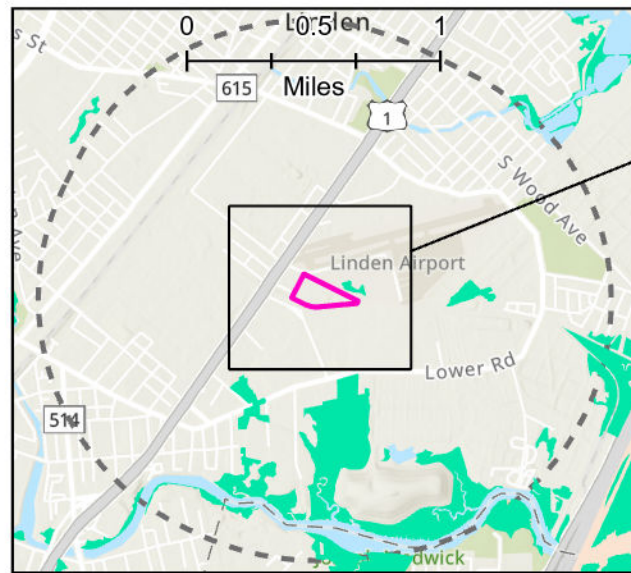
Wetland (2012):
Wetlands of New Jersey (from Land Use/Land Cover 2012 Update)
https://mapsdep.nj.gov/arcgis/rest/services/Features/Land_lu/MapServer/2

EPA Priority Wetlands:
EPA Priority Wetlands in New Jersey
https://gisdata-njdep.opendata.arcgis.com/datasets/2036eb15ebfa4d519fafbdcd684caf04_79

CAFRA Coastal Planning Areas:
Coastal Zones Coastal Planning Area (2010) for New Jersey
https://gisdata-njdep.opendata.arcgis.com/datasets/292ea3ab75204c66a2aebace543c2d00_2

Contours:
2014 USGS CMGP Lidar: Post Sandy (New Jersey)
U.S. Geological Survey NOAA: Data Access Viewer

i. Topographic conditions, contour data, drainage patterns, wetlands or their associated buffers, coastal zones, or other areas regulated by the Department;



map center: 74°15'2"W 40°36'52"N

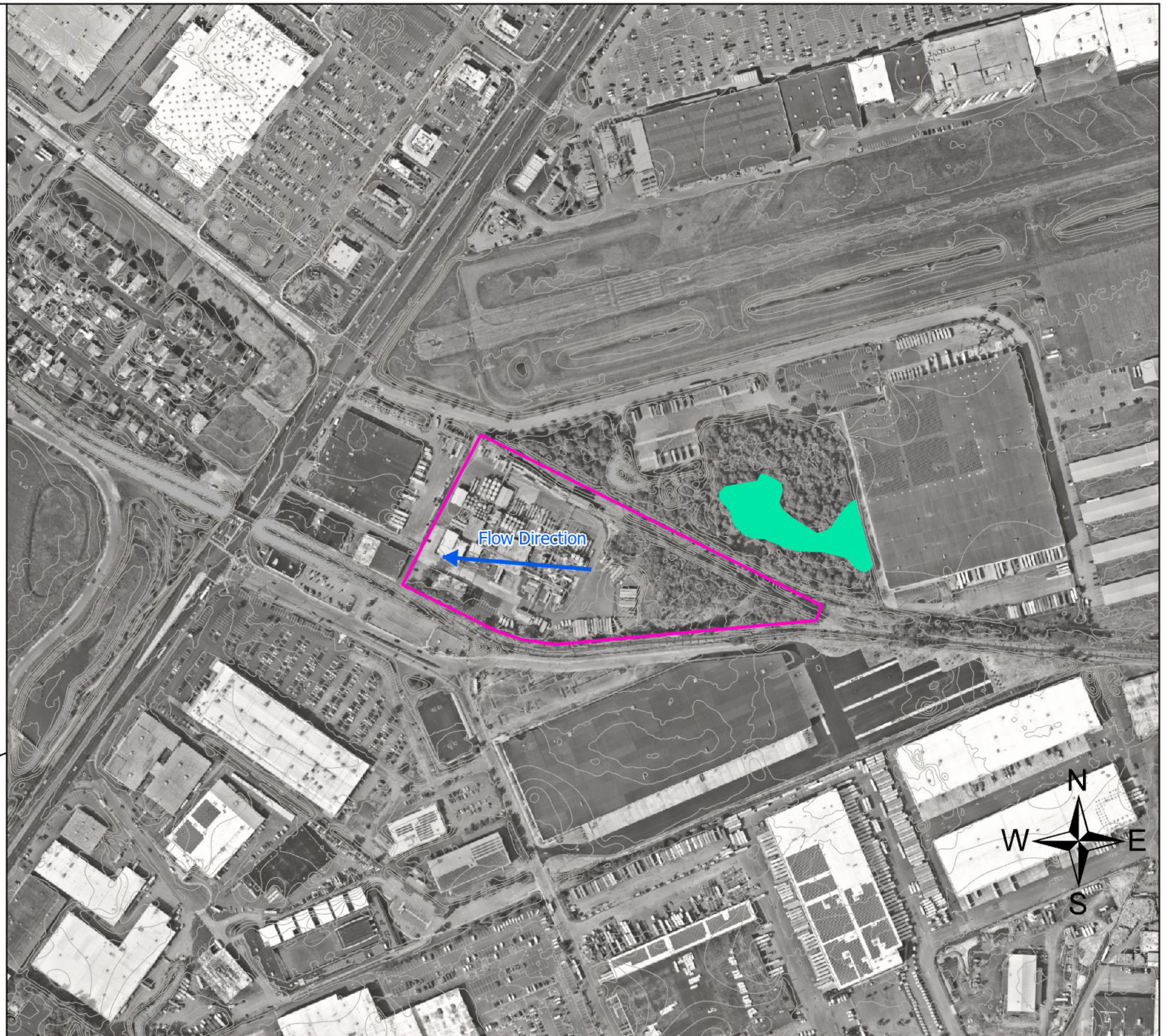
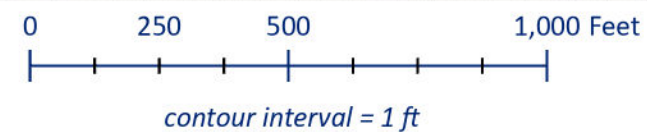


Figure 01 Drainage and Wetland Conditions - Safety Kleen
Linden, New Jersey



Folder: C:\Users\dcook\ArcGIS\Projects\0301 - Project: E.J. Impact Map - Layout: 01 Drainage and Wetland Conditions Map: Map Frame Date Exported: 3/21/2024 4:11 PM User: David Cook Date Saved: 3/21/2024 4:05 PM

Conservation Focal Areas - Piedmont

Arthur Kill Watershed CFA

Landscape Project - Species-Based Habitat - Piedmont Plains

Rank 1 - Habitat specific requirements

Rank 3 - State Threatened

Rank 4 - State Endangered

The nearest Species-Based Habitat in relation to the Site are located 60 feet North of the eastern portion of the site. Of all the Landscape 3.3 Regions of New Jersey, only the Arthur Kill Watershed CFA, Ranks 1,3,and 4 Species-Based habitats exist within a 1-mile radius from the site boundary. While many other protected areas exist in the Landscape 3.3 Regions of New Jersey, only those present within a 1-mile radius are presented for simplicity.

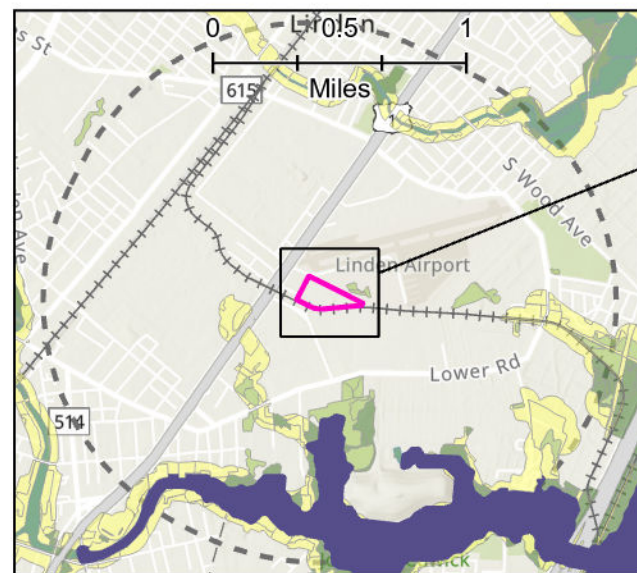
No US Fish and Wildlife mapped areas of Critical Habitat for Threatened and Endangered Species were in proximity to the 1-mile buffer.

Source:
GIS data was referenced between the dates of 3/10/2024 and 3/21/2024 for the production of this map.

Threatened and endangered species habitat:
Landscape 3.3 Regions of New Jersey
https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/83

Critical Habitat for Threatened & Endangered Species [USFWS]
<https://www.arcgis.com/home/item.html?id=9d0965dae6a64f38b1af80c2f7ea2efe#>

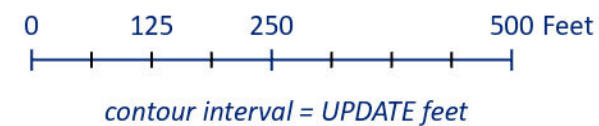
ii. Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list



map center: 74°15'1"W 40°36'51"N



Figure 02 Threatened Species - Safety Kleen
Linden, New Jersey



Folder: C:\Users\dool\ArcGIS\Projects\030 - Project: E.J. Impact Map - Layout: 02 Biodiversity Map: Map Frame
 Date Exported: 3/21/2024 4:11 PM User: David Cook Date Saved: 3/21/2024 4:05 PM

Surface Water Quality Classifications

- FW2-NT/SE3
- SE2
- SE3

Groundwater Contamination Areas (CEA)



The site is located within the Rahway River / Woodbridge Creek Watershed part of the Arthur Kill Watershed Management Area. Waters within this watershed are Non-Supporting of Fish Consumption based on the 2022 Integrated List of Waters. Kings Creek is the nearest down gradient receiving water body classified as SE3 with designations of:

1. Secondary contact recreation;
2. Maintenance and migration of fish populations;
3. Migration of diadromous fish;
4. Maintenance of wildlife; and
5. Any other reasonable uses.

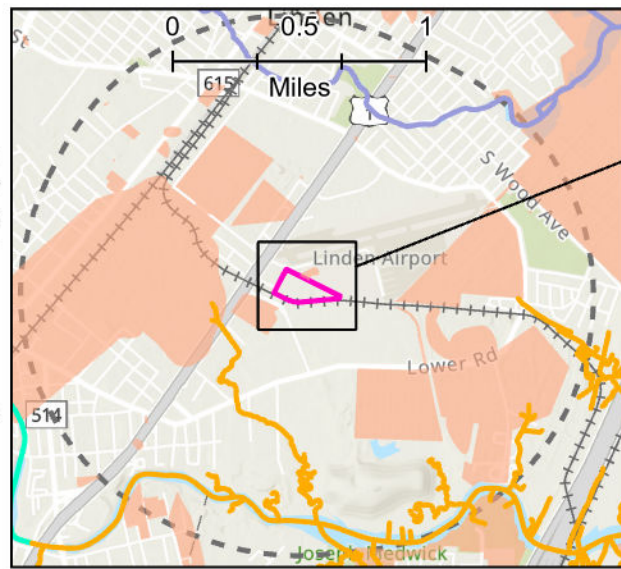
Two Well Restricted Areas are located with close proximity of the site to the north and south, respectively.

Source:
GIS data was referenced between the dates of 3/10/2024 and 3/21/2024 for the production of this map.

Surface Water Quality Classifications:
Layer: Surface Water Quality Classifications (ID: 7) (nj.gov)
<https://mapsdep.nj.gov/arcgis/rest/services/Features/Hydrography/MapServer/7>

Groundwater Contamination Areas (CEA):
Layer: Groundwater Contamination Areas (CEA) (ID: 11) (nj.gov)
https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_mon_gw/MapServer/11

iii. All existing water classifications, designated uses, and limitations of the surface water bodies that are immediately adjacent to the site, exist on the site, or drain directly onto or off the site, upstream tributaries of bodies of water which flow onto the site, and downstream tributaries of bodies of water which flow from the site, in accordance with N.J.A.C. 7:9B



map center: 74°15'1"W 40°36'51"N

Assessment Unit Name	Watershed Management Area Name	Watershed Name	Aquatic Life General	Aquatic Life Trout	Fish Consumption
Rahway River (below Robinsons Branch)	Arthur Kill	Rahway River / Woodbridge Creek	Insufficient Data	NA	Non Support

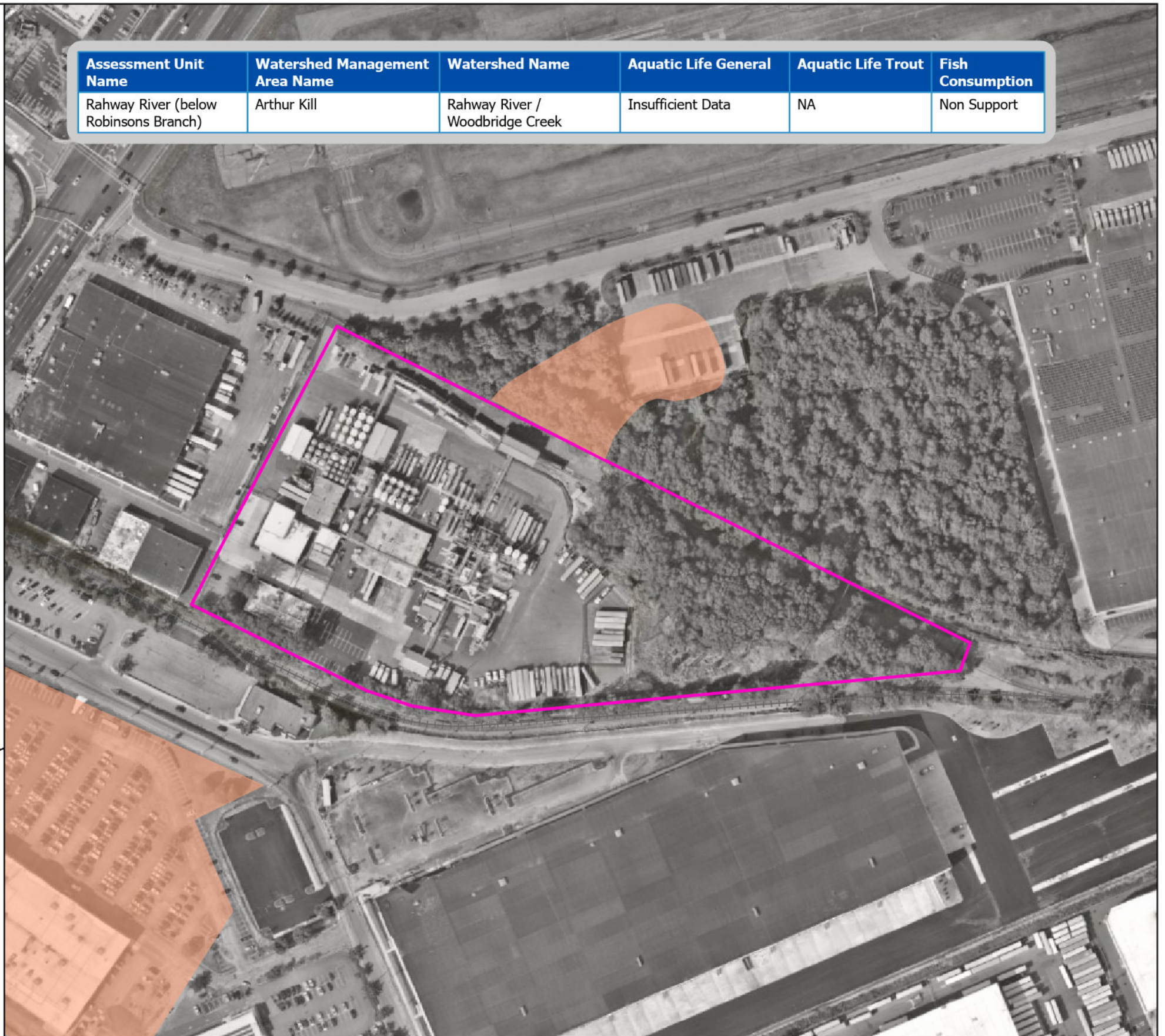


Figure 04 Water Quality - Safety Kleen
Linden, New Jersey



Historic Property Features	Golf Course	Reservoir Site
Open Space	Greenway	State Fish Hatchery
<Null>	Historic Site	State Forest
Aviation Facility	National Historic Park	State Marina
Boat Access	National Wildlife Refuge	State Park
Boat Ramp	Natural Area	State Preserve
Cemetery	Preserve	Trail
Fire Tower	Recreation Area	Wildlife Management Area
Fishing Access	Reinhardt	Wildlife management Area
	Reservoir	<all other values>

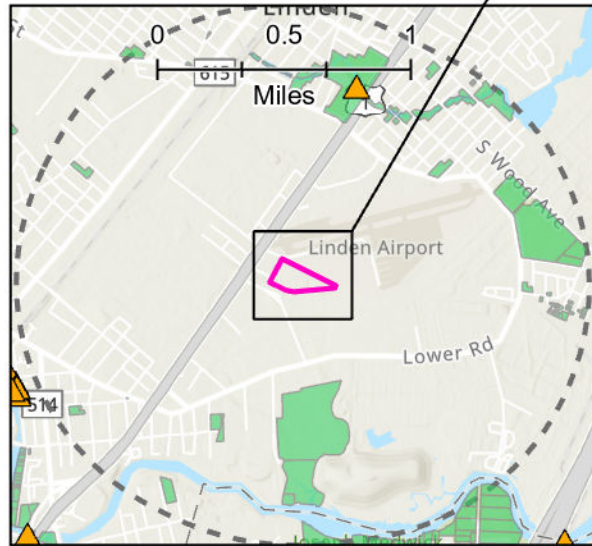
The presence of public space in the area surround the Site is sparse. The nearest open space is a Conservation property in the Green Acres Program located 2,000 feet south owned and managed by the City of Linden.

Source:
GIS data was referenced between the dates of 3/10/2024 and 3/21/2024 for the production of this map.

Open Space:
State, Local and Nonprofit Open Space of New Jersey
mapsdep.nj.gov/arcgis/rest/services/Features/Land/MapServer/65

Historic Property Features:
Historic Property Features of New Jersey
mapsdep.nj.gov/arcgis/rest/services/Features/Land/MapServer/54

iv. Any existing onsite public scenic attributes or outdoor recreation and conservation opportunities in the overburdened community, such as any Federal, State, county, or municipal parks, forests, wildlife management areas and natural areas, any areas acquired for recreation and conservation purposes with Green Acres funding, program, or a non-profit conservation organization, any lands preserved as open space by a non-profit conservation organization or other public access features



map center: 74°15'1"W 40°36'51"N



Figure 04 Public Space - Safety Kleen
Linden, New Jersey



**Table of GIS Sources Used in Mapping
Supplemental Information NJAC 7:1C-3.3(a)(1)**

MapNumber	IncludedInMap	NameInMap	Description	Notes	SourceName	SourceURL	Criteria
1	Yes	Contour	1 foot contour lines derived from lidar		2014 USGS CMGP Lidar: Post Sandy (New Jersey)	https://coast.noaa.gov/dataviewer/#/lidar/search/-8270002.783356359.4952440.335622633.-8259860.464550184.4961575.942865803/details/4921	Topographic conditions, contour data, drainage patterns, wetlands or their associated buffers, coastal zones, or other areas regulated by the Department
1	Yes	Flow Directoin	1 foot contour lines derived from lidar	interpreted on map	2014 USGS CMGP Lidar: Post Sandy (New Jersey)	https://coast.noaa.gov/dataviewer/#/lidar/search/-8270002.783356359.4952440.335622633.-8259860.464550184.4961575.942865803/details/4921	Topographic conditions, contour data, drainage patterns, wetlands or their associated buffers, coastal zones, or other areas regulated by the Department
1	Yes	Wetlands (2012)	The data set will provide information for regulators, planners, and others interested in LU/LC changes, and allow them to quantify those changes over time using GIS. The use of the updated 2012 LU/LC in land use analyses will provide a means of monitoring "the health of the citizens and ecosystems of New Jersey" through the use of diverse applications. This data set is intended to serve as a resource data set. The NJDEP may change the line work or polygon coding based on more in depth analysis and field inspection.		Wetlands of New Jersey (from Land Use/Land Cover 2012 Update)	https://mapsdep.nj.gov/arcgis/rest/services/Features/Land_U/MapServer/2	Topographic conditions, contour data, drainage patterns, wetlands or their associated buffers, coastal zones, or other areas regulated by the Department
1	No	CAFRA Coastal Planning Areas	This data layer is a depiction of the boundaries of CAFRA centers, CAFRA cores, CAFRA nodes, mainland coastal centers, and non-mainland coastal centers used in CAFRA permitting by the NJDEP. CAFRA centers, cores and nodes are those centers, cores and nodes, respectively, that have been adopted by the State Planning Commission and reviewed and accepted by the Department for the purposes of CAFRA. The Department delineated mainland and non-mainland coastal centers, based in part on centers identified in the 1992 State Development and Redevelopment Plan, where the State Planning Commission had not yet designated centers. Delineations were digitized over 1991 orthophotography at a minimum scale of 1:12,000. 1995 orthophotography was used to spot check ground conditions. The NJ Office of Planning Advocacy GIS layers were utilized for this update for CAFRA Centers, Nodes & Cores including: Cores and Nodes Boundaries of NJ State Development and Redevelopment Plan New Jersey (Update 9/6/2023) and Designated Center of NJ State Development and Redevelopment Plan (Update 12/4/2023). For the Coastal Non - Mainland Centers, 2020 Landuse Landcover Water Type was removed and center boundaries were adjusted to 2020 Municipalities Layer.		CAFRA and Coastal Centers (2023) of New Jersey	https://services1.arcgis.com/QWdNfRs7kPq4g4Q/arcgis/rest/services/CAFRA_and_Coastal_Centers_2023_of_New_Jersey/FeatureServer/6	Topographic conditions, contour data, drainage patterns, wetlands or their associated buffers, coastal zones, or other areas regulated by the Department
1	No	EPA Priority Wetlands	The identification of a priority wetlands list for New Jersey is part of EPA's commitment to develop comprehensive policy framework to establish a technically sound and consistent basis for EPA positions on proposed dredged or fill material discharges into waters of the United States, including wetlands. An important step in this effort is to focus regional resources on the identification and protection of the most important wetlands in the region. In general, the list for New Jersey recognizes those areas identified by various federal, state and private contributors which are considered to be the most important and vulnerable wetlands in the state. This is not a comprehensive inventory; rather it is a listing of areas currently known to EPA to be important and/or under particular threat. It must be noted that failure to include any particular area on the list in no way implies that it will/should receive less than full protection under the Section 404 regulatory Program. In New Jersey, the Legislature has decided to incorporate the EPA Priority Wetland List into the Freshwater Wetlands Protection Act and Rules to ensure that the State program complies and is consistent with the federal program. The New Jersey Freshwater Wetlands Act prohibits the use of certain general permits within areas on this list. This list replaces the former listing which was dated May 1989.	No Proximity to Site	EPA Priority Wetlands in New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Land/MapServer/79	Topographic conditions, contour data, drainage patterns, wetlands or their associated buffers, coastal zones, or other areas regulated by the Department
2		Landscape 3.3	and land management programs of non-government organizations and private landowners and at every level of government- federal, state, county and municipal. Landscape maps and overlays provide a basis for proactive planning, such as the development of local habitat protection ordinances, zoning to protect critical wildlife areas, management guidelines for imperiled species conservation on public and private lands, and land acquisition projects. Most importantly, the information that is readily available in the Landscape Project can be used for planning purposes before any actions such as proposed development, resource extraction (e.g. timber harvests) or conservation measures occur. The maps help increase predictability for local planners, environmental commissions, and developers and help facilitate local land use decisions that appropriately site and balance development and habitat protection. The Landscape Project maps allow the regulated public to anticipate potential environmental regulation in an area and provide some level of assurance regarding areas where endangered, threatened or species of special concern are not likely to occur, affording predictability to the application and development process. Thus, Landscape Project maps can be used proactively by regulators, planners and the regulated public in order to minimize conflict and protect species. This minimizes time and money spent attempting to resolve after-the-fact endangered and threatened species issues.	Collection of layers, not all are on site			

**Table of GIS Sources Used in Mapping
Supplemental Information NJAC 7:1C-3.3(a)(1)**

MapNumber	IncludedInMap	NameInMap	Description	Notes	SourceName	SourceURL	Criteria
2	No	Landscape Project - Vernal Pools (82)	In 2001 ENSP partnered with Rutgers University Center for Remote Sensing and Spatial Analysis (CRSSA) to develop a method for mapping potential vernal pools throughout New Jersey. Through an on-screen visual interpretation of digital orthophotography, CRSSA identified over 13,000 potential pools throughout the state. A subset of these pools was field verified and confirmed, with an 88% accuracy rate (Lathrop et al. 2005), to meet the physical characteristics to qualify as a vernal pool. In accordance with N.J.A.C. 7:7A-1.4, the term "vernal habitat" includes a vernal pool - or the area of ponding - plus any freshwater wetlands adjacent to the vernal pool. The Department here includes mapping of vernal habitat locations that relies upon data developed by the Department and Rutgers University Center for Remote Sensing and Spatial Analysis (CRSSA) to identify sites that should be field checked for possible identification as vernal habitats areas. DEP staff is in the process of field-verifying these pools. The Department also maps vernal habitat areas based upon on-the-ground assessment of sites not captured by the CRSSA mapping. These vernal habitat locations, all of the CRSSA-identified sites, as well as sites identified by on-the-ground reconnaissance, are categorized as either "potential vernal habitat location" or "vernal habitat location."	No Proximity to Site	Landscape 3.3 Vernal Pools of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/82	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Landscape Project - Freshwater Mussel Habitat (91)	Each of the Regions has a species look-up table that can be related to the data. The common field is LINKID in each of the tables.	No Proximity to Site	Landscape 3.3 Species Table for Freshwater Mussel Regions of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/110	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Conservation Focal Areas - Skylands (105)	important opportunities for effective conservation action. They will allow for the consideration of threats and actions from a geographic perspective that will benefit key wildlife habitats generally and, in turn, virtually all Species of Greatest Conservation Need (SGCN). Further, CFAs include important opportunities for habitat connectivity, a critical factor in increasing resilience in a changing landscape. With their rich mix of important habitats and diverse species assemblages, CFAs are designed to represent some of the best opportunities for protecting, restoring, and sustaining New Jersey's wildlife diversity.	No Proximity to Site	Conservation Focal Areas Version 1.1, Skylands Landscape Region in New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/105	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	Yes	Conservation Focal Areas - Piedmont (104)	Conservation Focal Areas are key geographic areas for the conservation of wildlife in New Jersey. These are the portions of the landscape regions that are of particular conservation interest to the Division of Fish and Wildlife (DFW) and its conservation partners because they have important habitats and species assemblages, and represent the best opportunities for protecting, restoring, and sustaining New Jersey's wildlife diversity. They also include important opportunities for habitat connectivity, a critical factor in increasing resilience in a changing landscape. DFW will use CFAs to further identify geographically-based threats to New Jersey's wildlife habitats and develop actions that will address those threats. In addition, DFW will regularly review and improve CFA maps as new data become available and as new insights are shared by the public and conservation partners.		Conservation Focal Areas Version 1.1, Piedmont/Inner Coastal Plain Landscape Region in New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/104	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Conservation Focal Areas - Pinelands (103)	important opportunities for effective conservation action. They will allow for the consideration of threats and actions from a geographic perspective that will benefit key wildlife habitats generally and, in turn, virtually all Species of Greatest Conservation Need (SGCN). Further, CFAs include important opportunities for habitat connectivity, a critical factor in increasing resilience in a changing landscape. With their rich mix of important habitats and diverse species assemblages, CFAs are designed to represent some of the best opportunities for protecting, restoring, and sustaining New Jersey's wildlife diversity.	No Proximity to Site	Conservation Focal Areas Version 1.1, Pinelands Landscape Region in New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/103	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Conservation Focal Areas - Coastal (102)	Conservation Focal Areas are key geographic areas for the conservation of wildlife in New Jersey. These are the portions of the landscape regions that are of particular conservation interest to the Division of Fish and Wildlife (DFW) and its conservation partners because they have important habitats and species assemblages, and represent the best opportunities for protecting, restoring, and sustaining New Jersey's wildlife diversity. They also include important opportunities for habitat connectivity, a critical factor in increasing resilience in a changing landscape. DFW will use CFAs to further identify geographically-based threats to New Jersey's wildlife habitats and develop actions that will address those threats. In addition, DFW will regularly review and improve CFA maps as new data become available and as new insights are shared by the public and conservation partners.	No Proximity to Site	Conservation Focal Areas Version 1.1, Atlantic Coast Landscape Region in New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/102	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Conservation Focal Areas - Delaware Bay (101)	important opportunities for effective conservation action. They will allow for the consideration of threats and actions from a geographic perspective that will benefit key wildlife habitats generally and, in turn, virtually all Species of Greatest Conservation Need (SGCN). Further, CFAs include important opportunities for habitat connectivity, a critical factor in increasing resilience in a changing landscape. With their rich mix of important habitats and diverse species assemblages, CFAs are designed to represent some of the best opportunities for protecting, restoring, and sustaining New Jersey's wildlife diversity.	No Proximity to Site	Conservation Focal Areas Version 1.1, Delaware Bay Landscape Region in New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/101	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Conservation Focal Areas - Marine (100)	Conservation Focal Areas are key geographic areas for the conservation of wildlife in New Jersey. These are the portions of the landscape regions that are of particular conservation interest to the Division of Fish and Wildlife (DFW) and its conservation partners because they have important habitats and species assemblages, and represent the best opportunities for protecting, restoring, and sustaining New Jersey's wildlife diversity. They also include important opportunities for habitat connectivity, a critical factor in increasing resilience in a changing landscape. DFW will use CFAs to further identify geographically-based threats to New Jersey's wildlife habitats and develop actions that will address those threats. In addition, DFW will regularly review and improve CFA maps as new data become available and as new insights are shared by the public and conservation partners.	No Proximity to Site	Conservation Focal Areas Version 1.1, Marine Landscape Region in New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/100	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list

**Table of GIS Sources Used in Mapping
Supplemental Information NJAC 7:1C-3.3(a)(1)**

MapNumber	IncludedInMap	NameInMap	Description	Notes	SourceName	SourceURL	Criteria
2	No	Highlands (99)		No Proximity to Site	Landscape 3.3 Regions of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/99	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Natural Heritage Priority Sites (93)	The Natural Heritage Priority Sites Coverage was created to identify critically important areas to conserve New Jersey's biological diversity, with particular emphasis on rare plant species and ecological communities. Natural Heritage Priority Sites are based on analysis of information in the New Jersey Natural Heritage Database. However, these sites do not cover all the known habitat for endangered and threatened species in New Jersey. If information is needed on whether or not endangered or threatened species have been documented from a particular piece of land, a Natural Heritage Database search can be requested by contacting the Office of Natural Lands Management. The Natural Heritage Priority Sites coverage is a valuable tool which can be used by individuals and agencies concerned with the protection and management of land. However, the coverage was not developed for regulatory purposes, and should not be used as a substitute for the on-site surveys and Natural Heritage Database searches required by regulatory agencies.	No Proximity to Site	Natural Heritage Priority Sites in New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/93	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Landscape Project - Species-Based Habitat - Atlantic Coastal (90)		No Proximity to Site	Landscape 3.3 Regions of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/90	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Landscape Project - Species-Based Habitat - Delaware Bay (89)		No Proximity to Site	Landscape 3.3 Regions of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/89	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Landscape Project - Species-Based Habitat - Marine (88)		No Proximity to Site	Landscape 3.3 Regions of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/88	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	Yes	Landscape Project - Species-Based Habitat - Piedmont Plains (87)			Landscape 3.3 Regions of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/87	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Landscape Project - Species-Based Habitat - Pinelands (86)		No Proximity to Site	Landscape 3.3 Regions of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/86	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Landscape Project - Species-Based Habitat - Skylands (85)		No Proximity to Site	Landscape 3.3 Regions of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/85	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Landscape Project - Vernal Habitat (84)		No Proximity to Site	Landscape 3.3 Regions of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/84	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Landscape Regions (83)		Site Located in Piedmont Region	Landscape 3.3 Regions of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/83	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Ecological Solution Projects (119)		No Proximity to Site	Landscape 3.3 Regions of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_habitat/MapServer/110	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
2	No	Critical Habitat for Threatened and Endangered Species	This National Geospatial Data Asset (NGDA) dataset, shared as a U.S. Fish and Wildlife Service (FWS) feature layer, displays proposed and designated critical habitat under the U.S. Endangered Species Act. According to the FWS, "When the Fish and Wildlife Service proposes a species for listing under the Endangered Species Act, we are required to consider whether there are geographic areas that contain essential features on areas that	No Proximity to Site	Critical Habitat for Threatened and Endangered Species	https://services.arcgis.com/QVENGdaPbd4LUkLV/arcgis/rest/services/USEFWS_Critical_Habitat/FeatureServer	Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list
3	No	TMDLs	TMDLs are required, under Section 303(d) of the federal Clean Water Act, to be developed for waterbodies that cannot meet surface water quality standards after the implementation of technology-based effluent limitations. Once adopted in the NJ Register they are official added as amendments to the DEP's Water Quality Management Plan. TMDLs are mechanisms for identifying all the contributors to surface water quality impacts and setting goals for load reduction for pollutants of concern as necessary to meet SWQS.	No Proximity to Site	Total Maximum Daily Loads (TMDL) for Shellfish-Impaired Waters in New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental/MapServer/78	All existing water classifications, designated uses, and limitations of the surface water bodies that are immediately adjacent to the site, exist on the site, or drain directly onto or off the site, upstream tributaries of bodies of water which flow onto

**Table of GIS Sources Used in Mapping
Supplemental Information NJAC 7:1C-3.3(a)(1)**

MapNumber	IncludedInMap	NameInMap	Description	Notes	SourceName	SourceURL	Criteria
3	No	TMDLs	The pollutants of concern for these Stream TMDLs are fecal coliform and total phosphorus. Concentrations of these pollutants were found to exceed New Jersey's Surface Water Quality Standards (SWQS), published at N.J.A.C. 7-9B et seq., for the segments identified in the Reports. In accordance with Section 305(b) of the Federal Clean Water Act (CWA), the State of New Jersey developed the 2002, 2004 and 2006 Integrated List of Waterbodies, addressing the overall water quality of the State's waters and identifying impaired waterbodies for which Total Maximum Daily Loads (TMDLs) may be necessary. As reported in the 2002, 2004 and 2006 Integrated List of Waterbodies, also identified is the river miles and management response associated with each listed segment. Nonpoint and stormwater point sources are the primary contributors to loads in these streams and can include storm-driven loads transporting fecal coliform form sources such as geese, farms, and domestic pets to the receiving water. Nonpoint sources also include steady-inputs from sources such as failing sewage conveyance systems and failing or inappropriately located septic systems. In some instances, point sources such as publicly-owned treatment works can contribute to phosphorus loads, and therefore will have further restrictions on effluent limits. The TMDLs are derived from waste load allocations from point sources plus load allocations from non-point sources and a margin of safety to account for uncertainty in the model.	No Proximity to Site	Total Maximum Daily Loads (TMDLs)	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental/MapServer/75	All existing water classifications, designated uses, and limitations of the surface water bodies that are immediately adjacent to the site, exist on the site, or drain directly onto or off the site, upstream tributaries of bodies of water which flow onto
3	No	TMDLs	The pollutants of concern for these lake TMDLs are phosphorus and fecal coliform. Phosphorus is an essential nutrient for plants and algae, but is considered a pollutant when it stimulates excessive plant and algae growth. Overgrown vegetation and algae blooms in lakes can prevent recreational use for fishing and swimming. In severe cases, plant and algae die-off can deplete oxygen in the lake raising the potential for killing fish in the lake. Potential sources of phosphorus include discharges from sewage treatment plants, combined sewer overflows and stormwater runoff. As stormwater flows over the land, it may pick up phosphorus. Phosphorus contributions to stormwater runoff are calculated based on land uses within the lake's watershed. Nonpoint and stormwater point sources are the primary contributors to fecal coliform loads and can include storm-driven loads transporting fecal coliform form sources such as geese, farms, and domestic pets to the receiving water. Nonpoint sources also include steady-inputs from sources such as failing sewage conveyance systems and failing or inappropriately located septic systems. The TMDLs are derived from waste load allocations from point sources plus load allocations from non-point sources and a margin of safety to account for uncertainty in the model.	No Proximity to Site		https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental/MapServer/77	All existing water classifications, designated uses, and limitations of the surface water bodies that are immediately adjacent to the site, exist on the site, or drain directly onto or off the site, upstream tributaries of bodies of water which flow onto
3	Yes	2022 Integrated List of Waters	This data consists of the 2018-2020 New Jersey Integrated List of Waters (Integrated List) prepared as the Designated Use Result Table of the 2022 NJ Integrated Water Quality Monitoring and Assessment Report. This data represents the results of assessing NJ's 958 assessment units to determine if applicable designated use(s) was(were) attained. The data reflects which of four results each assessment was assigned: Full Support- Fully Supporting, Insufficient Data- Insufficient data was available to assess, Non Support- Non Supporting, or NA – Not Applicable.	Water Classifications	2022 Integrated List of Waters	https://services1.arcgis.com/QWdNfRs7kPq4g4Q/arcgis/rest/services/2022_Integrated_List_of_Waters_Integrated_List_/FeatureServer/79	All existing water classifications, designated uses, and limitations of the surface water bodies that are immediately adjacent to the site, exist on the site, or drain directly onto or off the site, upstream tributaries of bodies of water which flow onto
3	No	Well Head Protection Areas (Community)	WHPA delineations are created in compliance to the Safe Drinking Water Act Amendments of 1986 and 1996	No Proximity to Site	Well Head Protection Areas For Public Community Water Supply Wells In New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Hydrography/MapServer/25	All existing water classifications, designated uses, and limitations of the surface water bodies that are immediately adjacent to the site, exist on the site, or drain directly onto or off the site, upstream tributaries of bodies of water which flow onto
3	No	Well Head Protection Areas (Non-Community)	Public Non-Community Well Head Protection Area delineations are conducted in response to the Safe Drinking Water Act Amendments of 1986 and 1996 as part of the Source Water Area Protection Program (SWAP). The delineations are the first step in defining the sources of water to a public supply well. Within these areas, potential contamination will be assessed and appropriate monitoring will be undertaken as subsequent phases of the NJDEP SWAP.	No Proximity to Site	Well Head Protection Areas for Public Non-Community Water Supply Wells in New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Hydrography/MapServer/26	
3	No	Water Source Areas	The surface water source water areas, in this data-set represent the source water areas for each public community and non-community surface water intake active as of 200301. Surface water source water areas for groundwater under the direct influence of surface water are also included in this data-set. The treatment facilities for these intakes may have a groundwater component (wells) as well, however only the surface water contribution is mapped in this data-set. Surface water source water areas were created as part of the NJ Source Water Assessment Program. They represent the land surface area where water will travel overland past the intake structure. They were delineated from the intake or the intake's controlling structure (dam or weir) to the headwaters of all tributaries upstream of the intake. Intake's located on the Delaware River were delineated using the same process, however a 25 hour time of travel on the main stem of the Delaware was used to break the upstream boundary. Intakes located on the Delaware and Raritan canal included any identified tributaries and a 300 foot zone on each side of the canal for the length of the canal. This GIS data-set represents the source water areas for each active public (community and non-community) surface water intake. The surface water source water areas for all wells considered under the direct influence of surface water (GWUDI) are also included. A surface water source water area represents the surface ground area where water will flow overland past the intake location. The source water areas were delineated from the intake location or a controlling structure, such as a dam or weir, to the headwaters of all tributaries upstream of the intake. For more information on the surface water source water areas refer to https://nj.gov/dep/watersupply/swap . The source water assessment process determined the susceptibility (Low, Medium, or High) of each intake to 8 contaminant groups (Disinfection Byproduct (DBP) Precursors, Inorganics, Nutrients, Pathogens, Pesticides, Radionuclides, Radon, and Volatile Organic Compounds (VOCs)) which can also be linked to for geographical display.	No Proximity to Site	Water Source Areas of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Hydrography/MapServer/16	All existing water classifications, designated uses, and limitations of the surface water bodies that are immediately adjacent to the site, exist on the site, or drain directly onto or off the site, upstream tributaries of bodies of water which flow onto

**Table of GIS Sources Used in Mapping
Supplemental Information NJAC 7:1C-3.3(a)(1)**

MapNumber	IncludedInMap	NameInMap	Description	Notes	SourceName	SourceURL	Criteria
3	No	Surface Water Classifications	This data is a digital representation of New Jersey's Surface Water Quality Standards in accordance with "Surface Water Quality Standards for New Jersey Waters" as designated in N.J.A.C. 7:9 B. The Surface Water Quality Standards (SWQS) establish the designated uses to be achieved and specify the water quality (criteria) necessary to protect the State's waters. Designated uses include potable water, propagation of fish and wildlife, recreation, agricultural and industrial supplies, and navigation. These are reflected in use classifications assigned to specific waters. The line-work has been broken/alterd to reflect the descriptions specified at N.J.A.C. 7:9B-1.15. When interpreting the stream classifications and anti-degradation designations, the descriptions specified in the SWQS at N.J.A.C. 7:9B-1.15 always take precedence. The GIS layer reflects the stream classifications and anti-degradation designations adopted as of the publication date and is supplemental only and is not legally binding.	No Proximity to Site	Surface Water Quality Classification	https://mapsdep.nj.gov/arcgis/rest/services/Features/Hydrography/MapServer/7	All existing water classifications, designated uses, and limitations of the surface water bodies that are immediately adjacent to the site, exist on the site, or drain directly onto or off the site, upstream tributaries of bodies of water which flow onto
3	No	Surface Water Springs	In 2007, the New Jersey Geological and Water Survey began a long term project to map, classify and characterize the state's inventory of springs. The purpose of surveying the states springs was to establish the geological/ hydro geological framework for the diversity of origin and form of springs in addition to providing a historical perspective on springs in New Jersey and to document the findings. The geodatabase also contains eight accessory tables. These tables include discharge rates, chemistry, cultural characteristics, discharge characteristics, discharge rates, ecology, geology, and geomorphology. These accessory tables can be joined together with the springs feature class based on a unique ID number in the geodatabase. This springs feature class contains springs locations. The water from the springs is not considered potable. They might not be microbiologically safe to drink, unless you have recent results. Please avoid drinking from them.	No Proximity to Site	Surface Water Springs of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Hydrography/MapServer/34	All existing water classifications, designated uses, and limitations of the surface water bodies that are immediately adjacent to the site, exist on the site, or drain directly onto or off the site, upstream tributaries of bodies of water which flow onto
3	No	Groundwater Contamination Areas (CEA)	This data identifies those sites where groundwater contamination has been identified and, where appropriate, the NJDEP has established a Classification Exception Area (CEA) in accordance with N.J.A.C. 7:9-1.6 and 1.9(b). CEAs are institutional controls in geographically defined areas within which the New Jersey Ground Water Quality Standards (NJGWQS) for specific contaminants have been exceeded. CEAs are established in order to provide notice that the constituent standards for a given aquifer classification are not or will not be met in a localized area due to natural water quality or anthropogenic influences, and that designated aquifer uses are suspended in the affected area for the term of the CEA. For further information about Classification Exception Areas: https://www.nj.gov/dep/strp/guidance/cea/cea_guide.htm	No Proximity to Site	Classification Exception Areas-Well	https://mapsdep.nj.gov/arcgis/rest/services/Features/Environmental_mon_gw/MapServer/11	All existing water classifications, designated uses, and limitations of the surface water bodies that are immediately adjacent to the site, exist on the site, or drain directly onto or off the site, upstream tributaries of bodies of water which flow onto
4	No	State, Local and Nonprofit Open Space of New Jersey	This New Jersey Open Space dataset contains Green Acres encumbered and unencumbered protected open space and recreation areas. The Green Acres encumbered lands are owned in fee simple interest by either the state, county, municipality, or a nonprofit agency and have either received funding through the Green Acres State or Local Assistance Program or are listed on a Green Acres approved Recreation and Open Space Inventory (ROSI). The unencumbered open space lands do not fall under Green Acres rules and regulations and therefore have a lesser level of protection. Types of open space property in this data layer include parks, conservation areas, preserves, historic sites, recreational fields, beaches, etc. The data was derived from a variety of mapped sources which vary in scale and level of accuracy. These sources are inclusive of but not exclusive of tax maps, surveys, deeds, digital aerial photography, as well as USGS topographic maps.	No Proximity to Site	State, Local and Nonprofit Open Space	https://mapsdep.nj.gov/arcgis/rest/services/Features/Land/MapServer/65	Any existing onsite public scenic attributes or outdoor recreation and conservation opportunities in the overburdened community, such as any Federal, State, county, or municipal parks, forests, wildlife management areas and natural areas, any areas acquired for recreation and conservation purposes with Green Acres funding, program, or a non-profit conservation organization, any lands preserved as open space by a non-profit conservation organization or other public access features
4	No	State Park Service Points of Interest for New Jersey	This data set contains protected open space and recreation areas administered by the State of New Jersey Department of Environmental Protection (NJDEP). Types of property in this data layer include parcels such as parks, forests, historic sites, natural areas, wildlife management areas and Natural Lands Trust. The data was derived from a variety of source maps including tax maps, surveys and even hand-drafted boundary lines on USGS topographic maps. These source materials vary in scale and level of accuracy. Due to the varied mapped sources and methods of data capture, this data set is limited in its ability to portray all open space lands accurately, particularly the parcels purchased prior to 1991.	No Proximity to Site	State Protected Open Space Agency	https://mapsdep.nj.gov/arcgis/rest/services/Features/Land/MapServer/62	Any existing onsite public scenic attributes or outdoor recreation and conservation opportunities in the overburdened community, such as any Federal, State, county, or municipal parks, forests, wildlife management areas and natural areas, any areas acquired for recreation and conservation purposes with Green Acres funding, program, or a non-profit conservation organization, any lands preserved as open space by a non-profit conservation organization or other public access features
4	No	Historic Property Features of New Jersey	Historic Properties are buildings, sites, structures or objects that are evaluated as historically significant. This dataset represents the polygon boundaries of historic properties that: 1. Are National Historic Landmarks, 2. Are included in the New Jersey or National Registers of Historic Places, 3. Have been determined Eligible for inclusion in the registers through federal or state processes administered by the HPO, 4. Have been designated as Local Landmarks by local government, or 5. Have been identified through cultural resource survey or other documentation on file at the HPO. The majority of features in the dataset represent categories 1, 2, and 3 above. HPO is still in the process of comprehensive digitizing for categories 4 and 5. Inclusion in this dataset does not preclude the existence of other historic properties as yet unidentified, unrecorded, or undocumented.	No Proximity to Site	Historic Properties of New Jersey	https://mapsdep.nj.gov/arcgis/rest/services/Features/Land/MapServer/54	Any existing onsite public scenic attributes or outdoor recreation and conservation opportunities in the overburdened community, such as any Federal, State, county, or municipal parks, forests, wildlife management areas and natural areas, any areas acquired for recreation and conservation purposes with Green Acres funding, program, or a non-profit conservation organization, any lands preserved as open space by a non-profit conservation organization or other public access features

**Table of GIS Sources Used in Mapping
Supplemental Information NJAC 7:1C-3.3(a)(1)**

MapNumber	IncludedInMap	NameInMap	Description	Notes	SourceName	SourceURL	Criteria
4	No	Parks and Forests Trail System for New Jersey State	The purpose is to provide NJSPS with a manageable, graphic inventory of trails within the NJSPS system. Besides in-house trail management this data was created for the production of trail maps for hikers, bikers, and horseback riders for safe navigation through official trails in the NJSPS. These maps are available at http://nj.gov/dep/parksandforests/index.html . The data has value to the public, federal, state, county and municipal government agencies, trail organizations and non-profits for use in local and regional trail planning efforts such as land acquisition for trail corridors, new trail construction, trail maintenance, etc. This data is not intended for orienteering purposes.	No Proximity to Site	Parks and Forests Trail System for New Jersey State	https://mapsdep.nj.gov/arcgis/rest/services/Features/Land/MapServer/63	Any existing onsite public scenic attributes or outdoor recreation and conservation opportunities in the overburdened community, such as any Federal, State, county, or municipal parks, forests, wildlife management areas and natural areas, any areas acquired for recreation and conservation purposes with Green Acres funding, program, or a non-profit conservation organization, any lands preserved as open space by a non-profit conservation organization or other public access features
FEMA		Flood Hazard Zone	The Federal Emergency Management Agency (FEMA) produces Flood Insurance Rate maps and identifies Special Flood Hazard Areas as part of the National Flood Insurance Program's floodplain management. Special Flood Hazard Areas have regulations that include the mandatory purchase of flood insurance.		National Flood Hazard Layer (NFHL)	https://services.arcgis.com/P3ePLMYs2RVChkIj/arcgis/rest/services/USA_Flood_Hazard_Reduced_Set_gdb/FeatureServer	
FEMA		LULC Urban 2015 with Future Flooding	The layer was used to estimate the metric of "Future Percent Flooding within Urban Areas per Census Block Group" for the New Jersey Environmental Justice Mapping Tool. It should be used only as reference of the percent of flooding within Urban Areas per Census Block Group for planning and not for regulatory delineation purposes.		LULC Urban 2015 with Future Flooding	https://mapsdep.nj.gov/arcgis/rest/services/Features/Government/MapServer/43	

K2. Onsite Contamination Information

Supplemental Information **NJAC 7:1C-3.3(a)(2) - Contamination**

The Linden Recycle Center is an operating, permitted hazardous waste management facility. The property was originally developed in 1942 and used as a solvent reclaiming center by Solvents Recovery Services of New Jersey (SRSNJ). SRSNJ operated the facility from 1942 through 1988 when SRSNJ was acquired by Safety-Kleen. Historical operations consisted of three main processes: solvent recovery using flash distillation equipment, custom fractional distillation, and fuel blending. Environmental investigations began at the site in the 1980s under an Administrative Order (AO) issued by New Jersey to SRSNJ. Subsequently, a HSWA permit (#NJ002182897) was issued by the USEPA to Safety-Kleen in 1993 with an effective date of December 17, 1993. A program of corrective action is ongoing at the Site in accordance with a scope of work defined by the HSWA permit. This work includes an ongoing Phase 3 RCRA Facility Investigation (RFI) and interim corrective measures.

Soil sampling has been performed in many phases of work since 1982. Over 600 soil samples have been collected and analyzed from more than 350 locations distributed throughout the developed portion of the facility. The total number of soil analyses is over 11,000. Additionally, over 60 monitoring wells have been installed onsite and offsite in the unconsolidated glacial till as well as in weathered bedrock and competent bedrock.

During historical investigations, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals (including antimony, arsenic, lead, and mercury), and polychlorinated biphenyls (PCBs) were detected in soil at concentrations greater than regulatory criteria in one or more location. Elevated VOC concentrations were observed across the site, while elevated metals concentrations were observed primarily on the northern portion of the Site along the railroad tracks and elevated PCBs were primarily concentrated in two areas. Access to the Site is restricted to authorized personnel and potential exposure to impacted soil is limited by asphalt, concrete, and gravel cover material. Further soil investigation and further mitigation of soil impacts are anticipated following the closure of facility operations.

VOCs are the primary constituents of concern in groundwater at the Site, which is consistent with the Site's long history of solvent recycling. Groundwater plumes migrating offsite have included elevated concentrations of chlorobenzene, cis-1,2-dichloroethene, vinyl chloride, and benzene. VOC impacts to groundwater have primarily been observed at higher concentrations and more laterally extensive in the intermediate zone (weathered bedrock), while lesser impacts to groundwater have generally been observed in the overlying glacial till and underlying bedrock. During preliminary groundwater sampling for constituents of emerging concern in 2023, polyfluoroalkyl substances (PFAS), 1,4-dioxane, and 1,2,3-trichloropropane were also detected in groundwater at the Site.

A site-wide groundwater pump-and-treat (GWP&T) system was constructed in 2001 and 2002 to contain and mitigate groundwater impacts in response to requirements in the HSWA permit and implementation of corrective action in parallel with and prior to completion of the RFI. The system was built to recover groundwater in the upper bedrock aquifer at three wells located along the downgradient margin of the property. The objective of this GWP&T system is primarily to contain the migration of groundwater contamination

through hydraulic control. VOCs in the groundwater are removed by an air stripper followed by removal of dissolved iron and manganese in an inorganic constituent reduction circuit. The treated groundwater is discharged to the municipal sewer system. The GWP&T began operation in June 2004 following modification of the facility's air permit to accommodate treatment and discharge of air stripper off-gas to the plant regenerative thermal oxidizer (RTO).

Under USEPA and NJDEP oversight the ongoing Phase 3 RFI is focused on evaluation of the offsite extent of groundwater quality impacts and an effectiveness evaluation of the GWP&T system through a modeling and capture zone analysis. The results of groundwater flow modeling indicate that the operating GWP&T system is effectively capturing groundwater impacts and containing migration. Since 2004, the system is estimated to have removed over 30,000 pounds of VOCs.

K3. Ambient Air Quality Data/Information

Supplemental Information NJAC 7:1C-3.3(a)(3) – Ambient Air Quality

The Linden Recycle Center receives used solvents, solvent mixtures, and other liquid and solid wastes from industrial and commercial generators/customers, local, State and Federal agencies, Safety-Kleen service centers, and other Safety-Kleen Recycle Centers. The Linden facility will be introducing a new treatment option with the treatment of metal-bearing hazardous wastes via stabilization and solidification in a mix pit to render it non-hazardous waste.

In accordance with the requirements of N.J.A.C. 7:27, the Linden Recycle Center developed and submitted an air permit application for the mix pit to the New Jersey Department of Environmental Protection (NJDEP) on September 13, 2023 through the mandated RADIUS software and NJDEP Online portal (Facility # 40097). Currently, the facility is a synthetic minor for volatile organic compounds (VOC) and other priority pollutants. The addition of the mix pit operation does not change the facility's status and will remain a synthetic minor, with the potential to emit VOCs at a rate of less than 25 tons per year. Mix pit operations are conducted within an enclosed building designed to control air emissions from the process through control devices including a bag house dust collector and carbon adsorption bed. The Linden Recycle Center will comply with the requirements of N.J.A.C. 7:27 by operating the mix pit process in accordance with the stipulations and emission limits outlined in the associated air permit, as approved and enforced by NJDEP.

Ambient Air Quality data for existing concentrations of the National Ambient Air Quality Standards (NAAQS) pollutants, also known as criteria pollutants, was presented in the NJDEP 2022 New Jersey Air Quality Report (AQR) (<https://dep.nj.gov/wp-content/uploads/airmon/annual-reports/nj-aq-report-2022.pdf>) dated August 2023. There are six criteria air pollutants: ozone, particulate matter (PM), nitrogen dioxide, sulfur dioxide, carbon monoxide, and lead. Because particulate matter includes a wide range of contaminants, there are separate NAAQS for particle sizes less than 2.5 microns in size (PM_{2.5}) and less than 10 microns in size (PM₁₀). A New Jersey map showing the locations of air monitoring stations throughout the state is included as *Figure 2-2* and a breakdown of parameters monitored at each station is included in *Table 2-1*. The NJDEP 2022 ambient air quality data, as it pertains to monitored NAAQS pollutants, is generally summarized below:

Ozone

The entire state of New Jersey is designated as nonattainment for ozone NAAQS. The 2022 ozone season had eight days on which the NAAQS (8-hour daily maximum average concentration of 0.070 ppm) was exceeded. Seven monitoring sites recorded levels above the standard at least once. The Bayonne, NJ monitoring site is the closest in proximity to the Linden Recycle Center. The Bayonne monitoring site exceeded the 8-hour daily maximum average standard on July 20, 2022 and July 23, 2022. No monitoring sites exceeded the NAAQS (1-hour daily maximum concentration of 0.12 ppm) in 2022.

PM_{2.5}

For 2022, NJDEP had twenty PM_{2.5} monitoring sites in the state. There were 10 filter-based monitors and 16 continuous monitors active. None of the filter based sites exceeded either the annual (12.0 ug/m³) or 24-hour

(35 ug/m³) NAAQS in 2022. None of the continuous monitoring sites exceeded the annual or 24-hour NAAQS in 2022, except for the Brigantine monitor, which was attributable to smoke from the Mullica River Fire in Wharton State Forest.

PM₁₀

All areas of the state were in attainment for the 24-hour NAAQS standard of 150 ug/m³. The standard is based on the second highest 24-hour value.

Nitrogen Dioxide (NO₂)

There were no exceedances of any NO₂ NAAQS in 2022.

Sulfur Dioxide (SO₂)

There were no exceedances of any SO₂ NAAQS in 2022.

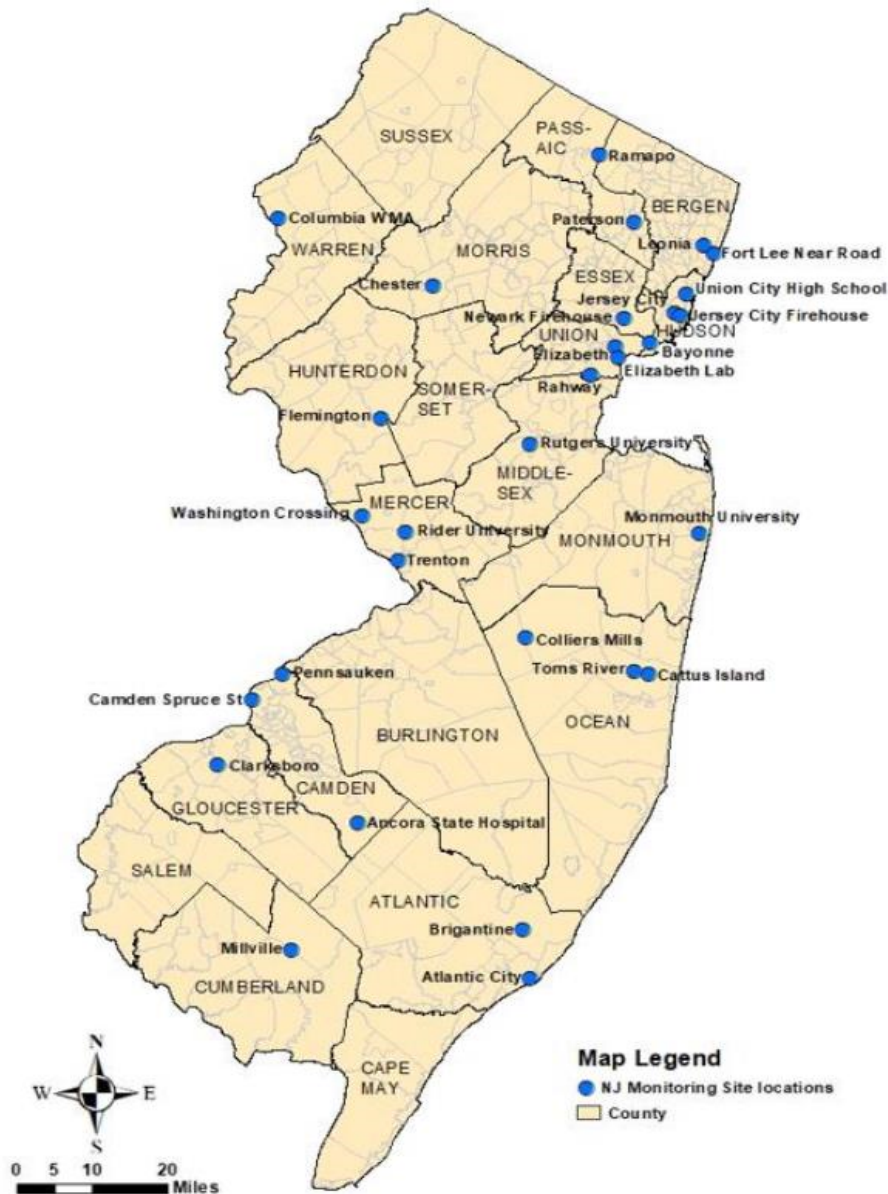
Carbon Monoxide (CO)

There were no exceedances of any CO NAAQS in 2022.

Lead

By 2008, all of New Jersey's lead monitoring stations had been shut down due to decreasing concentrations. In March 2012, a lead monitor was installed at the Newark Firehouse monitoring station but was subsequently shut down in September 2022. The most recent lead data shows that ambient air quality concentrations of lead were well below the AAQS standard of 0.15 ug/m³ over a 3-month rolling average period. The highest annual 3-month rolling average lead concentrations at the Newark Firehouse monitoring station since 2012 ranged from 0.003 to 0.004 ug/m³.

Figure 2-2
New Jersey Air Monitoring Sites in 2022



(1) Source: 2022 NJ Air Quality Report, NJ Department of Environmental Conservation, August 2023

**Table 2-1
 2022 New Jersey Air Monitoring Network Parameters**

Monitoring Station	Monitoring Parameter	O ₃	PM _{2.5} (Filter-based)	Real-Time PM _{2.5}	PM ₁₀	NO ₂	NO _y	SO ₂	CO	Lead	Toxics	PM _{2.5} -Speciation	O ₃ Precursors (PAMS)	BTEX & Black Carbon	Visibility	Acid Deposition	Mercury	Meteorological ^a	Solar Radiation
1	Ancora State Hospital	X																	
2	Atlantic City		X																
3	Bayonne	X				X		X						X				X	
4	Brigantine	X	X	X				X							X	X			
5	Camden Spruce Street	X	X	X	X	X		X	X		X	X		X				X	
6	Cattus Island															X			
7	Chester	X	X			X		X			X	X							
8	Clarksboro	X	X																
9	Colliers Mills	X																	
10	Columbia	X		X		X		X										X	
11	Elizabeth							X	X										
12	Elizabeth Lab		X	X		X		X	X		X	X		X			X	X	
13	Flemington	X		X														X	
14	Fort Lee Near Road			X		X			X					X				X	
15	Jersey City					X		X	X										
16	Jersey City Firehouse		X	X	X														
17	Leonia	X																	
18	Millville	X		X		X													
19	Monmouth University	X																	
20	Newark Firehouse*	X	X	X	X	X	X	X	X	X		X		X				X	X
21	Paterson**			X															
22	Pennsauken		X																
23	Rahway			X															
24	Ramapo	X																	
25	Rider University	X		X														X	
26	Rutgers University	X	X	X		X	X				X	X	X				X	X	X
27	Toms River			X															
28	Trenton			X															
29	Union City High School**			X															
30	Washington Crossing			X												X			
	TOTAL	16	10	16	3	10	2	9	6	1	4	5	1	5	1	3	2	9	2

X - Parameter measured in 2022.

*Site shut down as of 9/26/2022.

**Continuous PM_{2.5} monitor operated part of the year.

NO₂ usually includes NO and NO_x.

a - Meteorological parameters include temperature, relative humidity, barometric pressure, wind direction & wind speed.

(1) Source: 2022 NJ Air Quality Report, NJ Department of Environmental Conservation, August 2023

K4. Subsurface Hydrology Information

Supplemental Information NJAC 7:1C-3.3(a)(4) - Subsurface Characteristics

Soil at the subject Site is mapped as urban land¹, which consists of greater than 90 percent of the surface covered by asphalt, concrete, buildings, and other impervious surfaces. During historical investigations, surficial material at the Site has been identified as glacial till consisting of up to 30 feet of poorly sorted and generally unstratified clay, silty clay, sand, and some gravel. Soil within the glacial till is anticipated to have a moderately slow to very slow permeability and a low risk for erosion and sedimentation, consistent with the Hasbrouck silt loam, which has been mapped on nearby properties.

The Site can be divided hydrogeologically into three regimes or water-bearing zones. The uppermost is the shallow unconsolidated glacial till; the second is the lower till and weathered bedrock; and the third is the upper competent bedrock of the Passaic Formation. Historical subsurface investigations have indicated that groundwater flow in each of the water-bearing zones is generally to the south and southeast. As further discussed under the supplemental information provided for site contamination (NJAC 7:1C-3.3(a)(2)), a site-wide groundwater pump-and-treat (GWP&T) system is in use at the Site to contain and mitigate groundwater impacts, which may impact local groundwater flow direction. Additional hydrogeologic information is summarized below by zone:

- Unconsolidated superficial deposits at the Site are comprised of 25 to 30 feet of glacial till. The till consists of clay, silty clay, sand, and some gravel. The till is poorly sorted and generally unstratified. The unconsolidated glacial till deposits are considered a minor aquifer in Union County. The depth to groundwater is shallow and can occur under both confined and unconfined conditions. These unconsolidated deposits are not considered a major aquifer because they are generally less than 25 to 30 feet thick. Groundwater quality in the till is potable; however, groundwater is generally not used for human consumption. Groundwater in this shallow zone under the facility occurs at a depth of generally 5 to 10 feet below land surface under water-table conditions. However, the depth to groundwater can range from as little as one foot to as deep as 14 feet. Highest water levels are generally attained in the spring and early summer months; the lowest levels are seen in late fall and winter. The hydraulic gradient is lowest in the central area of the facility in the vicinity of Tankfarm No. 1, 2, and Building 10 (averaging at 0.002). The gradient is the steepest by the southeast property line (at 0.02). Short-term aquifer testing (slug testing) has been performed both in existing and former monitoring wells at the Site and indicates more permeable conditions in the lower glacial till compared to the upper glacial till. The hydraulic conductivity in the upper glacial till averages 0.2 ft/day². Hydraulic conductivity values in the lower till are an order of magnitude higher and average 2.0 ft/day³.
- The lower till and weathered bedrock comprise a more permeable water bearing zone than the upper till. The base of the till has been observed at some locations to contain a thin, poorly sorted sand, gravel, and/or cobble zone. The upper 5 to 15 feet of bedrock is weathered, consisting of more broken,

¹ USDA, 2002. Soil Survey of Union County, New Jersey, 2002.

² ERM Northeast, 1990. Preliminary Aquifer Test Results, Safety-Kleen Corp., Linden Recycle Center Linden, New Jersey, April 1990.

³ ERM Northeast, 1984. Evaluation of Groundwater Recovery Well at Solvents Recovery Service of New Jersey, March 28, 1984.

fractured, friable or soft siltstone and shale. The highest hydraulic conductivities and greatest degree of fracturing are generally associated with the weathered bedrock⁴. The hydraulic gradient across the intermediate zone ranges from less than 0.001 ft/ft to approximately 0.005 ft/ft. The hydraulic conductivity in the weathered bedrock, has ranged from 11 to 330 ft/day based on packer tests⁴.

- The glacial till is underlain by the Passaic Formation, which consists of shallow dipping, gradational sequences of reddish brown to gray mudstone, shale, and siltstone. Regionally, the Passaic Formation bedding trends northeast and dips gently to the northwest⁵. The potentiometric surface for bedrock groundwater occurs at a depth of approximately 9 to 15 feet below land surface. This surface is below the water table in the glacial till, and the vertical hydraulic gradient between the groundwater in the till and the bedrock is therefore downward. The hydraulic gradient is approximately 0.025 ft/ft. The seasonal water level fluctuation observed in bedrock wells varies from about 0.5 feet to 4 feet. Bedrock beneath the Site has low intergranular permeability. Groundwater flow is controlled by fractures primarily along bedding and the contrast in fracturing between beds. Near vertical, cross-cutting fractures are less common but provide leakage across beds. Collectively, these conditions define a multi-unit leaky aquifer system. The shallow dipping beds and water-bearing fractures along bedding alternating with impermeable beds impart an anisotropy to the flow system. Flow probably occurs primarily along strike to the south with lesser flow across bedding through less significant steeply dipping fractures, which results in an overall southeasterly flow.

A water supply well search was conducted for the Site in 2010 through online resources and City of Linden records. The survey was completed to identify wells within 0.5 miles of the Site and any irrigation or industrial wells within one mile of the Site. No potable wells were identified. The Site is located in a highly developed area and surrounded by various industrial and commercial properties. Groundwater impacts are documented at the Site and surrounding properties, and public water is available to the Site and surrounding area. Based on the presence of public water, widespread industrial and commercial use, and known groundwater impacts extending into bedrock, future groundwater use is not anticipated in this area.

⁴ Cameron-Cole, 2007. Phase III RCRA Facility Investigation (RFI) Report, November 16, 2007

⁵ Trihydro, 2013. 2012 Field Investigation Report, Phase III RCRA Facility Investigation. May 29, 2013.

K5. Localized Climate and Flooding Impacts' Information

Safety-Kleen Systems, Inc.

Linden, New Jersey

Supplemental Information NJAC 7:1C-3.3(a)(5) – Localized Climate and Flooding Impacts

Temperature and Precipitation Data

Site-specific precipitation and temperature data for Safety-Kleen’s facility in Linden, New Jersey (“the facility”) was obtained from the National Oceanographic and Atmospheric Administration (NOAA) station at the Newark Airport in Newark, New Jersey ([NOAA NCEI U.S. Climate Normals Quick Access](#)). Average monthly and annual values for precipitation and temperature at this station are summarized in the table below.

**Average Monthly and Annual Temperature and Precipitation Values
NOAA Station: Newark International Airport
1991-2020**

Month	Average Temperature (°F)	Precipitation (Inches)
January	32.8	3.42
February	35.1	2.98
March	42.5	4.13
April	53.3	3.87
May	63.3	3.97
June	72.7	4.34
July	78.2	4.66
August	76.4	4.15
September	69.2	3.82
October	57.5	3.79
November	47.0	3.33
December	38.0	4.14
Annual	55.5	46.60

As local and global temperature and precipitation are expected to increase as a result of climate change, facilities like this one will have to analyze and prepare for the potential impacts this could cause. Among these impacts are regional flooding or inundation due to rising stream elevations, rising sea levels, and ocean tides, as well as site-specific effects from increased precipitation amounts. The following sections analyze the level of risk associated with each of these impacts at this facility, as well as potential resilience and mitigation measures to minimize risks from flooding and inundation.

Impacts of Stream Flooding

As delineated in the Flood Hazard Area Control Act Rules (N.J.A.C. 7:13) under Method 3, a facility is located within a flood hazard area if it is within the Federal Emergency Management Agency (FEMA) floodway limit and is located within three feet of the FEMA 100-year flood elevation. 100-year flood elevations are determined by the water level that is expected from the flood event that has a one percent

chance of being equaled or exceeded in any given year. This type of flood has a return or recurrence frequency of 100 years, hence the terms “100-year flood”. The FEMA National Flood Hazard Layer (NFHL) in ArcGIS was used to obtain a flood map showing the one percent annual chance flood hazard area (i.e., 100-year flood hazard area) and the 0.2 percent annual chance flood hazard (i.e., 500-year flood hazard area) for the land surrounding the facility. This map is attached as *Figure 1*.

The flood map in *Figure 1* shows that the facility is located 1,600 feet away from the nearest one percent flood hazard area (shown in light purple) and is therefore not located in a flood hazard area. This means that during a 100-year flood event (an event with a one percent chance of occurring in a given year), the facility is not projected to be directly impacted by flooding.

In future years, peak streamflow throughout the Northeast is likely to increase as a result of climate change. As a result, the higher streamflows are likely to become more frequent. This means that the streamflow and flood elevation that currently has a one percent chance of occurring in a given year could occur at a higher frequency. While the FEMA flood map in *Figure 1* does not show projections for what future 100-year flood hazard areas may be, it can be assumed that over time, this area could start to look similar to the current 500-year flood hazard area. For this reason, the 500-year flood hazard area was also analyzed as a potential future flooding scenario. While the 500-year flood hazard area is larger than the 100-year flood hazard area due to the higher elevation associated with flooding of that magnitude, the facility is still located approximately 1,300 feet northeast of the nearest 500-year flood hazard area. In addition, *Figure 1* also shows that the 500-year flood hazard area is wider to the west, spreading further in the opposite direction of the facility. This suggests that the topography of the land on which the facility is located is at a higher elevation, and therefore less likely to experience flooding than other more low-lying areas around the facility. This suggests that even as flood hazard areas expand in the future, the facility is not likely to become part of a flood hazard area, and therefore is not likely to experience substantial effects from stream flooding.

Finally, the “Land Use/Land Cover (LULC) Urban 2015 with Future Flooding in New Jersey” layer was obtained from the New Jersey Department of Environmental Protection (NJDEP) Bureau of GIS ([LULC Urban 2015 with Future Flooding in New Jersey | NJDEP Open Data \(arcgis.com\)](#)) to further estimate future flooding conditions. This ArcGIS layer provides an estimate of future flooding conditions by Census Block Group based on climate change projections. As shown in *Figure 1*, the facility is not located within a LULC Urban 2015 with Future Flooding in New Jersey boundary, and is therefore not projected to experience substantial effects from flooding in the future.

Impacts of Rising Sea Levels

In order to analyze potential impacts from inundation due to sea level rise (i.e. flooding or overflow of sea water), sea level rise projections were obtained from the NJDEP’s Climate Change website ([NJDEP | Climate Change | Home](#)). The table below was obtained from the website’s sea level page.

Sea-Level rise (SLR) Projections for New Jersey ¹

	Chance SLR Exceeds	2030	2050	2070 Emissions			2100 Emissions			2150 Emissions		
				Low	Mod.	High	Low	Mod.	High	Low	Mod.	High
Low End	> 95% chance	0.3	0.7	0.9	1.0	1.1	1.0	1.3	1.5	1.3	2.1	2.9
Likely Range	> 83% chance	0.5	0.9	1.3	1.4	1.5	1.7	2.0	2.3	2.4	3.1	3.8
	~ 50 % chance	0.8	1.4	1.9	2.2	2.4	2.8	3.3	3.9	4.2	5.2	6.2
	< 17% chance	1.1	2.1	2.7	3.1	3.5	3.9	5.1	6.3	6.3	8.3	10.3
High End	< 5% chance	1.3	2.6	3.2	3.8	4.4	5.0	6.9	8.8	8.0	13.8	19.6

The table above breaks out sea-level rise projections for New Jersey from 2030 to 2150 under low, moderate, and high emissions scenarios. Projections are given in feet above the average sea level in the year 2000. In this case, a low emissions scenario would be obtained through substantial reductions to greenhouse gas emissions (primarily carbon dioxide), a moderate emissions scenario would be obtained from less substantial greenhouse gas reductions, and the high emissions scenario would be obtained by making no reductions to greenhouse gas emissions. In addition, low (least extreme), likely, and high (most extreme) predictions for sea-level rise are given for each scenario. For the purpose of this analysis, projections for 2070 were used to estimate sea-level rise in approximately 45 years, a reasonable operational window for the facility. Based on this table, potential impacts to the facility were assessed for a range in sea-level rise from one foot (the lowest prediction under a moderate emission scenario) to 4.4 feet (the highest prediction under a high emissions scenario).

Using the range in potential sea-level rise of one foot to 4.4 feet obtained above, the NOAA sea level rise viewer tool ([Sea Level Rise and Coastal Flooding Impacts \(noaa.gov\)](https://sea-level-rise.noaa.gov/)) was utilized to observe the effect that sea-level rise might have on the facility. *Figure 3*, *Figure 4*, and *Figure 5* show the effects of a one-foot sea-level rise, a four-foot sea-level rise, and a five-foot sea-level rise, respectively. The five-foot sea-level rise scenario was included to provide a highly conservative projection of the potential effects of inundation due to rising sea levels. On these figures, areas that are connected to the ocean (i.e. rivers and streams, and the areas surrounding them) and are expected to be inundated as a result of sea level rise shown in blue. Darker shades of blue are indicative of areas with greater water depth. Areas shown in green are areas that are

¹ [Climate Change in New Jersey: Impacts & Effects \(arcgis.com\)](https://arcgis.com), Table 1: Sea-Level rise (SLR) projections for New Jersey from 2030 to 2150 under low, moderate, and high emissions scenarios.

“unconnected” to the ocean but are determined to be prone to flooding based on elevation and drainage characteristics. The facility is shown in yellow on the three figures.

Even under the five-foot sea-level rise scenario, these figures show that the facility is not projected to experience substantial effects from inundation due to sea-level rise.

Impacts of High Tide Flooding

The NOAA sea level rise viewer tool was used to assess the potential for high tide flooding (i.e. flooding caused by ocean tides as opposed to streams or rainstorms) in the area surrounding the facility. A screenshot of this tool, with the facility outlined in yellow and areas currently subject to high tide flooding shown in red, is attached as *Figure 5*. This tool shows that the facility and its immediate surroundings are not currently subject to high tide flooding, with the nearest flooding area located over 2,000 feet from the site boundary. While there are currently no projections for future high tide flooding in this area, the fact that even extreme sea-level rise (i.e., a rise of five feet) is not projected to result in inundation at the facility suggests that more extreme high tide flooding caused by climate change and rising sea levels is not likely to result in substantial flooding at this facility.

Impacts of Increased Precipitation

While it has been determined that the facility is not likely to experience substantial effects from flooding due to stream flooding, ocean tides, or rising sea levels, it is still important to consider the effects of increasing amounts of precipitation on the facility’s operations and drainage system. The New Jersey Extreme Precipitation Tool ([New Jersey Extreme Precipitation Projection Tool \(njprojectedprecipitationchanges.com\)](http://njprojectedprecipitationchanges.com)) was utilized to obtain projections for future rainfall amounts in Linden, New Jersey. This tool provides projected rainfall depths in Linden over the time period of 2020 to 2069. Projected depths are given for a range of 24-hour rainstorm scenarios – from 2-year rain events (i.e. 24-hour rainstorms with a probability of occurring once in a two-year period) to 100-year rain events. For each scenario, the tool also provides NOAA Atlas 14 values, which represent current rainfall depths for the given scenario. The table below summarizes the rain depth values obtained from the New Jersey Extreme Precipitation Projection Tool under a moderate emissions scenario and a high emissions scenario.

**24-Hour Precipitation Depths Obtained from NJDEP’s New Jersey Extreme Precipitation Tool
 Time Period 2020 - 2069**

Rainstorm Scenario	Median Projected Depth – Moderate Emissions Scenario (inches)	Median Projected Depth – High Emissions Scenario (inches)	Mean NOAA Atlas 14 Value (inches)
2-year	3.75	3.87	3.51
5-year	4.94	5.08	4.62
10-year	5.95	6.06	5.54
25-year	7.35	7.44	6.85
50-year	8.53	8.55	7.87
100-year	9.75	9.66	8.98

Under both the moderate emissions scenario and a high emissions scenario, the projected median rain depths for each rainstorm are within ten percent of the mean NOAA Atlas 14 values. This means that precipitation in Linden for the range of rainfall scenarios consider is generally not projected to increase by more than ten percent between now and 2069 when considering average conditions.

At present, the facility does not typically experience flooding within the site boundary during heavy rain events. As this is the case, a ten percent increase in precipitation is unlikely to exceed the current capacity of the facility’s drainage system and cause issues with flooding. The proposed facility expansion is not expected to increase the amount of impervious surface (i.e. surface that water cannot pass through) at the facility, which means it is not anticipated to have a substantial effect on the facility’s drainage system.

Measures to Increase Resilience and Mitigate Risks from Flooding and Inundation

Going forward, it will be of the utmost importance that the facility continues to be diligent in the maintenance of its drainage system. The stormwater drainage system should be monitored during heavy rainstorms to ensure that there are no signs of localized flooding. In addition, roadways surrounding the facility should be monitored for flooding during heavy rain events to ensure the safety of those that may be traveling in and out of the facility.

The facility currently maintains a Stormwater Pollution Prevention Plan to minimize the potential discharge of pollutants in stormwater. Keeping this plan up to date and implemented as part of ongoing operations is important for minimizing potential impact from stormwater runoff during rain events.

Additional best management practices that could be adopted by the facility to mitigate the effects of flooding include the following:

- Elevating equipment or materials that could potentially be damaged by flooding;
- Storing materials inside, if practical;
- Developing a contingency plan that outlines the facility's response to a flooding event;
- Preparing for large storms by utilizing flood doors, shields, flood gates, or sandbags for areas of critical operations.

Although this facility does not appear to be at a substantial risk of flooding due to rain, ocean tides, or rising sea levels, continued maintenance of the stormwater drainage system and the practice of best management practices regarding flooding and stormwater are important aspects of ensuring that the facility is prepared to respond to the effects of climate change.

Figure 1
FEMA Flood Hazard Map

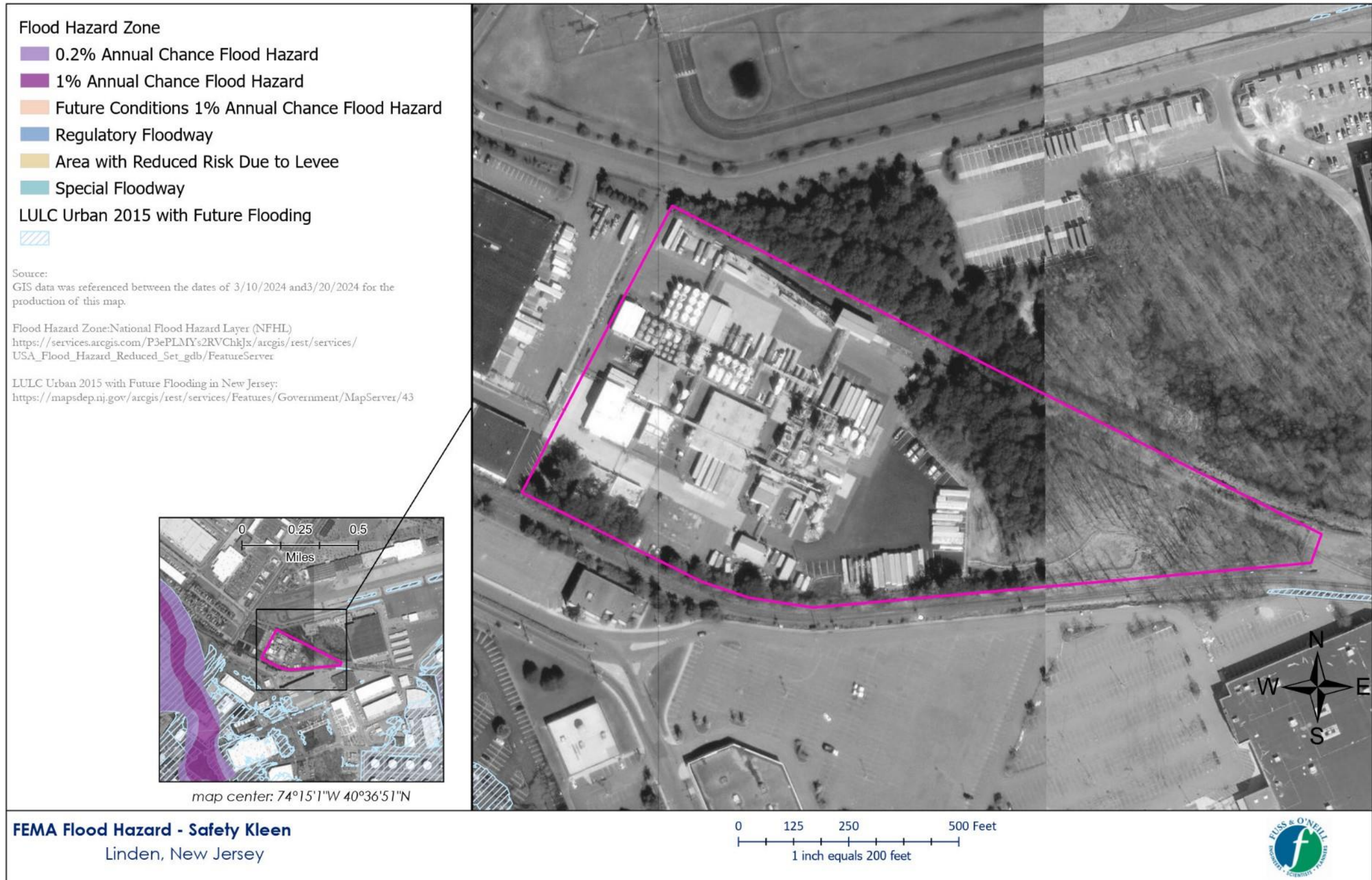


Figure 2
NOAA Sea Level Rise Viewer: One-Foot Sea-Level Rise



Figure 3
NOAA Sea Level Rise Viewer: Four-Foot Sea-Level Rise

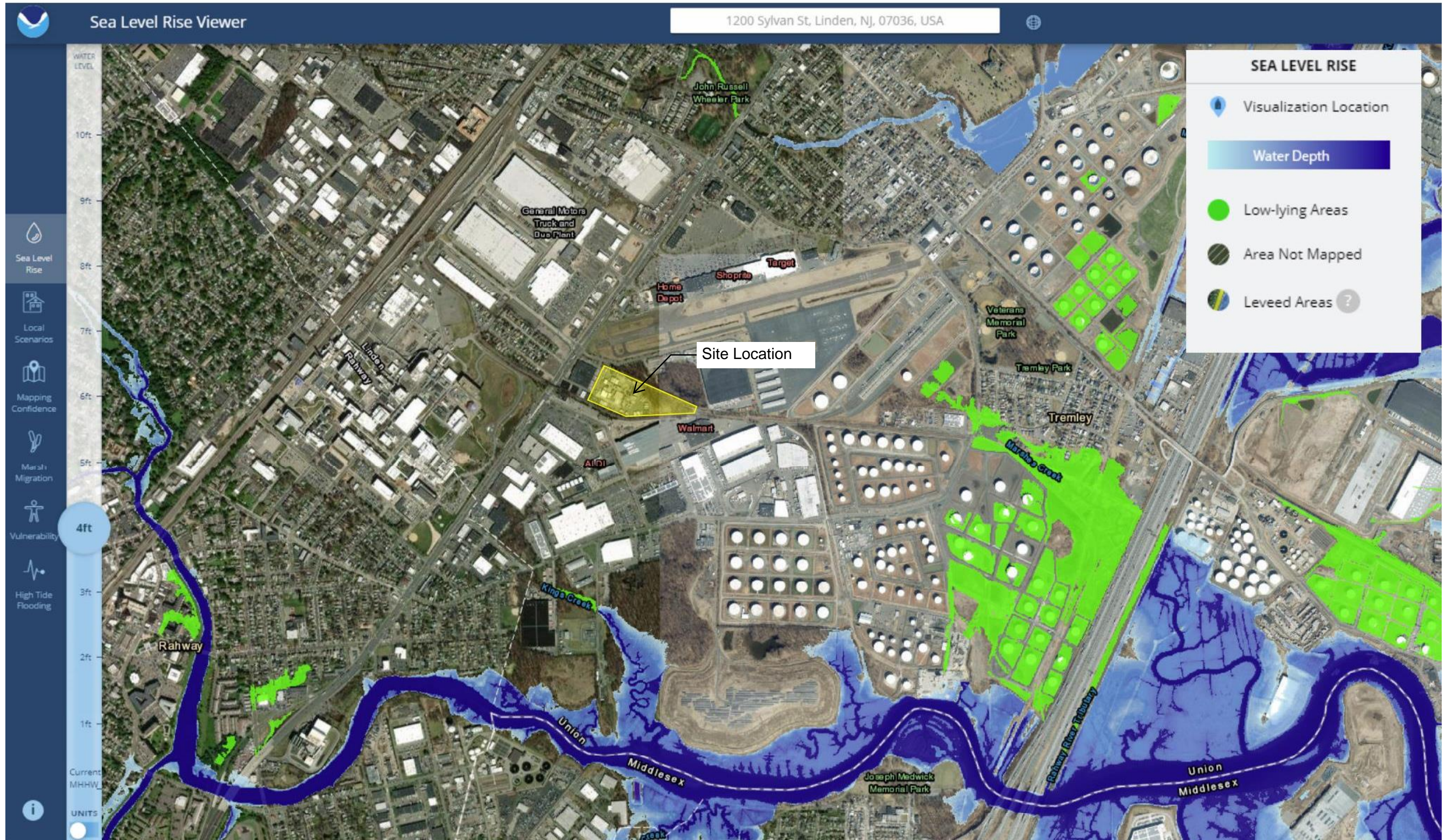


Figure 4
NOAA Sea Level Rise Viewer: Five-Foot Sea-Level Rise

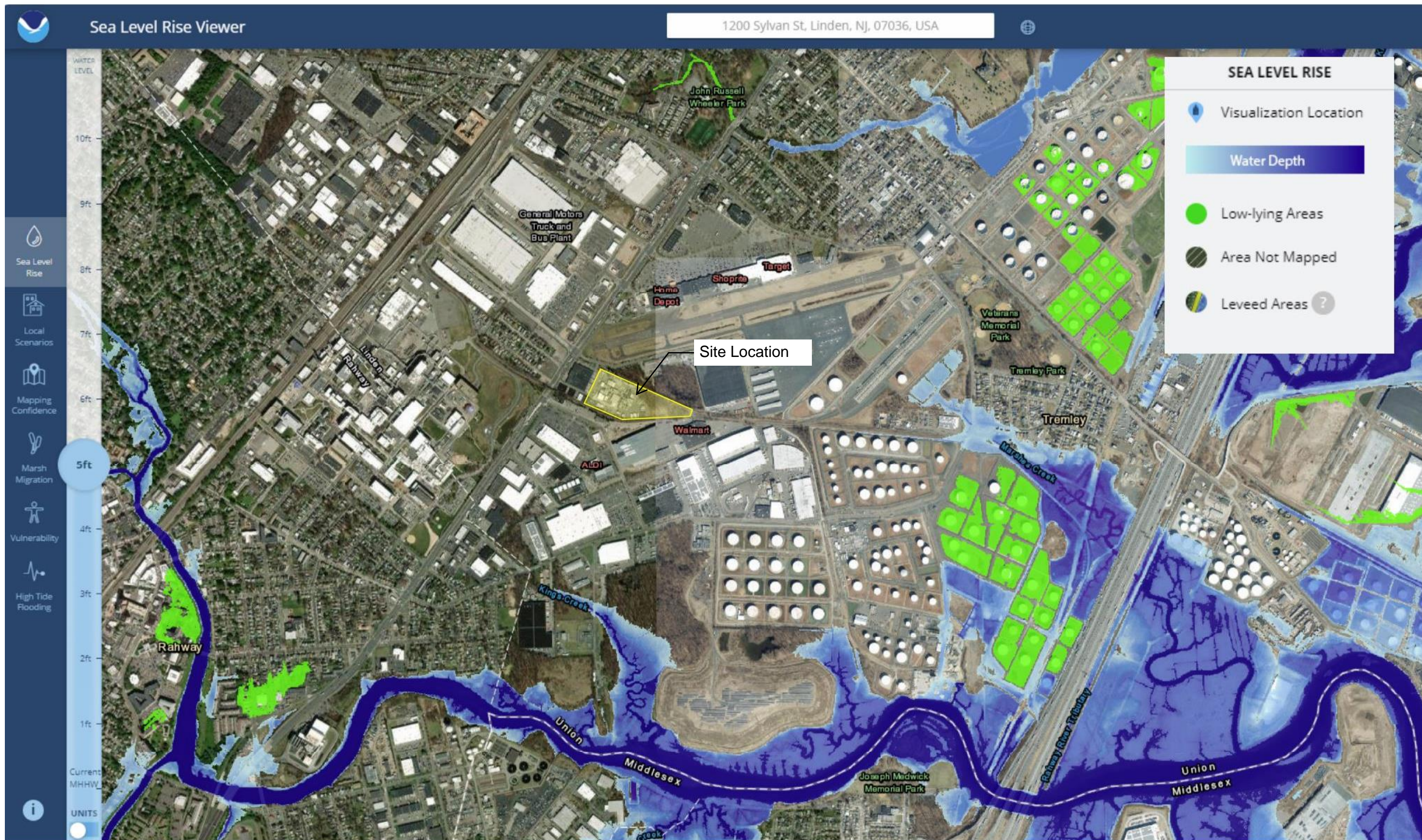
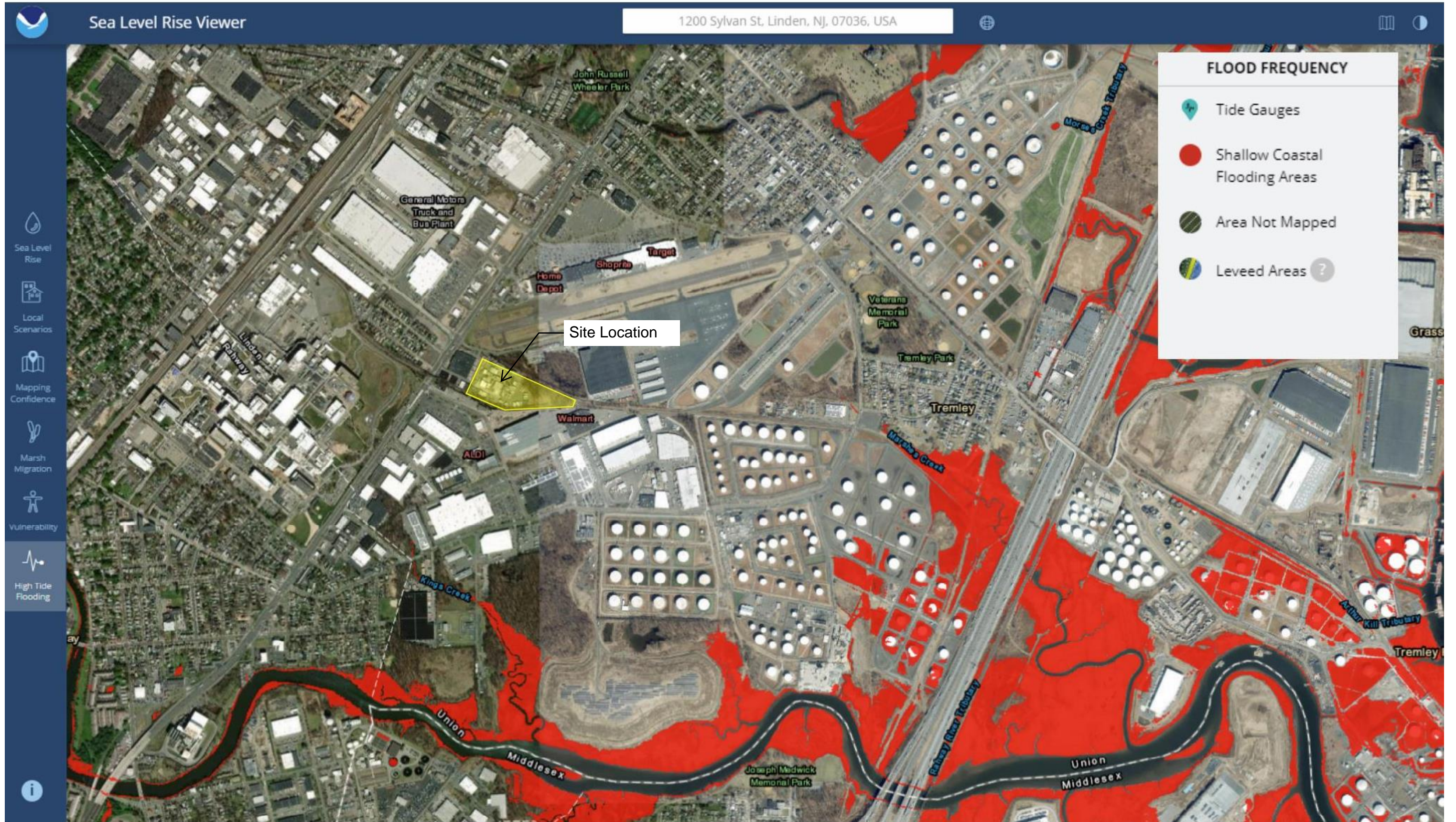


Figure 5
NOAA Sea Level Rise Viewer: Current High Tide Flooding



K6. Traffic Study

Supplemental Information **NJAC 7:1C-3.3(a)(6) - Traffic**

Site Access and Circulation

The site is separated between two facilities, the main building and the rear storage/treatment area. The main facility is accessed via two curb cuts on Route 1/9 (West Edgar Road) and one full access driveway on Wildcat Way. The rear facility is currently accessed via two driveways, one full access driveway on Wildcat Way and one driveway at the terminus of Sylvan Street. Wildcat Way provides access to the signalized intersection of Wildcat Way at Route 1/9/Pleasant Street. Sylvan Street provides access to the unsignalized intersection of Route 1/9 at Sylvan Street where right-in/right-out access only is permitted.

Transportation Routes

The transportation routes that service the site consist of the following roadways:

- Wildcat Way
- Sylvan Street
- Route 1/9 (West Edgar Road)
- Interstate 278
- Interstate 95

Wildcat Way runs primarily east/west from its intersection with Route 1/9 and continues east until its terminus at the Linden Airport. Wildcat Way provides two lanes of travel, one in each direction, and is classified by the New Jersey Department of Transportation (NJDOT) as an urban local roadway. The posted speed limit is 25 miles per hour and the land uses surrounding Wildcat Way are retail commercial, commercial district, and heavy industry.

Sylvan Street runs primarily east/west from its intersection with Route 1/9 and continues east until its terminus at the site. Sylvan Street provides two lanes of travel, one in each direction, and is classified by the NJDOT as an urban local roadway. There is no posted speed limit and the land use surrounding Sylvan Street is light industrial.

Route 1/9 (West Edgar Road) runs primarily north/south from Linden's border with Woodbridge Township and runs north for approximately 4 miles where it continues into Elizabeth, NJ. Route 1/9 provides seven lanes of travel, four in the northbound direction and three in the southbound direction, in the vicinity of the site. The roadway is median divided and classified by the NJDOT as an urban principal arterial. Additionally, left and right turn lanes are provided throughout the corridor at the roadway's intersection with side streets. The posted speed limit is 40 miles per hour and the land uses surrounding Route 1/9 are heavy industrial, light industrial, commercial district, retail commercial, planned commercial district, two family 40', and general commercial in the vicinity of the site.

Interstate 278 runs primarily east/west from its intersection with Route 1/9 and continues east for approximately 2 miles where it continues into the State of New York. Interstate 278 provides four lanes of travel, two in the westbound direction and two in the eastbound direction just east of Route 1/9 but widens to provide three lanes in each direction over the Goethals Bridge. Interstate 278 is classified by NJDOT as an urban interstate. The posted speed limit is 50 miles per hour and the surrounding land use is heavy industrial.

Interstate 95 runs primarily north/south from the boarder with Woodbridge Township, NJ and continues north for approximately 3.5 miles where it enters Elizabeth, NJ. Interstate 95 provides 14 lanes of travel, seven southbound and seven northbound and is classified by NJDOT as an urban interstate. The posted speed limit is 65 miles per hour and the surrounding land use is heavy industrial.

Existing Traffic Volumes

Automatic Traffic Recorder data for Route 1/9 utilized in this study were obtained from the NJDOT Traffic Count Stations Viewer. The counts were conducted from November 15, 2017 through November 17, 2017. The counts indicated that the Average Annual Daily Traffic (AADT) for the northbound direction was 35,930 vehicles/day and the AADT for the southbound direction was 35,704 vehicles/day. These traffic volumes can be found in *Attachment A*. The traffic volumes were then adjusted to the current 2024 year utilizing a growth factor of 2.25 percent per year to account for normal traffic growth in the study area, the grown 2024 AADT for the northbound direction is 41,985 vehicles/day and 41,722 vehicles/day in the southbound direction, for a total grown AADT of 83,707 vehicles/day.

Trip Generation

The existing site generates 214 daily trips (107 entering trips and 107 exiting trips). The proposed site is expected to increase the trip generation of the site by 71 vehicles/day entering and 71 vehicles/day exiting. The overall site including the proposed expansion is anticipated to generate 178 vehicles/day entering and 178 vehicles/day exiting the site for a total of 356 vehicles/day. However, the site operates with a minimum of four shifts throughout the day and night with shift changes occurring during off-peak hours. Therefore, the existing and proposed traffic for the site will provide a minimal impact to the peak hour traffic operations. The existing site traffic volumes and expected additional vehicle trips were confirmed using operational data provided by the property owner.

It is anticipated that approximately 10% of the total daily site traffic will arrive/depart during the peak hours and it has been assumed that 10% of the roadway AADT is present during the peak hours. With these assumptions it is projected that a total of 15 additional vehicles will be generated by the site during the morning and afternoon peak hours. Additionally, the expected traffic that is present on Route 1/9 during the morning and afternoon peak hours is 10% of 83,707 vehicles per day, for a total of 8,371 vehicles in the peak hours.

Trip Distribution

The distribution of traffic entering and exiting the development site was applied to the roadway network based on existing site operations, confirmed by the owner, and the layout of the adjacent roadway network. The following arrival/departure distributions of traffic are anticipated.

- 25% from the north on Route 1/9
- 50% from the north from Interstate 278 from Interstate 95
- 25% from the South on Route 1/9

Analysis

As noted above, the expected network traffic that will be present during the morning and afternoon peak hours due to the proposed expansion is 15 vehicles and the approximate peak hour volumes on Route 1/9 today are 8,371 vehicles. This results in a total increase in peak hour traffic volumes of 0.18% for both peak hours. This is a minimal increase in the traffic volumes that would result in a de minimis impact to vehicle delays on Route 1/9, therefore a full level of service analysis is not warranted.

The expected average daily trips for the proposed site expansion is 71 vehicles/day arriving and 71 vehicles/day departing. Based on the expected trip distribution of 75% from the north and 25% from the south, it is expected that an additional 53 vehicles/day will approach from the north and an additional 53 vehicles/day will depart to the north. Additionally, it is expected that an additional 18 vehicles/day will arrive from the south and an additional 18 vehicles/day will depart to the south. As noted previously, the total AADT for the northbound traffic and southbound traffic is 41,985 vehicles/day and 41,722 vehicles/day, respectively. An increase in trip generation of 103 vehicles/day in the northbound direction and 36 vehicles/day in the southbound direction equates to an increase in total daily traffic volume of approximately 0.25% and 0.09%, respectively.

The overall development, including the proposed expansion, is anticipated to contribute 267 vehicles/day in the northbound direction and 89 vehicles/day in the southbound direction. This represents a maximum increase of 356 vehicles/day to the overall network with an AADT of 83,707 vehicles/day. Equating to approximately 0.43% of the total traffic volume. This minimal percentage of traffic produced by the overall development would lead to no substantial impact on the traffic operations within the local traffic network and given the off-peak hour operations of the existing site, would result in minimal impact to the peak hour operations along Route 1 and 9.

Attachment A

Traffic Volume Counts

New Jersey Department of Transportation

Short-term Hourly Traffic Volume for 11/15/2017 to 11/17/2017

Site names: 4-4-210,US 1&9-40.88,00000001__
 County: UNION
 Funct Class: Urban Principal Arterial - Other
 Location: BET Winans Ave and Eddy Ave

Seasonal Factor Grp: rg1_3U
 Daily Factor Grp: rg1_3U
 Axle Factor Grp: rg1_3U
 Growth Factor Grp: rg1_3U

	Sun, Nov 12, 2017			Mon, Nov 13, 2017			Tue, Nov 14, 2017			Wed, Nov 15, 2017			Thu, Nov 16, 2017			Fri, Nov 17, 2017			Sat, Nov 18, 2017		
	Road	N	S	Road	N	S	Road	N	S	Road	N	S	Road	N	S	Road	N	S	Road	N	S
00:00													1,037	537	500	1,093	580	513			
01:00													773	359	414	832	406	426			
02:00													734	365	369	757	375	382			
03:00													806	402	404	826	404	422			
04:00													1,390	690	700	1,363	636	727			
05:00													2,602	1,413	1,189	2,563	1,332	1,231			
06:00													3,994	2,110	1,884	4,048	2,101	1,947			
07:00													4,554	2,613	1,941	4,508	2,378	2,130			
08:00													5,110	2,656	2,454	4,653	2,100	2,553			
09:00													4,258	2,215	2,043	4,043	1,919	2,124			
10:00													3,834	1,900	1,934	3,955	1,969	1,986			
11:00													4,015	2,008	2,007	4,041	1,979	2,062			
12:00												4,466	2,108	2,358	4,204	2,017	2,187				
13:00												4,256	2,018	2,238	4,147	1,888	2,259				
14:00												4,068	2,082	1,986	4,362	2,051	2,311				
15:00												4,496	2,219	2,277	4,547	2,193	2,354				
16:00												4,652	2,291	2,361	4,751	2,320	2,431				
17:00												5,002	2,641	2,361	4,898	2,458	2,440				
18:00												4,505	2,132	2,373	4,681	2,212	2,469				
19:00												3,568	1,772	1,796	3,603	1,740	1,863				
20:00												2,757	1,352	1,405	2,832	1,364	1,468				
21:00												2,460	1,280	1,180	2,552	1,336	1,216				
22:00												1,896	970	926	1,979	1,025	954				
23:00												1,535	801	734	1,584	827	757				
Total												43,661	21,666	21,995	77,247	38,699	38,548	32,682	16,179	16,503	
AM Peak Vol														5,110	2,656	2,454	4,683	2,417	2,553		
AM Peak Fct														.958	.982	.934	.949	.866	.925		
AM Peak Hr														8: 00	8: 00	8: 00	7: 45	6: 45	8: 00		
PM Peak Vol													5,153	2,646	2,507	5,033	2,470	2,609			
PM Peak Fct														.973	.893	.927	.936	.923	.919		
PM Peak Hr														17: 15	17: 15	17: 15	17: 15	16: 45	17: 15		
Seasonal Fct														.997	.997	.997	.997	.997	.997		
Daily Fct														.926	.926	.926	.977	.977	.977		
Axle Fct														.490	.490	.490	.490	.490	.490		
Pulse Fct														2.000	2.000	2.000	2.000	2.000	2.000		

K7. Sewage Facilities' Information

Supplemental Information **NJAC 7:1C-3.3(a)(7) - Sewage Facilities' Information**

A description of the sewage facilities that identifies the type of treatment system available, existing treatment capacity, collection system capacity, average and peak flow data, and current committed capacity for the treatment and collection system is as follows:

LINDEN ROSELLE SEWERAGE AUTHORITY (LRSA)

The LRSA services the City of Linden and the Borough of Roselle, and was established in 1948 to contract and operate wastewater treatment and interceptor facilities, as well as to collect, treat and dispose of sewage generated by the municipalities. The Authority's service area is 13 square miles, it services a residential population of 60,000 and a diverse industrial community, and administers a state approved Industrial Pre-treatment Program.

The Authority's sewerage treatment is classified as a biological system and is designed to treat 17 million gallons per day. It consists of primary sedimentation, activated sludge, secondary clarifiers and ultraviolet disinfection for final effluent. Residuals (sludge) treatment is by gravity thickening of primary sludge and gravity belt thickening for waste activated sludge, followed by anaerobic digestion. Sludge is transported via barge to a private dewatering facility where it is prepared for ultimate disposal at municipal landfills.

For additional LRSA information see: <https://lrsa-nj.gov/>

The Linden facility currently discharges sanitary and industrial wastewater as well as recovered/treated groundwater to LRSA under permit number 036. The Linden facility is currently permitted to discharge 60,000 per day of industrial wastewater from onsite processes and 63,360 gallons per day of treated groundwater. Industrial wastewater is pretreated onsite via neutralization/pH adjustment prior to discharge to LRSA. Presently industrial wastewater discharges average approximately 15,806 gallons per day with a daily maximum discharge of approximately 46,927 gallons per day. Recovered groundwater is pretreated via air stripping to remove VOCs prior to discharge to LRSA. Presently recovered groundwater discharges average approximately 40,120 gallons per day with a daily maximum discharge of approximately 94,290 gallons per day. These flow limits are monthly average limits based on the number of discharge days during the month. Neither the current industrial wastewater nor treated groundwater discharges to LRSA are presently affected by the proposed facility expansion.

There are no permitted limits for the discharge of sanitary wastewater to LRSA. An increase in sanitary wastewater discharge from the currently proposed facility expansion is expected to primarily be a result of the addition of possibly 2-5 new positions (3 used for sanitary wastewater purposes) and the relocation to Linden of 43 existing employees from other NJ company locations. Sanitary wastewater discharge is not required to be metered/measured by LRSA. It is anticipated the currently proposed facility expansion will result in an increase of sanitary wastewater discharge in the amount of approximately 690 gallons per day. A 690 gallons per day increase in sanitary wastewater discharge is 0.004 % of the LRSA's sewerage treatment capacity which does not represent a significant increase that might affect LRSA's sanitary wastewater treatment capabilities.

K8. Stormwater Management System Information

Supplemental Information

NJAC 7:1C-3.3(a)(8) - Stormwater Management System Information

A description of the stormwater management system that identifies the type of collection and treatment system available, and current collection and treatment capacity and utilization, including the presence or absence of combined sewer overflows is as follows:

The Linden facility collects rainwater run-on in active operating areas via a concrete swale system that drains to a concrete stormwater collection basin which prevents rainwater run-off from those areas. Collected rainwater run-on is then pumped from the stormwater collection basin into Tank 75 (i.e., a dedicated stormwater tank) prior to being treated via neutralization/pH adjustment before being discharged to the LRSA wastewater treatment plant (see Appendix K.7 for LRSA wastewater treatment capabilities).

All areas of the facility are inspected at least daily. Any discovered leaks, spills, etc., are immediately corrected, materials removed and affected surfaces are cleaned-up. Truck stations with secondary containment that are not covered and collect rainwater undergo an additional inspection prior to the collected stormwater being pumped-out onto the surrounding area (i.e., uncontaminated stormwater) as sheet run-off. Rainwater run-off from building roofs, driveways and parking lots drain offsite via sheet flow and stormwater outfalls. Stormwater offsite discharge mostly flows towards Kings Creek. See Attachment A for a site diagram noting stormwater drainage pathways and outfalls. There are no onsite combined sewer overflows.

Attachment A

Facility Stormwater Drainage Drawing

K9. Water Supply Information

Supplemental Information **NJAC 7:1C-3.3(a)(9) – Water Supply**

The local utility that supplies water to the Safety-Kleen facility at 1200 Sylvan Street in Linden, New Jersey is New Jersey American Water. Water supplied by New Jersey American Water to this facility is treated and produced by the Raritan Millstone Treatment Plant (“Raritan System,” PWS NJ2004002. According to the 2022 Annual Water Quality Report for the Raritan System, the system sources water from the Millstone River, Raritan River, Delaware & Raritan Canal, Brunswick aquifer, Stockton aquifer, Basalt aquifer, Passaic aquifer, and Glacial Drift aquifer, with surface water making up 92 percent of the water supply, and groundwater making up eight percent of the water supply¹. Treatment that occurs at the Raritan Millstone Treatment Plant includes disinfecting groundwater with chlorine and treating surface water with chloramines to maintain water quality in the distribution system. According to the 2022 Annual Water Quality Report, the Raritan System supplies an average of 126 million gallons of water per day to customers. The peak capacity of the Raritan System is 185 million gallons per day.²

The city of Linden owns the local water distribution system piping, which enters this facility through Sylvan Street. Based on the facility’s water bills from New Jersey American Water from the period of March 2023 through March 2024, the entire facility uses an average of approximately 46,000 gallons of water per day, and a maximum (i.e., “peak”) of approximately 73,000 gallons per day. According to the United States Environmental Protection Agency (USEPA), sanitary water usage in industrial settings is estimated to be 10 to 25 gallons per person per shift, where 25 gallons is used if the facility has toilets, showers and full kitchen services (i.e., food preparation and dishwashing).³ Because there are no kitchen services at this facility, 15 gallons per person per shift was used to estimate employee sanitary water usage. The facility plans to hire approximately 3 additional full-time employees for the purpose of this facility expansion. Additionally, approximately 43 workers presently domiciled at other company locations in New Jersey will be relocated to this facility. If 43 workers are relocated to this facility and 3 additional employees are hired, sanitary water usage (i.e., sinks, toilets, and showers) could increase by approximately 690 gallons per day, assuming each employee works one shift per day. This represents an increase of approximately 2 percent to the estimated average daily demand, and an increase of approximately 1 percent to the estimated peak daily demand. However, the employees being relocated to this facility would primarily be truck drivers who spend a minimal amount of time at the facility. Therefore, actual facility-wide water demand is likely to increase by an even smaller amount. Additionally, mix pit operations are expected to require minimal amounts of water.

An increase of this size in the facility’s daily water demand is unlikely to exceed the current capacity of the water distribution system. Additionally, an increase of 690 gallons per day represents an increase to the Raritan System’s average water supply of approximately 0.0005 percent, which means that alternative water supply sources are unlikely to be necessary.

¹ [Water Quality Reports \(amwater.com\)](https://www.amwater.com)

² [Press Release Details \(amwater.com\)](https://www.amwater.com)

³ [Lean & Water Toolkit: Appendix C | US EPA](https://www.epa.gov/lean-and-water-toolkit)

K10. Energy Supply System Information

Supplemental Information NJAC 7:1C-3.3(a)(10) – Energy Supply

Energy Supply System

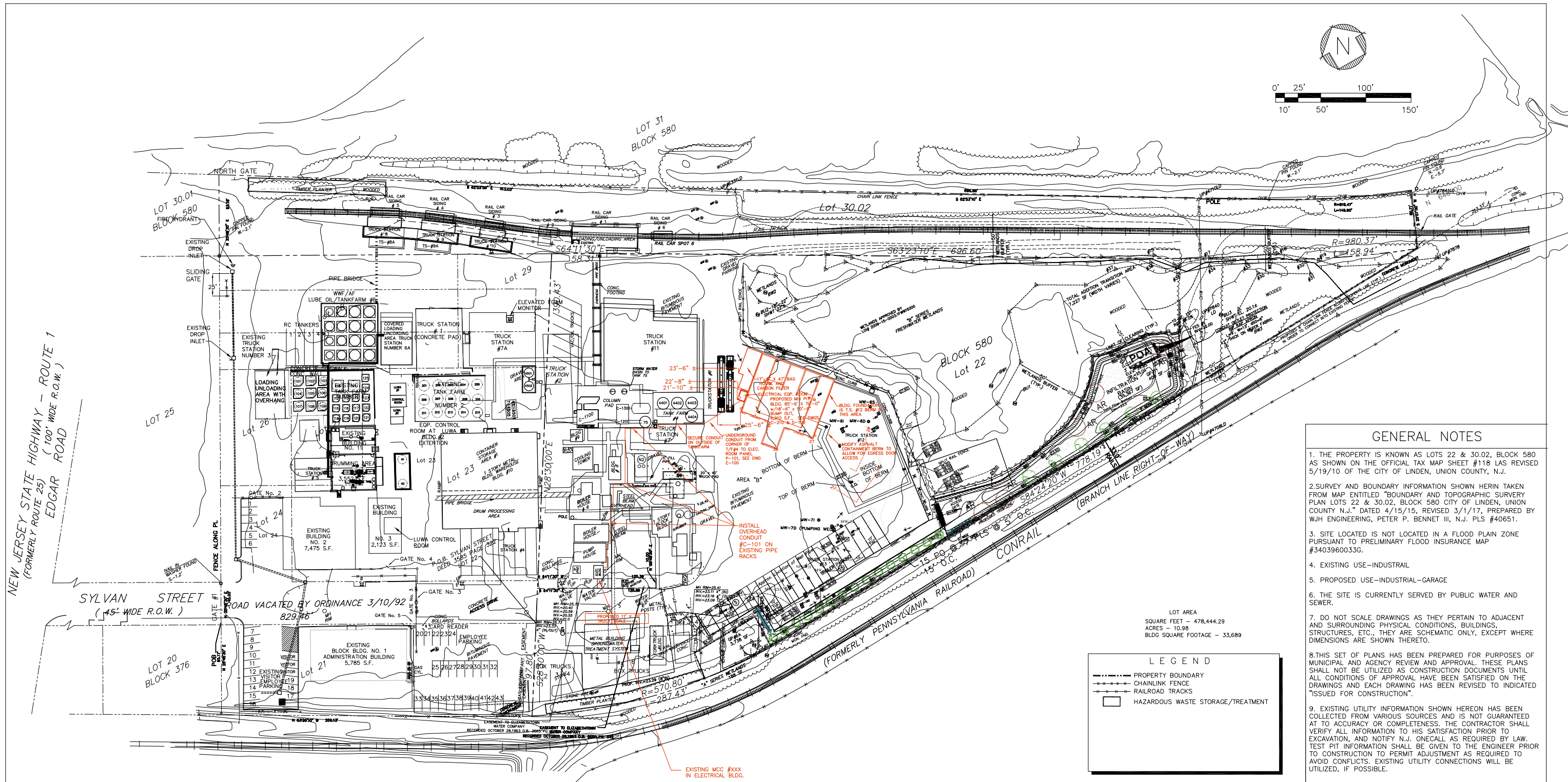
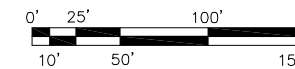
Public Service Enterprise Group, PSE&G, is the electrical service company for the Safety-Kleen Systems (Safety-Kleen) facility located at 1200 Sylvan Street in Linden, New Jersey with existing street level electrical distribution service. There are three existing metered electrical services at the facility which feed the office building, locker room building, and the Recycling Center (RC) Plant, respectively. The RC plant electrical service is a 3-Phase 480-volt (V), 2000-amp (A) service and will be used for the Mix Pit building. The highest monthly current consumption on the RC Plant service is 430A and the Mix Pit building will contribute an additional calculated electrical load of 148A, well below the 2000A total service capacity. To draw power from the RC plant service to the Mix Pit, a circuit will be tapped into an existing 3-phase 480V 600A Master Control Center (MCC) service which will be equipped with a 250A breaker. The MCC service is in the Electrical Building located in the southeast corner of the RC Plant. A site map depicting the approximate location of proposed conduit routing for the Mix Pit building is provided as *Attachment A*. Based upon the above system as described, there exists a more than adequate electrical service to supply the demand for the Mix Pit Building. No natural gas will be used for the Mix Pit Building.

Through the PSE&G distribution network, energy supply is purchased from MP2 Energy NE LLC (MP2 Energy), which is a subsidiary of Shell Energy North America. An Environmental Information Disclosure (EID) from MP2 Energy depicting the resources used to generate electricity for customers is provided as *Attachment B*. As noted in the EID, MP2 Energy utilizes a diverse portfolio of power generation sources including the following renewable energy sources which together accounted for 6.88% of MP2 Energy's generation supplied to customers from June 1, 2022 to May 31, 2023:

- Captured Methane Gas (0.23%)
- Geothermal (0.08%)
- Hydroelectric (0.95%)
- Solar (1.20%)
- Solid Waste (0.49%)
- Wind (3.75%)
- Wood/Biomass (0.18%)

Attachment A

Proposed Conduit Routing – Mix Pit



GENERAL NOTES

1. THE PROPERTY IS KNOWN AS LOTS 22 & 30.02, BLOCK 580 AS SHOWN ON THE OFFICIAL TAX MAP SHEET #118 LAS REVISED 5/19/10 OF THE CITY OF LINDEN, UNION COUNTY, N.J.
2. SURVEY AND BOUNDARY INFORMATION SHOWN HERIN TAKEN FROM MAP ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY PLAN LOTS 22 & 30.02, BLOCK 580 CITY OF LINDEN, UNION COUNTY N.J." DATED 4/15/15, REVISED 3/1/17, PREPARED BY WJH ENGINEERING, PETER P. BENNET III, N.J. PLS #40651.
3. SITE LOCATED IS NOT LOCATED IN A FLOOD PLAIN ZONE PURSUANT TO PRELIMINARY FLOOD INSURANCE MAP #3403960033G.
4. EXISTING USE—INDUSTRIAL
5. PROPOSED USE—INDUSTRIAL—GARAGE
6. THE SITE IS CURRENTLY SERVED BY PUBLIC WATER AND SEWER.
7. DO NOT SCALE DRAWINGS AS THEY PERTAIN TO ADJACENT AND SURROUNDING PHYSICAL CONDITIONS, BUILDINGS, STRUCTURES, ETC., THEY ARE SCHEMATIC ONLY, EXCEPT WHERE DIMENSIONS ARE SHOWN THERETO.
8. THIS SET OF PLANS HAS BEEN PREPARED FOR PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THESE PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED ON THE DRAWINGS AND EACH DRAWING HAS BEEN REVISED TO INDICATED "ISSUED FOR CONSTRUCTION".
9. EXISTING UTILITY INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS SATISFACTION PRIOR TO EXCAVATION, AND NOTIFY N.J. ONECALL AS REQUIRED BY LAW. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENT AS REQUIRED TO AVOID CONFLICTS. EXISTING UTILITY CONNECTIONS WILL BE UTILIZED, IF POSSIBLE.

LOT AREA
 SQUARE FEET = 478,444.29
 ACRES = 10.98
 BLDG SQUARE FOOTAGE = 33,689

LEGEND

- PROPERTY BOUNDARY
- CHAINLINK FENCE
- RAILROAD TRACKS
- HAZARDOUS WASTE STORAGE/TREATMENT

PROPRIETARY STATEMENT

THIS DRAWING IS THE EXCLUSIVE PROPERTY OF SAFETY-KLEEN SYSTEMS, INC. AND IS PROPRIETARY AND CONFIDENTIAL INFORMATION. THIS DRAWING AND THE INFORMATION CONTAINED THEREIN MUST NOT BE DUPLICATED, USED, DIVULGED, REPRODUCED, COPIED, DISCLOSED OR APPROPRIATED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN AS EXPRESSLY AUTHORIZED BY SAFETY-KLEEN SYSTEMS, INC. THIS DRAWING MUST BE RETURNED PROMPTLY UPON REQUEST.

ROUNDTABLE
 TECHNICAL RESOURCES

Colorado Springs Office: 660 Southpointe Court, Suite 300G, Colorado Springs, CO 80905
 Phone: (801) 541-6585
 Email: engineering@rtsglobal.com
 http://rtsglobal.com

Central Florida Office: 1460 Breezy Way, Spring Hill, FL 34608
 Phone: (352) 684-7275
 Fax: (800) 660-6724
 Email: alex@rtsglobal.com

Brian Lewis, PE
 N.J. PE# GE53109

CONDUIT NUMBER	CONDUIT SIZE	VOLTAGE	LENGTH	CONDUCTORS	WIRE TYPE	FROM	TO	DESCRIPTION
101	2 INCH	480V	400 FT	4#4/0 AWG + 1#4 GND	XHHW	480V MCC # XXX ELECTRIC ROOM @ PLMPCUSE XXX	480V MAIN PANELBOARD 'P101' ELECTRIC ROOM - MIX PIT/SOLIDS WAREHOUSE @ BRODERICK RD & EMMETT ST.	MIX PIT/SOLIDS WAREHOUSE BLDG MAIN POWER FEEDER 250A, 480V, 3PH, 4 WIRE

SCALE		BY		CHKD		APPROVAL		OP. APPR		DATE	
A	ISSUED FOR REVIEW	JEK	DDP	DDP	012624	1"=50'-0"	JEK	KJM	DP	OP	012624
NO.		DESCRIPTION		BY		CHK		APPR		DATE	
		LINDEN, N.J.								SC-DWG NUMBER E-150	
		REVISIONS								REV. NO. A	

TITLE
 PROPOSED MIXPIT/SOLIDS AREA
 MAIN POWER CONDUIT ROUTING
 1200 SYLVAN ST.
 LINDEN, N.J. 07036

SAFETY-KLEEN SYSTEMS, INC.
 42 LONGWATER DRIVE, NORWELL, MA 02061
 PHONE: 781-792-5000

Attachment B

MP2 Energy Environmental information Disclosure (EID)



**Environmental Information Disclosure (EID) for the Electricity Product of
MP2 Energy NE LLC D/B/A Shell Energy Solutions**

Electricity Supplied from June 1, 2022 to May 31, 2023

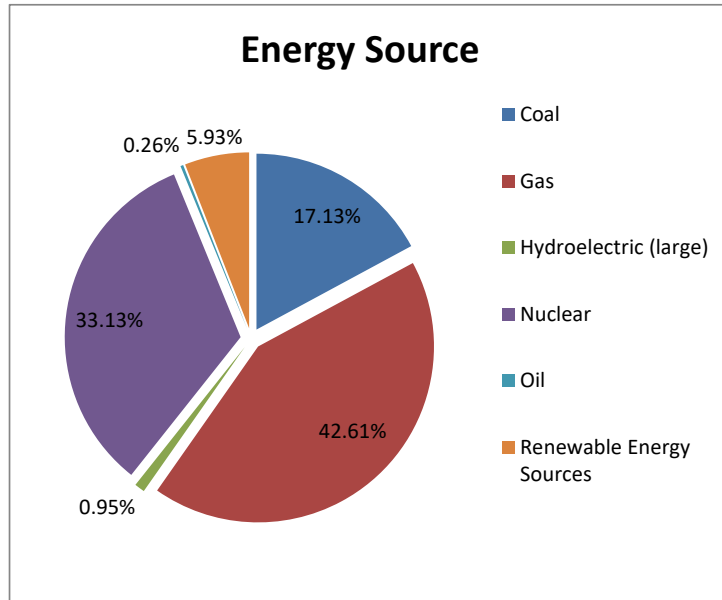
Electricity can be generated in a number of ways with different impacts on the environment. The standardized environmental information shown below allows you to compare this electricity product with electricity products offered by other electric suppliers. Below is the default EID Label describing the resources used to generate electricity for customers of MP2 Energy NE LLC d/b/a Shell Energy Solutions .

PJM System Mix

Energy Source

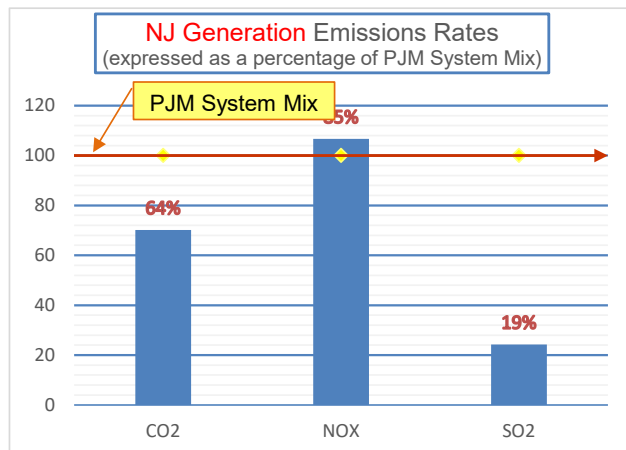
Coal	17.13%
Gas	42.61%
Hydroelectric (large)	0.95%
Nuclear	33.13%
Oil	0.26%
Renewable Energy Sources	
Captured methane gas	0.23%
Fuel cells	0.00%
Geothermal	0.08%
Hydroelectric (small)	0.00%
Solar	1.20%
Solid waste	0.49%
Wind	3.75%
Wood or other biomass	0.18%
Total:	100.00%
Renewable Energy Sources Subtotal	5.93%

Energy Source



Air Emissions Rates

Pursuant to N.J.A.C. 14:8-3:1(b)2, air emission rates for CO₂, NO_x, and SO₂ associated with the fuel mix must be reported in units of pound per megawatt-hour (lb/MWh). The Benchmark Energy Source and emission rate data is the PJM System Mix for EY 2022 and represent the average amount of air pollution associated with the generation of electricity in the PJM region. The PJM System Mix average emission rate for all electricity generation in the PJM Region can be used for comparison when a NJ TPS or BGS Provider supplies actual emission data for a product making an affirmative environmental claim that exceeds the NJ Renewable Portfolio Standards. CO₂ is a "greenhouse gas" which may contribute to global climate change. NO_x and SO₂ react to form acids found in acid rain. NO_x also reacts to form ground level ozone, an unhealthy component of "smog." For illustrative purposes, the chart below compares a hypothetical electricity product that contained 100% NJ generation sources to the PJM System Mix.



Data Source	CO ₂ (lb/MWh)	NO _x (lb/MWh)	SO ₂ (lb/MWh)
PJM System Mix	766.35	0.29	0.37
NJ Benchmark	537.60	0.31	0.09

	CO ₂	NO _x	SO ₂
PJM System Mix (%)	100	100	100
NJ Generation (%)	70	107	24

K11. Reasonable Design Alternatives' Information

Supplemental Information **NJAC 7:1C-3.3(a)(11) – Reasonable Design Alternatives’ Information**

Presently the treatment capacity for wastes generated by utility companies is limited. This project is to add two (2) steel-lined inground structures called mix pits inside a fully enclosed building with proper air pollution control devices installed at the company’s most centrally located facility. This operation will be used to accept hazardous and non-hazardous wastes collected from offsite generators. The typical generator includes utility companies’ manhole cleanouts that are required before utility work is performed (e.g., to service electrical grids). The wastes consist of water and solids contaminated with low-levels of heavy metals and volatile organic compounds. The water is separated from the solids. Solids are stabilized and solidified and sent offsite for proper disposal. The water will be shipped offsite, or possibly treated and discharged to the local POTW.

There is not a reasonable alternative for this activity. The current facility does not have the infrastructure to treat this waste without the permit approvals and existing treatment capacity elsewhere is limited.

For new or expanded facilities, a sufficiently detailed comparison of reasonable design alternatives that would permit independent and comparative evaluation, including siting changes or process alternatives that could reduce some or all of the proposed facility’s contributions to environmental and public health stressors in the overburdened community, including:

- i. Identification of any significant differences in contributions to environmental and public health stressors that would reasonably result from the alternatives considered;

The alternatives were to build only one (1) mix pit, construct the mix pit operation at another NJ company location, or ship the wastes to an existing company facility in another state. One mix pit was determined to not provide the treatment capacity needed for current and future utility companies’ needs. Building at another company location in NJ would require more new permitting in another less centralized site, and building at one of those locations would result in longer drives resulting in greater fuel usage and vehicle emissions. Shipping to an existing company location in another state would result in even longer drives, significantly more fuel usage and additional vehicle emissions.

- ii. A discussion of the alternative of no action or no project, including the major foreseeable consequences of such a choice;

No action or no project results in the waste being shipped longer distances to another permitted facility. This will result in more truck miles being driven resulting in increased fuel usage and vehicle emissions. Trucks will also have to drive more miles to the job site resulting in more increased emissions.

- iii. A comparison, in matrix or other appropriate format, of both the chosen alternative and the set of alternatives considered; and

NA – There are no reasonable alternatives.

iv. A justification of selection of the preferred alternative;

There is not a reasonable alternative for treating utility company wastes. The Linden facility does not currently have the infrastructure to treat utility companies' wastes without the permit approvals, and as such the enclosed mix pit process is the only reasonable option that could reduce some or all of the proposed facility's contributions to environmental and public health stressors in the overburdened community.

K12. Odor, Dust, and/or Noise Mitigation or Management Plan

Supplemental Information

NJAC 7:1C-3.3(a)(12) - Odor, Dust, and/or Noise Mitigation or Management Plan

A description of odor, dust, and/or noise mitigation or management plan, if

- i. The facility has the potential to cause odor, dust, and/or noise off-site; or
- ii. The facility has had a confirmed odor, dust, and/or noise complaint submitted through DEP's Hotline or the local health agency for the five years preceding the date of the permit application.

With respect to subpart i. (the potential to cause odor, dust, and/or noise off-site):

The Linden facility is located in an industrial area of the city and is not immediately adjacent to the site. Additionally, the site has a significant buffer area (in consideration that operations are conducted at the rear of the facility) to properties surrounding the location.

Regarding odor, dust, and noise are managed as follows:

- Operations that would contribute to odors are controlled by permitted air pollution control devices.
- There is very little dust potential since the site is paved.
- Operations which would contribute to noise are generally associated with typical noises from an industrial location. These include: fans, pumps, trucks, and railcar movement within the facility.

Specifically, regarding the proposed unit:

- The wastes proposed for processing are inorganic and have little to no volatile organic content significantly reducing the potential to emit odors that could migrate off-site.
- Operations will be conducted in a building specifically designed for this process which will reduce any noise emanating from processing the material.
- The building will be equipped with an air pollution control system that will draw air through the building into the control device. This air pollution control device will eliminate any dust and odors from the process.

With respect to subpart ii. (if the facility has had a confirmed odor, dust, and/or noise complaint submitted through DEP's Hotline or the local health agency for the five years preceding the date of the permit application.):

The facility has not had an odor, dust or noise complaint that resulted in an inspection or a violation at the facility for the five years preceding the date of this permit application. As such, the facility is in compliance with this provision.

K13. Detailed Compliance History



Enforcement Action Summary Report

Facility *Linden*

<i>Date Recieved</i>	<i>Agency</i>	<i>Enforcement Type</i>	<i>Alleged Violation</i>	<i>Proposed Penalty</i>	<i>Status</i>	<i>Resolution Date</i>	<i>Penalty Paid</i>
8/7/2019	NJDEP	Notice of Violation	Alleged some testing was not pursuant to applicable RCRA Part B permit condition requiring test method certification.	\$0.00	Resolved w/o Penalty	5/13/2020	\$0.00
		<i>EA Number:</i>	PEA190001 - NJD002182897	<i>Description of Resolution:</i>	WAP revision to remove test methods for which lab is not state certified.		
5/20/2020	NJ DEP	Notice of Violation	1) Failure to operate the facility to minimize the possibility of release, 2) Failure to provide verbal notification of a release within 24 hours and 3) Failure to submit a written spill report within 5 days.	\$20,000.00	Resolved	1/11/2021	\$17,000.00
		<i>EA Number:</i>		<i>Description of Resolution:</i>	Entered into a civil consent order.		
6/9/2020	US EPA	Notice of Non-Compliance	Delay in notification of a reportable quantity release to the NRC and local emergency organizations.	\$63,117.00	Resolved	9/28/2022	\$44,200.00
		<i>EA Number:</i>	CERCLA-02-2022-2022	<i>Description of Resolution:</i>	Entered into a consent order with civil penalty.		

7/14/2021	NJ DEP	Penalty Notice	Air emissions exceedance from a tank.	\$11,000.00	Resolved	5/13/2022	\$11,000.00
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EA Number:

Description of Resolution:

Paid the civil penalty

10/18/2021	Ohio Public Utilities Commission	Notice of Violation	Failure to placard a hazardous waste shipment for subsidiary dangerous when wet hazard class.	\$1,140.00	Resolved	11/2/2021	\$1,140.00
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EA Number:

Description of Resolution:

Paid the civil penalty

12/14/2021	Linden Fire Department	Notice of Violation	1) Ceiling tiles with holes must be replaced, 2) Hose with dry rot must be replaced.	\$0.00	Pending		\$0.00
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EA Number:

Description of Resolution:

6/22/2022	NJ DEP	Notice of Violation	1) Failure to submit sample results for a Solid/Chemical Marix (SCM) Proficiency Test.	\$500.00	Resolved	7/1/2022	\$500.00
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EA Number:

NEA220001

Description of Resolution:

Entered into an order and paid a civil penalty.

2/16/2023	NJ DEP	Notice of Violation	1) Failure to maintain a facility to prevent a release. 2) An unauthorized discharge.	\$0.00	Pending		\$0.00
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EA Number:

Description of Resolution:

4/6/2023	NJ DEP	Notice of Violation	1) Failure to maintain the facility as to prevent a release, 2) Failure to prevent a release from a rail car with a broken valve.	\$6,400.00	Pending		\$0.00
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EA Number:

Description of Resolution:

6/13/2023	NJ DEP Bureau of Release Prevention	Notice of Violation	The Linden facility caused, suffered, allowed or permitted a 250 gallon discharge of spent mineral oils (containing regulated petroleum distillates) to the lands of the State of New Jersey from a railcar with a malfunctioning valve.	\$2,000.00	Resolved	8/18/2023	\$0.00
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EA Number:

Description of Resolution:

Provided corrective actions to the agency.

8/22/2023	NJ DEP	Penalty Notice	Failure to have a working flowmeter on the RTO unit.	\$6,450.00	Pending		\$0.00
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EA Number:

Description of Resolution:

K14. Analysis and Proposal of Control Measures

Supplemental Information **NJAC 71C-3.3(a)(14) - Analysis and Proposal of Control Measures**

An analysis and proposal of control measures to address the facility's contribution to environmental and public health stressors is as follows:

“Environmental and public health stressor” or “stressor” means sources of environmental pollution, including, but not limited to, concentrated areas of air pollution, mobile sources of air pollution, contaminated sites, transfer stations or other solid waste facilities, recycling facilities, scrap yards, and point-sources of water pollution including, but not limited to, water pollution from facilities or combined sewer overflows; or conditions that may cause potential public health impacts.

With regard to the Linden Recycle Center “stressor” sources that have the potential to be impacted by facility operations can be narrowed down to the following categories:

- Concentrated areas of air pollution (site) - Currently, the facility is a synthetic minor for volatile organic compounds (VOC) and other priority pollutants. The addition of the mix pit operation does not change the facility's status and will remain a synthetic minor, with the potential to emit VOCs at a rate of less than 25 tons per year. Mix pit operations will be conducted within an enclosed building designed to control air emissions from the process through control devices including a bag house dust collector and carbon adsorption bed. The Linden Recycle Center has submitted an air permit application for the mix pit and will comply with the requirements of this permit by operating in accordance with the stipulations and emission limits outlined in the associated air permit, as approved, and enforced by NJDEP.
- Concentrated areas of air pollution (proposed unit) - wastes proposed for processing are inorganic and have little to no volatile organic content significantly reducing air releases. Additionally, the building will be equipped with an air pollution control system (equipped with air filtration for dust removal and carbon absorption for removal of VOCs) that will draw air through the building into the control devices.

A further discussion on Air quality is included in:

- Section 7 of the Environmental Impact Statement - Assessment of Impacts on Environmental and Public Health Stressors
- Appendix F NJDEP Division of Air Quality Risk Screening Worksheet
- Appendix K3 Ambient Air Quality
- Mobile sources of air pollution - the facility has four potential sources of air pollution from mobile sources (employee vehicles, cargo trucks, backhoes and rail-car engines). Sources under facility control are the employee vehicles (i.e., while onsite), backhoes and cargo trucks. To address these sources, employees are encouraged to utilize mass transit where it is available, and the cargo trucks and backhoes are required to use ultra-low sulfur diesel fuel and minimize idling. Also, it should be noted that, for the proposed unit, cargo trucks will be unloading in a building equipped with an air

pollution control system (equipped with air dust filtration and carbon absorption), and those trucks are already in use at other NJ company locations but are being relocated to the Linden facility.

A further discussion on mobile source emissions is included in:

- Section 7 of the Environmental Impact Statement - Assessment of Impacts on Environmental and Public Health Stressors.
- Appendix K6 Traffic Study
- Point sources of water pollution include, but not limited to, water pollution from facilities or combined sewer overflows; - there is no point source discharge to surface water associated with the current or planned operations at this facility. Stormwater discharged under the existing Basic Industrial Stormwater General Permit will not be impacted by this expansion. Additionally, the facility expansion is not expected to increase the occurrence of any combined sewer overflows.

A further discussion on point sources is included in:

- Section 7 of the Environmental Impact Statement - Assessment of Impacts on Environmental and Public Health Stressors
- Appendix K7 Sewage Facilities Information
- Appendix K8 Stormwater Management
- Conditions that may cause potential public health impacts, including, but not limited to, asthma, cancer, elevated blood lead levels, cardiovascular disease, and developmental – The site operates under numerous permits (RCRA (hazardous waste), Solid waste, Air and Water) to safely manage the materials brought in for processing and recycling. Any increased hazards associated with the proposed unit 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 (i.e., baghouse dust collector and carbon absorption bed) and performing mix pit operations within an enclosed building.

A further discussion on conditions that may cause potential public health impacts is included in:

- Section 7 of the Environmental Impact Statement - Assessment of Impacts on Environmental and Public Health Stressors

Appendix L

Union County Solid Waste Management Plan Amendment



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF SOLID AND HAZARDOUS WASTE

401 East State Street

P.O. Box 420, Mail Code 401-02C

Trenton, New Jersey 08625-0420

Tel. (609) 984-4250 • Fax (609) 777-1951

www.nj.gov/dep/dshw

PHILIP D. MURPHY

Governor

SHEILA Y. OLIVER

Lt. Governor

SHAWN M. LATOURETTE

Acting Commissioner

Daniel P. Sullivan, Executive Director
Union County Utilities Authority
1499 Routes 1 & 9
Rahway, NJ 07065

APR 27 2021

Dear Mr. Sullivan:

The Department of Environmental Protection's Division of Solid and Hazardous Waste is in receipt of an Administrative Action request to the Union County District Solid Waste Management Plan (County Plan) dated March 21, 2021. This request proposes County Plan inclusion of a revised maximum daily tonnage of solid waste types 27 and 72 at the Safety Kleen Systems, Inc. (Safety Kleen) Transfer Station/Materials Recovery Facility (TS/MRF) located at 1200 Sylvan Street in the City of Linden.

Safety Kleen TS/MRF was included in the County Plan on June 20, 2002 to accept a maximum of 50 tons per day (tpd) of solid waste type 27. This request proposes a revised maximum daily capacity of 15 tpd of solid waste type 27 and the addition of 60 tpd of solid waste type 72. However, please note that per N.J.A.C. 7:26-6.3(a)1, solid waste type 72 is exempted from the County Plan inclusion process.

Therefore, pursuant to N.J.A.C. 7:26-6.11(b)14, the revision of the maximum daily tonnage of a solid waste facility can be accomplished via an administrative action. Therefore, the County Plan inclusion of the revised maximum daily tonnage of 15 tpd of solid waste type 27 at the Safety Kleen TS/MRF is hereby approved as an administrative action pursuant to N.J.A.C. 7:26-6.11(f).

Please be advised that this administrative action approval shall not be construed as an expression of the Department's intent to issue a permit modification to the subject facility for the above noted operational changes.

If you have any questions relative to this matter, please contact Dawn Slawsky of my staff at (609) 984-4250 or by e-mail at dawn.slawsky@dep.nj.gov.

Sincerely,

Seth Hackman, Chief
Bureau of Planning and Licensing



UNION COUNTY UTILITIES AUTHORITY

1499 US Highway One, Rahway, New Jersey 07065

(732) 382-9400
FAX (732) 382-5862

RESOLUTION NO.: 57-2020

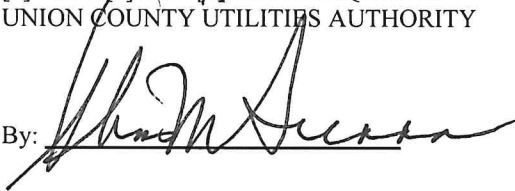
DATE: November 10, 2020

**RESOLUTION OF THE UNION COUNTY UTILITIES AUTHORITY
RECOMMENDING AN ADMINISTRATIVE ACTION PLAN AMENDMENT
TO THE UNION COUNTY DISTRICT SOLID WASTE MANAGEMENT PLAN
PERTAINING TO THE APPLICATION OF SAFETY-KLEEN SYSTEMS, INC.
FOR A MODIFICATION OF ITS CLASS D RECYCLING FACILITY IN THE
CITY OF LINDEN, NEW JERSEY**

APPROVED AS TO FORM:
Joseph C. Bodek, RMC
Clerk of the Authority

APPROVED AS TO SUFFICIENCY OF FUNDS
[] YES [] NO [X] NONE REQUIRED
UNION COUNTY UTILITIES AUTHORITY

By: Joseph C Bodek

By: 

	PRESENT	ABSENT	AYE	NAY	ABSTAIN	MOTION	SECOND
<i>Eastman</i>	✓		✓				✓
<i>Jackus</i>		✓					
<i>Kahn</i>	✓		✓				
<i>Lombardo</i>	✓		✓				
<i>McManus</i>	✓		✓				
<i>People</i>	✓		✓				
<i>Rachlin</i>	✓		✓			✓	
<i>Szpond</i>	✓		✓				
<i>Scutari</i>	✓		✓				
<i>Alma, Alternate No. 1</i>	✓		✓				
<i>Scott Bey, Alternate No. 2</i>	✓						

**RESOLUTION OF THE UNION COUNTY UTILITIES AUTHORITY
RECOMMENDING AN ADMINISTRATIVE ACTION PLAN AMENDMENT
TO THE UNION COUNTY DISTRICT SOLID WASTE MANAGEMENT PLAN
PERTAINING TO THE APPLICATION OF SAFETY-KLEEN SYSTEMS, INC.
FOR A MODIFICATION OF ITS CLASS D RECYCLING FACILITY IN THE
CITY OF LINDEN, NEW JERSEY**

WHEREAS, pursuant to the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., each county within the State of New Jersey is designated a solid waste management district with responsibility for the development of a solid waste management plan setting forth the solid waste disposal strategy to be applied in the district; and

WHEREAS, the Union County District Solid Waste Management Plan (“County Plan”), developed in accordance with the SWMA, was initially adopted by the Union County Board of Chosen Freeholders (“Freeholders”) on June 7, 1979 and certified by the New Jersey Department of Environmental Protection (“NJDEP”) on August 13, 1980, and has since been amended from time to time; and

WHEREAS, the Union County Utilities Authority (the “Authority”) was created by the Freeholders, in accordance with the provisions of the Municipal and County Utilities Authorities Law, N.J.S.A. 40:14B-1 et seq., by an Ordinance adopted on June 5, 1986, as amended on December 11, 1986, and has been designated by the Freeholders, pursuant to and in accordance with the Solid Waste Management Act, as the agency responsible for implementation of the County Plan; and

WHEREAS, Safety-Kleen Systems, Inc. (“Safety-Kleen”) owns and operates a Class D Recycling Facility (“Facility”), located at 1200 Sylvan Street, Linden, New Jersey, that maintains permits issued by NJDEP, including a RCRA Part B Hazardous Waste Facility Operating Permit that incorporates a Solid Waste Facility Permit to accept Solid Waste Types ID 27 (dry industrial waste) and ID 72 (liquid and semi-liquid waste), and bearing EPA ID Number NJD002182897 and NJDEP HWP 190001; and

WHEREAS, Safety-Kleen filed an application with the Authority on February 7, 2020, requesting an amendment of the County Plan for a major modification to the Facility to permit the Facility to accept, store, process and solidify Solid Waste Types ID 27 and ID 72 generated on-site and off-site operational and remediation activities that may include utility manhole clean-outs, oil/water separator clean-outs, maintenance garage trench cleanings, and similar activities; and

WHEREAS, Solid Waste Types ID 27 and ID 72 accepted for processing will be stored at the Facility in a new area to be constructed with a specific purpose building, mix pit and storage area, and fourteen existing truck stations may be used for storage and staging of the materials; and

WHEREAS, Safety-Kleen initially projected that the amounts of Solid Waste Types ID 27 and ID 72 from existing customers, municipalities, utilities and transit authorities would approximate 1,500 shipments, 7,000 tons per year that amounts to an average of 135 tons per week, with a maximum of 140 tons per day, based upon an anticipation of 40 tons per day of Solid Waste ID Type 27 and 100 tons per day of Solid Waste Type ID 72; and

WHEREAS, a modification to the plan amendment application was submitted by Safety-Kleen that revised its maximum daily tonnage to 75 tons per day, based upon an anticipation of 15 tons per day of Solid Waste ID Type 27 and 60 tons per day of Solid Waste Type ID 72; and

WHEREAS, the plan amendment application, as modified, was presented to the Solid Waste Advisory Council for Union County (“SWAC”) during a virtual meeting held on November 5, 2020 and, through correspondence transmitted to the Authority, the members of SWAC present at the meeting expressed no objection to the proposed modification of the Facility and the plan amendment included in the County Plan; and

WHEREAS, the plan amendment application, as modified, was reviewed by the Authority’s Consulting Engineer – CME Associates, who sent correspondence to the Authority, setting forth all engineering issues and recommending that the proposed modification to the Facility be included in the County Plan; and

WHEREAS, the solid waste regulations of NJDEP (N.J.A.C. 7:26-1.1 et seq.) provide certain actions to amend a county solid waste management plan may be taken by administrative action by the implementing agency as opposed to a full plan amendment requiring notice and a public hearing before the governing body of the county; and

WHEREAS, the Authority has determined that the inclusion in the County Plan of a modification to the Facility to accept a maximum daily tonnage of 75 tons per day, based upon an anticipation of 15 tons per day of Solid Waste ID Type 27 and 60 tons per day of Solid Waste Type ID 72, constitutes the first increase in the daily tonnage capacity at the Facility and, as set forth in N.J.A.C. 7:26-6.10 (b)8 and 7:26-6.11 (b)4, does not warrant a full plan amendment process, and may be addressed through an administrative plan amendment process; and

WHEREAS, the approval of Safety-Kleen’s application to amend the County Plan to reflect the inclusion of a modification to the Facility to accept a maximum daily tonnage of 75 tons per day, based upon an anticipation of 15 tons per day of Solid Waste ID Type 27 and 60 tons per day of Solid

Waste Type ID 72 is consistent with the Statewide Solid Waste Management Plan, is in the best interests of the County and its citizens, and is necessary for UCUA's continued effective operation as the agency responsible for implementation of the County Plan;

NOW, THEREFORE, BE IT RESOLVED, by the Union County Utilities Authority as follows:

Section 1. The aforesaid recitals are hereby incorporated by reference, as if set forth at length herein.

Section 2. UCUA hereby authorizes, by administrative action, an amendment to the County Plan to reflect the inclusion of a modification to the Facility owned and operated by Safety-Kleen in Linden, New Jersey to accept a maximum daily tonnage of 75 tons per day, based upon an anticipation of 15 tons per day of Solid Waste ID Type 27 and 60 tons per day of Solid Waste Type ID 72 as more comprehensively described in the plan amendment application filed with the Authority and incorporated in this Resolution.

Section 3. The Executive Director of the Authority and Solid Waste Counsel are hereby authorized and directed to submit the plan amendment application from Safety-Kleen and this Resolution to NJDEP as an administrative action plan amendment pursuant to an in accordance with in N.J.A.C. 7:26-6.10 (b)8 and 7:26-6.11 (b)4 in order to obtain such approvals as may be necessary under applicable law.

Section 4. A copy of this Resolution, together with a copy of Safety-Kleen's application to amend the County Plan, shall be forwarded to the Clerk of the County for public inspection, and shall also be available, upon execution by the parties, for public inspection at the offices of the Authority at 1499 Routes 1 & 9 North, Rahway, New Jersey.

Section 5. This Resolution shall take effect immediately.

Signature: Joseph C Bodek
Joseph C Bodek (Nov 13, 2020 06:18 EST)

Email: jcb693@msn.com

Appendix M

Flood Map

Flood Hazard Zone

- 0.2% Annual Chance Flood Hazard
- 1% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Area with Reduced Risk Due to Levee
- Special Floodway

LULC Urban 2015 with Future Flooding



Source:
GIS data was referenced between the dates of 3/10/2024 and 3/20/2024 for the production of this map.

Flood Hazard Zone: National Flood Hazard Layer (NFHL)
https://services.arcgis.com/P3ePLMYs2RVChkJs/arcgis/rest/services/USA_Flood_Hazard_Reduced_Set_gdb/FeatureServer

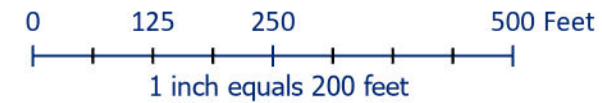
LULC Urban 2015 with Future Flooding in New Jersey:
<https://mapsdep.nj.gov/arcgis/rest/services/Features/Government/MapServer/43>



map center: 74°15'1"W 40°36'51"N



FEMA Flood Hazard - Safety Kleen
Linden, New Jersey



Folder: C:\Users\dcook\ArcGIS\Projects\p30\ Project: EJ Impact Map Layout: FEMA Map: Map Frame
Date Exported: 3/20/2024 11:31 AM User: David.Cook Date Saved: 3/20/2024 11:30 AM