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Cumulative Environmental Assessment Report for KYMEA Energy Center I

*Kentucky Municipal Energy Agency
Madisonville, Kentucky*

Rev 0
October 3, 2024

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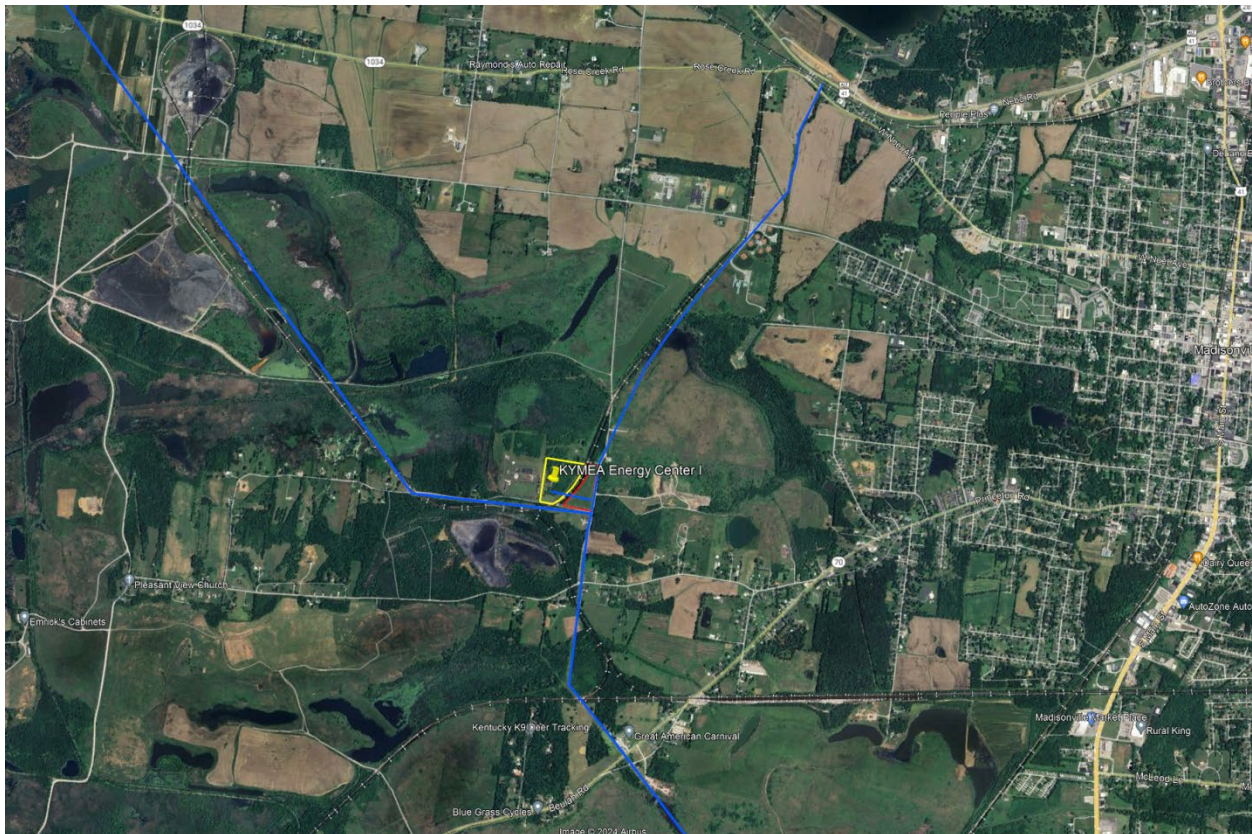
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Section 1 Introduction

The Kentucky Municipal Energy Agency (KYMEA) is a Kentucky Interlocal agency which provides all requirements power to ten participating municipal utilities in Kentucky including Frankfort, Madisonville, Corbin, Providence, Bardwell, Barbourville, Paris, Berea, Falmouth and Benham.

KYMEA will construct a natural gas electric generating facility in Madisonville, Kentucky with a capacity of approximately 75 net megawatts (KYMEA Energy Center I or Project). The Plant Site will be located at 1757 AC Slaton Road in Madisonville, Kentucky with the LGE/KU Interconnection Facilities (Substation) located adjacent to the Plant at the corner of A C Slaton Road and Bean Cemetery Road. A high-pressure natural gas line will be constructed to serve the Plant.

Figure 1-1: Site Location Map



The Project will install a new electric generating unit comprised of four Wärtsilä 18V50SG reciprocating internal combustion engine (RICE) generators. Each RICE generator would have nominal capacity of 18.8 MW. The Project will be designed for both continuous and peaking service with the capability of multiple quick starts and stops per day. Site development is expected to begin in June 2025 with a proposed in-service date for the Project of June 2027. The Project is expected to have an operating life of not less than 30 years.

1.1 Purpose

The Public Works facility will provide electric energy and capacity to KYMEA's ten municipal utility all requirements customers.

The intent of this document is to satisfy the requirements of Kentucky Revised Statute (KRS) 224.10-280. This statute requires the submittal of a Cumulative Environmental Assessment that describes the project and evaluates potential environmental impacts, such as air pollutants, water pollutants, waste management, and water withdrawal.

Section 2 Environmental Permit Matrix

A permitting matrix was created for the proposed project. This matrix is a tool which should be used during the design process to help ensure that required permits and regulatory clearances have been secured for the project. A copy of this can be found in Appendix B.

A comprehensive suite of environmental regulatory programs were evaluated for applicability to the site. The most significant areas of regulation included air permitting for proposed generation units, requirements for stormwater and sediment and erosion control during and after construction, protection of threatened and endangered species during construction, mitigation of potential impacts to wetlands / Waters of the United States.

Section 3 Quality Control Responsibilities

3.1 Location

The Project is comprised of two sites designated as the Plant Site and the Substation Site. The Plant Site is approximately bound by the Madisonville Wastewater Treatment Plant on the west, the CSX railroad on the east and AC Slaton Road on the south. The plant will generally be located as shown on the Preliminary Site Plan – as found in Appendix C.

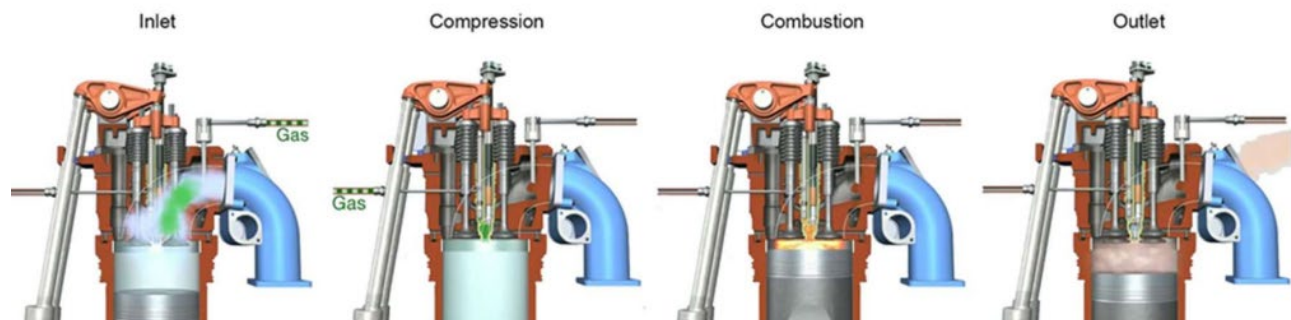
The Substation will be owned by Louisville Gas & Electric/Kentucky Utilities (LGE/KU) and located adjacent to the plant on the east side of the railroad. The site is generally bounded by the railroad, Bean Cemetery Road and AC Slaton Road and is approximately 9.5 acres. A 69 kV generator lead line will connect the Plant to the Substation and a 69 kV line will connect the Substation to the existing dual 69 kV transmission lines running along the south side of A C Slaton Road. In addition, a new high pressure gas line will be constructed to serve the plant running from the Texas Gas high pressure network near Frank Hill Road for approximately one mile to the Plant Site. Appendix A contains a two-mile radius map showing the project site, along with nearby residences, parks and schools.

3.2 Reciprocating Internal Combustion Engines

The Project will consist of four Wärtsilä18V50SG reciprocating internal combustion engine (RICE) generators. The Wärtsilä50SG engine is a spark-ignited lean-burn gas engine. The engine works according to the Otto cycle.

Gas is mixed with air before the inlet valves, and the gas-air mixture is compressed during the compression phase. Gas is also fed into a small pre-chamber, where the gas mixture is rich compared to the gas in the cylinder. At the end of the compression phase, a spark plug ignites the gas-air mixture in the pre-chamber. The flames from the nozzle of the pre-chamber ignite the gas-air mixture in the whole cylinder. After the working phase, the exhaust gas valves open, and the cylinder is emptied of exhaust gases. The intake air is turbocharged and intercooled.

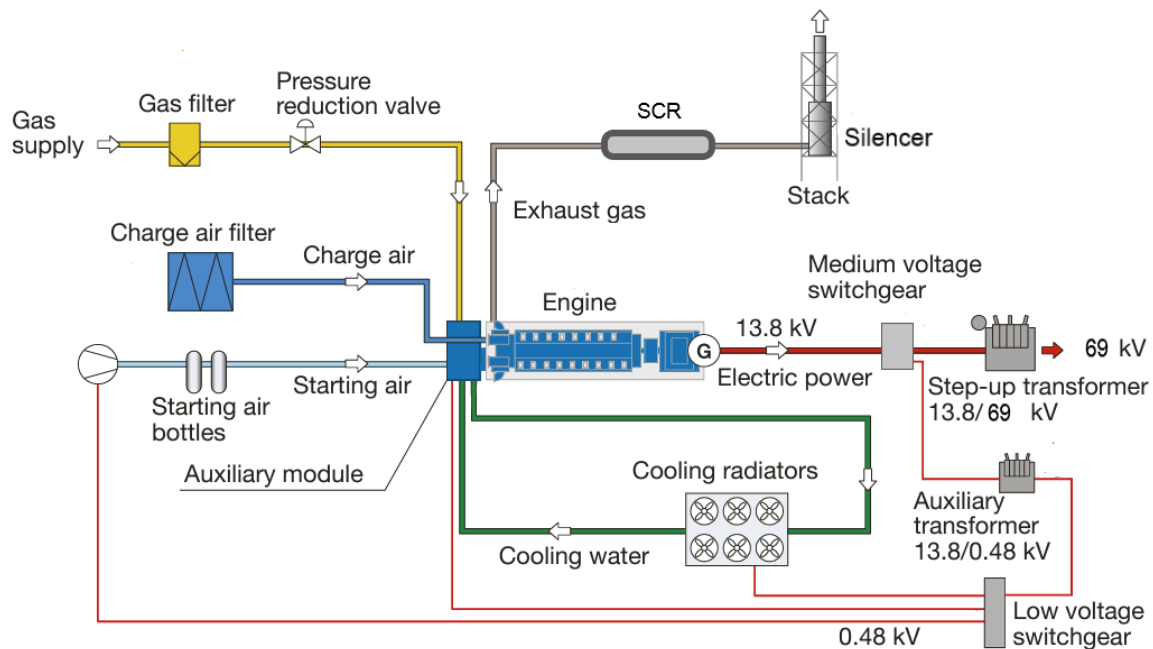
Figure 3-1: Otto Cycle



3.3 Major Components

A simplified overview of the major components is shown below followed by a brief description of each along with miscellaneous balance of plant major components.

Figure 3-2: Major Components of Wärtsilä Power Plant



3.4 Fuel System

The engine is designed for continuous operation on natural gas. High pressure natural gas will be supplied from the Texas Gas transmission line. A pressure regulation station will be provided on site along with a coalescing filter with knock-out tank to meet the engine operating requirements. A dew point heater for the natural gas will be provided to ensure proper cold weather operation.

The purpose of the fuel gas system is to supply the engine with a constant gas feed of suitable pressure, temperature, and cleanness. It should also shut off the gas supply if any problem arises and provide ventilation of trapped gas.

Each engine is equipped with a fuel gas supply unit. It controls the gas feed pressure to the engine depending on the engine load and isolates the engine gas system in case of an emergency or process shutdown. The fuel gas supply unit performs a leakage test of the main shut-off valves after every engine stop or shutdown.

3.5 Lubricating Oil System

The lubricating oil system provides required lubrication for all moving parts on the engine. It consists of the engine's lubricating oil system, which handles the cooling and filtration of the lubricating oil for the engine itself, and the plant-related lubricating oil system, which handles storage of new and used lubricating oil.

The New Lubricating Oil System shall include fresh oil storage tank supplied directly from bulk oil transport truck or a truck off-loading pump skid. The fresh oil storage tank will include level indication and low oil level alarm for transfer pump control and provide makeup to each engine sump as required.

The Service Lubricating Oil System shall include transfer pump skid and a service/used storage tank to transfer lubricating oil from engines for storage during maintenance. Used lube oil may also be diverted to a tanker truck for offsite disposal.

The Oil mist separator separates lubricating oil from crankcase ventilation oil mist. The oil mist separator works by the principle of centrifugal separation where separated oil will be drained back to engine.

3.6 Compressed Air System

Compressed air is produced by a starting the air compressor unit and stored in starting air receiver tanks, while instrument air of higher quality is produced in an instrument air compressor unit. The engine is started with compressed air, with a nominal pressure of 435 psi. The start is performed by directing air into the cylinders through starting air valves in the cylinder heads. The instrument air compressor unit produces control, instrument and service air.

3.7 Cooling Water System

The cooling system provides adequate cooling of critical engine components such as cylinder jackets, cylinder heads and turbochargers as well as to cool the lubrication oil and charge air entering the cylinders. The engine cooling water cools the low-temperature charge-air cooler, lubricating oil cooler, high temperature charge-air cooler and engine jackets in a common single-circuit radiator. The engines are cooled in a closed loop system with remote, horizontal-type radiators with fans powered by variable frequency drive motors.

The maintenance water tank unit provides storage for the drained engine cooling water during maintenance work. The tank can also be used to mix propylene glycol, corrosion inhibitor and city water for the engine cooling water. The volume of the tank holds only the coolant from one engine itself, not including piping or radiators, etc. Makeup required is typically two gallons per engine per week.

3.8 Intake Air System

The main function of the charge air system is to provide the engine with an adequate supply of clean and dry air, and to reduce the air intake noise. The air inlet to the filter is equipped with a vertical weather louver for removal of water droplets. The dry type filter is provided with replaceable single-stage bag-type synthetic fiber filter elements. The charge air silencer reduces the noise emission from the engine air intake.

3.9 Exhaust System

The main function of the exhaust gas system is to lead exhaust gases safely out from the power plant, and discharge the exhaust gas at the required height. The exhaust gas system also reduces the exhaust noise from the engines. The safety vent and rupture disk arrangement is intended to protect equipment and personnel in case of a rapid build-up of pressure in the exhaust gas system. Each engine will have its own exhaust system and stack.

3.10 Engine Hall Building

One engine hall shall contain all engine generating sets, as well as all associated equipment and piping. The building shall have sound attenuating panels (i.e. 4" mineral wool). The exact design of these panels will be at a later date.

3.11 Electrical Transmission Interconnection

The Project will include a 69-kV generator tie line from the Generator Step Up transformer located on the Plant Site over the RR tracks to the new LGE/KU Substation to be located on the property adjacent to the Plant. The LGE/KU Substation will interconnect with their dual 69 kV transmission line which runs along the south side of A C Slaton Road. An interconnection application has been submitted to the Queue and will be studied as part of the 2024 Cluster study. Interim results are expected in May 2025. A concept level general arrangement is shown in Appendix E – Proposed Generator Interconnection.

3.12 Gas Transmission Interconnection

Details on the gas service to the facility are to be provided at a later date. A rough layout of gas pipeline to the facility is discussed in Section 3.1, above.

Section 4 Anticipated Environmental Impacts

4.1 Air Pollutants (KRS 224.10-280 (3.a))

The Clean Air Act governs the control of air pollutants and empowered the US Environmental Protection Agency (EPA) to establish the National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. Criteria pollutants covered under NAAQS include ozone (O₃) which has precursors of volatile organic compounds (VOC) and nitrogen oxides (NO_x), particulate matter of 10 microns or less (PM₁₀) and 2.5 microns or less (PM_{2.5}), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead (Pb). Geographical regions are categorized as in attainment, nonattainment, or unclassified based on their compliance with the NAAQS criteria. Those areas where the ambient levels of the specified pollutants surpass the NAAQS thresholds are designated as nonattainment areas. Consequently, sources of emissions within these regions typically face more stringent air permitting obligations to address and mitigate their contributions to the air quality issues in these areas. Hopkins County is currently in attainment for all pollutants. Additionally, Hopkins County is subject to the Air Quality Regulations found in KAR Title 401 Chapters 50-68 which establishes a robust framework for air quality management, emission control, and pollution prevention across Kentucky.

The Clean Air Act also requires air permits for industrial and commercial sources that release pollutants into the air. Air permits include information on which pollutants are being released, how much may be released, and what kinds of steps the source's owner or operator is required to take to reduce the pollution. Permits must include plans to measure and report air pollution emitted. A Kentucky Division for Air Quality (DAQ) permit is required for the construction and operation of an air contaminant source and its air pollution control equipment within the state of Kentucky. The type of permit is dependent on the amount of air pollutants that the facility has the Potential-to-Emit (PTE) if the facility were to operate 24 hours a day, 7 days a week with all processes operating at maximum capacity. Air emissions are to be identified by the amount of criteria pollutants and hazardous air pollutants (HAPs) that the entire source has the potential-to-emit. HAPs are chemicals that are known to cause or contribute to serious human health risks or adverse environmental effects. A source that emits at least 10 tons per year of a single HAP, 25 tons per year of all HAPs, or 100 tons per year of a criteria pollutant is considered a 'major source' and must apply and be issued a Title V Operating Permit.

During the initial phase of site preparation and construction, temporary increases in emissions of air pollutants stemming from the operation of construction equipment, worker commuting vehicles, delivery vehicles, and ground disturbing activities may occur. The extent of these increased emissions varies with weather conditions, construction activity, and workforce onsite; however, it is expected that the emissions generated by the Project will consistently remain below the NAAQS.

All contractors engaged in the construction of the Project will be required to implement a set of best management practices (BMPs) aimed at mitigating dust and preserving air quality to the highest feasible degree. Vehicles and heavy machinery anticipated to be on site during construction include personal passenger vehicles, backhoes, bulldozers, flatbed semi-trucks, cranes, forklifts, machinery fitted with drills and pile drivers, and concrete trucks. Fuel for these vehicles and machinery would generate temporary, local emissions of PM, NO_x, CO₂, SO₂, and volatile organic compounds. Increased air pollutant emissions will be minor and will be dependent on specific construction activity, weather, and number of workers and

vehicles on site at any given time. The limited number of vehicles, construction duration, and operating hours are anticipated to minimize the extent of these emissions.

Ground disturbing activities (e.g., excavation, drilling, grading, vehicle travel on unpaved roads, etc.) may increase dust emissions and result in temporary increases in air pollutant levels. These increases, however, will be localized and temporary and Project contractors will be required to implement BMPs, such as water suppression and lowered speed limits, to reduce dust emissions.

4.1.1 Calculations

Potential-to-Emit (PTE) calculations have been performed, and Total HAP emissions are expected to make the facility a major source with regard to Title V permitting. Preliminary annual facility PTE and major source thresholds are summarized in Table 4-1 below:

Table 4-1: Preliminary Annual PTE and Major Source Thresholds

Pollutant	PTE	Major Source Threshold
PM10	17.03	100
PM2.5	17.03	100
SO2	1.00	100
NO2	41.47	100
VOC	57.33	100
CO	63.05	100
Pb	0.00	100
Single HAP	9.36	10
Total HAP	28.76	25

4.1.2 Control Methods - Emission Control System

The Selective Catalytic Reduction (SCR) system is used for control of nitrogen oxides (NOx) emissions. In the SCR process, nitrogen oxides are reduced with the help of a reducing agent to nitrogen (N2) and water vapor (H2O), the major components of the ambient air. The SCR reducing agent is an aqueous urea solution, typically 40 wt-%. The reducing agent is evenly distributed in the mixing duct with the help of mixing element(s). The reduction of nitrogen oxides takes place on the surface of the ceramic or fiber reinforced catalyst elements.

The SCR system includes an automated process control that automatically adjusts the amount of reducing agent injected into the flue gas stream. Moreover, the automation system controls, monitors and protects the components in the SCR system. The feeding unit pumps reducing agent from the storage tank to the reagent dosing unit. The dosing unit controls the amount of reducing agent fed into the exhaust gas stream.

To reduce carbon monoxide (CO) and/or hydrocarbon emissions, an oxidation catalyst is fitted into the same housing as the SCR catalyst elements. Oxidation reactions take place on the surface of the catalytically active material and utilize the excess of oxygen already present in flue gas. Oxidation catalyst does not require any other consumables.

The safety vent and rupture disk arrangement is intended to protect equipment and personnel in case of a rapid build-up of pressure in the exhaust gas system.

4.2 Water Pollutants (KRS 224.10-280 (3.b))

Water systems that will result in discharge into site drainage includes Storm Water and Process Wastewater. Sanitary sewer system will gravity discharge to a lift station where it will pump to the neighboring wastewater treatment plant.

4.2.1 Storm Water

Surface water in the Project Area consists of wet weather conveyances. The Project Area drains to an unnamed tributary to Greasy Creek which flows primarily through manmade channels to the west, to Clear Creek. A wetlands delineation has been performed for the site and is included in the Appendix.

A wetlands delineation was performed for site in July of 2024. It was found that some areas of wetlands exist both upstream and downstream of the proposed site, along the primary drainageway through the site. Upstream wetlands (south end of the site) are either outside of the parcel boundaries on railroad right-of-way or will be avoided in the project design and facility layout. Surface drainage which currently flows into the downstream wetland area will be redirected to an on-site retention basin. Discharge from this basin will occur at a controlled rate and will flow to wetlands areas downstream (north) of the project site. There will be no anticipated reduction in drainage discharge to/through the wetlands as a result of the proposed project.

No waterways within or adjacent to the Project are designated as Outstanding State Resource Waters or other Special Use Waters as defined by the Kentucky Division of Water. Therefore, no permanent impacts are anticipated to waterways off the project site. Some realignment of drainage features will be required for the placement of the generation yard.

Construction activities have the potential to increase erosion and sedimentation, which may affect onsite streams and wetlands. To minimize these effects, BMPs will be implemented, and grading will be avoided whenever feasible. As earth-moving and ground clearing activities are an anticipated component of site preparation and construction, the Project is expected to have stormwater discharge during these phases. However, no topsoil will be removed from the site. Since clearing activities are anticipated to disturb more than one acre, the facility will comply with the Kentucky Division of Water Construction Storm Water Discharge General Permit requirements.

In order to obtain coverage under this general permit, a NOI-SWCA shall be completed. The primary requirement of the general permit is for the permittee to develop and implement a Stormwater Pollution Prevention Plan (SWPPP). During both construction and revegetation efforts, contractors will be required to adhere to the SWPPP and follow the BMPs laid out within. These may include silt fences, temporary

sediment basins and traps, buffers around wetlands and waterbodies, mulching, dust control, and other BMPs that will minimize sediment runoff. Following construction, all disturbed areas, including temporary equipment storage and construction work areas, will be revegetated using a mixture of low-growing native and pollinator plant seed mixes from a certified distributor. If necessary for control of invasive and nuisance species, spraying of EPA-approved herbicide by a state licensed pesticide applicator may be conducted; spraying will be conducted in accordance with label directions and application will be limited near waterbodies. All erosion controls and revegetated areas will be inspected and maintained until the Project Area is deemed stable. Following construction, all equipment and waste will be removed from the Project Area. The Project is anticipated to have minimal or no impact to surface waters throughout its operational phase. Should any maintenance activities occur that could cause runoff of sediments or pollutants, proper BMPs will be implemented.

The project area consists of roughly 9.5 acres. The current vegetative cover within the proposed boundaries of the site will be replaced by impervious and semi-pervious surface types, such as gravel driveways and equipment yards, electrical and generating equipment and foundations, and small structures. This increase in impervious area will result in an increase in site stormwater runoff.

For illustration, a 3-acre substation development would result in the generation of over 40,000 cubic feet of runoff for a 10-year, 24-hour storm event.

Table 4-2: Stormwater Runoff

		Existing	Proposed
Pervious area	(ac)	7.6	4.6
Impervious area	(ac)	0	3
Net runoff coefficient		0.15	0.446
Design storm (10-yr, 24hr)	(in)	5.04	5.04
Net stormwater runoff	(cf)	20,857	62,021

A detailed stormwater analysis will be performed as part of the stormwater permitting for the facility, following completion of detailed design. A retention basin will be included in final design, to mitigate the effects of increased runoff, in accordance with State and Local regulations.

4.2.2 Wastewater

As a gas-fired generation facility, there will be minimal generation of wastewater.

Some amount of sanitary wastewater may be generated from on-site office facilities. Additionally, stormwater that has the potential to come in contact with oil from machinery oil spills or releases will be routed to a separate sump collection system and conveyed to an oil/water separator. Discharge from this separator will in turn be conveyed to the on-site wastewater lift station, where it will combine with sanitary flows, and be pumped to the City of Madisonville Wastewater Treatment Plant for treatment.

The combined sanitary and plant process drains are expected to generate 500 gallons per day on average, with peak wet weather flows on the order of 5,000 gallons per day. The design flow rate for wastewater is nominally 150 gallons per minute.

4.3 Wastes (KRS 224.10-280 (3.c))

Waste generated by the Project is largely limited to the construction phase and may include packing materials (i.e., wooden crates, pallets, cardboard), wiring and mechanical debris, used fuel, oil, lubricants, or hydraulic fluid, and general trash. No waste will be disposed of, stored long-term, or burned at the Project site. Any waste that cannot be recycled will be properly contained on site and disposed of at a permitted facility offsite by a designated waste management company. Any liquid waste (i.e., lubricants, fuels, and oils) will be stored in proper containers. These containers will be appropriately labeled, stored in secondary containment, and the associated Safety Data Sheet will be available onsite to all personnel. The refueling of construction machinery, including tractors, trucks, and semi-trucks using petroleum based fuels, will occur within designated zones in the Project Area.

A comprehensive Spill Prevention, Containment, and Countermeasures Plan (SPCC) will be developed and put into place to reduce the risk of hazardous material spills, if oils stored on site total more than 1,320 gallons. Additionally, all refueling vehicles will be equipped with spill control kits to ensure prompt and effective response measures.

Small quantities of paint, degreasers, pesticides, herbicides, air conditioning fluids (chlorofluorocarbons), gasoline, propane, hydraulic fluid, welding rods, and janitorial supplies may be stored temporarily onsite (less than 55 gallons, 500 pounds, or 200 cubic feet). These materials will be stored in proper containers in a secure area. The small volume of these materials, combined with the implementation of proper containment and cleanup procedures, is expected to reduce the likelihood of spills and the potential for significant environmental impacts. Portable chemical toilets will be used onsite during construction for the workers. The toilets will be maintained by a licensed contractor who will be responsible for pumping sewage from the toilets to be disposed of at a permitted facility offsite. The portable toilets will be removed upon construction completion. During the operational phase of the Project, sanitary waste will be conveyed to the City of Madisonville Wastewater Treatment plant, as discussed above. Any potential waste generated from maintenance activities will be removed from the site by designated waste management companies and disposed of properly. At the end of the Project's operation phase, all equipment associated with the facility will be removed and recycled or disposed of in accordance with a decommissioning plan that will be developed for the Project. All waste generated during construction and operation of the Project will be disposed of in accordance with all local, state, and federal regulations and no adverse effects from waste generation or disposal are anticipated for the Project.

4.4 Water Withdrawal (KRS 224.10-280 (3.d))

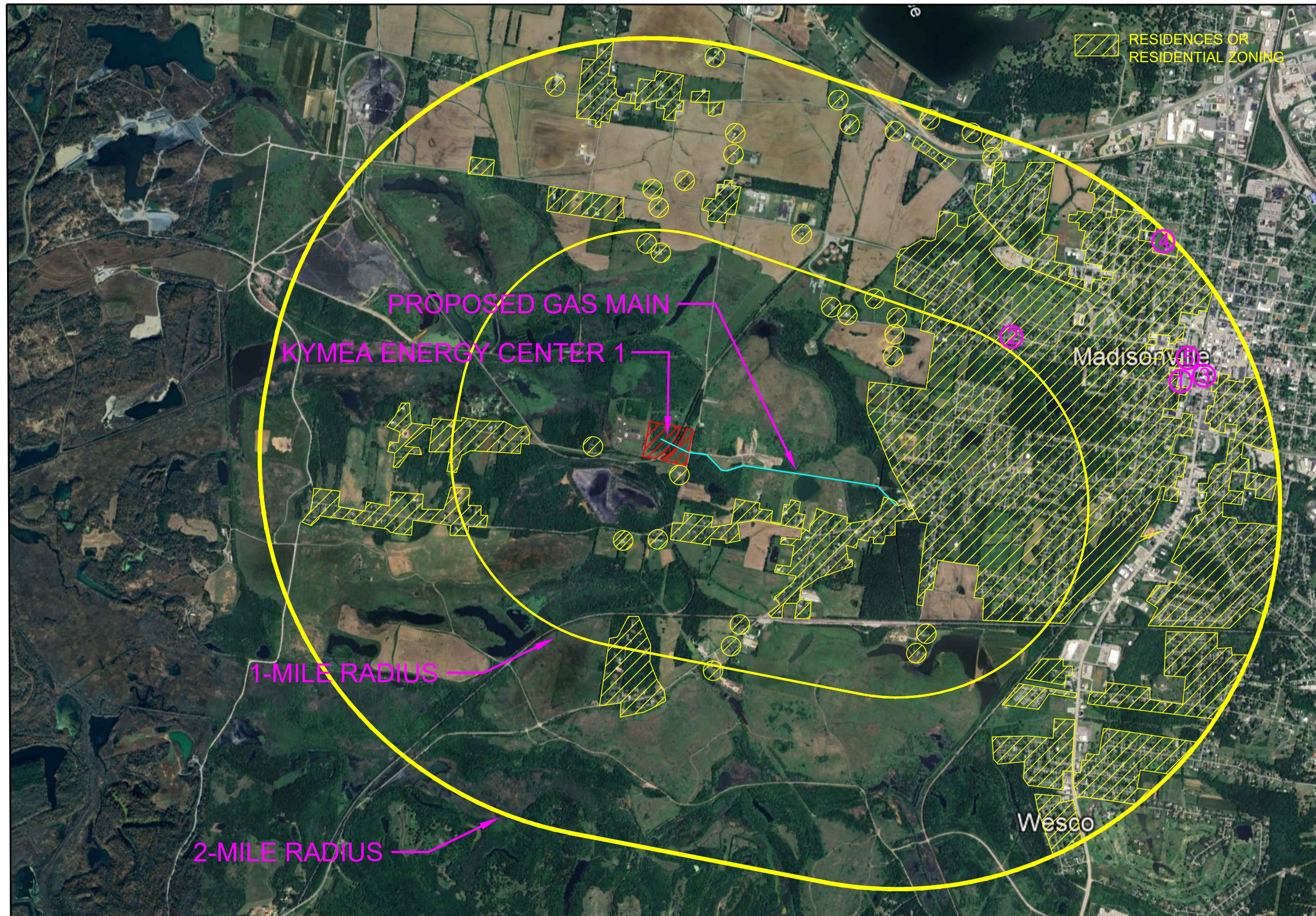
Fire Protection Water, Potable Water and Service Water Systems are supplied from the municipal water system. Service Water System usage is minimal at a few gallons per day.

Water for construction-related dust control and operational purposes is anticipated to be transported in from an offsite water supplier. The utilization of water during construction will primarily be for dust control for the grading of access roads, foundations, and equipment platforms. BMPs outlined in the SWPPP will be

adhered to during all dust control activities and equipment washing. The volume of water needed during the construction phase is not expected to have any adverse impact on groundwater resources.

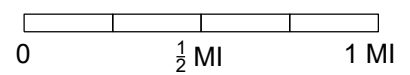


Appendix A Two Mile Radius Map



LEGEND

- 1 - WEST BROADWAY ELEMENTARY SCHOOL
- 2 - CHERRY PARK
- 3 - BEARD'S PARK
- 4 - DR. FESTUS CLAYBON PARK
- 5 - MADISONVILLE SKATE PARK



TWO-MILE RADIUS MAP

NOTE: Residential locations based on City of Madisonville Zoning Ordinance and visual identification from Google Street View mapping. Some residential structures may not be shown on this figure.

Appendix B Permitting Matrix



Kentucky Municipal Energy Agency (KYMEA)
Environmental Permitting Matrix
Madisonville, Kentucky

Drawing Number: Z001
 Revision: Rev A
 Date: 6/28/2024

Prepared by: Jeremy James
 Checked by: Abby Ritter
 Approved by: Tyler Marshall

6/25/2024
 6/25/2024
 6/26/2024

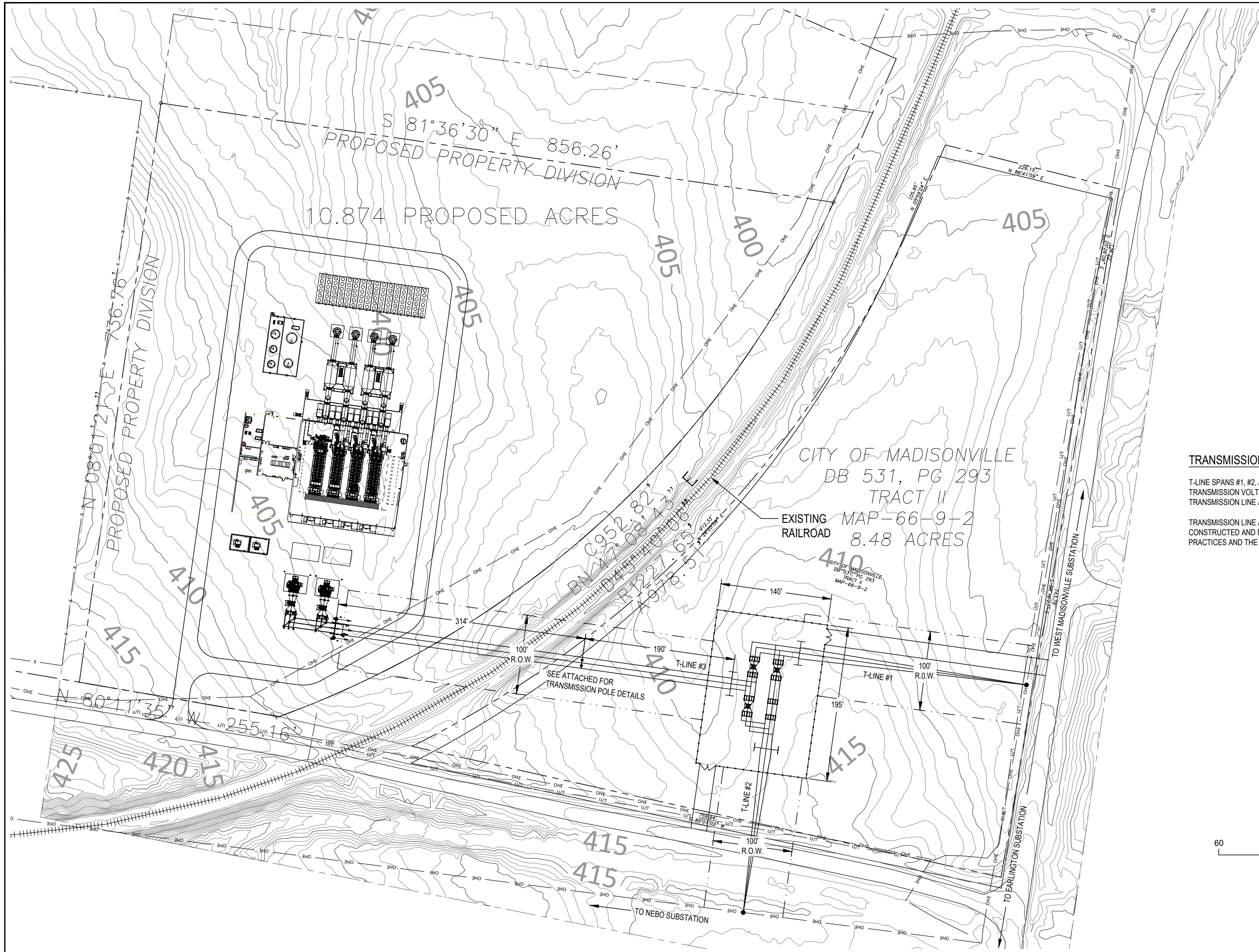
Updates: Rev A
 Changes: 6/28/2024 Issued for review

Jurisdiction	Agency	Permit or Plan	Regulatory Program	Regulatory Trigger	Preparer	Party Responsible for Filing Permit	Permit Timeline*	Permit Fees	Additional Comments, Requirements, Risks	Permit Required
Waters of the U.S.										
Federal	U.S. Army Corps of Engineers	Nationwide Permit	USACE Section 404	<ul style="list-style-type: none"> Ground disturbing activities located in potential waters of the U.S. Impacts may require formal notification to USACE or remain under NWP thresholds 	SCI (if needed)	Owner/Operator (KYMEA)	Up to 6 months (permit prep + 90 day agency review).	Varies	Dependent on scope and location. Anyone planning to work in navigable waters of the United States, or discharge (dump, place, deposit) dredged or fill material in waters of the United States, including wetlands, must first obtain a permit. Review time depended on type of permit being applied for (Nationwide Permit, Regional Permit, Individual Permit). May involve coordination with SHPO and USFWS.	TBD - Most likely, depending on results of wetland delineation.
State	Kentucky Division of Water	General Permit for Floodplain Development KY FPGP	Water Resources	Development within a floodplain.	NA	Owner/Operator (KYMEA)	Unknown	Unknown	Not anticipated, project work will not take place within the Floodplain.	No
Stormwater / Wastewater										
State	Kentucky Division of Water	KPDES Individual Permit (Operating permit)	Water Quality	The discharge of industrial stormwater runoff and/or wastewater associated with industrial activity. The discharge of flows from an oil/water separator to surface waters will trigger individual permitting.	TBD	Owner/Operator (KYMEA)	1 month	None	<ul style="list-style-type: none"> Operators of discharges which are composed entirely of storm water must complete Form F (KY Form 7032-F) in conjunction with Form 1 (KY Form 7032-1). Operators of discharges of storm water which are combined with process wastewater must complete and submit Form F, Form 1, and Form C (KY Form 7032-C). Operators of discharges of storm water which are combined with nonprocess wastewater must complete Form 1, Form F, and Form SC (KY Form 7032-SC). Develop Stormwater Pollution Prevention Plan (SWPPP) to minimize pollution from soil erosion and other sources. A Socioeconomic Demonstration and Alternatives Analysis (SDAA) will be required as part of the application. 	TBD (pending final wastewater discharge location)
State	Kentucky Division of Water	KPDES KYR10000 - Stormwater Discharges Associated with Construction Activities	Stormwater	The construction general permit applies to construction projects that disturb one or more acres or is part of a larger common plan of development.	TBD	TBD be determined if Christmas or KYMEA	<1 month - Submit an electronic Notice of Intent. A SWPPP must be in development at this time of and the SWPPP must be completed prior to the start of construction activities.	None	<ul style="list-style-type: none"> Develop Construction Stormwater Pollution Prevention Plan (CSWPPP) to minimize pollution from soil erosion and other sources. NOI and Proof of Publication required for inclusion in CSWPPP. Submit online Notice of Intent (NOI). Link: https://sso.kog.ky.gov/ Submit a Notice of Termination (NOT) once final stabilization has been met. 	Yes
Local	City of Madisonville	City Sewer Use Permit - Industrial	Water Quality	If regulated discharges are collected and pumped via sanitary sewer to the City of Madisonville WWTP, a sewer use permit will be required.	TBD	Owner/Operator (KYMEA)	1 month	\$50	As described in City of Madisonville Sewer Ordinance (https://www.madisonvilleliving.com/files/ugd/32ec9c_7844ab47966646969e1a97d168a424d1.pdf)	TBD (pending wastewater discharge location)
Special Status Species										
Federal	U.S. Fish and Wildlife Service, Section 7 of the Threatened & Endangered Species Act	Section 7 Consultation	Endangered Species Act	Included in Joint Application process and initiated by USACE if a 404/10 permit is issued. If no USACE permit is issued USFWS must be consulted if project has received other federal permits, federal funding, or is on federal land (this includes state lands that may be receiving federal funds).	TBD	Owner/Operator (KYMEA) and Lead Federal Agency	1 Month	Not Applicable	<ul style="list-style-type: none"> Permit Potential - Unlikely if best management practices are implemented. Letter is recommended to address plans. If federal permitting is needed, consultation with USFW may be required. Risks - Five special status species, the Whooping Crane, Monarch Butterfly, Northern Long-eared Bat, Tricolored Bat, and Indiana Bat were found to have potential to occur within the Project Area. Threatened or Endangered species found at project site must be reported and could limit project completion. 	TBD, in conjunction with USACE and pre-construction notification process for Nationwide (wetland) Permit.
Cultural and Archaeological Resources										
Federal	Section 106 of National Historic Preservation Act	Section 106 Consultation	National Historic Preservation Act	Construction activities with a federal nexus (such as activities requiring a federal permit)	TBD	Owner/Operator (KYMEA) and Lead Federal Agency	Unknown	Not Applicable	Need for cultural / archaeological clearances will be determined by USACE as part of their permit processing.	TBD, in conjunction with USACE and pre-construction notification process for Nationwide (wetland) Permit.
State	Kentucky Office of State Archaeology, Kentucky Heritage Council	Kentucky Antiquities Act Permit	Kentucky Antiquities Act	<ul style="list-style-type: none"> Construction activities with a state nexus (such as activities requiring a state permit) may require survey Activities with the potential to disturb cultural resources with unmarked human remains 	TBD	Lead State Agency and Owner/Operator	Unknown	Not Applicable	Need for cultural / archaeological clearances will be determined by USACE as part of their permit processing.	TBD, in conjunction with USACE and pre-construction notification process for Nationwide (wetland) Permit.
Air and Aviation										
State	Kentucky Division of Air Quality Permit Support Section 300 Sower Boulevard Frankfort, KY 40601	Federally Enforceable State Origin Permit (FESOP)	Air Quality	For sources that have the potential to emit 100 ton/yr or greater of a criteria pollutant, 10 ton/yr or greater of any HAP, or 25 ton/yr or greater of any combination of HAP's; the permittee can accept federally enforceable limits in the FESOP that limits the potential to emit to the same criteria specified for a minor source.	SCI (if needed)	Owner/Operator (KYMEA)	<ul style="list-style-type: none"> 30-45 days permit application 60 days (completeness check) 60 days (draft issuance) 30 days (public comment) 60 days (final permit issuance) Total = 255 days 	\$0 application fee. Annual actual emission releases of up to 25 tons per year cost a flat fee of \$150. Sources that emit 25 tons or greater per year receive a fee on a per ton basis.	<ul style="list-style-type: none"> No construction, installation or establishment of a new stationary source may commence unless the owner or operator has filed an application for and received a draft permit. All air permit applications involve multiple forms from the DEP7007 series. Both the DEP7007AI and DEP7007N forms are required for all permit applications. Other DEP7007 series forms are required based on the facility's processes. This facility may also require forms DEP7007EE, DEP7007V, DEP7007GG. 	TBD - confirming. See below.
State	Kentucky Division of Air Quality Permit Support Section 300 Sower Boulevard Frankfort, KY 40601	Major/Title V Permit	Air Quality	<ul style="list-style-type: none"> Title V permits are required for the largest sources in Kentucky. Title V sources: Emit more than 100 ton/yr of any criteria air pollutant. Emit more than 10 ton/yr of any single HAP or more than 25 ton/yr of all HAPs combined. 	SCI (if needed)	Owner/Operator (KYMEA)	<ul style="list-style-type: none"> 30-60 days permit application 60 days (completeness check) 60 days (draft issuance) 30 days (public comment) 45 days (EPA comment period) 60 days (final permit issuance) Total = 315 days 	\$0 application fee. Annual actual emission releases of up to 25 tons per year cost a flat fee of \$150. Sources that emit 25 tons or greater per year receive a fee on a per ton basis.	<ul style="list-style-type: none"> No construction, installation or establishment of a new stationary source may commence unless the owner or operator has filed an application for and received a draft permit. All air permit applications involve multiple forms from the DEP7007 series. Both the DEP7007AI and DEP7007N forms are required for all permit applications. Other DEP7007 series forms are required based on the facility's processes. This facility may also require forms DEP7007EE, DEP7007V, DEP7007GG. Air Modeling - is not expected to be required as part of a permitting application, per KDAQ. 	TBD. Still confirming. Initial calculations - potential-to-emit (PTE) calculations suggest this facility will be major for Title V under current design.
Federal	Federal Aviation Administration (FAA)	FAA Notice	CFR Title 14 Part 77.9, FAA Co-location Policy	The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, runway, and frequencies emitted from the structure, etc. For more details, please reference CFR Title 14 Part 77.9.	NA	Owner/Operator (KYMEA)	If required to submit notice, must do so 45 days before start of construction.	None	The FAA's Notice Criteria Tool can be used to determine applicability. At this time it is suggested that facility will not exceed Notice Criteria.	No
Facility Operations										
Federal	EPA	Spill Prevention, Control, and Countermeasure (SPCC) Plan	Water Quality	Facilities that store more than 1,320 U.S. gallons in total of all aboveground containers (only count containers with 55 gallons or greater storage capacity) or more than 42,000 gallons in completely buried containers.	Owner/Operator (KYMEA)	Owner/Operator (KYMEA)	N/A	N/A	Does not need to be submitted to a regulatory agency.	Yes, assuming more than 1,320 gallons of oil will be stored on site.

Footnotes:
 * Permit timeline is variable and based on agency workload and permit application prep.

Appendix C Preliminary Site Plan

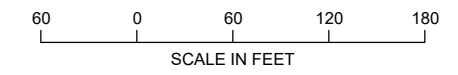
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TRANSMISSION NOTES:

T-LINE SPANS #1, #2, AND #3 CONDUCTOR: 954 AAC
 TRANSMISSION VOLTAGE: 69KV NOMINAL
 TRANSMISSION LINE AMPACITY: 900 AMPS

TRANSMISSION LINE AND APPURTENANCES WILL BE
 CONSTRUCTED AND MAINTAINED WITH ACCEPTED ENGINEERING
 PRACTICES AND THE NATIONAL ELECTRICAL SAFETY CODE.



REV.	DATE	DESCRIPTION
A	09-12-24	ISSUED FOR REVIEW
B	09-16-24	SUBMITTED FOR PERMIT

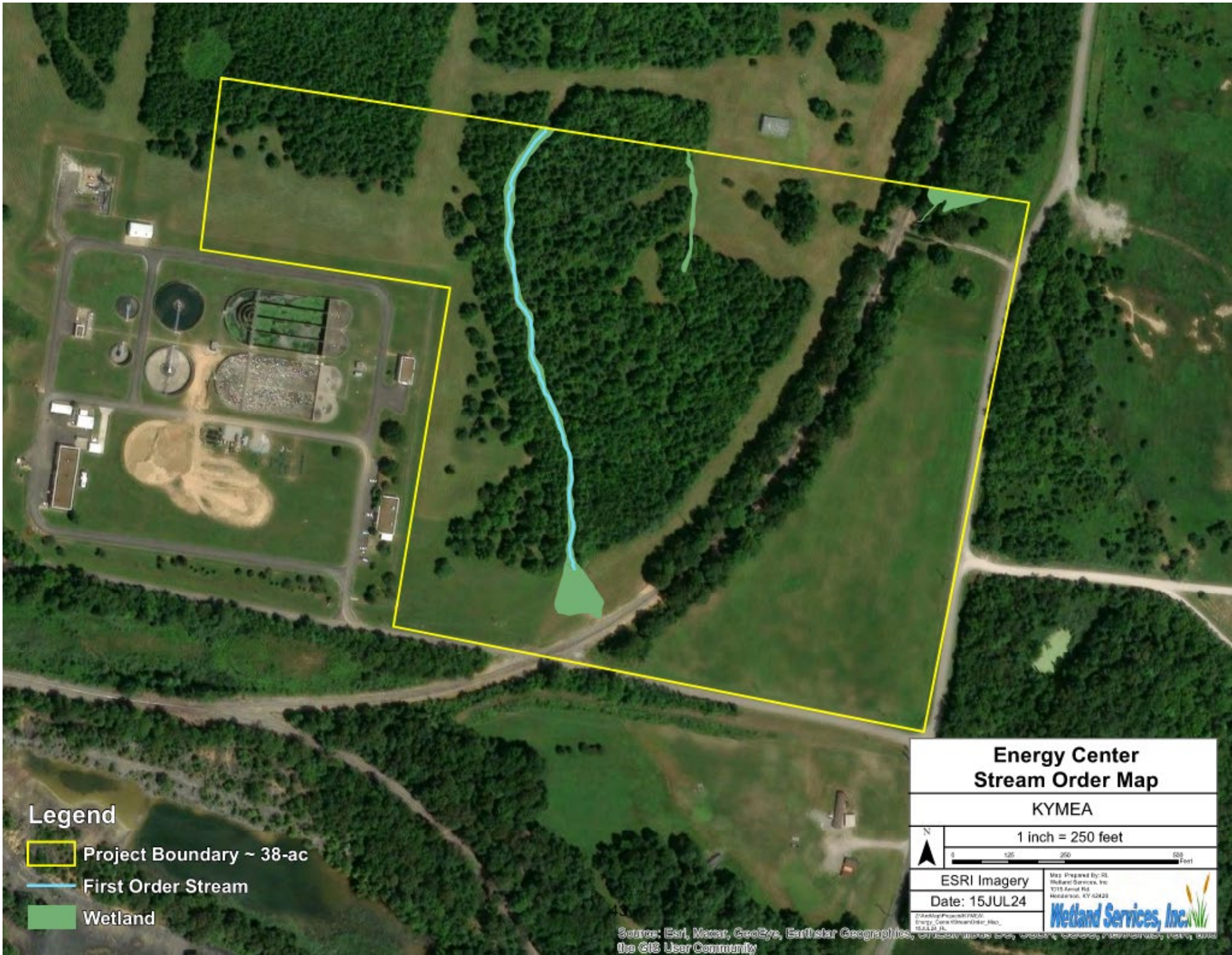
KENTUCKY MUNICIPAL ELECTRIC AGENCY
 MADISONVILLE, KENTUCKY
 RICE GENERATION STATION - MADISONVILLE
 SITE LAYOUT

DESIGNED BY: PAH
 DRAWN BY: EED
 CHECKED BY: PAH



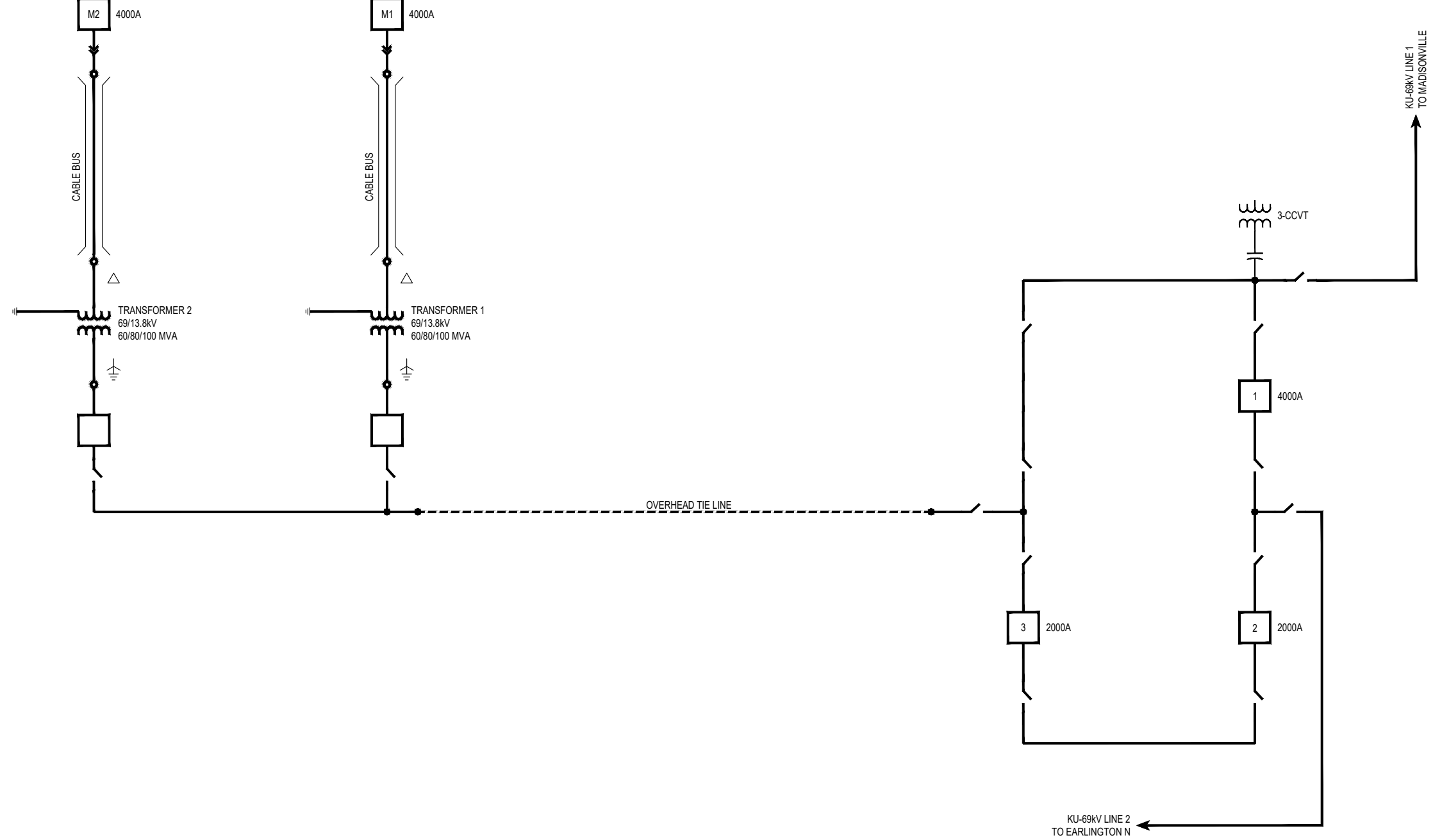
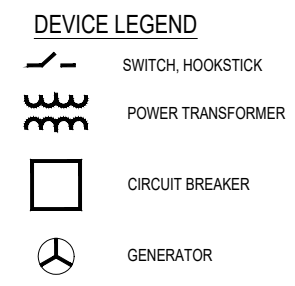
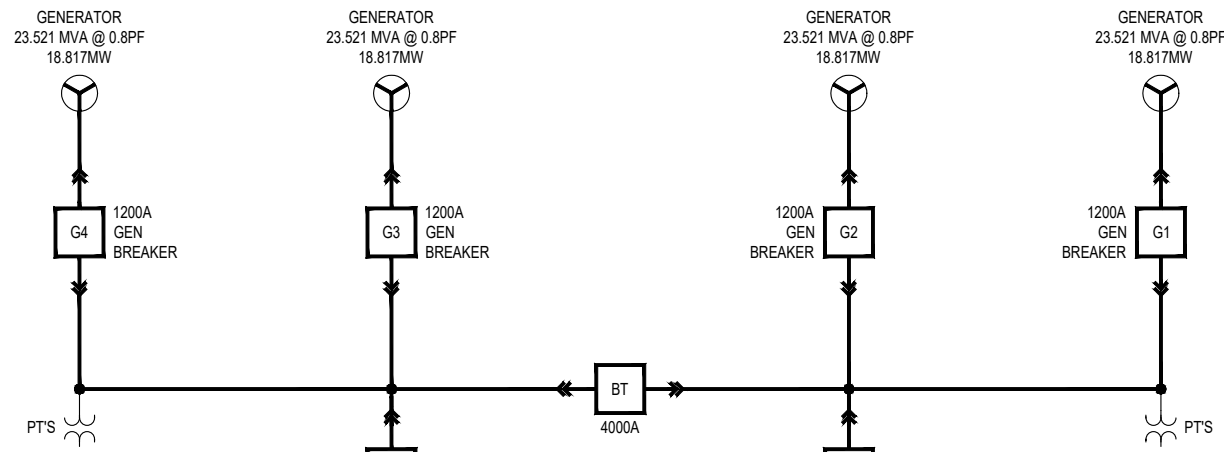
DATE	9-12-24
SCALE	NONE
DRAWING NO.	KYKYMRC6
REV.	B

Appendix D Wetlands Map



Appendix E Proposed Generator Interconnection

PLOTTED: 9/23/2024 10:31 AM BY EDURHAM
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REV.	DATE	BY	CHKD.
A	09-12-24	EED	PAH
B	09-19-24	PAH	PAH

KENTUCKY MUNICIPAL ELECTRIC AGENCY
 MADISONVILLE, KENTUCKY
RICE GENERATION STATION - MADISONVILLE
 SINGLE LINE DIAGRAM SIMPLIFIED



patterson & dewar
ENGINEERS
 850 CENTER WAY, NORCROSS, GEORGIA 30071
 (770) 453-1410 | pdengineers.com
 ENGINEERS - SURVEYORS

DATE	9-12-24
SCALE	NONE
DRAWING NO.	KYKYMRCISK5
REV.	B

FOR REVIEW