

Engineering Analysis
Southwire Company – Heflin Plant
Heflin, Cleburne County, Alabama
Facility No. 305-0003

DESCRIPTION

The Department received a Synthetic Minor Operating Permit (SMOP) application dated April 30, 2025, from the Southwire Company for their Heflin Plant, an insulated electrical wire manufacturing facility located at 6771 Highway 78 East, Heflin, Alabama. The facility submitted a revised application on July 2, 2025.

This facility originally stated its intention to become a Title V source due to their potential emissions exceeding the major source threshold for total Hazardous Air Pollutants (HAPs) and individual HAPs in the form of acetophenone in an application on January 3, 2024. As such, the facility was issued their current Air Permit No.: 305-0003-X007 on May 22, 2024, with the requirement to submit an application to obtain a Title V permit or a new SMOP by May 22, 2025. The facility determined that by taking limits on acetophenone emissions, the Heflin Plant could remain a synthetic minor source for HAPs. The facility submitted a SMOP application within the timeframe of 12 months of the issuance of the Air Permit.

PROCESS DESCRIPTION

The Heflin Plant produces insulated medium voltage copper and aluminum cable. This cable is made by taking the metal wire and drawing it through a series of progressively smaller dies. This wire is taken through an annealer to relieve the stress built up by the drawing process. Then it is routed through the extrusion process which insulates the wires through the extrusion of melted ethylene propylene rubber (EPR) or cross-linked polyethylene (XPPE) pellets through a die surrounding the cables. This insulated cable is then passed through a long, pressurized nitrogen filled tube to be cured. Depending on the demand, a jacket coating of either polyethylene (PE), polyvinyl chloride (PVC), or additional XPPE is added to the cable. The wire is then labeled by a printer.

The following emission sources are located onsite:

- 2-Die Drawing Machine with no annealer (3,000 lb/hr)
- Dual-Wire AL Drawing Machine with Annealer (8,000 lb/hr)
- Dual-Wire AL Drawing Machine with Annealer (15,300 lb/hr)
- (5) Continuous Vulcanization Extruders: CV02, CV08, CV09, CV10, and CV11 (1,800 lb/hr)
- (3) Continuous Vulcanization Extruders: CV03, CV04, and CV05 (1,000 lb/hr)
- (5) Jacket Extrusion Lines: JL01, JL02, JL04, JL05, and JL06 (1,150 lb/hr)
- (8) Ink Application Systems (42 gal/yr)
- Emergency Diesel Fire Pump (237 BHP)

- (3) Contact Cooling Towers (6,842 gpm)
- (2) Contact Cooling Towers (488 gpm)
- Railcar Unloading
- LPG Fuel Tank (1,000 gal)
- Wastewater Storage Tank (100 gal)
- (2) Diesel Storage Tanks (500 gal)
- (3) Maintenance Parts Washer (25 gal/yr)

NOTABLE CHANGES

In addition to the above, this engineering analysis will address the following changes:

- Southwire would like to re-instate their previous SMOP limit of 9.5 tons of acetophenone emissions in any consecutive 12-month period
- Southwire would be subject to their previous total hazardous air pollutant (HAP) limit of 24.5 tons in any consecutive 12-month period.
- Southwire would also be subject to a 95 ton limit of volatile organic compounds (VOC) in any consecutive 12-month period.
- Southwire has requested that the new SMOP does not include the previous insulation throughput limits and instead Southwire proposes to monitor and maintain records of the throughput of each type of insulation to accurately calculate monthly HAP emissions including acetophenone.
- The Heflin Plant shall submit a semiannual report by the 30th day following the end of each six month period, January 1st through June 30th and July 1st through December 31st. This report shall contain the rolling 12-month total for each type of insulation used, the 12-month rolling total for acetophenone emissions, the 12-month rolling total of total HAP emissions, and the 12-month rolling total of VOC emissions.

In addition to requesting the SMOP limits, the Heflin Plant has applied to add the following equipment:

- A Dual-Wire AL Drawing Machine with Annealer (8,000 lb/hr)
- A Dual-Wire AL Drawing Machine with Annealer (15,300 lb/hr)
- (3) Jacket Extrusion Lines: JL07, JL08, and JL09 (1,150 lb/hr)
- (3) Ink Application Systems (42.00 lb/yr)
- An Emergency Diesel Fire Pump (700 BHP)
- A LPG Fuel Tank (1,000 gal)
- A Plastic Pellet Storage Silo (100 tons)

- A Diesel Storage Tank (1,000 gal)

The facility also plans to remove two of the jacket extrusion lines, JL01 and JL02.

EMISSIONS

The uncontrolled potential to emit (PTE) of the Southwire – Heflin facility was determined through the use of AP-42 factors, engineering test data, maximum design throughput capacity, and worst-case assumptions in regard to VOC and HAP emissions. These emission estimates include the proposed units by the facility and do not include emissions from sources the facility plans to remove.

The Continuous Vulcanization Lines (CV Lines) can extrude either XPLE or EPR though not both at the same time. Emissions from the CV Lines were calculated assuming the worst-case emission factor for each individual HAP regardless of insulation type. According to the application, the peroxide-based XPLE used by the CV Lines is cured through nitrogen tubes, resulting in different emissions from the ambient air cured silane-based XPLE used by the Jacket Lines.

The Jacket Lines can extrude either PVC, XPLE, or PE, though not all at the same time. According to the application, each jacket line can also extrude a strip of PE in addition to the primary insulation. Emissions from the Jacket Lines were also calculated using the worst-case emission factors regardless of insulation throughput type.

The following table contains the uncontrolled VOC, total HAP, and key individual HAP emissions for the entire facility.

Uncontrolled VOC, Individual HAP, and Total HAP Emissions (TPY)

Source	VOC	Total HAP	Methanol	Acetophenone	Cumene	Carbon Disulfide	Xylene
Continuous Vulcanization Lines	64.09	18.82	-	17.77	0.38	0.24	0.43
Jacketing Lines	12.07	6.21	6.21	-	-	-	-
Drawing Machines	4.28	-	-	-	-	-	-
Fire Pump Engines	1.17	0.04	-	-	-	-	-
Miscellaneous Sources	5.59	-	-	-	-	-	-
Potential Facility-Wide	87.21	25.07	6.21	17.77	0.38	0.24	0.43

The RD05 and RD06 Drawing Machines are capable of manufacturing either copper or aluminum wire. The rest of the Drawing Machines only draw copper wire. Emissions from these units were

estimated using the maximum throughput of each unit. The drawing machines are equipped with mist sprays for the control of PM though no control factor was used when determining the potential emissions from this source.

The Miscellaneous Sources include three cooling towers, the railcar unloading, the ink application system containing eleven stations, the storage tanks, and the four gluing and taping lines. The throughput for the ink application system and the gluing and taping lines was doubled for a conservative estimate of VOC emissions.

The facility has proposed to take a limit of 9.5 tons per year (TPY) limits on the emissions of acetophenone/individual HAP and a 24.5 TPY limit on combined HAP emissions. The facility will also be subject to a 95 TPY limit on VOC emissions. The following table contains the facility-wide emissions of each criteria pollutant, the total HAPs, and acetophenone.

Facility-Wide Criteria Pollutant, Total HAP, and Acetophenone Potential Emissions (TPY)

Source	NO _x	CO	SO ₂	PM*	VOC	Total HAP	Acetophenone
Continuous Vulcanization Lines	0.32	0.27	0.002	0.89	64.09	18.82	17.77
Jacketing Lines	0.24	0.20	0.001	2.14	12.07	6.21	-
Drawing Machines	-	-	-	9.11	4.28	-	-
Fire Pump Engines	27.49	6.86	2.27	1.20	1.17	0.04	-
Miscellaneous Sources	-	-	-	2.80	5.59	-	-
Uncontrolled Facility-Wide Emissions	28.04	7.33	2.28	16.14	87.21	25.07	17.77
Allowable Facility-Wide Emissions	28.04	7.33	2.28	7.08	87.21	24.50	9.50

*Conservatively assumes PM equals PM₁₀ equals PM_{2.5}

REGULATIONS

State Implementation Plan

ADEM Admin. Code r. 335-3-4-.01, "Visible Emissions"

According to ADEM Admin. Code r. 335-3-4-.01(1)(a), unless otherwise specified, no affected source shall discharge to the atmosphere particulate of an opacity greater than that designated as twenty percent (20%) opacity as determined by a six (6) minute average.

Per ADEM Admin. Code r. 335-3-4-.01(1)(b), in one six (6) minute period during any sixty (60) minute period, a person may discharge into the atmosphere an opacity no greater than forty percent (40%) opacity.

Each source within the Heflin Plant that is not a fugitive source is subject to the requirements of this section. If visible emissions are observed, Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.

ADEM Admin. Code r. 335-3-4-.02, “Fugitive Emissions”

Per ADEM Admin Code r. 335-3-4-.02, no person shall cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

Reasonable precautions shall include, but not be limited to, the installation of hoods, fans, and fabric filters, or other suitable control devices, to enclose and vent the handling of dusty materials.

Per ADEM Admin. Code r. 335-3-1-.02(1)(ff), fugitive dust means solid air-borne particulate matter emitted from any source other than a flue or stack. Equipment at the Heflin Plant that is considered fugitive shall comply with the requirements in this section.

ADEM Admin. Code r. 335-3-4-.03, “Control of Particulate Emissions – Fuel Burning Equipment”

Per ADEM Admin. Code r. 335-3-4-.03(1), no person shall cause or permit the emission of particulate matter from fuel-burning equipment in excess of the amount shown in Table 4-1 of this Rule. Interpolation of this data can be performed using the equation below:

$$E = 1.38H^{-0.44}$$

Where E is emissions in pounds per MMBtu and H is heat input in MMBtu per hour.

However, the above equation is only to be used for sources with heat input values between 10 and 250 MMBtu per hour. As such, each of the process heaters on the equipment in the CV and jacket lines are too small to use the above equations due to the heaters being only 0.092 MMBtu/hr.

The standards of particulate matter emissions according to Table 4-1 in this section state that the maximum allowable particulate matter emissions for a source of 1 MMBtu/hr would be 0.5 lb/MMBtu. The process heaters located at the Heflin Plant are smaller than 1 MMBtu/hr and burn natural gas for fuel, so the process heaters are not expected to exceed this limit.

ADEM Admin. Code r. 335-3-4-.04, “Control of Particulate Emissions – Process Industries – General”

Cleburne County is a Class 2 County; however, per ADEM Admin. Code r. 335-3-4-.04(5), new sources subject to this requirement which emit particulate matter shall be subject to the rules and regulations for Class 1 Counties, regardless of their location.

According to ADEM Admin. Code r. 335-3-4-.04(1), no process shall emit particulate matter in any one hour in excess of the amount shown in Table 4-2 of this Rule. The allowable rate can also be found using the equation below for processes with a throughput of less than 30 tons per hour:

$$E = 3.59P^{0.62}$$

Where P is process weight per hour in tons per hour and E is emissions in pounds per hour.

Each source at the Heflin Plant, which is not considered a fugitive source, is subject to the PM emission limits. Using the equation for a Class 1 County and the maximum throughput of both the largest and smallest CV lines, the PM emission limits were found to be 3.36 lbs/hr and 2.34 lbs/hr, respectively. PM emissions from the jacket lines shall not exceed 2.55 lb/hr. The CV and Jacket Lines have inherent process dust filters according to the application. Based on the emissions detailed above, these sources are not expected to exceed the Class 1 County emission standards. However, if testing is required, Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine PM emissions.

ADEM Admin. Code r. 335-3-5-.01, “Control of Sulfur Emissions – Fuel Combustion”

According to ADEM Admin. Code r. 335-3-5-.01(1), no person shall cause or permit the operation of a fuel burning installation in a Sulfur Dioxide Category II County in such a manner that that sulfur dioxide is emitted in excess of 4.0 pounds per MMBtu heat input. Cleburne County is considered a Category II County for the purpose of sulfur emissions.

The CV and Jacket Line burners are fueled with purchased natural gas; therefore, sulfur dioxide emissions would not be expected to exceed the 4.0 lb/MMBtu standard.

ADEM Admin. Code r. 335-3-6-.11, “Control of Volatile Organic Compound Emissions – Surface Coating”

Per ADEM Admin. Code r. 335-3-6-.01(1)(b), the provisions of this section apply to all sources of VOC emissions in accordance with the schedules contained in Rule 335-3-6-.15 except for sources with a potential VOC emission rate of less than 100 tons per year.

The Heflin Plant does not have the potential to emit more than 100 tons of VOC emissions in a consecutive twelve month period. As such, the facility does not have any requirements under this section.

ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]”

Southwire Heflin is not one of the listed sources for which the PSD major threshold is 100 tons per year (TPY). The facility does not have the potential to emit more than the significance threshold of 250 TPY of any criteria pollutant.

The change in emissions from this project would not exceed the significance threshold of 250 TPY of any criteria pollutant. As such, no PSD review would be required at this time.

ADEM Admin. Code r. 335-3-14-.06, “Requirements for Control Technology [Determinations for Major Sources in Accordance with Clean Air Act Section 112 (g)]”

This section is applicable provided that the facility in question exceeds the significance threshold of 25 TPY for any combination of HAPs or the 10 TPY significance threshold for any individual HAP.

Southwire Heflin has proposed a 9.5 TPY limit on acetophenone emissions in order to remain below the 10 TPY significance threshold for individual HAPs. According to the application, with this limit in place, the facility would not have the potential to exceed the 25 TPY significance threshold for total HAPs. The facility will still have a 24.5 TPY limit on total HAP emissions to ensure that the Heflin Plant does not exceed the significance thresholds for total or individual HAPs.

With the aforementioned limits, Southwire Heflin will not be subject to the requirements of this section.

ADEM Admin. Code r. 335-3-15, “Synthetic Minor Operating Permits”

Applicability

Southwire Heflin does not have the potential to exceed the 100 TPY Title V major threshold for any criteria pollutant. However, the facility has the potential to emit more than 10 TPY of acetophenone, a HAP, and more than 25 TPY of all combined HAPs.

Southwire Heflin submitted a SMOP application and requested limits on acetophenone and total HAP emissions in order to avoid being a major source of HAP emissions.

Emission Standards

The facility has requested a 9.5 TPY limit on acetophenone emissions. The facility will also have a 24.5 TPY emission limit on combined HAPs and a 95 TPY limit on VOC emissions. The VOC limit is a placeholder in case of future expansion. These emission limits ensure that the facility will remain below the Title V major thresholds of 10 TPY for individual HAP emissions, 25 TPY for combined HAP emissions, and 100 TPY for criteria pollutant emissions.

In the previous SMOP, Southwire Heflin had limits on the insulation throughput; however, according to the application, the facility can insulate more wire than the previous throughput limit allowed while maintaining compliance with the 9.5 TPY limit on acetophenone. As such, this limit will not be included in the current SMOP.

Compliance and Performance Testing

If testing is required, the following test methods and procedures will be used:

- Volatile organic compound (VOC) emissions shall be determined by Method 18 of Appendix A-6 to 40 CFR Part 60 or Method 25, 25A, or 25B to Appendix A-7 to 40 CFR Part 60, or other equivalent methods.
- HAP emissions shall be determined by Method 18 of Appendix A-6 to 40 CFR Part 60, or Method 320 of Appendix A to 40 CFR Part 63, or other equivalent methods.

Southwire will be required conduct a performance test on a CV line in accordance with the test methods listed above in order to determine emission factors for cross-linked polyethylene applied to the wires within 12 months of the permit issuance.

Should Southwire decide to use different extrusion material than what is included in this application, the facility will submit a notification to the Department prior to implementing the use of this material. Southwire Heflin will be required to conduct testing as discussed above, within a year of using the new material.

Emissions Monitoring

The facility uses two types of insulation in the CV Lines, EPR and peroxide-based XPLE, with XPLE producing more acetophenone emissions. The facility uses PVC, PE, and silane-based XPLE in the Jacket Lines. To demonstrate compliance with the SMOP limits, the facility will track the throughput of each type of insulation.

Emissions of acetophenone/individual HAP and total combined HAPs from the CV and Jacket Lines will be determined on a monthly basis using the throughput of each type of insulation. Calculations of acetophenone and total combined HAP emissions shall be determined using the insulation throughput of each type per month and the emission factors provided in this application. These emission factors were determined through stack tests performed on identical lines located at other facilities.

The total facility-wide emissions of acetophenone and combined HAPs will be calculated on a monthly and a twelve month rolling basis. The total facility-wide emissions of VOC will be calculated on a monthly and a twelve month rolling basis.

Recordkeeping and Reporting Requirements

Records shall be maintained for a period of at least five (5) years following the generation of said record. These records shall be maintained in a form readily available for inspection and made available upon request.

The facility will maintain records of the throughput of each type of insulation for each CV and Jacket Line, as well as the facility-wide insulation throughput. Additionally, the facility shall maintain the monthly and twelve month rolling emissions of acetophenone and the total HAP emissions for each CV and Jacket Line. Records of the facility-wide rolling twelve month acetophenone and combined HAP emissions shall also be maintained.

The facility shall submit a semiannual report within 30 days of the end of each semiannual period (January 1st through June 30th and July 1st through December 31st). This report shall include the monthly and combined twelve month rolling individual and total HAP emissions for the Heflin Plant for each month during the reporting period. The report will also contain the facility-wide VOC emissions per month and per twelve month rolling period for each month during the reporting period.

Each report submitted shall be certified by a responsible official that the information is true, accurate, and complete.

ADEM Admin. Code r. 335-3-16, “Major Source Operating Permits”

The facility proposes to implement synthetic minor operating limits of 9.5 TPY on the emissions of acetophenone and 24.5 total HAPs in order to avoid exceeding the significance threshold of 10 TPY for individual HAPs and 25 TPY for total HAPs. This facility will also have a 95 TPY limit on VOCs to avoid the 100 TPY criteria pollutant threshold for Title V. As long as the facility does not exceed these limits, Southwire Heflin will not be a major source with respect to Title V.

Class I Areas

The nearest Class I Area, Cohutta Wilderness, is located more than 100 km from the facility. As such, emissions from this facility would not be expected to have a significant impact on this or any Class I Area.

Federal Regulations

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart A, “General Provisions”

This subpart is applicable provided one of the NSPS subparts is applicable to this facility. This subpart is applicable as described in Table 8 to 40 CFR Part 60 Subpart IIII [§60.4218].

40 CFR Part 60, Subpart Dc, “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units”

Per §60.40c, this subpart is applicable to each affected facility, steam generating unit, for which construction, modification, or reconstruction commenced after June 9, 1989 with a maximum design heat input of 100 MMBtu or less, but greater than or equal to 10 MMBtu/hr. The heaters associated with the CV and Jacket lines have a heat input of less than 1 MMBtu/hr, and are not used to produce steam; therefore, this subpart is not applicable to the Southwire Heflin facility.

40 CFR Part 60, Subpart Kb, “Standards of Performance Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, and On or Before October 4, 2023”

This subpart is applicable to each storage vessel with a capacity greater than or equal to 75 cubic meters, (19,812.9 gallons) used to store volatile organic liquids for which construction, reconstruction or modification commenced after July 23, 1984, and on or before October 4, 2023 [§60.110b(a)].

All storage tanks which are located at this facility have a capacity of 1,000 gallons or less and as such are not subject to the requirements of this subpart.

40 CFR Part 60, Subpart Kc, “Standards of Performance Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After October 4, 2023”

Southwire Heflin has applied to add two more storage tanks, one 1,000 gallon Diesel Storage Tanks and one 1,000 gallon LPG Fuel Tank. Per §60.110c(a), this subpart is applicable to each storage vessel with a capacity greater than or equal to 20,000 gallons (75.7 m³) that is used to store volatile organic liquids for which construction, reconstruction or modification commenced after October 4, 2023.

Although the proposed storage tanks would be constructed after October 4, 2023, they are both less than 20,000 gallons. As such, the proposed storage tanks located at the Heflin Plant are not subject to the requirements of this subpart.

40 CFR Part 60, Subpart TT, “Standards of Performance for Metal Coil Surface Coating”

The requirements of this subpart are applicable to each affected facility in a metal coil surface coating operation, defined as each prime coat operation, each finish coat operation, and each prime

and finish coat operation combined when the finish coat is applied wet on wet over the prime coat and both coatings are cured simultaneously, which commenced construction, modification, or reconstruction after January 5, 1981 [§60.460(a) and (b)].

As defined in §60.461(a), coating refers to any organic material that is applied to the surface of metal coil and metal coil surface coating operation means the application system used to apply organic coating to the surface of any continuous metal strip with a thickness of 0.15 mm, or 0.006 in, or more that is packaged in a roll or coil.

The Heflin Plant applies coating to metal wire and does not apply coatings onto metal strips that are packaged in rolls or coils. Therefore, the Heflin Plant is not subject to the requirements of this subpart.

40 CFR Part 60, Subpart VVV, “Standards of Performance for Polymeric Coating of Supporting Substrates Facilities”

As described in §60.740(a), the provisions of this subpart apply to each coating operation and any onsite coating mix preparation equipment used to prepare coating for the polymeric coating of supporting substrates. As defined in §60.741(a), polymeric coating of supporting substrates refers to a web coating process that applies elastomers, polymers, or prepolymers to a supporting web other than paper, plastic film, metallic foil, or metal coil.

As substrate refers to the surface to which a coating is applied, and as seen above, this definition does not exclude the braided wires used in the production of cables and the insulation surrounding the cable.

However, the Heflin Plant uses a process referred to as extrusion to apply insulation to the cables. As indicated in US EPA ADI No. 0300037, which supersedes the previous Subpart VVV determinations regarding pultrusion, Subpart VVV applies to those polymeric coating processes where solvents are intentionally volatilized out of the coating as a necessary part of the process. In the process of pultrusion, and extrusion, as determined in ADI No. 0300037, the VOCs are a reactant not a solvent, and are not intentionally volatilized out of the coatings.

As such, this subpart is not applicable to the CV or Jacket Lines located at the Heflin Plant.

40 CFR Part 60, Subpart IIII, “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines”

Applicability

As described in §60.4200(a)(2)(ii), the provisions of this subpart apply to owners and operators of stationary compression ignition (CI) internal combustion engines (ICE) that commence construction after July 11, 2005, and are manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

Fire Pump Engine No. 1 is an emergency use 237 BHP diesel powered fire pump engine manufactured by John Deere, Model No. JU6H-UFAD88, in 2022. Fire Pump Engine No. 2 is an emergency use 700 BHP diesel powered fire pump engine which was manufactured by Clarke Co., Model No. C18H0-UFAD50, in 2024. Both emergency fire pump engines, Fire Pump Engine No. 1, FP01, and Fire Pump Engine No. 2, FP02, are NFPA certified fire pump engines.

Emission Standards

Per §60.4205(c), fire pump engines with a displacement of less than 30 liters per cylinder are required to comply with the applicable requirements in Table 4 to 40 CFR Part 60, Subpart IIII.

As described in Table 4 to this subpart, fire pump engines with a maximum engine power of 237 BHP and 700 BHP with a model year of 2009 or later are subject to the following emission standards:

- Emissions of NMHC + NO_x shall not exceed 4.0 g/kW-hr or 3.0 g/HP-hr
- Emissions of CO shall not exceed 3.5 g/kW-hr or 2.6 g/HP-hr
- Emissions of PM shall not exceed 0.20 g/kW-hr or 0.15 g/HP-hr

Per §60.4206, the stationary CI ICE must be operated and maintained to achieve the emission standards described above over the entire life of the engine. Starting October 1, 2010, CI ICE subject of the requirements of this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel, must use diesel fuel that meets the requirements of 40 CFR §1090.305 for non-road diesel fuel [§60.4207(b)]. As described in §1090.305, the maximum sulfur content in diesel fuel is 15 ppm and diesel fuel must meet either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Compliance and Performance Test Methods and Procedures

If FP01 or FP02 are not installed, configured, operated, and maintained according to the manufacturer's emission-related written instruction or if the emission-related settings are changed in any way not permitted by the manufacturer and must comply with §60.4211(g)(2) or §60.4211(g)(3) respectively, these engines will be required to conduct performance tests.

If a performance test is required, these engines shall use the applicable test methods and procedures described in §60.4212. Fire pump engines may use an optional 3-mode test cycle as described in Table 6 to this subpart.

Emissions Monitoring

Per §60.4209(a), if an emergency stationary CI Internal combustion engine does not meet the standards applicable to non-emergency engines, a non-resettable hour meter must be installed prior to startup of the engine. Both the FP01 and FP02 shall be equipped with a non-resettable hour meter.

Owners or operators of stationary CI ICE which must comply with the emission standards specified in this subpart, must operate and maintain the engine and control device according to the manufacturer's emission-related instructions, change only the emission-related settings that are permitted by the manufacturer, and meet the applicable requirements of 40 CFR 1068 [§60.4211(a)(1), (2), & (3)].

Per §60.4211(c), CI fire pump engines manufactured after the model year that applies to the applicable fire pump engine power rating in Table 3 to this subpart must comply with the emission standards specified in §60.4205(c). Both FP01 and FP02 were manufactured after 2011, the latest year in Table 3, and are NFPA certified engines which meet the emission standards specified in §60.4205(c). Additionally, the engines must be installed and configured according to the manufacturer's emission-related specifications.

If the FP01 engine is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instruction, or if the emission-related settings are changed in any way not permitted by the manufacturer then compliance shall be demonstrated through the following [§60.4211(g)(2)]:

- Keeping a maintenance plan and records of conducted maintenance
- Maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions to the extent practicable
- An initial performance test shall be conducted to demonstrate compliance with the applicable emission standards within one year of startup or within a year of changing the emission-related settings in a way not configured as described by the manufacturer

If the FP02 engine is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instruction, or if the emission-related settings are changed in any way not permitted by the manufacturer then compliance shall be demonstrated through the following [§60.4211(g)(3)]:

- Keep a maintenance plan and records of all conducted maintenance
- Maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions to the extent practicable
- An initial performance test shall be conducted to demonstrate compliance with the applicable emission standards within one year of startup or within a year of changing the emission-related settings in a way not configured as described by the manufacturer
- Subsequent performance testing shall be conducted at least every 8760 operating hours or once every three years, whichever comes first.

Engines considered emergency stationary ICE by this subpart shall not be operated in any way other than emergency operation, maintenance and testing, and operation in non-emergency situations as described below, for 50 hours per year [§60.4211(f)].

- There is no limit on the use of emergency stationary ICE in emergency situations.
- Engines considered emergency stationary ICE shall be operated in non-emergency situations, to include maintenance and readiness testing, provided these tests are recommended by the applicable authority, for a maximum of 100 hours per calendar year. Any operation of the engine for non-emergency situations counts as part of the 100 hours per calendar year.
- Emergency stationary ICE may be operated for up to 50 hours per year in non-emergency situations, which count to the 100 hours per calendar year for maintenance and testing. Except as described in §60.4211(f)(3)(i), these 50 hours per calendar year in non-emergency situations cannot be used for peak shaving or non-emergency response, or to generate an income for a facility to an electric grid or otherwise provide power as part of a financial arrangement with another entity.

Recordkeeping and Reporting Requirements

Per §60.4214(b), stationary CI ICE which are emergency stationary ICE, are not required to submit an initial notification. As described in Table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, records of operation of the engine in emergency and non-emergency service that are recorded through the

non-resettable hour meter shall be maintained. This record shall include the time a of operation of the engine and the reason the engine was operating during that time.

Should an emergency stationary ICE of more than 100 HP operate for any of the reasons described in §60.4211(f)(3)(i) an annual report shall be submitted that contains the following [§60.4212(d)]:

- The company name and address, the date of the report and the beginning and ending dates of the reporting period, the engine site rating and model year, and the latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
- The hours spent in operation for the purposes in §60.4211(f)(3)(i), including the date start time, end time of said operation, the identity of the entity that dispatched the engine and situation which necessitated the dispatch of the engine.
- Annual reports for each calendar year shall be submitted no later than March 31st.
- These annual reports must also be submitted electronically using the Compliance Emissions Data Reporting Interface (CEDRI) on EPA's Central Data Exchange.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

40 CFR 63 Subpart KK, “National Emission Standards for the Printing and Publishing Industry”

Subpart KK applies only to publication printing, rotogravure printing, and wide-web flexographic printing per §63.820(a)(1). Southwire Heflin operates ink jet or hot foil printers exclusively to print on products and therefore is not subject to Subpart KK.

40 CFR 63 Subpart MMM, “National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products”

Per §63.3881(c)(5), this subpart does not apply to surface coating or coating operations where plastic is extruded onto metal wire or cable or other metal parts to form a coating. Therefore, this subpart is not applicable to the Heflin Plant.

40 CFR 63 Subpart PPPP, “National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products”

Per §63.4481(c)(4), this subpart does not apply to surface coating where plastic is extruded onto plastic parts or products to form a coating. Therefore, this subpart is not applicable to this facility.

40 CFR 63 Subpart SSSS, “National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coils”

Per §63.5090(a), this subpart applies to each facility that is a major source of HAP at which a coil coating line is operated. The Heflin Plant is synthetic minor source for the purpose of HAP emissions, and this facility does not contain coil coating lines. As such, this facility is not subject to the requirements of this subpart.

40 CFR 63 Subpart ZZZZ, “National Emission Standards for Hazardous Air Pollutants: Stationary Reciprocating Internal Combustion Engines”

Per §63.6590(c), new reciprocating internal combustion engines located at area sources of HAP emissions shall comply with the requirements of this subpart by meeting the applicable requirements of 40 CFR Part 60, Subpart IIII.

RECOMMENDATION

Based on the analysis, I recommend issuing Synthetic Minor Operating Permit Nos. 305-0003-X008 and X009 for the following emission sources located at Southwire's Heflin Plant.

<u>Permit No.</u>	<u>Description</u>
305-0003-X008	Continuous Vulcanization (CV) Lines – Five (5) 1,800 lb/hr Continuous Vulcanization Extruders with 0.0092 MMBtu/hr burners (CV02, CV08, CV09, CV10, and CV11) and three (3) 1,000 lb/hr Continuous Vulcanization Extruders with 0.0092 MMBtu/hr burners (CV03, CV04, and CV05) Jacket Lines – Six (6) 1,150 lb/hr Jacket Extrusion Lines with 0.0092 MMBtu/hr burners (JL04, JL05, JL06, JL07, JL08, and JL09)
305-0003-X009	Fire Pump Engine No. 1 – 238 BHP 4SLB NFPA Certified Diesel Emergency Fire Pump Engine No. 1 (FP01) Fire Pump Engine No. 2 – 700 BHP 4SLB NFPA Certified Diesel Emergency Fire Pump Engine No. 1 (FP02)

If Southwire Company adheres to the permit conditions, this equipment should be in compliance with all State and Federal regulations.

Brett Buchheit
Industrial Minerals Section
Energy Branch
Air Division

DRAFT
Date