

**Table E1 - Haney Brown Quarry Operational Fuel Usage**

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors [1]:

HP: 0 to 100	0.059	HP: Greater than 100	0.0529
--------------	-------	----------------------	--------

Values above are expressed in gallons per horsepower-hour/BSFC.

**MINING EQUIPMENT**

Mining Equipment	#	Hours per Day	Horsepower	Load Factor	Fuel Used / Day (gallons)	Fuel Used / Year (gallons)
Loader	2	4	247	0.37	19	9,669
Excavator	1	4	187	0.38	15	3,759
Water Truck	1	4	168	0.41	15	3,644
Dozer	1	4	247	0.40	21	5,227
Gen Sets	2	8	84	0.74	26	13,153
<b>Total Fuel</b>					<b>96</b>	<b>35,451</b>

Operational Phase	Days of Operation
Operational	250

**Sources:**

[1] United States Environmental Protection Agency. 2018. *Exhaust and Crankcase Emission Factors for Nonrod Compression-Ignition Engines in MOVES2014b*. July 2018. Available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf>.

**TABLE E2 - Haney Brown Quarry WORKER & TRUCK TRIPS**

Operational Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons/day)	Total (gallons/yr)
Employee Trips	24.0	10	20.0	8.33	2,083
On-Road Haul Truck Trips	6.0	18	20.0	60.00	15,000
Fuel Delivery Truck	6.0	2	20.0	6.67	1,667
			<b>Total</b>	75.00	<b>18,750</b>

**TABLE E4 - Wine Quarry TOTAL ANNUAL FUEL CONSUMPTION**

Phase	Days of Operation	Gas Used (gal/yr)	Diesel Used (gal/yr)
Operational Phase	250	2,083	54,201

**Sources:**

[1] United States Environmental Protection Agency. 2018. *Exhaust and Crankcase Emission Factors for Nonrod Compression-Ignition Engines in MOVES2014b*. July 2018. Available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf>.

[2] Federal Highway Administration. Highway Statistics 2018, Table VM-1. Accessed 1/30/23 at [fhwa.dot.gov/policyinformation/statistics/2018/pdf/vm1.pdf](http://fhwa.dot.gov/policyinformation/statistics/2018/pdf/vm1.pdf): Worksheet available at [afdc.energy.gov/data](http://afdc.energy.gov/data)

CAT Performance Handbook Edition 48, June 2018.