

## **Letter J: Pacific Gas and Electric Company (February 22, 2021)**

### **Comment J-335: Attachment 3.**

Revised Air Quality Analysis

Estrella Substation and Paso Robles Area Reinforcement Project  
PG&E Comments on Draft Environmental Impact Report

**Attachment 3**  
**Revised Air Quality Analysis**

*Estrella Substation and Paso Robles Area Reinforcement Project***Proposed Project Construction Emissions**

	CO	ROG	NO <sub>x</sub>	ROG + NO <sub>x</sub>	SO <sub>x</sub>	Fugitive Dust PM <sub>10</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	DPM
<b>Maximum Daily Emissions (lbs/day)</b>									
CalEEMod Sources (unmitigated)	77.59	11.89	110.48	122.37	0.28	8.47	12.38	7.38	3.91
Helicopter (unmitigated)	11.86	1.60	30.17	30.56	3.58	46.30	48.36	48.36	0.00
Total Maximum Daily (unmitigated)	79.88	11.89	110.48	122.37	3.83	47.78	52.66	51.37	3.91
CalEEMod Sources (mitigated)	77.59	11.89	110.48	122.37	0.28	4.05	7.96	5.28	3.91
Helicopter (mitigated)	11.86	1.60	30.17	30.56	3.58	46.30	48.36	48.36	0.00
Total Maximum Daily (mitigated)	79.88	11.89	110.48	122.37	3.83	47.78	52.66	51.37	3.91
Significance Thresholds	-	-	-	137	-	-	-	-	7
Significant?	-	-	-	No	-	-	-	-	No
<b>Maximum Quarterly Emissions (tons/quarter)</b>									
CalEEMod Sources (unmitigated)	-	-	-	1.18	-	0.04	-	-	0.04
Helicopter (unmitigated)	-	-	-	0.09	-	0.12	-	-	-
Total Maximum Quarterly (unmitigated)	-	-	-	1.28	-	0.16	-	-	0.04
CalEEMod Sources (mitigated)	-	-	-	1.18	-	0.03	-	-	0.04
Helicopter (mitigated)	-	-	-	0.09	-	0.12	-	-	-
Total Maximum Quarterly (mitigated)	-	-	-	1.28	-	0.14	-	-	0.04
Significance Thresholds	-	-	-	Tier 1 2.5 Tier 2 26.3	-	2.5	-	-	0.13
Significant?	-	-	-	No	-	No	-	-	No

*Estrella Substation and Paso Robles Area Reinforcement Project*

	CO	ROG	NO <sub>x</sub>	ROG + NO <sub>x</sub>	SO <sub>x</sub>	Fugitive Dust PM <sub>10</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	DPM
<b>Total Project Emissions (tons)</b>									
CalEEMod Sources (unmitigated)	6.82	0.97	8.63	9.60	0.02	0.29	0.60	0.38	0.31
Helicopter (unmitigated)	0.04	0.01	0.15	0.16	0.02	0.21	0.22	0.22	-
Total Construction Project (unmitigated)	6.86	0.98	8.78	9.76	0.04	0.50	0.82	0.60	0.31
CalEEMod Sources (mitigated)	6.82	0.97	8.63	9.60	0.02	0.22	0.53	0.35	0.31
Helicopter (mitigated)	0.04	0.01	0.15	0.16	0.02	0.21	0.22	0.22	-
Total Construction Project (mitigated)	6.86	0.98	8.78	9.76	0.04	0.43	0.75	0.57	0.31

Note: Some totals may be off due to rounding.



*Estrella Substation and Paso Robles Area Reinforcement Project***Proposed Project GHG Emissions**

<b>Phase</b>	<b>GHG Emissions (Metric Tons CO<sub>2</sub>e)</b>
Ground-Based Construction Emissions (unmitigated)	2,206
Helicopter Emissions (unmitigated)	43.70
Total Construction Emissions (unmitigated)	2,250
Amortized Construction Emissions (unmitigated)	75.0
Ground-Based Construction Emissions (mitigated)	2,206
Helicopter Emissions (mitigated)	43.70
Total Construction Emissions (mitigated)	2,250
Amortized Construction Emissions (mitigated)	75.0
SF <sub>6</sub> Gas Insulated Switches and Equipment	96
Total Annualized Emissions	187

Estrella Substation and Paso Robles Area Reinforcement Project

Maximum Weekly Emissions

Estimated Weekly Emissions (to determine maximum lb/day)		Total Unmitigated											Total Mitigated																
Start of week	End of Week	Week	CO	ROG	NOX	ROG + NOX	SOX	Fugitive Dust PM10	PM10	PM2.5	DPM	CO	ROG	NOX	ROG + NOX	SOX	Fugitive Dust PM10	PM10	PM2.5	DPM	CO	ROG	NOX	ROG + NOX	SOX	Fugitive Dust PM10	PM10	PM2.5	DPM
6/1/2022	6/7/2022	1	4.55	0.63	9.33	9.97	0.02	1.26	1.47	0.41	0.21	4.55	0.63	9.33	9.97	0.02	0.77	0.98	0.35	0.23									
6/8/2022	6/14/2022	2	4.55	0.63	9.33	9.97	0.02	1.26	1.47	0.41	0.21	4.55	0.63	9.33	9.97	0.02	0.77	0.98	0.35	0.23									
6/15/2022	6/21/2022	3	11.94	1.91	18.05	19.97	0.04	0.37	1.05	0.72	0.67	11.94	1.91	18.05	19.97	0.04	0.37	1.05	0.72	0.67									
6/22/2022	6/28/2022	4	11.94	1.91	18.05	19.97	0.04	0.37	1.05	0.72	0.67	11.94	1.91	18.05	19.97	0.04	0.37	1.05	0.72	0.67									
6/29/2022	7/5/2022	5	11.94	1.91	18.05	19.97	0.04	0.37	1.05	0.72	0.67	11.94	1.91	18.05	19.97	0.04	0.37	1.05	0.72	0.67									
7/6/2022	7/12/2022	6	11.94	1.91	18.05	19.97	0.04	0.37	1.05	0.72	0.67	11.94	1.91	18.05	19.97	0.04	0.37	1.05	0.72	0.67									
7/13/2022	7/19/2022	7	11.94	1.91	18.05	19.97	0.04	0.37	1.05	0.72	0.67	11.94	1.91	18.05	19.97	0.04	0.37	1.05	0.72	0.67									
7/20/2022	7/26/2022	8	11.94	1.91	18.05	19.97	0.04	0.37	1.05	0.72	0.67	11.94	1.91	18.05	19.97	0.04	0.37	1.05	0.72	0.67									
7/27/2022	8/2/2022	9	15.10	2.41	24.31	26.72	0.05	1.39	2.24	1.03	0.85	15.10	2.41	24.31	26.72	0.05	0.91	1.76	0.98	0.35									
8/3/2022	8/9/2022	10	15.10	2.41	24.31	26.72	0.05	1.39	2.24	1.03	0.85	15.10	2.41	24.31	26.72	0.05	0.91	1.76	0.98	0.35									
8/10/2022	8/16/2022	11	11.40	1.88	18.59	20.46	0.04	0.34	1.00	0.70	0.66	11.40	1.88	18.59	20.46	0.04	0.34	1.00	0.70	0.66									
8/17/2022	8/23/2022	12	11.40	1.88	18.59	20.46	0.04	0.34	1.00	0.70	0.66	11.40	1.88	18.59	20.46	0.04	0.34	1.00	0.70	0.66									
8/24/2022	8/30/2022	13	11.40	1.88	18.59	20.46	0.04	0.34	1.00	0.70	0.66	11.40	1.88	18.59	20.46	0.04	0.34	1.00	0.70	0.66									
8/31/2022	9/6/2022	14	23.80	3.41	32.27	35.68	0.08	0.55	1.69	1.20	1.14	23.80	3.41	32.27	35.68	0.08	0.55	1.69	1.20	1.14									
9/7/2022	9/13/2022	15	23.80	3.41	32.27	35.68	0.08	0.55	1.69	1.20	1.14	23.80	3.41	32.27	35.68	0.08	0.55	1.69	1.20	1.14									
9/14/2022	9/20/2022	16	55.73	8.79	84.47	93.26	0.20	8.05	11.06	6.43	1.01	55.73	8.79	84.47	93.26	0.20	1.64	3.98	4.33	1.01									
9/21/2022	9/27/2022	17	55.73	8.79	84.47	93.26	0.20	8.05	11.06	6.43	1.01	55.73	8.79	84.47	93.26	0.20	1.64	3.98	4.33	1.01									
9/28/2022	10/4/2022	18	55.73	8.79	84.47	93.26	0.20	8.05	11.06	6.43	1.01	55.73	8.79	84.47	93.26	0.20	1.64	3.98	4.33	1.01									
10/5/2022	10/11/2022	19	77.59	11.89	110.48	122.37	0.28	8.47	12.38	7.38	1.93	77.59	11.89	110.48	122.37	0.28	4.05	7.96	5.28	1.91									
10/12/2022	10/18/2022	20	41.54	6.01	57.05	63.07	0.15	1.38	3.32	1.94	41.54	6.01	57.05	63.07	0.15	1.22	3.15	2.10	1.04										
10/19/2022	10/25/2022	21	39.91	5.89	54.52	60.40	0.14	1.24	3.16	2.06	1.90	39.91	5.89	54.52	60.40	0.14	1.08	3.00	2.04	1.50									
10/26/2022	11/1/2022	22	49.49	6.89	64.50	71.39	0.17	1.30	3.74	2.61	2.45	49.49	6.89	64.50	71.39	0.17	1.30	3.74	2.61	2.45									
11/2/2022	11/8/2022	23	49.49	6.89	64.50	71.39	0.17	1.30	3.74	2.61	2.45	49.49	6.89	64.50	71.39	0.17	1.30	3.74	2.61	2.45									
11/9/2022	11/15/2022	24	52.91	7.34	69.69	77.04	0.17	1.41	4.10	2.86	2.69	52.91	7.34	69.69	77.04	0.17	1.41	4.10	2.86	2.69									
11/16/2022	11/22/2022	25	52.91	7.34	69.69	77.04	0.17	1.41	4.10	2.86	2.69	52.91	7.34	69.69	77.04	0.17	1.41	4.10	2.86	2.69									
11/23/2022	11/29/2022	26	47.19	6.65	61.61	68.26	0.16	1.21	3.66	2.59	2.45	47.19	6.65	61.61	68.26	0.16	1.21	3.66	2.59	2.45									
11/30/2022	12/6/2022	27	47.19	6.65	61.61	68.26	0.16	1.21	3.66	2.59	2.45	47.19	6.65	61.61	68.26	0.16	1.21	3.66	2.59	2.45									
12/7/2022	12/13/2022	28	48.80	6.85	62.78	69.63	0.17	1.22	3.59	2.51	2.36	48.80	6.85	62.78	69.63	0.17	1.22	3.59	2.51	2.36									
12/14/2022	12/20/2022	29	48.80	6.85	62.78	69.63	0.17	1.22	3.59	2.51	2.36	48.80	6.85	62.78	69.63	0.17	1.22	3.59	2.51	2.36									
12/21/2022	12/27/2022	30	56.64	7.81	74.14	81.97	0.20	1.71	4.31	2.87	2.63	56.64	7.81	74.14	81.97	0.20	1.71	4.31	2.87	2.63									
12/28/2022	1/3/2023	31	65.35	8.89	75.32	84.21	0.25	1.56	4.01	2.69	2.44	65.35	8.89	75.32	84.21	0.25	1.56	4.01	2.69	2.44									
1/4/2023	1/10/2023	32	62.17	8.58	72.76	81.34	0.23	1.56	3.98	2.67	2.43	62.17	8.58	72.76	81.34	0.23	1.56	3.98	2.67	2.43									
1/11/2023	1/17/2023	33	57.81	8.11	67.39	75.52	0.21	1.17	3.49	2.46	2.32	57.81	8.11	67.39	75.52	0.21	1.17	3.49	2.46	2.32									
1/18/2023	1/24/2023	34	67.96	9.43	89.13	98.56	0.28	47.36	53.62	50.68	2.20	67.96	9.43	89.13	98.56	0.28	47.36	53.62	50.68	2.20									
1/25/2023	1/31/2023	35	79.88	11.39	106.16	117.55	0.37	47.28	52.66	51.37	2.82	79.88	11.39	106.16	117.55	0.37	47.28	52.66	51.37	2.82									
2/1/2023	2/7/2023	36	43.10	6.12	53.44	59.56	0.16	1.40	3.16	2.01	1.77	43.10	6.12	53.44	59.56	0.16	1.40	3.16	2.01	1.77									
2/8/2023	2/14/2023	37	49.18	6.82	70.21	77.03	0.17	1.48	3.18	2.01	1.77	49.18	6.82	70.21	77.03	0.17	1.48	3.18	2.01	1.77									
2/15/2023	2/21/2023	38	36.74	4.98	52.78	57.75	0.16	47.19	50.11	49.42	0.88	36.74	4.98	52.78	57.75	0.16	47.19	50.11	49.42	0.88									
2/22/2023	2/28/2023	39	21.22	2.96	24.03	26.99	0.09	0.75	1.53	0.93	0.78	21.22	2.96	24.03	26.99	0.09	0.75	1.53	0.93	0.78									
3/1/2023	3/7/2023	40	31.86	4.26	41.41	45.66	0.12	3.59	4.85	1.81	1.25	31.86	4.26	41.41	45.66	0.12	3.59	4.85	1.81	1.25									
3/8/2023	3/14/2023	41	36.17	4.62	46.94	51.56	0.14	3.59	5.37	2.05	1.38	36.17	4.62	46.94	51.56	0.14	2.38	4.16	1.92	1.38									
3/15/2023	3/21/2023	42	29.89	4.02	41.61	46.63	0.11	3.59	4.85	1.81	1.25	29.89	4.02	41.61	46.63	0.11	2.38	4.16	1.92	1.38									
3/22/2023	3/28/2023	43	35.92	2.48	22.21	24.69	0.07	0.89	1.63	0.91	0.72	35.92	2.48	22.21	24.69	0.07	0.89	1.63	0.91	0.72									
3/29/2023	4/4/2023	44	37.19	2.13	16.90	19.03	0.06	0.54	1.12	0.69	0.59	37.19	2.13	16.90	19.03	0.06	0.54	1.12	0.69	0.59									
4/5/2023	4/11/2023	45	35.72	2.13	16.90	19.03	0.06	0.54	1.12	0.69	0.59	35.72	2.13	16.90	19.03	0.06	0.54	1.12	0.69	0.59									
4/12/2023	4/18/2023	46	35.72	2.13	16.90	19.03	0.06	0.54	1.12	0.69	0.59	35.72	2.13	16.90	19.03	0.06													

*Estrella Substation and Paso Robles Area Reinforcement Project***Preliminary Construction Activity and Schedule for the Proposed Project**

Project Phase	Task	PEA Estimated Work Dates*	Data Request 5 Estimated Work Dates*	Revised Estimated Work Dates*	PEA Estimated Work Months	Data Request 5 Estimated Work Months	Revised Estimated Work Months
<b>Estrella Substation</b>							
<b>Substation Site</b>	Site Work Area Preparation Grading Entrance Road Culverts Mobilization	November– December 2018	--	September– October 2022	Month 1–2 (2 months)	--	Month 4–5 (2 months)
	Access Roads	November 2018	--	September 2022	Month 1 (1 month)	--	Month 4 (1 month)
	Fence and Gate Installation	December 2018	--	October 2022	Month 2 (1 month)	--	Month 5 (1 month)
<b>230 kV Substation</b>	Foundation Construction	December– January 2019	--	October– November 2022	Month 2–3 (2 months)	--	Month 5–6 (2 months)
	Ground Grid / Conduit Installation	January– February 2019	--	November– December 2022	Month 3–4 (2 months)	--	Month 6–7 (2 months)
	Steel / Bus Erection	February 2019	--	December 2022–January 2023	Month 4 (1 month)	--	Month 7–8 (2 months)
	Install Yard Rock	February– March 2019	--	December 2022–January 2023	Month 4–5 (2 months)	--	Month 7–8 (2 months)
	Transformer and Equipment Delivery and Installation	February– March 2019	--	January– February 2023	Month 4–5 (2 months)	--	Month 8–9 (2 months)
	Control Enclosure Delivery and Install	March 2019	--	January 2023	Month 5 (1 month)	--	Month 8 (1 month)

*Estrella Substation and Paso Robles Area Reinforcement Project***Preliminary Construction Activity and Schedule for the Proposed Project**

Project Phase	Task	PEA Estimated Work Dates*	Data Request 5 Estimated Work Dates*	Revised Estimated Work Dates*	PEA Estimated Work Months	Data Request 5 Estimated Work Months	Revised Estimated Work Months
<b>230 kV Substation (cont.)</b>	Equipment Delivery and Install	March–April 2019	--	January–February 2023	Month 5–6 (2 months)	--	Month 8–9 (2 months)
	Cable Installation and Termination	March–April 2019	--	February 2023	Month 5–6 (2 months)	--	Month 9 (1 month)
	Testing and Commissioning	April–May 2019	--	February–March 2023	Month 6–7 (2 months)	--	Month 9–10 (2 months)
	Cable Installation and Termination	March–April 2019	--	February 2023	Month 5–6 (2 months)	--	Month 9 (1 month)
	Testing and Commissioning	April–May 2019	--	February–March 2023	Month 6–7 (2 months)	--	Month 9–10 (2 months)
	Cleanup and Restoration	May 2019	--	March 2023	Month 7 (1 month)	--	Month 10 (1 month)
<b>70 kV Substation</b>	Mobilization	--	--	October 2022	--	--	Month 5 (1 month)
	Foundation Construction	December–January 2019	--	November–December 2022	Month 2–3 (2 months)	--	Month 6–7 (2 months)
	Ground Grid / Conduit Installation	December–January 2019	--	November–December 2022	Month 2–3 (2 months)	--	Month 6–7 (2 months)
	Steel / Bus Erection	January–February 2019	--	January 2023	Month 3–4 (2 months)	--	Month 8 (1 month)

*Estrella Substation and Paso Robles Area Reinforcement Project***Preliminary Construction Activity and Schedule for the Proposed Project**

Project Phase	Task	PEA Estimated Work Dates*	Data Request 5 Estimated Work Dates*	Revised Estimated Work Dates*	PEA Estimated Work Months	Data Request 5 Estimated Work Months	Revised Estimated Work Months
<b>70 kV Substation (cont.)</b>	Control Enclosure Delivery and Install	February 2019	--	February 2023	Month 4 (1 month)	--	Month 9 (1 month)
	Equipment Delivery and Installation	February 2019	--	February 2023	Month 4 (1 month)	--	Month 9 (1 month)
	Cable Installation and Termination	February– March 2019	--	February– March 2023	Month 4–5 (2 months)	--	Month 9–10 (2 months)
	Install Yard Rock	March 2019	--	March 2023	Month 5 (1 month)	--	Month 10 (1 month)
	Cleanup and Restoration	March 2019	--	March 2023	Month 5 (1 month)	--	Month 10 (1 month)
	Testing and Commissioning	April 2019	--	April–May 2023	Month 6 (1 month)	--	Month 11–12 (2 months)
<b>230 kV Transmission Interconnection</b>	Site Work Area Preparation Mobilization	--	--	June 2022	--	--	Month 1 (1 month)
	Foundation Tower Installation / Removal of One Tower	December– January 2019	--	June–August 2022	Month 2–3 (2 months)	--	Month 1–7 (3 months)
	Conductor	February 2019	--	January 2023	Month 4 (1 month)	--	Month 8 (1 month)
	Cleanup and Restoration	March 2019	--	February 2023	Month 5 (1 month)	--	Month 9 (1 month)

*Estrella Substation and Paso Robles Area Reinforcement Project***Preliminary Construction Activity and Schedule for the Proposed Project**

Project Phase	Task	PEA Estimated Work Dates*	Data Request 5 Estimated Work Dates*	Revised Estimated Work Dates*	PEA Estimated Work Months	Data Request 5 Estimated Work Months	Revised Estimated Work Months
<b>Power Line Route</b>							
<b>New 70 kV Power Line Segment</b>	Site Work Area Preparation Mobilization	November 2018	March 2023	March 2023	Month 1 (1 month)	Month 8 (1 month)	Month 10 (1 month)
	Pole Installation / Transfer / Distribution	December– February 2019	April– November 2023	March– November 2023	Month 2–4 (3 months)	Month 9–16 (8 months)	Month 10–18 (9 months)
	Conductor Installation	March–April 2019	December 2023– January 2024	November 2023–January 2024	Month 5–6 (2 months)	Month 17–18 (2 months)	Month 18–20 (3 months)
	Cleanup and Restoration	May 2019	February 2024	February 2024	Month 7 (1 month)	Month 19 (1 month)	Month 21 (1 month)
<b>Reconductoring Segment</b>	Site Work Area Preparation Mobilization	November 2018	August 2022	August 2022	Month 1 (1 month)	Month 1 (1 month)	Month 3 (1 month)
	Pole Installation / Transfer / Distribution / Removal	December– February 2019	September 2022– February 2023	August 2022– February 2023	Month 2–4 (3 months)	Month 2–7 (6 months)	Month 3–9 (7 months)
	Conductor Installation	March–April 2019	October 2022– February 2023	October 2022– February 2023	Month 5–6 (2 months)	Month 3–7 (6 months)	Month 5–9 (5 months)
	Cleanup and Restoration	May 2019	March 2023	March 2023	Month 7 (1 month)	Month 8 (1 month)	Month 10 (1 month)

Notes: This table is preliminary and subject to change based on CPUC requirements, final engineering, and other factors.

\* Dates are provided for duration estimates.

Estrella Substation and Paso Robles Area Reinforcement Project

Table 1: Helicopter Combustion Emissions

Phase	Helicopter Type	Activity			Emissions (lb/day)		CO	NOX	ROG <sup>2</sup>	PM <sub>10</sub> /PM <sub>2.5</sub>	SOx	CO2	fuel use per project MT/project	(tons/project or MT/project) <sup>3</sup>				
		Number of Days	Hours Per day (excluding LTOs) <sup>1</sup>	Number of LTOs per day	fuel kg/day	CO								NOX	ROG <sup>2</sup>	PM10/PM2.5	SOx	CO2
Reconductoring Segment Pole Installation	Sikorsky S92A	5	2.1	14	1,385.30	11.86	24.85	1.60	2.06	3.58	9,635.57	6.93	0.03	0.06	0.00	0.01	0.009	21.85
Transfer Distribution Pole Removal	MD 520N	6	4.0	10	1,153.89	3.96	30.17	0.39	0.34	2.98	8,025.95	6.92	0.01	0.09	0.00	0.0010	0.0089	21.84

<sup>1</sup> Hours operating per day excluding landing take off (LTOs) was derived by the project's projected total operating time minus the hovering time associated with planned activities. To be conservative, the climb out operating time is based on the total LTO mode operation times from FOCA data which is more in line with AEDT defaults.

<sup>2</sup> ROG is based on AEDT VOC emission factors.

<sup>3</sup> Criteria pollutants are in terms of tons per project (CO, NOX, ROG, PM10 and PM2.5 and GHG pollutants (CO2 are in metric tons (MT)

Table 2: Helicopter Fuel Consumption and Emission Factors

Helicopter Type	Engine Name	Engine Max SHP	Number of Engines	Takoff shaft HP per engine <sup>1</sup>	Climbout Engine Power Percentage	Climb Out Operating Time (seconds) <sup>2</sup>	Climbout Fuel Consumption (kg/second) <sup>1</sup>	Climbout Emission Factors (g/pollutant per kg fuel) <sup>3</sup>						Cruising Fuel Consumption <sup>3</sup>	Cruising Emission Factors g/hour <sup>3</sup>					
								CO EF	NOX EF	VOC EF	PM EF	SOx	CO2 EF		kg/hr	CO EF	NOX EF	VOC EF	PM EF	SOx <sup>4</sup>
Sikorsky S92A	GE CT7-8A	2740	2	2329	85	810	0.07	3.91	8.10	0.52	0.40	1.17	3,155.00	263.09	1,009.53	2,157.52	139.08	290.88	308.14	830,061.26
Total LTO Cycle Values							60.11	235.13	486.75	31.41	23.83	70.40	189,654.40							
Helicopter Type	Engine Name	Engine Max SHP	Number of Engines	Takoff shaft HP per engine <sup>1</sup>	Climbout Engine Power Percentage	Climb Out Operating Time (seconds) <sup>2</sup>	Climbout Fuel Consumption (kg/second) <sup>1</sup>	Climbout Emission Factors (g/pollutant per kg fuel) <sup>3</sup>						Cruising Fuel Consumption <sup>3</sup>	Cruising Emission Factors g/hour <sup>3</sup>					
								CO EF	NOX EF	VOC EF	PM EF	SOx	CO2 EF		kg/hr	CO EF	NOX EF	VOC EF	PM EF	SOx <sup>4</sup>
MD 520N	DDA260-C20	400	1	340	85	810	0.05	1.59	11.76	0.15	0.18	1.17	3,155.00	184.12	283.47	2,193.89	28.31	19.31	215.64	580,888.41
Total LTO Cycle Values							41.74	66.20	490.79	6.35	7.53	48.88	131,695.50							

<sup>1</sup> Takeoff shaft hp per engine is based on Takeoff% power equal to 85% to be consistent with AEDT default. Fuel consumption is based on FOCA data for TO\_FF per engine in order to be consistent with AEDT guidance to use climbout emission factors based on 85% engine power.

<sup>2</sup> Based on the FOCA data for time in LTO modes (summed). This estimate is in line with AEDT default climbout operating time of 887 seconds.

<sup>3</sup> Based on either AEDT results where available or the available FOCA data for the specific make/model of units. Note that the MD 520N Arrival/Departure profile is not available in AEDT 3c for Paso Robles Airport, so a similar sized, single-engine aircraft was modeled. PM10 emission factors are taken from FOCA data since AEDT results are zero.

Table 3: Fugitive Dust Emissions From Helicopters

Phase	Helicopter Type	Number of Days	Number of LTOs per day	PM Emission Factor (kg/LTO) <sup>1</sup>	Daily PM (lb/day)	Total Project PM (ton/yr)
Reconductoring Segment Pole Installation	Sikorsky S92A	5	14	1.5	46.30	0.12
Transfer Distribution Pole Removal		6	10	1.5	33.07	0.10
70 kV Power Line Conductor Installation	MD 520N	6	10	1.5	33.07	0.10

<sup>1</sup> Emission factor for fugitive dust for helicopters is based on Gillies et al. 2007 which states that fugitive dust during LTOs include 0.5 kg per take off and 1 kg per landing.

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*Estrella Substation and Paso Robles Area Reinforcement Project***AEDT Methodology**

The AEDT version 3c model metric results for air quality are based on running 14 arrivals and 14 takeoff operations by a Sikorsky S-92A model aircraft and 10 arrivals and 10 takeoffs by an Aerospatiale SA-350D Astar (AS-350). The Aerospatiale model was modeled in lieu of the MD-520 model aircraft since AEDT does not have an operational arrival and departure profiles for the MD520. The Aerospatial SA-350D is of similar size and weight and is also a one-engine aircraft. The model inputs are based on departure/arrival at the helipad at the Paso Robles Airport as the landing/takeoff site based on default airport characteristics. This is used as a proxy for a landing zone site associated with the project.

The results of the model include total fuel use and emissions for each operation group (e.g., 14 arrivals/14 departures from Sikorsky S-92A and 10 arrivals/10 departures for the Aerospatial SA-350D). In order to populate the emissions for the landing take offs (LTOs), the fuel use in kilograms (kg) per second (kg/s) is derived from the climb ground phase of operation. To determine fuel usage during full flight, the full flight fuel use in kg/s was derived from the AEDT results. Similarly, each emission factor is derived for the LTOs and full flight from the grams of emissions per kilogram of fuel from the AEDT results based on the total emissions from each operation group divided by the fuel use during the appropriate phase of operation.

The total emissions per day are based on the AEDT fuel use during "Ground climb phase" in kg/second multiplied by an assumed climb out operating time of 810 seconds (from FOCA data). The fuel use per LTO is then multiplied by the g/pollutant per kilogram fuel emission factor during "ground climb". Note that particulate matter (PM) emissions in AEDT were zero, thus the FOCA emission factors for PM were substituted to be conservative. This result is added to the full flight fuel consumption in kg/hour (calculated from AEDT's "full flight" fuel use) multiplied by the grams pollutant/kg fuel during full flight for each pollutant.

Essentially, to calculate emissions, the most recent AEDT version 3c model fuel use and emission results for arrivals and departures for the modeled units were applied to the Proposed Project specific LTO and cruising details from Attachment 4 (Helicopter Noise Analysis).

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Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

**Estrella Substation and Paso Robles Area Reinforcement Project**  
**San Luis Obispo County, Summer**

**1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	7,144.00	1000sqft	164.00	7,144,000.00	0

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	3.2	Precipitation Freq (Days)	44
Climate Zone	4			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - The total area in power line the easement widths, substation temp disturbance, areas for temporary staging and access roads outside of the easement equals approximately 164 acres or a 7,144,000 square feet area

Construction Phase - Based on project schedule and description

Off-road Equipment - Based on construction schedule

Off-road Equipment - Based on construction schedule

Off-road Equipment - Based on construction schedule

Off-road Equipment - Based on construction schedule

Off-road Equipment - Based on construction schedule

Off-road Equipment - Based on construction schedule

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

Off-road Equipment - Based on construction schedule  
Off-road Equipment - Based on construction schedule  
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Off-road Equipment - Based on construction schedule  
Off-road Equipment - Based on construction schedule  
Off-road Equipment - Based on equipment roster for the project.  
Off-road Equipment - Based on construction schedule  
Off-road Equipment - Based on construction schedule  
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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

Off-road Equipment - Based on construction schedule

Off-road Equipment - Based on construction schedule

Trips and VMT - Based on equipment roster and schedule provided

On-road Fugitive Dust - Per the user guide 9.3% silt content should be used for the San Luis Obispo region

Grading - Based on grading and material movement for the project.

Vehicle Trips - Unmanned operation

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Consumer Products - No consumer product utilization was assumed for the project

Area Coating - No architectural coating is assumed for the project

Energy Use - Energy intensity factors scaled down to match the area occupied by the 230kV Substation Control Enclosure approximately 14 feet wide, 48 feet long, and the 70 kV Substation Control Enclosure approximately 16 feet wide and 64 feet long.

Water And Wastewater - Unmanned facility - No water use is expected

Solid Waste - No solid waste generation is expected

Construction Off-road Equipment Mitigation - At a minimum, the off-road equipment fleet shall meet the CARB off-road emissions average for that calendar year and ensure that quarterly DPM emissions are less than the SLOCAPCD significance thresholds.

Operational Off-Road Equipment - Assumes monthly inspections and an annual maintenance on the substation components. Helicopter emissions are represented as Other general industrial equipment with hp increased to 400

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	3572000	0
tblAreaCoating	Area_Nonresidential_Interior	10716000	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	50.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	19.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstructionPhase	NumDays	3,100.00	48.00
tblConstructionPhase	NumDays	3,100.00	48.00
tblConstructionPhase	NumDays	3,100.00	24.00
tblConstructionPhase	NumDays	3,100.00	24.00
tblConstructionPhase	NumDays	3,100.00	18.00
tblConstructionPhase	NumDays	3,100.00	24.00
tblConstructionPhase	NumDays	3,100.00	30.00
tblConstructionPhase	NumDays	3,100.00	12.00
tblConstructionPhase	NumDays	3,100.00	24.00
tblConstructionPhase	NumDays	3,100.00	48.00
tblConstructionPhase	NumDays	3,100.00	6.00
tblConstructionPhase	NumDays	3,100.00	18.00
tblConstructionPhase	NumDays	3,100.00	6.00
tblConstructionPhase	NumDays	3,100.00	6.00
tblConstructionPhase	NumDays	3,100.00	12.00

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tblConstructionPhase	NumDays	3,100.00	30.00
tblConstructionPhase	NumDays	3,100.00	18.00
tblConstructionPhase	NumDays	3,100.00	216.00
tblConstructionPhase	NumDays	3,100.00	12.00
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tblConstructionPhase	NumDays	3,100.00	144.00
tblConstructionPhase	NumDays	3,100.00	12.00
tblConstructionPhase	NumDays	3,100.00	120.00
tblConstructionPhase	NumDays	3,100.00	36.00
tblConstructionPhase	NumDays	310.00	24.00
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tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	LightingElect	3.08	0.01
tblEnergyUse	NT24E	3.70	0.01
tblEnergyUse	NT24NG	6.67	0.01
tblEnergyUse	T24E	1.48	0.01
tblEnergyUse	T24NG	19.71	0.01
tblGrading	AcresOfGrading	36.00	27.00
tblGrading	AcresOfGrading	4.50	9.00
tblGrading	AcresOfGrading	9.00	18.00
tblGrading	AcresOfGrading	4.50	9.00
tblGrading	MaterialExported	0.00	828.00
tblGrading	MaterialImported	0.00	3,140.00
tblOffRoadEquipment	HorsePower	63.00	62.00
tblOffRoadEquipment	HorsePower	63.00	62.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		230-kV Substation Steel Bus Erection
tblOffRoadEquipment	PhaseName		70-kV Substation Steel Bus Erection
tblOffRoadEquipment	PhaseName		70-kV Substation Equip Delivery & Installation
tblOffRoadEquipment	PhaseName		230-kV Substation Cable Installation and Termination
tblOffRoadEquipment	PhaseName		70-kV Substation Foundation Construction
tblOffRoadEquipment	PhaseName		230-kV Transmission Foundation Tower Installation Remove two towers
tblOffRoadEquipment	PhaseName		Reconductoring Segment Pole Installation Transfer Distribution Pole Removal
tblOffRoadEquipment	PhaseName		230-kV Substation Foundation Construction
tblOffRoadEquipment	PhaseName		70-kV Substation Mobilization
tblOffRoadEquipment	PhaseName		230-kV Transmission Site Clean-up and Restoration
tblOffRoadEquipment	PhaseName		70-kV Power Line Site Development Mobilization

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tblOffRoadEquipment	PhaseName	Reconductoring Segment Clean-up and Restoration
tblOffRoadEquipment	PhaseName	Reconductoring Segment Site Development Mobilization
tblOffRoadEquipment	PhaseName	70-kV Power Line Clean-up and Restoration
tblOffRoadEquipment	PhaseName	230-kV Substation Steel Bus Erection
tblOffRoadEquipment	PhaseName	230-kV Substation Install Yard Rock
tblOffRoadEquipment	PhaseName	70-kV Substation Steel Bus Erection
tblOffRoadEquipment	PhaseName	230-kV Substation Transformer & Equip Delivery & Installation
tblOffRoadEquipment	PhaseName	230-kV Substation Transformer & Equip Delivery & Installation
tblOffRoadEquipment	PhaseName	230-kV Substation Remaining Equipment Delivery and Install
tblOffRoadEquipment	PhaseName	230-kV Transmission Foundation Tower Installation Remove two towers
tblOffRoadEquipment	PhaseName	230-kV Transmission Foundation Tower Installation Remove two towers
tblOffRoadEquipment	PhaseName	230-kV Transmission Foundation Tower Installation Remove two towers
tblOffRoadEquipment	PhaseName	230-kV Transmission Conductor
tblOffRoadEquipment	PhaseName	230-kV Transmission Conductor
tblOffRoadEquipment	PhaseName	70-kV Substation Equip Delivery & Installation
tblOffRoadEquipment	PhaseName	70-kV Substation Control Enclosure Delivery and Install
tblOffRoadEquipment	PhaseName	230-kV Substation Testing and Commissioning
tblOffRoadEquipment	PhaseName	70-kV Substation Cable Installation and Termination
tblOffRoadEquipment	PhaseName	70-kV Power Line Pole Tower Installation
tblOffRoadEquipment	PhaseName	70-kV Power Line Pole Tower Installation
tblOffRoadEquipment	PhaseName	70-kV Substation Install Yard Rock
tblOffRoadEquipment	PhaseName	70-kV Cleanup and Restoration
tblOffRoadEquipment	PhaseName	70-kV Substation Testing and Commissioning

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tblOffRoadEquipment	PhaseName	70-kV Power Line Conductor Installation
tblOffRoadEquipment	PhaseName	70-kV Power Line Conductor Installation
tblOffRoadEquipment	PhaseName	70-kV Power Line Conductor Installation
tblOffRoadEquipment	PhaseName	Reconductoring Segment Pole Installation Transfer Distribution Pole Removal
tblOffRoadEquipment	PhaseName	Reconductoring Segment Pole Installation Transfer Distribution Pole Removal
tblOffRoadEquipment	PhaseName	230-kV Substation Access Roads
tblOffRoadEquipment	PhaseName	230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization
tblOffRoadEquipment	PhaseName	230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization
tblOffRoadEquipment	PhaseName	Reconductoring Segment Conductor Installation
tblOffRoadEquipment	PhaseName	Reconductoring Segment Conductor Installation
tblOffRoadEquipment	PhaseName	Reconductoring Segment Conductor Installation
tblOffRoadEquipment	PhaseName	Reconductoring Segment Conductor Installation
tblOffRoadEquipment	PhaseName	230-kV Substation Cleanup and Restoration
tblOffRoadEquipment	PhaseName	70-kV Power Line Conductor Installation
tblOffRoadEquipment	PhaseName	70-kV Power Line Conductor Installation
tblOffRoadEquipment	PhaseName	Reconductoring Segment Conductor Installation
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tblOffRoadEquipment	PhaseName	230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization
tblOffRoadEquipment	PhaseName	230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization
tblOffRoadEquipment	PhaseName	230-kV Substation Install Yard Rock
tblOffRoadEquipment	PhaseName	70-kV Substation Install Yard Rock

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tblOffRoadEquipment	PhaseName		230-kV Substation Fence and Gate Installation
tblOffRoadEquipment	PhaseName		70-kV Substation Foundation Construction
tblOffRoadEquipment	PhaseName		70-kV Substation Ground Grid Conduit Installation
tblOffRoadEquipment	PhaseName		230-kV Substation Ground Grid Conduit Installation
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	5.30
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	7.00	5.00
tblOffRoadEquipment	UsageHours	8.00	2.60
tblOffRoadEquipment	UsageHours	8.00	3.00
tblOffRoadEquipment	UsageHours	8.00	3.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	0.50
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	5.00
tblOffRoadEquipment	UsageHours	8.00	6.00

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MaterialSiltContent	8.50	9.30
tblOnRoadDust	MeanVehicleSpeed	40.00	32.40
tblOnRoadDust	MeanVehicleSpeed	40.00	32.40
tblOnRoadDust	MeanVehicleSpeed	40.00	32.40
tblOnRoadDust	MeanVehicleSpeed	40.00	32.40
tblOnRoadDust	MeanVehicleSpeed	40.00	32.40

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

tblOnRoadDust	MeanVehicleSpeed	40.00	32.40
tblOnRoadDust	MeanVehicleSpeed	40.00	32.40
tblOnRoadDust	MeanVehicleSpeed	40.00	32.40
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	13.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	2.00
tblOperationalOffRoadEquipment	OperHorsePower	88.00	400.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblSolidWaste	SolidWasteGenerationRate	8,858.56	0.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	0.91
tblTripsAndVMT	VendorTripLength	5.00	1.20
tblTripsAndVMT	VendorTripLength	5.00	8.68
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	1.15
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	1.34
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	1.90
tblTripsAndVMT	VendorTripLength	5.00	1.20
tblTripsAndVMT	VendorTripLength	5.00	1.85
tblTripsAndVMT	VendorTripLength	5.00	13.00
tblTripsAndVMT	VendorTripLength	5.00	1.85
tblTripsAndVMT	VendorTripNumber	0.00	11.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	1,171.00	13.00
tblTripsAndVMT	VendorTripNumber	1,171.00	9.00
tblTripsAndVMT	VendorTripNumber	1,171.00	29.00
tblTripsAndVMT	VendorTripNumber	1,171.00	30.00

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

tblTripsAndVMT	VendorTripNumber	1,171.00	45.00
tblTripsAndVMT	VendorTripNumber	1,171.00	9.00
tblTripsAndVMT	VendorTripNumber	1,171.00	30.00
tblTripsAndVMT	VendorTripNumber	1,171.00	2.00
tblTripsAndVMT	VendorTripNumber	1,171.00	28.00
tblTripsAndVMT	VendorTripNumber	1,171.00	12.00
tblTripsAndVMT	VendorTripNumber	1,171.00	11.00
tblTripsAndVMT	VendorTripNumber	1,171.00	12.00
tblTripsAndVMT	VendorTripNumber	1,171.00	2.00
tblTripsAndVMT	VendorTripNumber	1,171.00	9.00
tblTripsAndVMT	VendorTripNumber	1,171.00	3.00
tblTripsAndVMT	VendorTripNumber	1,171.00	26.00
tblTripsAndVMT	VendorTripNumber	1,171.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	1,171.00	15.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	1,171.00	16.00
tblTripsAndVMT	VendorTripNumber	0.00	29.00
tblTripsAndVMT	VendorTripNumber	1,171.00	2.00
tblTripsAndVMT	VendorTripNumber	1,171.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	7.00
tblTripsAndVMT	VendorTripNumber	1,171.00	13.00
tblTripsAndVMT	VendorTripNumber	0.00	33.00
tblTripsAndVMT	VendorTripNumber	0.00	30.00
tblTripsAndVMT	VendorTripNumber	1,171.00	30.00
tblTripsAndVMT	VendorTripNumber	1,171.00	10.00

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

tblTripsAndVMT	VendorTripNumber	1,171.00	31.00
tblTripsAndVMT	WorkerTripLength	13.00	10.00
tblTripsAndVMT	WorkerTripLength	13.00	7.68
tblTripsAndVMT	WorkerTripLength	13.00	8.45
tblTripsAndVMT	WorkerTripLength	13.00	8.45
tblTripsAndVMT	WorkerTripLength	13.00	9.15
tblTripsAndVMT	WorkerTripLength	13.00	9.56
tblTripsAndVMT	WorkerTripLength	13.00	8.97
tblTripsAndVMT	WorkerTripLength	13.00	7.34
tblTripsAndVMT	WorkerTripLength	13.00	8.52
tblTripsAndVMT	WorkerTripLength	13.00	10.00
tblTripsAndVMT	WorkerTripLength	13.00	10.00
tblTripsAndVMT	WorkerTripLength	13.00	10.00
tblTripsAndVMT	WorkerTripLength	13.00	10.00
tblTripsAndVMT	WorkerTripLength	13.00	7.68
tblTripsAndVMT	WorkerTripLength	13.00	9.23
tblTripsAndVMT	WorkerTripLength	13.00	10.00
tblTripsAndVMT	WorkerTripLength	13.00	10.00
tblTripsAndVMT	WorkerTripLength	13.00	6.79
tblTripsAndVMT	WorkerTripLength	13.00	6.72
tblTripsAndVMT	WorkerTripLength	13.00	8.68
tblTripsAndVMT	WorkerTripLength	13.00	8.25
tblTripsAndVMT	WorkerTripLength	13.00	8.15
tblTripsAndVMT	WorkerTripLength	13.00	7.67
tblTripsAndVMT	WorkerTripLength	13.00	10.00
tblTripsAndVMT	WorkerTripLength	13.00	7.68
tblTripsAndVMT	WorkerTripLength	13.00	8.14

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

tblTripsAndVMT	WorkerTripLength	13.00	8.45
tblTripsAndVMT	WorkerTripLength	13.00	8.56
tblTripsAndVMT	WorkerTripLength	13.00	9.18
tblTripsAndVMT	WorkerTripLength	13.00	6.32
tblTripsAndVMT	WorkerTripLength	13.00	8.45
tblTripsAndVMT	WorkerTripLength	13.00	7.85
tblTripsAndVMT	WorkerTripLength	13.00	5.87
tblTripsAndVMT	WorkerTripLength	13.00	7.50
tblTripsAndVMT	WorkerTripLength	13.00	8.38
tblTripsAndVMT	WorkerTripNumber	5.00	22.00
tblTripsAndVMT	WorkerTripNumber	5.00	16.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	22.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	12.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	12.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	12.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	18.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	14.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	18.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	12.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	9.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	30.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	38.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	16.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	12.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	14.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	10.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	12.00



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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

tblTripsAndVMT	WorkerTripNumber	3,000.00	12.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	5.00	16.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	41.00
tblTripsAndVMT	WorkerTripNumber	5.00	18.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	12.00
tblTripsAndVMT	WorkerTripNumber	5.00	8.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	12.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	32.00
tblTripsAndVMT	WorkerTripNumber	5.00	16.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	38.00
tblTripsAndVMT	WorkerTripNumber	10.00	24.00
tblTripsAndVMT	WorkerTripNumber	30.00	26.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	18.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	28.00
tblTripsAndVMT	WorkerTripNumber	3,000.00	22.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	1,652,050,000.00	0.00

**2.0 Emissions Summary**

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	11.8422	110.4933	77.2514	0.2800	8.4664	3.9120	12.3784	3.7790	3.6004	7.3794	0.0000	27,421.4854	27,421.4854	7.9074	0.0000	27,619.1696
2023	9.7336	81.3116	67.7871	0.2547	3.9882	2.8194	5.3724	0.7733	2.6007	3.0068	0.0000	24,904.6116	24,904.6116	7.0316	0.0000	25,080.4017
2024	2.4896	20.6289	17.1270	0.0597	0.5937	0.7958	1.1246	0.0968	0.7322	0.8221	0.0000	5,829.9182	5,829.9182	1.7066	0.0000	5,872.5819
Maximum	11.8422	110.4933	77.2514	0.2800	8.4664	3.9120	12.3784	3.7790	3.6004	7.3794	0.0000	27,421.4854	27,421.4854	7.9074	0.0000	27,619.1696

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	11.8422	110.4933	77.2514	0.2800	4.0505	3.9120	7.9625	1.6790	3.6004	5.2794	0.0000	27,421.4854	27,421.4854	7.9074	0.0000	27,619.1696
2023	9.7336	81.3116	67.7871	0.2547	2.7752	2.8194	4.3000	0.6423	2.6007	3.0068	0.0000	24,904.6116	24,904.6116	7.0316	0.0000	25,080.4017
2024	2.4896	20.6289	17.1270	0.0597	0.3511	0.7958	1.1246	0.0899	0.7322	0.8221	0.0000	5,829.9182	5,829.9182	1.7066	0.0000	5,872.5818
Maximum	11.8422	110.4933	77.2514	0.2800	4.0505	3.9120	7.9625	1.6790	3.6004	5.2794	0.0000	27,421.4854	27,421.4854	7.9074	0.0000	27,619.1696

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	45.00	0.00	29.08	48.14	0.00	18.74	0.00	0.00	0.00	0.00	0.00	0.00

## 2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	152.9488	6.6100e-003	0.7282	5.0000e-005		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003		1.5635	1.5635	4.0800e-003		1.6655
Energy	4.2200e-003	0.0384	0.0322	2.3000e-004		2.9200e-003	2.9200e-003		2.9200e-003	2.9200e-003		46.0532	46.0532	8.8000e-004	8.4000e-004	46.3269
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Offroad	0.8750	6.0932	5.9132	0.0250		0.2146	0.2146		0.1974	0.1974		2,414.7318	2,414.7318	0.7810		2,434.2562
Total	153.8280	6.1382	6.6737	0.0252	0.0000	0.2201	0.2201	0.0000	0.2029	0.2029		2,462.3485	2,462.3485	0.7859	8.4000e-004	2,482.2486

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	152.9488	6.6100e-003	0.7282	5.0000e-005		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003		1.5635	1.5635	4.0800e-003		1.6655
Energy	4.2200e-003	0.0384	0.0322	2.3000e-004		2.9200e-003	2.9200e-003		2.9200e-003	2.9200e-003		46.0532	46.0532	8.8000e-004	8.4000e-004	46.3269
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Offroad	0.8750	6.0932	5.9132	0.0250		0.2146	0.2146		0.1974	0.1974		2,414.7318	2,414.7318	0.7810		2,434.2562
<b>Total</b>	<b>153.8280</b>	<b>6.1382</b>	<b>6.6737</b>	<b>0.0252</b>	<b>0.0000</b>	<b>0.2201</b>	<b>0.2201</b>	<b>0.0000</b>	<b>0.2029</b>	<b>0.2029</b>		<b>2,462.3485</b>	<b>2,462.3485</b>	<b>0.7859</b>	<b>8.4000e-004</b>	<b>2,482.2486</b>

  

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	230-kV Transmission Site Work Area Preparation Mobilization	Site Preparation	6/1/2022	6/14/2022	6	12	
2	230-kV Transmission Foundation Tower Installation Remove two towers	Building Construction	6/15/2022	8/9/2022	6	48	
3	Reconductoring Segment Site Development Mobilization	Site Preparation	8/1/2022	8/13/2022	6	12	

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## Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

4	Reconductoring Segment Pole Installation Transfer Distribution Pole Removal	Building Construction	8/15/2022	2/18/2023	6	144
5	230-kV Substation Access Roads	Site Preparation	9/1/2022	9/14/2022	6	12
6	230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization	Grading	9/15/2022	10/12/2022	6	24
7	230-kV Substation Fence and Gate Installation	Building Construction	10/8/2022	10/21/2022	6	12
8	Reconductoring Segment Conductor Installation	Building Construction	10/10/2022	2/28/2023	6	120
9	230-kV Substation Foundation Construction	Building Construction	10/15/2022	11/25/2022	6	36
10	70-kV Substation Mobilization	Site Preparation	10/18/2022	10/30/2022	6	12
11	70-kV Substation Foundation Construction	Building Construction	11/1/2022	12/31/2022	6	48
12	70-kV Substation Ground Grid Conduit Installation	Building Construction	11/1/2022	12/31/2022	6	48
13	230-kV Substation Ground Grid Conduit Installation	Building Construction	11/15/2022	12/12/2022	6	24
14	230-kV Substation Steel Bus Erection	Building Construction	12/9/2022	1/5/2023	6	24
15	230-kV Substation Install Yard Rock	Building Construction	12/23/2022	1/12/2023	6	16
16	70-kV Substation Steel Bus Erection	Building Construction	1/1/2023	1/31/2023	6	24
17	230-kV Substation Transformer & Equip Delivery & Installation	Building Construction	1/2/2023	2/4/2023	6	30
18	230-kV Substation Control Enclosure Delivery and Install	Building Construction	1/6/2023	1/19/2023	6	12
19	230-kV Substation Remaining Equipment Delivery and Install	Building Construction	1/13/2023	2/11/2023	6	24
20	230-kV Transmission Conductor	Building Construction	1/25/2023	1/31/2023	6	6
21	70-kV Substation Equip Delivery & Installation	Building Construction	2/1/2023	2/21/2023	6	18
22	70-kV Substation Control Enclosure Delivery and Install	Building Construction	2/1/2023	2/7/2023	6	6
23	230-kV Transmission Site Clean-up and Restoration	Building Construction	2/1/2023	2/7/2023	6	6
24	230-kV Substation Cable Installation and Termination	Building Construction	2/1/2023	2/14/2023	6	12

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25	230-kV Substation Testing and Commissioning	Building Construction	2/11/2023	3/17/2023	6	30
26	70-kV Substation Cable Installation and Termination	Building Construction	2/22/2023	3/14/2023	6	18
27	70-kV Power Line Site Development Mobilization	Site Preparation	3/1/2023	3/14/2023	6	12
28	Reconductoring Segment Clean-up and Restoration	Site Preparation	3/1/2023	3/14/2023	6	12
29	70-kV Power Line Pole Tower Installation	Building Construction	3/1/2023	11/30/2023	6	216
30	70-kV Substation Install Yard Rock	Building Construction	3/1/2023	3/14/2023	6	12
31	230-kV Substation Cleanup and Restoration	Site Preparation	3/11/2023	3/31/2023	6	18
32	70-kV Cleanup and Restoration	Site Preparation	3/15/2023	3/28/2023	6	12
33	70-kV Substation Testing and Commissioning	Building Construction	4/1/2023	5/31/2023	6	48
34	70-kV Power Line Conductor Installation	Building Construction	11/1/2023	1/31/2024	6	72
35	70-kV Power Line Clean-up and Restoration	Site Preparation	2/1/2024	2/14/2024	6	12

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
230-kV Transmission Site Work Area Preparation Mobilization	Graders	1	6.00	187	0.41
230-kV Transmission Site Work Area Preparation Mobilization	Tractors/Loaders/Backhoes	1	6.00	97	0.37
230-kV Transmission Foundation Tower Installation Remove two towers	Bore/Drill Rigs	1	1.00	221	0.50
230-kV Transmission Foundation Tower Installation Remove two towers	Cranes	3	5.30	231	0.29

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230-kV Transmission Foundation Tower Installation Remove two towers	Forklifts	3	2.60	89	0.20
230-kV Transmission Foundation Tower Installation Remove two towers	Off-Highway Trucks	2	3.50	402	0.38
230-kV Transmission Foundation Tower Installation Remove two towers	Off-Highway Trucks	1	0.80	402	0.38
230-kV Transmission Foundation Tower Installation Remove two towers	Off-Highway Trucks	2	2.60	402	0.38
230-kV Transmission Foundation Tower Installation Remove two towers	Tractors/Loaders/Backhoes	1	0.50	97	0.37
Reconductoring Segment Site Development Mobilization	Graders	1	6.00	187	0.41
Reconductoring Segment Site Development Mobilization	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Reconductoring Segment Pole Installation Transfer Distribution Pole Removal	Bore/Drill Rigs	1	6.00	221	0.50
Reconductoring Segment Pole Installation Transfer Distribution Pole Removal	Cranes	3	6.00	231	0.29
Reconductoring Segment Pole Installation Transfer Distribution Pole Removal	Cranes	1	1.00	231	0.29
Reconductoring Segment Pole Installation Transfer Distribution Pole Removal	Off-Highway Trucks	2	3.00	402	0.38
Reconductoring Segment Pole Installation Transfer Distribution Pole Removal	Off-Highway Trucks	2	2.00	402	0.38
230-kV Substation Access Roads	Off-Highway Trucks	2	8.00	402	0.38
230-kV Substation Access Roads	Tractors/Loaders/Backhoes	2	8.00	97	0.37
230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization	Graders	1	8.00	187	0.41
230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization	Off-Highway Trucks	4	10.00	402	0.38
230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization	Off-Highway Trucks	2	10.00	402	0.38
230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization	Rollers	2	8.00	80	0.38
230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization	Rubber Tired Dozers	1	8.00	247	0.40
230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization	Rubber Tired Loaders	1	8.00	203	0.36

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230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization	Scrapers	1	8.00	367	0.48
230-kV Substation Fence and Gate Installation	Skid Steer Loaders	1	4.00	65	0.37
Reconductoring Segment Conductor Installation	Forklifts	1	3.00	89	0.20
Reconductoring Segment Conductor Installation	Off-Highway Trucks	2	6.00	402	0.38
Reconductoring Segment Conductor Installation	Off-Highway Trucks	2	6.00	402	0.38
Reconductoring Segment Conductor Installation	Off-Highway Trucks	2	4.00	402	0.38
Reconductoring Segment Conductor Installation	Off-Highway Trucks	1	6.00	402	0.38
Reconductoring Segment Conductor Installation	Other General Industrial Equipment	1	6.00	88	0.34
Reconductoring Segment Conductor Installation	Other General Industrial Equipment	1	6.00	88	0.34
230-kV Substation Foundation Construction	Bore/Drill Rigs	1	8.00	221	0.50
230-kV Substation Foundation Construction	Cranes	1	5.00	231	0.29
230-kV Substation Foundation Construction	Tractors/Loaders/Backhoes	1	5.00	97	0.37
70-kV Substation Mobilization	Graders	1	4.00	187	0.41
70-kV Substation Mobilization	Tractors/Loaders/Backhoes	1	4.00	97	0.37
70-kV Substation Foundation Construction	Bore/Drill Rigs	1	8.00	221	0.50
70-kV Substation Foundation Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
70-kV Substation Foundation Construction	Trenchers	1	8.00	78	0.50
70-kV Substation Ground Grid Conduit Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
70-kV Substation Ground Grid Conduit Installation	Trenchers	1	6.00	78	0.50
230-kV Substation Ground Grid Conduit Installation	Trenchers	1	8.00	78	0.50
230-kV Substation Steel Bus Erection	Aerial Lifts	1	6.00	62	0.31
230-kV Substation Steel Bus Erection	Off-Highway Trucks	1	8.00	402	0.38
230-kV Substation Install Yard Rock	Off-Highway Trucks	1	10.00	402	0.38



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230-kV Substation Install Yard Rock	Skid Steer Loaders	1	10.00	65	0.37
70-kV Substation Steel Bus Erection	Aerial Lifts	2	8.00	62	0.31
70-kV Substation Steel Bus Erection	Off-Highway Trucks	2	6.00	402	0.38
230-kV Substation Transformer & Equip Delivery & Installation	Generator Sets	1	5.00	84	0.74
230-kV Substation Transformer & Equip Delivery & Installation	Off-Highway Trucks	2	10.00	402	0.38
230-kV Substation Transformer & Equip Delivery & Installation	Off-Highway Trucks	1	4.80	402	0.38
230-kV Substation Transformer & Equip Delivery & Installation	Tractors/Loaders/Backhoes	1	4.00	97	0.37
230-kV Substation Control Enclosure Delivery and Install	Cranes	1	6.00	231	0.29
230-kV Substation Remaining Equipment Delivery and Install	Off-Highway Trucks	1	6.00	402	0.38
230-kV Transmission Conductor	Cranes	3	6.00	231	0.29
230-kV Transmission Conductor	Off-Highway Trucks	2	4.00	402	0.38
230-kV Transmission Conductor	Off-Highway Trucks	2	4.00	402	0.38
70-kV Substation Equip Delivery & Installation	Aerial Lifts	2	4.00	62	0.31
70-kV Substation Equip Delivery & Installation	Off-Highway Trucks	1	5.30	402	0.38
70-kV Substation Control Enclosure Delivery and Install	Off-Highway Trucks	0	0.00	402	0.38
230-kV Transmission Site Clean-up and Restoration	Graders	1	8.00	187	0.41
230-kV Transmission Site Clean-up and Restoration	Tractors/Loaders/Backhoes	1	4.00	97	0.37
230-kV Substation Cable Installation and Termination	Aerial Lifts	1	8.00	62	0.31
230-kV Substation Testing and Commissioning	Off-Highway Trucks	0	0.00	402	0.38
70-kV Substation Cable Installation and Termination	Off-Highway Trucks	0	0.00	402	0.38
70-kV Power Line Site Development Mobilization	Graders	2	6.00	187	0.41
70-kV Power Line Site Development Mobilization	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Reconductoring Segment Clean-up and Restoration	Graders	1	6.00	187	0.41

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Reconductoring Segment Clean-up and Restoration	Tractors/Loaders/Backhoes	1	4.00	97	0.37
70-kV Power Line Pole Tower Installation	Cranes	1	4.00	231	0.29
70-kV Power Line Pole Tower Installation	Off-Highway Trucks	3	4.00	402	0.38
70-kV Power Line Pole Tower Installation	Off-Highway Trucks	3	4.00	402	0.38
70-kV Power Line Pole Tower Installation	Tractors/Loaders/Backhoes	2	4.00	97	0.37
70-kV Power Line Pole Tower Installation	Tractors/Loaders/Backhoes	1	4.00	97	0.37
70-kV Substation Install Yard Rock	Off-Highway Trucks	1	8.00	402	0.38
70-kV Substation Install Yard Rock	Skid Steer Loaders	1	8.00	65	0.37
70-kV Substation Install Yard Rock	Tractors/Loaders/Backhoes	1	8.00	97	0.37
230-kV Substation Cleanup and Restoration	Other General Industrial Equipment	1	6.00	88	0.34
230-kV Substation Cleanup and Restoration	Tractors/Loaders/Backhoes	1	6.00	97	0.37
70-kV Cleanup and Restoration	Off-Highway Trucks	0	0.00	402	0.38
70-kV Substation Testing and Commissioning	Off-Highway Trucks	0	0.00	402	0.38
70-kV Power Line Conductor Installation	Cranes	3	6.00	231	0.29
70-kV Power Line Conductor Installation	Forklifts	1	3.00	89	0.20
70-kV Power Line Conductor Installation	Off-Highway Trucks	3	4.00	402	0.38
70-kV Power Line Conductor Installation	Off-Highway Trucks	1	6.00	402	0.38
70-kV Power Line Conductor Installation	Off-Highway Trucks	2	2.00	402	0.38
70-kV Power Line Conductor Installation	Other General Industrial Equipment	1	6.00	88	0.34
70-kV Power Line Conductor Installation	Other General Industrial Equipment	1	6.00	88	0.34
70-kV Power Line Clean-up and Restoration	Graders	1	6.00	187	0.41
70-kV Power Line Clean-up and Restoration	Tractors/Loaders/Backhoes	1	4.00	97	0.37

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
230-kV Transmission	2	22.00	11.00	104.00	10.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Work Area Preparation										
230-kV Transmission	13	30.00	12.00	0.00	10.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Foundation Tower Install										
Reconductoring	2	18.00	10.00	0.00	7.67	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Sanment Site Develop										
Reconductoring	9	38.00	13.00	0.00	6.32	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Sanment Pole Installati										
230-kV Substation	4	24.00	33.00	0.00	8.45	1.90	20.00	LD_Mix	HDT_Mix	HHDT
Access Roads										
230-kV Substation Site	12	26.00	30.00	393.00	7.85	1.20	20.00	LD_Mix	HDT_Mix	HHDT
Brac Grading Entrance										
230-kV Substation	1	18.00	30.00	0.00	5.87	1.85	20.00	LD_Mix	HDT_Mix	HHDT
Fence and Gate Install										
Reconductoring	10	28.00	10.00	0.00	7.50	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Sanment Conductor In										
230-kV Substation	3	22.00	31.00	0.00	8.38	1.85	20.00	LD_Mix	HDT_Mix	HHDT
Foundation Construction										
70-kV Substation	2	16.00	6.00	0.00	7.68	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Mobilization										
70-kV Substation	3	22.00	13.00	0.00	8.45	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Foundation Construction										
70-kV Substation	2	12.00	9.00	0.00	8.45	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Ground Grid Conduit In										
230-kV Substation	1	12.00	29.00	0.00	9.15	0.91	20.00	LD_Mix	HDT_Mix	HHDT
Ground Grid Conduit In										
230-kV Substation	2	12.00	30.00	0.00	9.56	1.20	20.00	LD_Mix	HDT_Mix	HHDT
Steel Bus Erection										
230-kV Substation	2	18.00	45.00	0.00	8.97	8.68	20.00	LD_Mix	HDT_Mix	HHDT
Install Yard Rock										
70-kV Substation Steel	4	14.00	9.00	0.00	7.34	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Bus Erection										
230-kV Substation	5	18.00	30.00	0.00	8.52	1.15	20.00	LD_Mix	HDT_Mix	HHDT
Transformer 8, Equip D										
230-kV Substation	1	12.00	2.00	0.00	10.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Control Enclosure Deliv										
230-kV Substation	1	9.00	26.00	0.00	10.00	1.34	20.00	LD_Mix	HDT_Mix	HHDT
Remainder Equipment										
230-kV Transmission	7	38.00	11.00	0.00	10.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Conductor										
70-kV Substation	3	16.00	12.00	0.00	7.68	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Equip Deliv 8, Install										
70-kV Substation	0	12.00	2.00	0.00	9.23	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Control Enclosure Deliv										
230-kV Transmission	2	14.00	9.00	0.00	10.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Clean up and Rest										
230-kV Substation	1	10.00	3.00	0.00	10.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Cable Installation and T										
230-kV Substation	0	12.00	26.00	0.00	6.79	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Testing and Commissi										

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70-kV Substation Cable Installation and Tower Installation	0	12.00	3.00	0.00	6.72	13.00	20.00	LD_Mix	HDT_Mix	HHDT
70-kV Power Line Site Development Mobilization	3	20.00	10.00	0.00	8.68	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Reconductoring	2	16.00	5.00	0.00	8.25	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Segment Clean up and Tower Installation	10	41.00	15.00	0.00	8.15	13.00	20.00	LD_Mix	HDT_Mix	HHDT
70-kV Substation Install Yard Rock	3	12.00	16.00	0.00	10.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
230-kV Substation Cleanup and Restoration	2	8.00	29.00	0.00	7.68	13.00	20.00	LD_Mix	HDT_Mix	HHDT
70-kV Cleanup and Restoration	0	10.00	0.00	0.00	8.14	13.00	20.00	LD_Mix	HDT_Mix	HHDT
70-kV Substation Testing and Commissioning	0	12.00	2.00	0.00	8.45	13.00	20.00	LD_Mix	HDT_Mix	HHDT
70-kV Power Line Conductor Installation	12	32.00	10.00	0.00	8.56	13.00	20.00	LD_Mix	HDT_Mix	HHDT
70-kV Power Line Cleanup and Restoration	2	16.00	7.00	0.00	9.18	13.00	20.00	LD_Mix	HDT_Mix	HHDT

## 3.1 Mitigation Measures Construction

Water Exposed Area

## 3.2 230-kV Transmission Site Work Area Preparation Mobilization - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8081	0.0000	0.8081	0.0878	0.0000	0.0878			0.0000			0.0000
Off-Road	0.4348	5.1999	2.9698	7.3000e-003		0.1930	0.1930		0.1776	0.1776		706.8884	706.8884	0.2286		712.6040
Total	0.4348	5.1999	2.9698	7.3000e-003	0.8081	0.1930	1.0011	0.0878	0.1776	0.2654		706.8884	706.8884	0.2286		712.6040

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### 3.2 230-kV Transmission Site Work Area Preparation Mobilization - 2022

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0650	2.2878	0.5415	6.6800e-003	0.1514	9.0900e-003	0.1604	0.0415	8.7000e-003	0.0502		722.6477	722.6477	0.0421		723.6996
Vendor	0.0533	1.5702	0.4231	4.8000e-003	0.1324	5.9200e-003	0.1383	0.0381	5.6700e-003	0.0437		512.0216	512.0216	0.0218		512.5671
Worker	0.0683	0.0503	0.5220	1.4700e-003	0.1674	1.0400e-003	0.1684	0.0444	9.6000e-004	0.0454		146.7023	146.7023	4.1800e-003		146.8069
Total	0.1866	3.9083	1.4867	0.0130	0.4511	0.0161	0.4671	0.1239	0.0153	0.1393		1,381.3716	1,381.3716	0.0681		1,383.0736

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3152	0.0000	0.3152	0.0342	0.0000	0.0342			0.0000			0.0000
Off-Road	0.4348	5.1999	2.9698	7.3000e-003		0.1930	0.1930		0.1776	0.1776	0.0000	706.8884	706.8884	0.2286		712.6040
Total	0.4348	5.1999	2.9698	7.3000e-003	0.3152	0.1930	0.5081	0.0342	0.1776	0.2118	0.0000	706.8884	706.8884	0.2286		712.6040

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### 3.2 230-kV Transmission Site Work Area Preparation Mobilization - 2022

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0650	2.2878	0.5415	6.6800e-003	0.1514	9.0900e-003	0.1604	0.0415	8.7000e-003	0.0502		722.6477	722.6477	0.0421		723.6996
Vendor	0.0533	1.5702	0.4231	4.8000e-003	0.1324	5.9200e-003	0.1383	0.0381	5.6700e-003	0.0437		512.0216	512.0216	0.0218		512.5671
Worker	0.0683	0.0503	0.5220	1.4700e-003	0.1674	1.0400e-003	0.1684	0.0444	9.6000e-004	0.0454		146.7023	146.7023	4.1800e-003		146.8069
Total	0.1866	3.9083	1.4867	0.0130	0.4511	0.0161	0.4671	0.1239	0.0153	0.1393		1,381.3716	1,381.3716	0.0681		1,383.0736

### 3.3 230-kV Transmission Foundation Tower Installation Remove two towers - 2022

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7490	16.2551	10.7389	0.0358		0.6653	0.6653		0.6121	0.6121		3,466.3790	3,466.3790	1.1211		3,494.4065
Total	1.7490	16.2551	10.7389	0.0358		0.6653	0.6653		0.6121	0.6121		3,466.3790	3,466.3790	1.1211		3,494.4065

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### 3.3 230-kV Transmission Foundation Tower Installation Remove two towers - 2022

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0581	1.7130	0.4616	5.2400e-003	0.1444	6.4600e-003	0.1508	0.0415	6.1800e-003	0.0477		558.5690	558.5690	0.0238		559.1641
Worker	0.0932	0.0686	0.7118	2.0100e-003	0.2282	1.4200e-003	0.2296	0.0605	1.3000e-003	0.0618		200.0486	200.0486	5.7100e-003		200.1912
<b>Total</b>	<b>0.1513</b>	<b>1.7815</b>	<b>1.1734</b>	<b>7.2500e-003</b>	<b>0.3726</b>	<b>7.8800e-003</b>	<b>0.3805</b>	<b>0.1021</b>	<b>7.4800e-003</b>	<b>0.1096</b>		<b>758.6176</b>	<b>758.6176</b>	<b>0.0295</b>		<b>759.3553</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7490	16.2551	10.7389	0.0358		0.6653	0.6653		0.6121	0.6121	0.0000	3,466.3790	3,466.3790	1.1211		3,494.4065
<b>Total</b>	<b>1.7490</b>	<b>16.2551</b>	<b>10.7389</b>	<b>0.0358</b>		<b>0.6653</b>	<b>0.6653</b>		<b>0.6121</b>	<b>0.6121</b>	<b>0.0000</b>	<b>3,466.3790</b>	<b>3,466.3790</b>	<b>1.1211</b>		<b>3,494.4065</b>

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### 3.3 230-kV Transmission Foundation Tower Installation Remove two towers - 2022

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0581	1.7130	0.4616	5.2400e-003	0.1444	6.4600e-003	0.1508	0.0415	6.1800e-003	0.0477		558.5690	558.5690	0.0238		559.1641
Worker	0.0932	0.0686	0.7118	2.0100e-003	0.2282	1.4200e-003	0.2296	0.0605	1.3000e-003	0.0618		200.0486	200.0486	5.7100e-003		200.1912
Total	0.1513	1.7815	1.1734	7.2500e-003	0.3726	7.8800e-003	0.3805	0.1021	7.4800e-003	0.1096		758.6176	758.6176	0.0295		759.3553

### 3.4 Reconductoring Segment Site Development Mobilization - 2022

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7954	0.0000	0.7954	0.0859	0.0000	0.0859			0.0000			0.0000
Off-Road	0.3936	4.7810	2.4103	6.5200e-003		0.1705	0.1705		0.1568	0.1568		631.5787	631.5787	0.2043		636.6853
Total	0.3936	4.7810	2.4103	6.5200e-003	0.7954	0.1705	0.9658	0.0859	0.1568	0.2427		631.5787	631.5787	0.2043		636.6853



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**3.4 Reconductoring Segment Site Development Mobilization - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0484	1.4275	0.3847	4.3700e-003	0.1203	5.3900e-003	0.1257	0.0346	5.1500e-003	0.0398		465.4742	465.4742	0.0198		465.9701
Worker	0.0471	0.0330	0.3453	9.3000e-004	0.1051	6.8000e-004	0.1057	0.0279	6.2000e-004	0.0285		92.9548	92.9548	2.7200e-003		93.0228
Total	0.0955	1.4604	0.7300	5.3000e-003	0.2254	6.0700e-003	0.2314	0.0625	5.7700e-003	0.0683		558.4290	558.4290	0.0226		558.9929

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3102	0.0000	0.3102	0.0335	0.0000	0.0335			0.0000			0.0000
Off-Road	0.3936	4.7810	2.4103	6.5200e-003		0.1705	0.1705		0.1568	0.1568	0.0000	631.5787	631.5787	0.2043		636.6853
Total	0.3936	4.7810	2.4103	6.5200e-003	0.3102	0.1705	0.4807	0.0335	0.1568	0.1903	0.0000	631.5787	631.5787	0.2043		636.6853

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**3.4 Reconductoring Segment Site Development Mobilization - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0484	1.4275	0.3847	4.3700e-003	0.1203	5.3900e-003	0.1257	0.0346	5.1500e-003	0.0398		465.4742	465.4742	0.0198		465.9701
Worker	0.0471	0.0330	0.3453	9.3000e-004	0.1051	6.8000e-004	0.1057	0.0279	6.2000e-004	0.0285		92.9548	92.9548	2.7200e-003		93.0228
Total	0.0955	1.4604	0.7300	5.3000e-003	0.2254	6.0700e-003	0.2314	0.0625	5.7700e-003	0.0683		558.4290	558.4290	0.0226		558.9929

**3.5 Reconductoring Segment Pole Installation Transfer Distribution Pole Removal - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7144	16.6546	10.2236	0.0373		0.6496	0.6496		0.5977	0.5977		3,611.1243	3,611.1243	1.1679		3,640.3221
Total	1.7144	16.6546	10.2236	0.0373		0.6496	0.6496		0.5977	0.5977		3,611.1243	3,611.1243	1.1679		3,640.3221

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### 3.5 Reconductoring Segment Pole Installation Transfer Distribution Pole Removal - 2022

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0630	1.8557	0.5001	5.6800e-003	0.1564	7.0000e-003	0.1634	0.0450	6.7000e-003	0.0517		605.1165	605.1165	0.0258		605.7611
Worker	0.0886	0.0596	0.6289	1.6400e-003	0.1828	1.2200e-003	0.1841	0.0485	1.1200e-003	0.0496		163.1212	163.1212	4.8800e-003		163.2433
<b>Total</b>	<b>0.1516</b>	<b>1.9153</b>	<b>1.1289</b>	<b>7.3200e-003</b>	<b>0.3392</b>	<b>8.2200e-003</b>	<b>0.3475</b>	<b>0.0935</b>	<b>7.8200e-003</b>	<b>0.1013</b>		<b>768.2377</b>	<b>768.2377</b>	<b>0.0307</b>		<b>769.0044</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7144	16.6546	10.2236	0.0373		0.6496	0.6496		0.5977	0.5977	0.0000	3,611.1243	3,611.1243	1.1679		3,640.3221
<b>Total</b>	<b>1.7144</b>	<b>16.6546</b>	<b>10.2236</b>	<b>0.0373</b>		<b>0.6496</b>	<b>0.6496</b>		<b>0.5977</b>	<b>0.5977</b>	<b>0.0000</b>	<b>3,611.1243</b>	<b>3,611.1243</b>	<b>1.1679</b>		<b>3,640.3221</b>

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### 3.5 Reconductoring Segment Pole Installation Transfer Distribution Pole Removal - 2022

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0630	1.8557	0.5001	5.6800e-003	0.1564	7.0000e-003	0.1634	0.0450	6.7000e-003	0.0517		605.1165	605.1165	0.0258		605.7611
Worker	0.0886	0.0596	0.6289	1.6400e-003	0.1828	1.2200e-003	0.1841	0.0485	1.1200e-003	0.0496		163.1212	163.1212	4.8800e-003		163.2433
Total	0.1516	1.9153	1.1289	7.3200e-003	0.3392	8.2200e-003	0.3475	0.0935	7.8200e-003	0.1013		768.2377	768.2377	0.0307		769.0044

### 3.5 Reconductoring Segment Pole Installation Transfer Distribution Pole Removal - 2023

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6258	15.0514	9.9920	0.0373		0.5892	0.5892		0.5421	0.5421		3,613.6088	3,613.6088	1.1687		3,642.8266
Total	1.6258	15.0514	9.9920	0.0373		0.5892	0.5892		0.5421	0.5421		3,613.6088	3,613.6088	1.1687		3,642.8266

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### 3.5 Reconductoring Segment Pole Installation Transfer Distribution Pole Removal - 2023

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0474	1.4333	0.4421	5.5600e-003	0.1564	3.3100e-003	0.1598	0.0450	3.1700e-003	0.0482		593.7102	593.7102	0.0239		594.3085
Worker	0.0829	0.0536	0.5744	1.5800e-003	0.1828	1.1900e-003	0.1840	0.0485	1.0900e-003	0.0496		157.0149	157.0149	4.3600e-003		157.1240
Total	0.1302	1.4868	1.0165	7.1400e-003	0.3393	4.5000e-003	0.3438	0.0935	4.2600e-003	0.0978		750.7251	750.7251	0.0283		751.4325

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6258	15.0514	9.9920	0.0373		0.5892	0.5892		0.5421	0.5421	0.0000	3,613.6088	3,613.6088	1.1687		3,642.8266
Total	1.6258	15.0514	9.9920	0.0373		0.5892	0.5892		0.5421	0.5421	0.0000	3,613.6088	3,613.6088	1.1687		3,642.8266

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### 3.5 Reconductoring Segment Pole Installation Transfer Distribution Pole Removal - 2023

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0474	1.4333	0.4421	5.5600e-003	0.1564	3.3100e-003	0.1598	0.0450	3.1700e-003	0.0482		593.7102	593.7102	0.0239		594.3085
Worker	0.0829	0.0536	0.5744	1.5800e-003	0.1828	1.1900e-003	0.1840	0.0485	1.0900e-003	0.0496		157.0149	157.0149	4.3600e-003		157.1240
<b>Total</b>	<b>0.1302</b>	<b>1.4868</b>	<b>1.0165</b>	<b>7.1400e-003</b>	<b>0.3393</b>	<b>4.5000e-003</b>	<b>0.3438</b>	<b>0.0935</b>	<b>4.2600e-003</b>	<b>0.0978</b>		<b>750.7251</b>	<b>750.7251</b>	<b>0.0283</b>		<b>751.4325</b>

### 3.6 230-kV Substation Access Roads - 2022

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.3863	11.3787	11.1933	0.0327		0.4721	0.4721		0.4344	0.4344		3,160.4485	3,160.4485	1.0222		3,186.0023
<b>Total</b>	<b>1.3863</b>	<b>11.3787</b>	<b>11.1933</b>	<b>0.0327</b>	<b>0.0000</b>	<b>0.4721</b>	<b>0.4721</b>	<b>0.0000</b>	<b>0.4344</b>	<b>0.4344</b>		<b>3,160.4485</b>	<b>3,160.4485</b>	<b>1.0222</b>		<b>3,186.0023</b>

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**3.6 230-kV Substation Access Roads - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0635	2.2904	0.6095	3.5200e-003	0.0588	3.7800e-003	0.0625	0.0170	3.6100e-003	0.0206		376.1312	376.1312	0.0291		376.8573
Worker	0.0667	0.0476	0.4969	1.3700e-003	0.1543	9.8000e-004	0.1553	0.0409	9.0000e-004	0.0418		136.0244	136.0244	3.9400e-003		136.1229
Total	0.1303	2.3380	1.1063	4.8900e-003	0.2131	4.7600e-003	0.2178	0.0579	4.5100e-003	0.0624		512.1556	512.1556	0.0330		512.9802

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.3863	11.3787	11.1933	0.0327		0.4721	0.4721		0.4344	0.4344	0.0000	3,160.4485	3,160.4485	1.0222		3,186.0023
Total	1.3863	11.3787	11.1933	0.0327	0.0000	0.4721	0.4721	0.0000	0.4344	0.4344	0.0000	3,160.4485	3,160.4485	1.0222		3,186.0023

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**3.6 230-kV Substation Access Roads - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0635	2.2904	0.6095	3.5200e-003	0.0588	3.7800e-003	0.0625	0.0170	3.6100e-003	0.0206		376.1312	376.1312	0.0291		376.8573
Worker	0.0667	0.0476	0.4969	1.3700e-003	0.1543	9.8000e-004	0.1553	0.0409	9.0000e-004	0.0418		136.0244	136.0244	3.9400e-003		136.1229
Total	0.1303	2.3380	1.1063	4.8900e-003	0.2131	4.7600e-003	0.2178	0.0579	4.5100e-003	0.0624		512.1556	512.1556	0.0330		512.9802

**3.7 230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.2392	0.0000	7.2392	3.4427	0.0000	3.4427			0.0000			0.0000
Off-Road	6.6584	59.5744	42.1219	0.1410		2.3287	2.3287		2.1424	2.1424		13,644.8698	13,644.8698	4.4130		13,755.1955
Total	6.6584	59.5744	42.1219	0.1410	7.2392	2.3287	9.5680	3.4427	2.1424	5.5851		13,644.8698	13,644.8698	4.4130		13,755.1955



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### 3.7 230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization - 2022

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1228	4.3226	1.0232	0.0126	0.2860	0.0172	0.3031	0.0784	0.0164	0.0948		1,365.3872	1,365.3872	0.0795		1,367.3747
Vendor	0.0523	1.9434	0.5162	2.5800e-003	0.0340	2.6300e-003	0.0367	9.8700e-003	2.5100e-003	0.0124		275.4384	275.4384	0.0243		276.0463
Worker	0.0690	0.0486	0.5079	1.3800e-003	0.1553	1.0000e-003	0.1563	0.0412	9.2000e-004	0.0421		137.2892	137.2892	4.0100e-003		137.3894
Total	0.2440	6.3146	2.0473	0.0166	0.4753	0.0208	0.4961	0.1294	0.0199	0.1493		1,778.1148	1,778.1148	0.1078		1,780.8104

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8233	0.0000	2.8233	1.3427	0.0000	1.3427			0.0000			0.0000
Off-Road	6.6584	59.5744	42.1219	0.1410		2.3287	2.3287		2.1424	2.1424	0.0000	13,644.8698	13,644.8698	4.4130		13,755.1955
Total	6.6584	59.5744	42.1219	0.1410	2.8233	2.3287	5.1520	1.3427	2.1424	3.4851	0.0000	13,644.8698	13,644.8698	4.4130		13,755.1955

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Estrella Substation and Paso Robles Area Reinforcement Project - San Luis Obispo County, Summer

### 3.7 230-kV Substation Site Prep Grading Entrance Road Culverts Mobilization - 2022

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1228	4.3226	1.0232	0.0126	0.2860	0.0172	0.3031	0.0784	0.0164	0.0948		1,365.3872	1,365.3872	0.0795		1,367.3747
Vendor	0.0523	1.9434	0.5162	2.5800e-003	0.0340	2.6300e-003	0.0367	9.8700e-003	2.5100e-003	0.0124		275.4384	275.4384	0.0243		276.0463
Worker	0.0690	0.0486	0.5079	1.3800e-003	0.1553	1.0000e-003	0.1563	0.0412	9.2000e-004	0.0421		137.2892	137.2892	4.0100e-003		137.3894
Total	0.2440	6.3146	2.0473	0.0166	0.4753	0.0208	0.4961	0.1294	0.0199	0.1493		1,778.1148	1,778.1148	0.1078		1,780.8104

### 3.8 230-kV Substation Fence and Gate Installation - 2022

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0348	0.4643	0.6936	1.0400e-003		0.0173	0.0173		0.0159	0.0159		100.1956	100.1956	0.0324		101.0058
Total	0.0348	0.4643	0.6936	1.0400e-003		0.0173	0.0173		0.0159	0.0159		100.1956	100.1956	0.0324		101.0058

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**3.8 230-kV Substation Fence and Gate Installation - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0574	2.0722	0.5513	3.1600e-003	0.0520	3.3700e-003	0.0554	0.0150	3.2300e-003	0.0183		337.1875	337.1875	0.0263		337.8439
Worker	0.0403	0.0267	0.2821	7.2000e-004	0.0805	5.4000e-004	0.0810	0.0214	5.0000e-004	0.0219		72.0390	72.0390	2.1800e-003		72.0934
Total	0.0976	2.0989	0.8334	3.8800e-003	0.1325	3.9100e-003	0.1364	0.0364	3.7300e-003	0.0401		409.2265	409.2265	0.0284		409.9373

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0348	0.4643	0.6936	1.0400e-003		0.0173	0.0173		0.0159	0.0159	0.0000	100.1956	100.1956	0.0324		101.0058
Total	0.0348	0.4643	0.6936	1.0400e-003		0.0173	0.0173		0.0159	0.0159	0.0000	100.1956	100.1956	0.0324		101.0058

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**3.8 230-kV Substation Fence and Gate Installation - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0574	2.0722	0.5513	3.1600e-003	0.0520	3.3700e-003	0.0554	0.0150	3.2300e-003	0.0183		337.1875	337.1875	0.0263		337.8439
Worker	0.0403	0.0267	0.2821	7.2000e-004	0.0805	5.4000e-004	0.0810	0.0214	5.0000e-004	0.0219		72.0390	72.0390	2.1800e-003		72.0934
Total	0.0976	2.0989	0.8334	3.8800e-003	0.1325	3.9100e-003	0.1364	0.0364	3.7300e-003	0.0401		409.2265	409.2265	0.0284		409.9373

**3.9 Reconductoring Segment Conductor Installation - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8207	21.9934	19.2902	0.0672		0.8771	0.8771		0.8069	0.8069		6,502.7190	6,502.7190	2.1031		6,555.2967
Total	2.8207	21.9934	19.2902	0.0672		0.8771	0.8771		0.8069	0.8069		6,502.7190	6,502.7190	2.1031		6,555.2967

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**3.9 Reconductoring Segment Conductor Installation - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0484	1.4275	0.3847	4.3700e-003	0.1203	5.3900e-003	0.1257	0.0346	5.1500e-003	0.0398		465.4742	465.4742	0.0198		465.9701
Worker	0.0722	0.0504	0.5278	1.4200e-003	0.1598	1.0300e-003	0.1609	0.0424	9.5000e-004	0.0434		141.5235	141.5235	4.1500e-003		141.6273
Total	0.1207	1.4778	0.9125	5.7900e-003	0.2801	6.4200e-003	0.2866	0.0770	6.1000e-003	0.0831		606.9977	606.9977	0.0240		607.5974

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8207	21.9934	19.2902	0.0672		0.8771	0.8771		0.8069	0.8069	0.0000	6,502.7189	6,502.7189	2.1031		6,555.2967
Total	2.8207	21.9934	19.2902	0.0672		0.8771	0.8771		0.8069	0.8069	0.0000	6,502.7189	6,502.7189	2.1031		6,555.2967

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**3.9 Reconductoring Segment Conductor Installation - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0484	1.4275	0.3847	4.3700e-003	0.1203	5.3900e-003	0.1257	0.0346	5.1500e-003	0.0398		465.4742	465.4742	0.0198		465.9701
Worker	0.0722	0.0504	0.5278	1.4200e-003	0.1598	1.0300e-003	0.1609	0.0424	9.5000e-004	0.0434		141.5235	141.5235	4.1500e-003		141.6273
Total	0.1207	1.4778	0.9125	5.7900e-003	0.2801	6.4200e-003	0.2866	0.0770	6.1000e-003	0.0831		606.9977	606.9977	0.0240		607.5974

**3.9 Reconductoring Segment Conductor Installation - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6753	19.6218	18.9364	0.0672		0.7684	0.7684		0.7069	0.7069		6,507.0092	6,507.0092	2.1045		6,559.6217
Total	2.6753	19.6218	18.9364	0.0672		0.7684	0.7684		0.7069	0.7069		6,507.0092	6,507.0092	2.1045		6,559.6217

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**3.9 Reconductoring Segment Conductor Installation - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0364	1.1025	0.3401	4.2800e-003	0.1203	2.5500e-003	0.1229	0.0346	2.4400e-003	0.0371		456.7001	456.7001	0.0184		457.1604
Worker	0.0676	0.0453	0.4824	1.3700e-003	0.1598	1.0100e-003	0.1608	0.0424	9.3000e-004	0.0433		136.2222	136.2222	3.7100e-003		136.3150
Total	0.1040	1.1478	0.8224	5.6500e-003	0.2802	3.5600e-003	0.2837	0.0770	3.3700e-003	0.0804		592.9224	592.9224	0.0221		593.4753

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6753	19.6218	18.9364	0.0672		0.7684	0.7684		0.7069	0.7069	0.0000	6,507.0092	6,507.0092	2.1045		6,559.6216
Total	2.6753	19.6218	18.9364	0.0672		0.7684	0.7684		0.7069	0.7069	0.0000	6,507.0092	6,507.0092	2.1045		6,559.6216

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**3.9 Reconductoring Segment Conductor Installation - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0364	1.1025	0.3401	4.2800e-003	0.1203	2.5500e-003	0.1229	0.0346	2.4400e-003	0.0371		456.7001	456.7001	0.0184		457.1604
Worker	0.0676	0.0453	0.4824	1.3700e-003	0.1598	1.0100e-003	0.1608	0.0424	9.3000e-004	0.0433		136.2222	136.2222	3.7100e-003		136.3150
Total	0.1040	1.1478	0.8224	5.6500e-003	0.2802	3.5600e-003	0.2837	0.0770	3.3700e-003	0.0804		592.9224	592.9224	0.0221		593.4753

**3.10 230-kV Substation Foundation Construction - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5602	5.9289	4.6226	0.0150		0.2377	0.2377		0.2187	0.2187		1,451.1041	1,451.1041	0.4693		1,462.8371
Total	0.5602	5.9289	4.6226	0.0150		0.2377	0.2377		0.2187	0.2187		1,451.1041	1,451.1041	0.4693		1,462.8371



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**3.10 230-kV Substation Foundation Construction - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0593	2.1413	0.5697	3.2600e-003	0.0538	3.4900e-003	0.0573	0.0155	3.3300e-003	0.0189		348.4271	348.4271	0.0271		349.1053
Worker	0.0608	0.0434	0.4525	1.2400e-003	0.1403	8.9000e-004	0.1412	0.0372	8.2000e-004	0.0380		123.6949	123.6949	3.5900e-003		123.7846
Total	0.1201	2.1847	1.0222	4.5000e-003	0.1941	4.3800e-003	0.1984	0.0528	4.1500e-003	0.0569		472.1220	472.1220	0.0307		472.8899

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5602	5.9289	4.6226	0.0150		0.2377	0.2377		0.2187	0.2187	0.0000	1,451.1041	1,451.1041	0.4693		1,462.8371
Total	0.5602	5.9289	4.6226	0.0150		0.2377	0.2377		0.2187	0.2187	0.0000	1,451.1041	1,451.1041	0.4693		1,462.8371

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**3.10 230-kV Substation Foundation Construction - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0593	2.1413	0.5697	3.2600e-003	0.0538	3.4900e-003	0.0573	0.0155	3.3300e-003	0.0189		348.4271	348.4271	0.0271		349.1053
Worker	0.0608	0.0434	0.4525	1.2400e-003	0.1403	8.9000e-004	0.1412	0.0372	8.2000e-004	0.0380		123.6949	123.6949	3.5900e-003		123.7846
Total	0.1201	2.1847	1.0222	4.5000e-003	0.1941	4.3800e-003	0.1984	0.0528	4.1500e-003	0.0569		472.1220	472.1220	0.0307		472.8899

**3.11 70-kV Substation Mobilization - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2651	0.0000	0.2651	0.0286	0.0000	0.0286			0.0000			0.0000
Off-Road	0.2899	3.4666	1.9799	4.8700e-003		0.1287	0.1287		0.1184	0.1184		471.2589	471.2589	0.1524		475.0693
Total	0.2899	3.4666	1.9799	4.8700e-003	0.2651	0.1287	0.3938	0.0286	0.1184	0.1470		471.2589	471.2589	0.1524		475.0693

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**3.11 70-kV Substation Mobilization - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0291	0.8565	0.2308	2.6200e-003	0.0722	3.2300e-003	0.0754	0.0208	3.0900e-003	0.0239		279.2845	279.2845	0.0119		279.5620
Worker	0.0419	0.0294	0.3072	8.3000e-004	0.0935	6.0000e-004	0.0941	0.0248	5.6000e-004	0.0254		82.7298	82.7298	2.4200e-003		82.7903
<b>Total</b>	<b>0.0709</b>	<b>0.8858</b>	<b>0.5380</b>	<b>3.4500e-003</b>	<b>0.1657</b>	<b>3.8300e-003</b>	<b>0.1695</b>	<b>0.0456</b>	<b>3.6500e-003</b>	<b>0.0492</b>		<b>362.0143</b>	<b>362.0143</b>	<b>0.0143</b>		<b>362.3723</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1034	0.0000	0.1034	0.0112	0.0000	0.0112			0.0000			0.0000
Off-Road	0.2899	3.4666	1.9799	4.8700e-003		0.1287	0.1287		0.1184	0.1184	0.0000	471.2589	471.2589	0.1524		475.0693
<b>Total</b>	<b>0.2899</b>	<b>3.4666</b>	<b>1.9799</b>	<b>4.8700e-003</b>	<b>0.1034</b>	<b>0.1287</b>	<b>0.2321</b>	<b>0.0112</b>	<b>0.1184</b>	<b>0.1295</b>	<b>0.0000</b>	<b>471.2589</b>	<b>471.2589</b>	<b>0.1524</b>		<b>475.0693</b>

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**3.11 70-kV Substation Mobilization - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0291	0.8565	0.2308	2.6200e-003	0.0722	3.2300e-003	0.0754	0.0208	3.0900e-003	0.0239		279.2845	279.2845	0.0119		279.5620
Worker	0.0419	0.0294	0.3072	8.3000e-004	0.0935	6.0000e-004	0.0941	0.0248	5.6000e-004	0.0254		82.7298	82.7298	2.4200e-003		82.7903
Total	0.0709	0.8858	0.5380	3.4500e-003	0.1657	3.8300e-003	0.1695	0.0456	3.6500e-003	0.0492		362.0143	362.0143	0.0143		362.3723

**3.12 70-kV Substation Foundation Construction - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7527	7.3217	6.8781	0.0159		0.4023	0.4023		0.3702	0.3702		1,541.7492	1,541.7492	0.4986		1,554.2150
Total	0.7527	7.3217	6.8781	0.0159		0.4023	0.4023		0.3702	0.3702		1,541.7492	1,541.7492	0.4986		1,554.2150

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**3.12 70-kV Substation Foundation Construction - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0630	1.8557	0.5001	5.6800e-003	0.1564	7.0000e-003	0.1634	0.0450	6.7000e-003	0.0517		605.1165	605.1165	0.0258		605.7611
Worker	0.0612	0.0437	0.4555	1.2500e-003	0.1415	9.0000e-004	0.1424	0.0375	8.3000e-004	0.0384		124.6891	124.6891	3.6100e-003		124.7794
Total	0.1241	1.8994	0.9556	6.9300e-003	0.2979	7.9000e-003	0.3058	0.0825	7.5300e-003	0.0900		729.8055	729.8055	0.0294		730.5405

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7527	7.3217	6.8781	0.0159		0.4023	0.4023		0.3702	0.3702	0.0000	1,541.7492	1,541.7492	0.4986		1,554.2150
Total	0.7527	7.3217	6.8781	0.0159		0.4023	0.4023		0.3702	0.3702	0.0000	1,541.7492	1,541.7492	0.4986		1,554.2150

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**3.12 70-kV Substation Foundation Construction - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0630	1.8557	0.5001	5.6800e-003	0.1564	7.0000e-003	0.1634	0.0450	6.7000e-003	0.0517		605.1165	605.1165	0.0258		605.7611
Worker	0.0612	0.0437	0.4555	1.2500e-003	0.1415	9.0000e-004	0.1424	0.0375	8.3000e-004	0.0384		124.6891	124.6891	3.6100e-003		124.7794
Total	0.1241	1.8994	0.9556	6.9300e-003	0.2979	7.9000e-003	0.3058	0.0825	7.5300e-003	0.0900		729.8055	729.8055	0.0294		730.5405

**3.13 70-kV Substation Ground Grid Conduit Installation - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3964	3.7915	3.6277	4.8600e-003		0.2472	0.2472		0.2274	0.2274		471.1413	471.1413	0.1524		474.9507
Total	0.3964	3.7915	3.6277	4.8600e-003		0.2472	0.2472		0.2274	0.2274		471.1413	471.1413	0.1524		474.9507

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**3.13 70-kV Substation Ground Grid Conduit Installation - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0436	1.2847	0.3462	3.9300e-003	0.1083	4.8500e-003	0.1131	0.0312	4.6400e-003	0.0358		418.9268	418.9268	0.0179		419.3731
Worker	0.0334	0.0238	0.2485	6.8000e-004	0.0772	4.9000e-004	0.0776	0.0205	4.5000e-004	0.0209		68.0122	68.0122	1.9700e-003		68.0615
Total	0.0770	1.3085	0.5947	4.6100e-003	0.1854	5.3400e-003	0.1908	0.0516	5.0900e-003	0.0567		486.9390	486.9390	0.0198		487.4345

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3964	3.7915	3.6277	4.8600e-003		0.2472	0.2472		0.2274	0.2274	0.0000	471.1413	471.1413	0.1524		474.9507
Total	0.3964	3.7915	3.6277	4.8600e-003		0.2472	0.2472		0.2274	0.2274	0.0000	471.1413	471.1413	0.1524		474.9507

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**3.13 70-kV Substation Ground Grid Conduit Installation - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0436	1.2847	0.3462	3.9300e-003	0.1083	4.8500e-003	0.1131	0.0312	4.6400e-003	0.0358		418.9268	418.9268	0.0179		419.3731
Worker	0.0334	0.0238	0.2485	6.8000e-004	0.0772	4.9000e-004	0.0776	0.0205	4.5000e-004	0.0209		68.0122	68.0122	1.9700e-003		68.0615
Total	0.0770	1.3085	0.5947	4.6100e-003	0.1854	5.3400e-003	0.1908	0.0516	5.0900e-003	0.0567		486.9390	486.9390	0.0198		487.4345

**3.14 230-kV Substation Ground Grid Conduit Installation - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3639	3.3797	2.5990	3.3700e-003		0.2395	0.2395		0.2203	0.2203		326.9494	326.9494	0.1057		329.5930
Total	0.3639	3.3797	2.5990	3.3700e-003		0.2395	0.2395		0.2203	0.2203		326.9494	326.9494	0.1057		329.5930



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**3.14 230-kV Substation Ground Grid Conduit Installation - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0483	1.8230	0.4839	2.2400e-003	0.0251	2.2200e-003	0.0274	7.3000e-003	2.1200e-003	9.4300e-003		239.6258	239.6258	0.0227		240.1926
Worker	0.0351	0.0254	0.2648	7.4000e-004	0.0835	5.2000e-004	0.0841	0.0222	4.8000e-004	0.0226		73.4348	73.4348	2.1100e-003		73.4876
Total	0.0834	1.8485	0.7487	2.9800e-003	0.1087	2.7400e-003	0.1114	0.0295	2.6000e-003	0.0321		313.0606	313.0606	0.0248		313.6802

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3639	3.3797	2.5990	3.3700e-003		0.2395	0.2395		0.2203	0.2203	0.0000	326.9494	326.9494	0.1057		329.5930
Total	0.3639	3.3797	2.5990	3.3700e-003		0.2395	0.2395		0.2203	0.2203	0.0000	326.9494	326.9494	0.1057		329.5930

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**3.14 230-kV Substation Ground Grid Conduit Installation - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0483	1.8230	0.4839	2.2400e-003	0.0251	2.2200e-003	0.0274	7.3000e-003	2.1200e-003	9.4300e-003		239.6258	239.6258	0.0227		240.1926
Worker	0.0351	0.0254	0.2648	7.4000e-004	0.0835	5.2000e-004	0.0841	0.0222	4.8000e-004	0.0226		73.4348	73.4348	2.1100e-003		73.4876
<b>Total</b>	<b>0.0834</b>	<b>1.8485</b>	<b>0.7487</b>	<b>2.9800e-003</b>	<b>0.1087</b>	<b>2.7400e-003</b>	<b>0.1114</b>	<b>0.0295</b>	<b>2.6000e-003</b>	<b>0.0321</b>		<b>313.0606</b>	<b>313.0606</b>	<b>0.0248</b>		<b>313.6802</b>

**3.15 230-kV Substation Steel Bus Erection - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5550	4.4273	4.1662	0.0145		0.1536	0.1536		0.1413	0.1413		1,399.0142	1,399.0142	0.4525		1,410.3260
<b>Total</b>	<b>0.5550</b>	<b>4.4273</b>	<b>4.1662</b>	<b>0.0145</b>		<b>0.1536</b>	<b>0.1536</b>		<b>0.1413</b>	<b>0.1413</b>		<b>1,399.0142</b>	<b>1,399.0142</b>	<b>0.4525</b>		<b>1,410.3260</b>

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**3.15 230-kV Substation Steel Bus Erection - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0523	1.9434	0.5162	2.5800e-003	0.0340	2.6300e-003	0.0367	9.8700e-003	2.5100e-003	0.0124		275.4384	275.4384	0.0243		276.0463
Worker	0.0362	0.0264	0.2744	7.7000e-004	0.0873	5.4000e-004	0.0878	0.0232	5.0000e-004	0.0237		76.6109	76.6109	2.1900e-003		76.6658
Total	0.0884	1.9698	0.7906	3.3500e-003	0.1213	3.1700e-003	0.1245	0.0330	3.0100e-003	0.0360		352.0493	352.0493	0.0265		352.7121

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5550	4.4273	4.1662	0.0145		0.1536	0.1536		0.1413	0.1413	0.0000	1,399.0142	1,399.0142	0.4525		1,410.3260
Total	0.5550	4.4273	4.1662	0.0145		0.1536	0.1536		0.1413	0.1413	0.0000	1,399.0142	1,399.0142	0.4525		1,410.3260

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**3.15 230-kV Substation Steel Bus Erection - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0523	1.9434	0.5162	2.5800e-003	0.0340	2.6300e-003	0.0367	9.8700e-003	2.5100e-003	0.0124		275.4384	275.4384	0.0243		276.0463
Worker	0.0362	0.0264	0.2744	7.7000e-004	0.0873	5.4000e-004	0.0878	0.0232	5.0000e-004	0.0237		76.6109	76.6109	2.1900e-003		76.6658
Total	0.0884	1.9698	0.7906	3.3500e-003	0.1213	3.1700e-003	0.1245	0.0330	3.0100e-003	0.0360		352.0493	352.0493	0.0265		352.7121

**3.15 230-kV Substation Steel Bus Erection - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5294	3.9615	4.0945	0.0145		0.1358	0.1358		0.1250	0.1250		1,399.9174	1,399.9174	0.4528		1,411.2365
Total	0.5294	3.9615	4.0945	0.0145		0.1358	0.1358		0.1250	0.1250		1,399.9174	1,399.9174	0.4528		1,411.2365

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**3.15 230-kV Substation Steel Bus Erection - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0406	1.7137	0.4549	2.5500e-003	0.0340	1.1600e-003	0.0352	9.8700e-003	1.1100e-003	0.0110		272.7425	272.7425	0.0206		273.2586
Worker	0.0339	0.0237	0.2510	7.4000e-004	0.0873	5.3000e-004	0.0878	0.0232	4.9000e-004	0.0236		73.7389	73.7389	1.9600e-003		73.7879
Total	0.0745	1.7375	0.7059	3.2900e-003	0.1213	1.6900e-003	0.1230	0.0330	1.6000e-003	0.0346		346.4814	346.4814	0.0226		347.0465

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5294	3.9615	4.0945	0.0145		0.1358	0.1358		0.1250	0.1250	0.0000	1,399.9174	1,399.9174	0.4528		1,411.2365
Total	0.5294	3.9615	4.0945	0.0145		0.1358	0.1358		0.1250	0.1250	0.0000	1,399.9174	1,399.9174	0.4528		1,411.2365

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**3.15 230-kV Substation Steel Bus Erection - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0406	1.7137	0.4549	2.5500e-003	0.0340	1.1600e-003	0.0352	9.8700e-003	1.1100e-003	0.0110		272.7425	272.7425	0.0206		273.2586
Worker	0.0339	0.0237	0.2510	7.4000e-004	0.0873	5.3000e-004	0.0878	0.0232	4.9000e-004	0.0236		73.7389	73.7389	1.9600e-003		73.7879
Total	0.0745	1.7375	0.7059	3.2900e-003	0.1213	1.6900e-003	0.1230	0.0330	1.6000e-003	0.0346		346.4814	346.4814	0.0226		347.0465

**3.16 230-kV Substation Install Yard Rock - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7475	6.1779	5.9324	0.0191		0.2256	0.2256		0.2075	0.2075		1,849.2207	1,849.2207	0.5981		1,864.1726
Total	0.7475	6.1779	5.9324	0.0191		0.2256	0.2256		0.2075	0.2075		1,849.2207	1,849.2207	0.5981		1,864.1726

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**3.16 230-kV Substation Install Yard Rock - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1668	5.1391	1.3808	0.0139	0.3619	0.0168	0.3787	0.1042	0.0161	0.1202		1,479.0425	1,479.0425	0.0699		1,480.7909
Worker	0.0520	0.0375	0.3909	1.0800e-003	0.1228	7.7000e-004	0.1236	0.0326	7.1000e-004	0.0333		108.0607	108.0607	3.1100e-003		108.1385
<b>Total</b>	<b>0.2188</b>	<b>5.1766</b>	<b>1.7717</b>	<b>0.0150</b>	<b>0.4847</b>	<b>0.0176</b>	<b>0.5023</b>	<b>0.1367</b>	<b>0.0168</b>	<b>0.1535</b>		<b>1,587.1032</b>	<b>1,587.1032</b>	<b>0.0730</b>		<b>1,588.9294</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7475	6.1779	5.9324	0.0191		0.2256	0.2256		0.2075	0.2075	0.0000	1,849.2207	1,849.2207	0.5981		1,864.1726
<b>Total</b>	<b>0.7475</b>	<b>6.1779</b>	<b>5.9324</b>	<b>0.0191</b>		<b>0.2256</b>	<b>0.2256</b>		<b>0.2075</b>	<b>0.2075</b>	<b>0.0000</b>	<b>1,849.2207</b>	<b>1,849.2207</b>	<b>0.5981</b>		<b>1,864.1726</b>

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**3.16 230-kV Substation Install Yard Rock - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1668	5.1391	1.3808	0.0139	0.3619	0.0168	0.3787	0.1042	0.0161	0.1202		1,479.0425	1,479.0425	0.0699		1,480.7909
Worker	0.0520	0.0375	0.3909	1.0800e-003	0.1228	7.7000e-004	0.1236	0.0326	7.1000e-004	0.0333		108.0607	108.0607	3.1100e-003		108.1385
Total	0.2188	5.1766	1.7717	0.0150	0.4847	0.0176	0.5023	0.1367	0.0168	0.1535		1,587.1032	1,587.1032	0.0730		1,588.9294

**3.16 230-kV Substation Install Yard Rock - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7112	5.5407	5.8424	0.0191		0.1978	0.1978		0.1820	0.1820		1,850.4684	1,850.4684	0.5985		1,865.4304
Total	0.7112	5.5407	5.8424	0.0191		0.1978	0.1978		0.1820	0.1820		1,850.4684	1,850.4684	0.5985		1,865.4304



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**3.16 230-kV Substation Install Yard Rock - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1262	4.0860	1.2198	0.0136	0.3620	7.9100e-003	0.3699	0.1042	7.5600e-003	0.1117		1,452.5337	1,452.5337	0.0639		1,454.1300
Worker	0.0487	0.0337	0.3574	1.0400e-003	0.1228	7.5000e-004	0.1236	0.0326	6.9000e-004	0.0333		104.0104	104.0104	2.7800e-003		104.0800
Total	0.1750	4.1198	1.5773	0.0146	0.4848	8.6600e-003	0.4935	0.1368	8.2500e-003	0.1450		1,556.5442	1,556.5442	0.0666		1,558.2099

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7112	5.5407	5.8424	0.0191		0.1978	0.1978		0.1820	0.1820	0.0000	1,850.4684	1,850.4684	0.5985		1,865.4304
Total	0.7112	5.5407	5.8424	0.0191		0.1978	0.1978		0.1820	0.1820	0.0000	1,850.4684	1,850.4684	0.5985		1,865.4304

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**3.16 230-kV Substation Install Yard Rock - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1262	4.0860	1.2198	0.0136	0.3620	7.9100e-003	0.3699	0.1042	7.5600e-003	0.1117		1,452.5337	1,452.5337	0.0639		1,454.1300
Worker	0.0487	0.0337	0.3574	1.0400e-003	0.1228	7.5000e-004	0.1236	0.0326	6.9000e-004	0.0333		104.0104	104.0104	2.7800e-003		104.0800
Total	0.1750	4.1198	1.5773	0.0146	0.4848	8.6600e-003	0.4935	0.1368	8.2500e-003	0.1450		1,556.5442	1,556.5442	0.0666		1,558.2099

**3.17 70-kV Substation Steel Bus Erection - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8239	6.4014	7.0821	0.0231		0.2117	0.2117		0.1947	0.1947		2,239.9099	2,239.9099	0.7244		2,258.0207
Total	0.8239	6.4014	7.0821	0.0231		0.2117	0.2117		0.1947	0.1947		2,239.9099	2,239.9099	0.7244		2,258.0207

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**3.17 70-kV Substation Steel Bus Erection - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0328	0.9923	0.3061	3.8500e-003	0.1083	2.2900e-003	0.1106	0.0312	2.1900e-003	0.0334		411.0301	411.0301	0.0166		411.4443
Worker	0.0334	0.0222	0.2372	6.7000e-004	0.0782	4.9000e-004	0.0787	0.0208	4.6000e-004	0.0212		66.7194	66.7194	1.8200e-003		66.7650
Total	0.0662	1.0145	0.5432	4.5200e-003	0.1865	2.7800e-003	0.1893	0.0519	2.6500e-003	0.0546		477.7496	477.7496	0.0184		478.2093

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8239	6.4014	7.0821	0.0231		0.2117	0.2117		0.1947	0.1947	0.0000	2,239.9099	2,239.9099	0.7244		2,258.0207
Total	0.8239	6.4014	7.0821	0.0231		0.2117	0.2117		0.1947	0.1947	0.0000	2,239.9099	2,239.9099	0.7244		2,258.0207

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**3.17 70-kV Substation Steel Bus Erection - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0328	0.9923	0.3061	3.8500e-003	0.1083	2.2900e-003	0.1106	0.0312	2.1900e-003	0.0334		411.0301	411.0301	0.0166		411.4443
Worker	0.0334	0.0222	0.2372	6.7000e-004	0.0782	4.9000e-004	0.0787	0.0208	4.6000e-004	0.0212		66.7194	66.7194	1.8200e-003		66.7650
Total	0.0662	1.0145	0.5432	4.5200e-003	0.1865	2.7800e-003	0.1893	0.0519	2.6500e-003	0.0546		477.7496	477.7496	0.0184		478.2093

**3.18 230-kV Substation Transformer & Equip Delivery & Installation - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8288	13.5256	13.6033	0.0467		0.5180	0.5180		0.4830	0.4830		4,507.8392	4,507.8392	1.3491		4,541.5672
Total	1.8288	13.5256	13.6033	0.0467		0.5180	0.5180		0.4830	0.4830		4,507.8392	4,507.8392	1.3491		4,541.5672