

R-1402 L-130 Sacramento River Crossing Replacement

Table - 1 Peak Onsite Emissions

March 29, 2022

Sacramento Valley Air Basin

Peak Day: ROG Emissions, lbs/day

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	5.64	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.25	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	2.44	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.96	0.96	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.00	0.00	0.00
Total		0.81	5.64	5.64	5.64	2.44	0.96	0.57	0.43	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: NOx Emissions, lbs/day

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	8.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	51.05	51.05	51.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	10.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	9.49	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	4.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	17.31	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	33.58	33.58	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	3.79	3.79	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	8.14	8.14	0.00	0.00	0.00
Total		8.53	51.05	51.05	51.05	33.58	33.58	8.14	8.14	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: CO Emissions, lbs/day

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	10.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	8.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	129.49	129.49	129.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	1.84	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	6.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	31.62	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	11.88	11.88	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	6.29	6.29	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	5.77	5.77	0.00	0.00	0.00
Total		10.03	129.49	129.49	129.49	31.62	11.88	6.29	5.77	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: SOx Emissions, lbs/day

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.30	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00
Total		0.02	0.30	0.30	0.30	0.06	0.05	0.02	0.02	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

R-1402 L-130 Sacramento River Crossing Replacement

Table - 1 Peak Onsite Emissions

March 29, 2022

Sacramento Valley Air Basin

Peak Day: PM₁₀ Emissions, lbs/day

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	1.54	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.17	0.17	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.70	0.70	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.17	0.17	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.00	0.00	0.00
Total		0.35	1.54	1.54	1.54	0.71	0.70	0.18	0.18	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: PM_{2.5} Emissions, lbs/day

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.16	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.68	0.68	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.17	0.17	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.00	0.00	0.00
Total		0.35	1.53	1.53	1.53	0.71	0.68	0.18	0.18	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: N₂O Emissions, lbs/day

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.25	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00
Total		0.02	0.25	0.25	0.25	0.05	0.04	0.02	0.02	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: CH₄ Emissions, lbs/day

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	5.30	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	1.80	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.83	0.83	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.34	0.34	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.28	0.00	0.00	0.00
Total		0.56	5.30	5.30	5.30	1.80	0.83	0.34	0.28	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

R-1402 L-130 Sacramento River Crossing Replacement
Table - 1 Peak Onsite Emissions
 March 29, 2022

Sacramento Valley Air Basin

Peak Day: CO₂ Emissions, lbs/day

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
		1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	2,079.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fabricate 16" Pull Back Strings	2	1,471.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perform HDD Replacement/Tie-In/Commissioning	3	0.0	30,919.7	30,919.7	30,919.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Conduct Pre-Project Riverbed Debris Survey	4	0.0	1,508.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mobilization to Site	5	0.0	1,357.2	1,357.2	1,357.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pig & Flush Crossing	6	0.0	0.0	0.0	454.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cement Pipeline Segments	7	0.0	0.0	0.0	1,418.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavate/Remove Terrestrial Piping	8	0.0	0.0	0.0	0.0	6,064.6	0.0	0.0	0.0	0.0	0.0	0.0
Remove In Water Sections Of Pipe	9	0.0	0.0	0.0	0.0	5,104.4	5,104.4	0.0	0.0	0.0	0.0	0.0
Remove/Abandon in Place Segments	10	0.0	0.0	0.0	0.0	0.0	1,345.6	1,345.6	0.0	0.0	0.0	0.0
Site Restoration	11	0.0	0.0	0.0	0.0	0.0	0.0	1,802.0	1,802.0	0.0	0.0	0.0
Total		2,079	30,920	30,920	30,920	6,065	5,104	1,802	1,802	0	0	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: ROG Emissions, tons

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
		1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total, over 3 months, running		0.02	0.04	0.03	0.05	0.04	0.01	0.00	0.00	0.00	0.00	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: NO_x Emissions, tons

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
		1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.23	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.37	0.37	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00
Total, over 3 months, running		0.15	0.25	0.23	0.31	0.55	0.38	0.03	0.02	0.00	0.00	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: CO Emissions, tons

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
		1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.99	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.13	0.13	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00
Total, over 3 months, running		0.20	1.00	0.99	1.05	0.41	0.14	0.06	0.05	0.00	0.00	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

R-1402 L-130 Sacramento River Crossing Replacement

Table - 1 Peak Onsite Emissions

March 29, 2022

Sacramento Valley Air Basin

Project Total: SOx Emissions, tons

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total, over 3 months, running		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: PM10 Emissions in Tons

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total, over 3 months, running		0.01	0.01	0.01	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: PM2.5 Emissions in Tons

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total, over 3 months, running		0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: N2O Emissions in Tons

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total, over 3 months, running		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

R-1402 L-130 Sacramento River Crossing Replacement

Table - 1 Peak Onsite Emissions

March 29, 2022

Sacramento Valley Air Basin

Project Total: CH4 Emissions in Tons

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
		1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total, over 3 months, running		0.01	0.03	0.03	0.04	0.02	0.01	0.00	0.00	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: CO2 Emissions in Tons

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
		1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	22.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	15.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	231.95	231.95	231.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.44	0.44	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	7.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	51.50	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	55.49	55.49	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	2.32	2.32	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	10.20	10.20	0.00	0.00	0.00
Total, over 3 months, running		38.36	235.71	232.39	244.83	106.99	57.81	12.52	10.20	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: Fugitive Dust Emissions lbs/day

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
		1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.14	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.21	0.21	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.21	0.21	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.21	0.00	0.00	0.00
Total, over 3 months, running		0.83	0.87	0.25	1.28	0.54	0.42	0.42	0.21	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: Fugitive Dust Emissions Tons

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
		1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total, over 3 months, running		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

R-1402 L-130 Sacramento River Crossing Replacement

Table - 2 Peak Offsite and Project Total Emissions

March 29, 2022

Sacramento Valley Air Basin

Peak Day: ROG Emissions, lbs/day

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.06	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	
Total Offsite		0.02	0.06	0.06	0.06	0.02	0.02	0.02	0.01	0.00	0.00	
Total Onsite		0.81	5.64	5.64	5.64	2.44	0.96	0.57	0.43	0.00	0.00	
TOTAL		0.84	5.69	5.69	5.70	2.46	0.98	0.59	0.44	0.00	0.00	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: NOx Emissions, lbs/day

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	1.45	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.28	0.28	0.28	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.84	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	2.63	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.32	0.32	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.32	0.32	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.28	0.00	0.00	
Total Offsite		0.80	1.45	1.45	2.63	0.32	0.32	0.32	0.28	0.00	0.00	
Total Onsite		8.53	51.05	51.05	51.05	33.58	33.58	8.14	8.14	0.00	0.00	
TOTAL		9.32	52.50	52.50	53.67	33.91	33.91	8.47	8.42	0.00	0.00	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: ROG + NOx Emissions, lbs/day

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.29	0.29	0.29	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	2.69	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.34	0.34	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.34	0.34	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.29	0.00	0.00	
Total Offsite		0.82	1.51	1.51	2.69	0.34	0.34	0.34	0.29	0.00	0.00	
Total Onsite		9.34	56.68	56.68	56.68	36.02	34.55	8.71	8.57	0.00	0.00	
TOTAL		10.16	58.19	58.19	59.37	36.36	34.89	9.06	8.86	0.00	0.00	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: CO Emissions, lbs/day

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	1.99	1.99	1.99	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.28	0.28	0.28	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	0.72	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.56	0.56	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.00	0.00	
Total Offsite		1.02	1.99	1.99	1.99	0.56	0.70	0.70	0.20	0.00	0.00	
Total Onsite		10.03	129.49	129.49	129.49	31.62	11.88	6.29	5.77	0.00	0.00	
TOTAL		11.05	131.48	131.48	131.48	32.18	12.58	6.98	5.97	0.00	0.00	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

R-1402 L-130 Sacramento River Crossing Replacement

Table - 2 Peak Offsite and Project Total Emissions

March 29, 2022

Sacramento Valley Air Basin

Peak Day: SO_x Emissions, lbs/day

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Offsite		0.01	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	
Total Onsite		0.02	0.30	0.30	0.30	0.06	0.05	0.02	0.02	0.00	0.00	
TOTAL		0.03	0.31	0.31	0.31	0.07	0.05	0.02	0.02	0.00	0.00	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: PM₁₀ Emissions, lbs/day

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Offsite		0.01	0.02	0.02	0.04	0.01	0.01	0.01	0.00	0.00	0.00	
Total Onsite		0.35	1.54	1.54	1.54	0.71	0.70	0.18	0.18	0.00	0.00	
TOTAL		0.36	1.57	1.57	1.58	0.71	0.70	0.19	0.19	0.00	0.00	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: PM_{2.5} Emissions, lbs/day

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Offsite		0.01	0.02	0.02	0.04	0.01	0.01	0.01	0.00	0.00	0.00	
Total Onsite		0.35	1.53	1.53	1.53	0.71	0.68	0.18	0.18	0.00	0.00	
TOTAL		0.36	1.56	1.56	1.57	0.71	0.69	0.18	0.18	0.00	0.00	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: N₂O Emissions, lbs/day

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.14	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.00	
Total Offsite		0.07	0.14	0.14	0.21	0.05	0.05	0.04	0.03	0.00	0.00	
Total Onsite		0.02	0.25	0.25	0.25	0.05	0.04	0.02	0.02	0.00	0.00	
TOTAL		0.08	0.39	0.39	0.46	0.10	0.09	0.06	0.04	0.00	0.00	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

R-1402 L-130 Sacramento River Crossing Replacement

Table - 2 Peak Offsite and Project Total Emissions

March 29, 2022

Sacramento Valley Air Basin

Peak Day: CH₄ Emissions, lbs/day

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Offsite		0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Onsite		0.56	5.30	5.30	5.30	1.80	0.83	0.34	0.28	0.00	0.00	0.00
TOTAL		0.56	5.31	5.31	5.31	1.81	0.83	0.34	0.28	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Peak Day: CO₂ Emissions, lbs/day

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	505.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fabricate 16" Pull Back Strings	2	651.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perform HDD Replacement/Tie-In/Commissioning	3	0.0	1,573.5	1,573.5	1,573.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Conduct Pre-Project Riverbed Debris Survey	4	0.0	414.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mobilization to Site	5	0.0	280.1	280.1	280.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pig & Flush Crossing	6	0.0	0.0	0.0	740.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cement Pipeline Segments	7	0.0	0.0	0.0	1,527.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavate/Remove Terrestrial Piping	8	0.0	0.0	0.0	0.0	379.7	0.0	0.0	0.0	0.0	0.0	0.0
Remove In Water Sections Of Pipe	9	0.0	0.0	0.0	0.0	513.2	513.2	0.0	0.0	0.0	0.0	0.0
Remove/Abandon in Place Segments	10	0.0	0.0	0.0	0.0	0.0	515.4	515.4	0.0	0.0	0.0	0.0
Site Restoration	11	0.0	0.0	0.0	0.0	0.0	0.0	246.2	246.2	0.0	0.0	0.0
Total Offsite		651	1,574	1,574	1,574	513	515	515	246	0	0	0
Total Onsite		2,079	30,920	30,920	30,920	6,065	5,104	1,802	1,802	0	0	0
TOTAL		2,731	32,493	32,493	32,493	6,578	5,620	2,317	2,048	0	0	0

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: ROG Emissions, tons

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Offsite		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Onsite		0.02	0.04	0.03	0.05	0.04	0.01	0.00	0.00	0.00	0.00	0.00
TOTAL		0.02	0.04	0.04	0.05	0.04	0.01	0.01	0.00	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: NO_x Emissions, tons

Activity	Code	2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobilization to Site	5	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Pipeline Segments	7	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Offsite		0.01	0.04	0.04	0.05	0.00	0.01	0.01	0.00	0.00	0.00	0.00
Total Onsite		0.15	0.25	0.23	0.31	0.55	0.38	0.03	0.02	0.00	0.00	0.00
TOTAL		0.15	0.29	0.27	0.36	0.55	0.38	0.04	0.02	0.00	0.00	0.00

Notes:

Green text and green highlighted cells indicate a number greater than zero.

R-1402 L-130 Sacramento River Crossing Replacement

Table - 2 Peak Offsite and Project Total Emissions

March 29, 2022

Sacramento Valley Air Basin

Project Total: ROG + NOx Emissions, tons

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Offsite		0.01	0.04	0.04	0.05	0.00	0.01	0.01	0.00	0.00	0.00	
Total Onsite		0.16	0.29	0.27	0.35	0.58	0.39	0.04	0.03	0.00	0.00	
TOTAL		0.17	0.33	0.30	0.41	0.59	0.40	0.04	0.03	0.00	0.00	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: CO Emissions, tons

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.06	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Offsite		0.02	0.07	0.07	0.07	0.01	0.02	0.01	0.00	0.00	0.00	
Total Onsite		0.20	1.00	0.99	1.05	0.41	0.14	0.06	0.05	0.00	0.00	
TOTAL		0.22	1.06	1.06	1.12	0.42	0.16	0.07	0.05	0.00	0.00	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: SOx Emissions, tons

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Offsite		0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	
Total Onsite		0.000	0.002	0.002	0.002	0.001	0.001	0.000	0.000	0.000	0.000	
TOTAL		0.001	0.003	0.003	0.003	0.001	0.001	0.000	0.000	0.000	0.000	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: PM10 Emissions, tons

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Offsite		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Onsite		0.01	0.01	0.01	0.01	0.02	0.01	0.00	0.00	0.00	0.00	
TOTAL		0.006	0.009	0.009	0.012	0.015	0.008	0.002	0.001	0.000	0.000	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

R-1402 L-130 Sacramento River Crossing Replacement

Table - 2 Peak Offsite and Project Total Emissions

March 29, 2022

Sacramento Valley Air Basin

Project Total: PM2.5 Emissions, tons

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Offsite		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Onsite		0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	
TOTAL		0.006	0.009	0.009	0.012	0.015	0.008	0.001	0.001	0.000	0.000	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: N2O Emissions, tons

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Offsite		0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
Total Onsite		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TOTAL		0.001	0.006	0.006	0.007	0.002	0.002	0.001	0.000	0.000	0.000	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: CH4 Emissions, tons

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Offsite		0.0001	0.0003	0.0002	0.0003	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	
Total Onsite		0.01	0.03	0.03	0.04	0.02	0.01	0.00	0.00	0.00	0.00	
TOTAL		0.008	0.035	0.035	0.036	0.024	0.010	0.004	0.003	0.000	0.000	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Sacramento Valley Air Basin

Project Total: CO2 Emissions, tons

		2022										2023
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Activity	Code	1	2	3	4	5	6	7	8	9	10	
Site Mobilization	1	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fabricate 16" Pull Back Strings	2	8.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Perform HDD Replacement/Tie-In/Commissioning	3	0.00	41.23	41.23	41.23	0.00	0.00	0.00	0.00	0.00	0.00	
Conduct Pre-Project Riverbed Debris Survey	4	0.00	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mobilization to Site	5	0.00	5.85	5.85	5.85	0.00	0.00	0.00	0.00	0.00	0.00	
Pig & Flush Crossing	6	0.00	0.00	0.00	4.49	0.00	0.00	0.00	0.00	0.00	0.00	
Cement Pipeline Segments	7	0.00	0.00	0.00	7.30	0.00	0.00	0.00	0.00	0.00	0.00	
Excavate/Remove Terrestrial Piping	8	0.00	0.00	0.00	0.00	3.12	0.00	0.00	0.00	0.00	0.00	
Remove In Water Sections Of Pipe	9	0.00	0.00	0.00	0.00	6.68	6.68	0.00	0.00	0.00	0.00	
Remove/Abandon in Place Segments	10	0.00	0.00	0.00	0.00	0.00	6.72	6.72	0.00	0.00	0.00	
Site Restoration	11	0.00	0.00	0.00	0.00	0.00	0.00	2.96	2.96	0.00	0.00	
Total Offsite		10.94	48.82	47.08	58.87	9.80	13.40	9.68	2.96	0.00	0.00	
Total Onsite		38.36	235.71	232.39	244.83	106.99	57.81	12.52	10.20	0.00	0.00	
TOTAL		49.3	284.5	279.5	303.7	116.8	71.2	22.2	13.2	0.0	0.0	

Notes:

Green text and green highlighted cells indicate a number greater than zero.

Table - 3 Offsite Exhaust Emissions Calculations

[illegible]

Activity/Source	Source	Activity Code	Vehicle Type	Emission Factors (lbs/mile)									Peak Day Round Trips per day	Average Round Trips per day	Length of Round Trip (miles)	Duration, days	Peak Day Emissions, lbs/day										Total Emissions, Tons								
				ROG	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}	N2O	CH4	CO2					ROG	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}	N2O	CH4	CO2	ROG	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}	N2O	CH4	CO2	
Auto and Light Truck Within Sacramento Valley Air Basin																																			
Site Mobilization	Trucks - Light	1	LDT2-d	0.00002	0.00017	0.00009	0.00001	0.00001	0.00001	0.00009	0.00000	0.55	2.0	2.0	60.0	10	0.00	0.02	0.01	0.00	0.00	0.00	0.01	0.000	65.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	
Site Mobilization	Autos	1	LDA-g	0.00002	0.00133	0.00010	0.00001	0.00000	0.00000	0.00001	0.00000	0.57	3.0	3.0	60.0	10	0.00	0.24	0.02	0.00	0.00	0.00	0.00	0.001	101.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	
Fabricate 16" Pull Back Strings	Trucks - Light	2	LDT2-d	0.00002	0.00017	0.00009	0.00001	0.00001	0.00001	0.00009	0.00000	0.55	4.0	4.0	60.0	30	0.00	0.04	0.02	0.00	0.00	0.00	0.02	0.000	131.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.97	
Fabricate 16" Pull Back Strings	Autos	2	LDA-g	0.00002	0.00133	0.00010	0.00001	0.00000	0.00000	0.00001	0.00000	0.57	12.0	12.0	60.0	30	0.01	0.96	0.07	0.00	0.00	0.00	0.01	0.003	407.1	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	6.11	
Perform HDD Replacement/Tie-In/Commissioning	Trucks - Light	3	LDT2-d	0.00002	0.00017	0.00009	0.00001	0.00001	0.00001	0.00009	0.00000	0.55	7.0	7.0	60.0	60	0.01	0.07	0.04	0.00	0.00	0.00	0.04	0.000	229.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.89	
Perform HDD Replacement/Tie-In/Commissioning	Autos	3	LDA-g	0.00002	0.00133	0.00010	0.00001	0.00000	0.00000	0.00001	0.00000	0.57	23.0	23.0	60.0	60	0.03	1.84	0.13	0.01	0.00	0.00	0.01	0.006	780.2	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	23.41	
Conduct Pre-Project Riverbed Debris Survey	Trucks - Light	4	LDT2-d	0.00002	0.00017	0.00009	0.00001	0.00001	0.00001	0.00009	0.00000	0.55	3.0	3.0	60.0	10	0.00	0.03	0.02	0.00	0.00	0.00	0.02	0.000	98.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	
Conduct Pre-Project Riverbed Debris Survey	Autos	4	LDA-g	0.00002	0.00133	0.00010	0.00001	0.00000	0.00000	0.00001	0.00000	0.57	6.0	6.0	60.0	10	0.01	0.48	0.04	0.00	0.00	0.00	0.00	0.002	203.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02	
Mobilization to Site	Trucks - Light	5	LDT2-d	0.00002	0.00017	0.00009	0.00001	0.00001	0.00001	0.00009	0.00000	0.55	2.0	2.0	60.0	45	0.00	0.02	0.01	0.00	0.00	0.00	0.01	0.000	65.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48	
Mobilization to Site	Autos	5	LDA-g	0.00002	0.00133	0.00010	0.00001	0.00000	0.00000	0.00001	0.00000	0.57	3.0	3.0	60.0	45	0.00	0.24	0.02	0.00	0.00	0.00	0.00	0.001	101.8	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	2.29	
Pig & Flush Crossing	Trucks - Light	6	LDT2-d	0.00002	0.00017	0.00009	0.00001	0.00001	0.00001	0.00009	0.00000	0.55	4.0	4.0	60.0	15	0.00	0.04	0.02	0.00	0.00	0.00	0.02	0.000	131.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	
Pig & Flush Crossing	Autos	6	LDA-g	0.00002	0.00133	0.00010	0.00001	0.00000	0.00000	0.00001	0.00000	0.57	8.0	8.0	60.0	15	0.01	0.64	0.05	0.00	0.00	0.00	0.00	0.002	271.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04	
Cement Pipeline Segments	Trucks - Light	7	LDT2-d	0.00002	0.00017	0.00009	0.00001	0.00001	0.00001	0.00009	0.00000	0.55	6.0	6.0	60.0	10	0.01	0.06	0.03	0.00	0.00	0.00	0.03	0.000	196.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	
Cement Pipeline Segments	Autos	7	LDA-g	0.00002	0.00133	0.00010	0.00001	0.00000	0.00000	0.00001	0.00000	0.57	6.0	6.0	60.0	10	0.01	0.48	0.04	0.00	0.00	0.00	0.00	0.002	203.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02	
Excavate/Remove Terrestrial Piping	Trucks - Light	8	LDT2-d	0.00002	0.00017	0.00009	0.00001	0.00001	0.00001	0.00009	0.00000	0.55	4.0	4.0	60.0	20	0.00	0.04	0.02	0.00	0.00	0.00	0.02	0.000	131.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31	
Excavate/Remove Terrestrial Piping	Autos	8	LDA-g	0.00002	0.00133	0.00010	0.00001	0.00000	0.00000	0.00001	0.00000	0.57	4.0	4.0	60.0	20	0.00	0.32	0.02	0.00	0.00	0.00	0.00	0.001	135.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.36	
Remove In Water Sections Of Pipe	Trucks - Light	9	LDT2-d	0.00002	0.00017	0.00009	0.00001	0.00001	0.00001	0.00009	0.00000	0.55	6.0	6.0	60.0	30	0.01	0.06	0.03	0.00	0.00	0.00	0.03	0.000	196.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.95	
Remove In Water Sections Of Pipe	Autos	9	LDA-g	0.00002	0.00133	0.00010	0.00001	0.00000	0.00000	0.00001	0.00000	0.57	6.0	6.0	60.0	30	0.01	0.48	0.04	0.00	0.00	0.00	0.00	0.002	203.5	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	3.05	
Remove/Abandon in Place Segments	Trucks - Light	10	LDT2-d	0.00002	0.00017	0.00009	0.00001	0.00001	0.00001	0.00009	0.00000	0.55	4.0	4.0	60.0	30	0.00	0.04	0.02	0.00	0.00	0.00	0.02	0.000	131.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.97	
Remove/Abandon in Place Segments	Autos	10	LDA-g	0.00002	0.00133	0.00010	0.00001	0.00000	0.00000	0.00001	0.00000	0.57	8.0	8.0	60.0	30	0.01	0.64	0.05	0.00	0.00	0.00	0.00	0.002	271.4	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	4.07	
Site Restoration	Trucks - Light	11	LDT2-d	0.00002	0.00017	0.00009	0.00001	0.00001	0.00001	0.00009	0.00000	0.55	2.0	2.0	60.0	30	0.00	0.02	0.01	0.00	0.00	0.00	0.01	0.000	65.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	
Site Restoration	Autos	11	LDA-g	0.00002	0.00133	0.00010	0.00001	0.00000	0.00000	0.00001	0.00000	0.57	2.0	2.0	60.0	30	0.00	0.16	0.01	0.00	0.00	0.00	0.00	0.001	67.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02	
Maximum by AOC Within Sacramento Valley Air Basin:																	0.03	1.84	0.13	0.01	0.00	0.00	0.04	0.006	780.2	0.00	0.06	0.00	0.00	0.00	0.00	0.00	23.41		
Total Within Sacramento Valley Air Basin:																										0.00	0.11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	66.23
Activity Maximum Within Sacramento Valley Air Basin:																	0.04	1.84	2.30	0.01	0.03	0.03	0.16	0.01	1014.51	0.001	0.06	0.01	0.00	0.00	0.00	0.00	23.41		
Project Total Within Sacramento Valley Air Basin:																										0.00	0.12	0.07	0.00	0.00	0.00	0.01	0.00	91.0	

- Notes:
1. Length of trips are assumed to be round trip distances within the Sacramento and Solano County Area.

2. CalEEMod Sacramento and Solano County comm30 miles OW

3. Concrete Source30 miles OW

4. Import source20 miles OW

5. Export20 miles OW

6. Equipment/Supplies20 miles OW

R-1402 L-130 Sacramento River Crossing Replacement
Table - 4 Onsite Exhaust Emission Calculations

March 29, 2022

Equipment	Activity Code	BHP	Load Factor	Hours per Day*	Number	Peak Day	Total Days	Emission Factors (g/bhp-hr)**								Emissions (lb/day)								Total Emission (tons)								Gallons		
								ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	N2O	CH4	CO2	ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	N2O	CH4	CO2	ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}		N2O	CH4
Site Mobilization																																		
Asphalt Fugitive	1	--	--	0	0	1	10	2.620	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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	0.00	
Air Compressor-1	1	50	0.48	0	0	1	10	0.120	3.700	2.740	0.007	0.192	0.192	0.004	0.117	568.3	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	0.00	
Air Compressor-2	1	50	0.48	0	0	1	10	0.120	3.700	2.740	0.007	0.008	0.008	0.004	0.117	568.3	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	0.00	
Air Compressor-3	1	540	0.43	0	0	1	10	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.027	506.7	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	0.00	
Air Compressor-4	1	50	0.48	0	0	1	10	0.120	3.700	2.740	0.007	0.008	0.008	0.004	0.117	568.3	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	0.00	
Concrete Pump	1	250	0.74	0	0	1	10	0.060	2.200	0.260	0.006	0.008	0.008	0.004	0.021	568.3	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	0.00	
Crew Boat	1	100	0.45	0	0	1	10	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.002	506.7	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	0.00	
Derrick Barge Crane	1	330	0.43	0	0	1	10	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.153	506.7	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	0.00	
Derrick Barge Generator	1	100	0.43	0	0	1	10	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.041	506.7	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	0.00	
Dozer-1	1	310	0.43	1	1	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.154	493.5	0.02	0.65	0.08	0.00	0.00	0.00	0.05	145.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	68.12
Drilling Rig-1	1	700	0.5	1	1	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	489.7	0.05	1.70	0.20	0.00	0.01	0.01	0.00	0.12	377.88	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.89	178.85
Drilling Rig-2	1	700	0.50	1	1	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	489.7	0.05	1.70	0.20	0.00	0.01	0.01	0.00	0.12	377.88	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.89	178.85
Excavator-1	1	310	0.38	1	1	1	10	0.613	3.905	3.916	0.005	0.165	0.165	0.004	0.152	489.1	0.16	1.01	1.02	0.00	0.04	0.04	0.00	0.04	127.02	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.64	60.20
Excavator-2	1	310	0.38	1	1	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	489.1	0.02	0.57	0.07	0.00	0.00	0.00	0.04	127.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	60.20	
Generator-1	1	50	0.74	1	1	1	10	0.120	3.700	2.740	0.006	0.192	0.192	0.004	0.041	568.3	0.01	0.30	0.22	0.00	0.02	0.02	0.00	0.00	46.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	18.91
Generator-2	1	50	0.74	1	1	1	10	0.120	3.700	2.740	0.006	0.008	0.008	0.004	0.041	568.3	0.01	0.30	0.22	0.00	0.00	0.00	0.00	46.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	18.91	
Generator-3	1	75	0.43	0	0	1	10	0.120	3.700	2.740	0.006	0.192	0.192	0.004	0.041	568.3	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	0.00	
Generator-4	1	50	0.43	0	0	1	10	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.080	506.7	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	0.00	
Generator-5	1	400	0.43	0	0	1	10	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.019	506.7	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	0.00	
Hydroexcavator	1	300	0.46	1	1	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	488.4	0.02	0.67	0.08	0.00	0.00	0.00	0.05	148.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	70.52	
Light Plant-1	1	15	0.74	6	1	1	10	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	0.11	0.37	0.68	0.00	0.03	0.03	0.00	0.01	83.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	34.03
Light Plant-2	1	15	0.74	6	1	1	10	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	0.11	0.37	0.68	0.00	0.03	0.03	0.00	0.01	83.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	34.03
Light Plant-3	1	15	0.74	6	1	1	10	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	0.11	0.37	0.68	0.00	0.03	0.03	0.00	0.01	83.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	34.03
Light Plant-4	1	15	0.74	6	1	1	10	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	0.11	0.37	0.68	0.00	0.03	0.03	0.00	0.01	83.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	34.03
Loader-1	1	240	0.36	1	1	1	10	0.120	2.600	2.320	0.005	0.088	0.088	0.004	0.152	489.5	0.02	0.50	0.44	0.00	0.02	0.02	0.00	0.03	93.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	44.15
Loader-2	1	240	0.36	1	1	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	487.9	0.01	0.42	0.05	0.00	0.00	0.00	0.03	92.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	44.15	
Mud Pump-1	1	600	0.74	0	0	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.020	568.3	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	0.00	
Mud Pump-2	1	600	0.74	0	0	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.020	568.3	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	0.00	
Pipelaye-1	1	260	0.29	1	1	1	10	0.060	2.200	0.26																								

R-1402 L-130 Sacramento River Crossing Replacement
Table - 4 Onsite Exhaust Emission Calculations

March 29, 2022

Equipment	Activity Code	BHP	Load Factor	Hours per Day*	Number	Peak Day	Total Days	Emission Factors (g/bhp-hr)**								Emissions (lb/day)								Total Emission (tons)								Gallons		
								ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	N2O	CH4	CO2	ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	N2O	CH4	CO2	ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	N2O	CH4	CO2
Perform HDD Replacement/Tie-In/Commissioning																																		
Asphalt Fugitive	3	--	--	0	0	1	60	2.620	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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		
Air Compressor-1	3	50	0.48	2	1	1	60	0.120	3.700	2.740	0.007	0.192	0.192	0.004	0.117	568.3	0.01	0.39	0.29	0.00	0.02	0.02	0.00	0.01	60.14	0.00	0.01	0.01	0.00	0.00	0.00	0.00	1.80	
Air Compressor-2	3	50	0.48	2	1	1	60	0.120	3.700	2.740	0.007	0.008	0.008	0.004	0.117	568.3	0.01	0.39	0.29	0.00	0.00	0.00	0.00	0.01	60.14	0.00	0.01	0.01	0.00	0.00	0.00	0.00	1.80	
Air Compressor-3	3	540	0.43	10	1	1	4	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.027	506.7	0.48	3.51	18.13	0.02	0.32	0.31	0.02	0.14	2,593.78	0.00	0.01	0.04	0.00	0.00	0.00	0.00	5.19	
Air Compressor-4	3	50	0.48	0	0	1	60	0.120	3.700	2.740	0.007	0.008	0.008	0.004	0.117	568.3	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		
Concrete Pump	3	250	0.74	4	1	1	2	0.060	2.200	0.260	0.006	0.008	0.008	0.004	0.021	568.3	0.10	3.59	0.42	0.01	0.01	0.01	0.01	0.03	927.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	
Crew Boat	3	100	0.45	0	0	1	60	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.002	506.7	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		
Derrick Barge Crane	3	330	0.43	0	0	1	60	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.153	506.7	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		
Derrick Barge Generator	3	100	0.43	0	0	1	60	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.041	506.7	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		
Dozer-1	3	310	0.43	8	1	1	5	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.154	493.5	0.14	5.17	0.61	0.01	0.02	0.02	0.01	0.36	1,160.24	0.00	0.01	0.00	0.00	0.00	0.00	0.00	2.90	
Drilling Rig-1	3	700	0.5	10	1	1	60	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	489.7	0.46	16.98	2.01	0.04	0.06	0.06	0.03	1.17	3,778.81	0.01	0.51	0.06	0.00	0.00	0.00	0.04	113.36	
Drilling Rig-2	3	700	0.50	10	1	1	60	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	489.7	0.46	16.98	2.01	0.04	0.06	0.06	0.03	1.17	3,778.81	0.01	0.51	0.06	0.00	0.00	0.00	0.04	113.36	
Excavator-1	3	310	0.38	8	1	1	10	0.613	3.905	3.916	0.005	0.165	0.165	0.004	0.152	489.1	1.27	8.11	8.14	0.01	0.34	0.34	0.01	0.32	1,016.17	0.01	0.04	0.04	0.00	0.00	0.00	0.00	5.08	
Excavator-2	3	310	0.38	8	1	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	489.1	0.12	4.57	0.54	0.01	0.02	0.02	0.01	0.32	1,016.17	0.00	0.02	0.00	0.00	0.00	0.00	0.00	5.08	
Generator-1	3	50	0.74	10	1	1	60	0.120	3.700	2.740	0.006	0.192	0.192	0.004	0.041	568.3	0.10	3.02	2.24	0.00	0.16	0.16	0.00	0.03	463.56	0.00	0.09	0.07	0.00	0.00	0.00	0.00	13.91	
Generator-2	3	50	0.74	10	1	1	60	0.120	3.700	2.740	0.006	0.008	0.008	0.004	0.041	568.3	0.10	3.02	2.24	0.00	0.01	0.01	0.00	0.03	463.56	0.00	0.09	0.07	0.00	0.00	0.00	0.00	13.91	
Generator-3	3	75	0.43	0	0	1	60	0.120	3.700	2.740	0.006	0.192	0.192	0.004	0.041	568.3	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		
Generator-4	3	50	0.43	0	0	1	60	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.080	506.7	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		
Generator-5	3	400	0.43	0	0	1	60	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.019	506.7	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		
Hydroexcavator	3	300	0.46	6	1	1	2	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	488.4	0.11	4.02	0.47	0.01	0.01	0.01	0.01	0.28	891.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	
Light Plant-1	3	15	0.74	6	1	1	60	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	0.11	0.37	0.68	0.00	0.03	0.03	0.00	0.01	83.44	0.00	0.01	0.02	0.00	0.00	0.00	0.00	2.50	
Light Plant-2	3	15	0.74	6	1	1	60	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	0.11	0.37	0.68	0.00	0.03	0.03	0.00	0.01	83.44	0.00	0.01	0.02	0.00	0.00	0.00	0.00	2.50	
Light Plant-3	3	15	0.74	6	1	1	60	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	0.11	0.37	0.68	0.00	0.03	0.03	0.00	0.01	83.44	0.00	0.01	0.02	0.00	0.00	0.00	0.00	2.50	
Light Plant-4	3	15	0.74	6	1	1	60	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	0.11	0.37	0.68	0.00	0.03	0.03	0.00	0.01	83.44	0.00	0.01	0.02	0.00	0.00	0.00	0.00	2.50	
Loader-1	3	240	0.36	8	1	1	10	0.120	2.600	2.320	0.005	0.088	0.088	0.004	0.152	489.5	0.18	3.96	3.54	0.01	0.13	0.13	0.01	0.23	745.93	0.00	0.02	0.02	0.00	0.00	0.00	0.00	3.73	
Loader-2	3	240	0.36	8	1	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	487.9	0.09	3.35	0.40	0.01	0.01	0.01	0.01	0.23	743.48	0.00	0.02	0.00	0.00	0.00	0.00	0.00	3.72	
Mud Pump-1	3	600	0.74	10	1	1	60	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.020	568.3	0.59	21.53	2.54	0.05	0.08	0.08	0.04	0.20	5,562.75	0.02	0.65	0.08	0.00	0.00	0.00	0.00	166.88	
Mud Pump-2	3	600	0.74	10	1	1	60	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.020	568.3	0.59	21.53	2.54	0.05	0.08	0.08	0.04	0.20	5,562.75	0.02	0.65	0.08	0.00	0.00	0.00	0.00	166.88	
Pipeline-1	3	260	0.29	10	1	1	2	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.153	491.4	0.10	3.66	0.43	0.01	0.01	0.01	0.01	0.25	816.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	
Pipeline-2	3	260	0.29	10	1	1	2	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.153	491.4	0.10	3.66	0.43	0.01	0.01													

Table - 4 Onsite Exhaust Emission Calculations

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padre
associates, inc.
ENGINEERS, GEOLOGISTS &
ENVIRONMENTAL SCIENTISTS

R-1402 L-130 Sacramento River Crossing Replacement
Table - 4 Onsite Exhaust Emission Calculations

March 29, 2022

Equipment	Activity Code	BHP	Load Factor	Hours per Day*	Number	Peak Day	Total Days	Emission Factors (g/bhp-hr)**								Emissions (lb/day)								Total Emission (tons)								Gallons		
								ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	N2O	CH4	CO2	ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	N2O	CH4	CO2	ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	N2O	CH4	CO2
Cement Pipeline Segments																																		
Asphalt Fugitive	7	--	--	0	0	1	10	2.620	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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	0.00	
Air Compressor-1	7	50	0.48	2	1	1	10	0.120	3.700	2.740	0.007	0.192	0.192	0.004	0.117	568.3	0.01	0.39	0.29	0.00	0.02	0.02	0.00	0.01	60.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	24.53
Air Compressor-2	7	50	0.48	2	1	1	10	0.120	3.700	2.740	0.007	0.008	0.008	0.004	0.117	568.3	0.01	0.39	0.29	0.00	0.00	0.00	0.00	0.01	60.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	24.53
Air Compressor-3	7	540	0.43	0	0	1	10	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.027	506.7	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	0.00	
Air Compressor-4	7	50	0.48	0	0	1	10	0.120	3.700	2.740	0.007	0.008	0.008	0.004	0.117	568.3	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	0.00	
Concrete Pump	7	250	0.74	4	1	1	2	0.060	2.200	0.260	0.006	0.008	0.008	0.004	0.021	568.3	0.10	3.59	0.42	0.01	0.01	0.01	0.01	0.03	927.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	75.63
Crew Boat	7	100	0.45	0	0	1	10	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.002	506.7	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	0.00	
Derrick Barge Crane	7	330	0.43	0	0	1	10	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.153	506.7	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	0.00	
Derrick Barge Generator	7	100	0.43	0	0	1	10	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.041	506.7	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	0.00	
Dozer-1	7	310	0.43	0	0	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.154	493.5	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	0.00	
Drilling Rig-1	7	700	0.5	0	0	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	489.7	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	0.00	
Drilling Rig-2	7	700	0.5	0	0	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	489.7	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	0.00	
Excavator-1	7	310	0.38	0	0	1	10	0.613	3.905	3.916	0.005	0.165	0.165	0.004	0.152	489.1	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	0.00	
Excavator-2	7	310	0.38	0	0	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	489.1	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	0.00	
Generator-1	7	50	0.74	0	0	1	10	0.120	3.700	2.740	0.006	0.192	0.192	0.004	0.041	568.3	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	0.00	
Generator-2	7	50	0.74	0	0	1	10	0.120	3.700	2.740	0.006	0.008	0.008	0.004	0.041	568.3	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	0.00	
Generator-3	7	75	0.43	0	0	1	10	0.120	3.700	2.740	0.006	0.192	0.192	0.004	0.041	568.3	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	0.00	
Generator-4	7	50	0.43	0	0	1	10	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.080	506.7	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	0.00	
Generator-5	7	400	0.43	0	0	1	10	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.019	506.7	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	0.00	
Hydroexcavator	7	300	0.46	0	0	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	488.4	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	0.00	
Light Plant-1	7	15	0.74	6	1	1	10	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	0.11	0.37	0.68	0.00	0.03	0.03	0.00	0.01	83.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	34.03
Light Plant-2	7	15	0.74	6	1	1	10	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	0.11	0.37	0.68	0.00	0.03	0.03	0.00	0.01	83.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	34.03
Light Plant-3	7	15	0.74	6	1	1	10	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	0.11	0.37	0.68	0.00	0.03	0.03	0.00	0.01	83.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	34.03
Light Plant-4	7	15	0.74	6	1	1	10	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	0.11	0.37	0.68	0.00	0.03	0.03	0.00	0.01	83.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	34.03
Loader-1	7	240	0.36	0	0	1	10	0.120	2.600	2.320	0.005	0.088	0.088	0.004	0.152	489.5	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	0.00	
Loader-2	7	240	0.36	0	0	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	487.9	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	0.00	
Mud Pump-1	7	600	0.74	0	0	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.020	568.3	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	0.00	
Mud Pump-2	7	600	0.74	0	0	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.020	568.3	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	0.00	
Pipelaye-1	7	260	0.29	0	0	1	10	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.153	491.4	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	0.00	
Pipelaye-2	7	260	0.29	0	0	1	10	0.060	2.200	0.260	0.005	0.008	0.00																					

Table - 4 Onsite Exhaust Emission Calculations

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padre
associates, inc.
ENGINEERS, GEOLOGISTS &
ENVIRONMENTAL SCIENTISTS

R-1402 L-130 Sacramento River Crossing Replacement
Table - 4 Onsite Exhaust Emission Calculations

March 29, 2022

Equipment	Activity Code	BHP	Load Factor	Hours per Day*	Number	Peak Day	Total Days	Emission Factors (g/bhp-hr)**								Emissions (lb/day)								Total Emission (tons)								Gallons	
								ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	N2O	CH4	CO2	ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	N2O	CH4	CO2	ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	N2O	CH4
Site Restoration																																	
Asphalt Fugitive	11	--	--	0	0	1	30	2.620	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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	
Air Compressor-1	11	50	0.48	0	0	1	30	0.120	3.700	2.740	0.007	0.192	0.192	0.004	0.117	568.3	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	
Air Compressor-2	11	50	0.48	0	0	1	30	0.120	3.700	2.740	0.007	0.008	0.008	0.004	0.117	568.3	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	
Air Compressor-3	11	540	0.43	0	0	1	30	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.027	506.7	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	
Air Compressor-4	11	50	0.48	0	0	1	30	0.120	3.700	2.740	0.007	0.008	0.008	0.004	0.117	568.3	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	
Concrete Pump	11	250	0.74	0	0	1	30	0.060	2.200	0.260	0.006	0.008	0.008	0.004	0.021	568.3	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	
Crew Boat	11	100	0.45	3	1	1	1	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.002	506.7	0.03	0.20	1.05	0.00	0.02	0.02	0.00	0.00	150.80	0.00	0.00	0.00	0.00	0.00	0.08	6.90	
Derrick Barge Crane	11	330	0.43	0	0	1	30	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.153	506.7	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	
Derrick Barge Generator	11	100	0.43	0	0	1	30	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.041	506.7	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	
Dozer-1	11	310	0.43	1	1	1	30	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.154	493.5	0.02	0.65	0.08	0.00	0.00	0.00	0.05	145.03	0.00	0.01	0.00	0.00	0.00	0.00	2.18	204.35	
Drilling Rig-1	11	700	0.5	0	0	1	30	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	489.7	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	
Drilling Rig-2	11	700	0.5	0	0	1	30	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	489.7	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	
Excavator-1	11	310	0.38	1	1	1	30	0.613	3.905	3.916	0.005	0.165	0.165	0.004	0.152	489.1	0.16	1.01	1.02	0.00	0.04	0.04	0.00	0.04	127.02	0.00	0.02	0.02	0.00	0.00	0.00	1.91	180.59
Excavator-2	11	310	0.38	1	1	1	30	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	489.1	0.02	0.57	0.07	0.00	0.00	0.00	0.04	127.02	0.00	0.01	0.00	0.00	0.00	0.00	1.91	180.59	
Generator-1	11	50	0.74	0	0	1	30	0.120	3.700	2.740	0.006	0.192	0.192	0.004	0.041	568.3	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	
Generator-2	11	50	0.74	0	0	1	30	0.120	3.700	2.740	0.006	0.008	0.008	0.004	0.041	568.3	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	
Generator-3	11	75	0.43	0	0	1	30	0.120	3.700	2.740	0.006	0.192	0.192	0.004	0.041	568.3	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	
Generator-4	11	50	0.43	0	0	1	30	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.080	506.7	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	
Generator-5	11	400	0.43	0	0	1	30	0.093	0.685	3.542	0.005	0.062	0.060	0.004	0.019	506.7	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	
Hydroexcavator	11	300	0.46	1	1	1	30	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	488.4	0.02	0.67	0.08	0.00	0.00	0.00	0.05	148.59	0.00	0.01	0.00	0.00	0.00	0.00	2.23	211.55	
Light Plant-1	11	15	0.74	0	0	1	30	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	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	
Light Plant-2	11	15	0.74	0	0	1	30	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	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	
Light Plant-3	11	15	0.74	0	0	1	30	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	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	
Light Plant-4	11	15	0.74	0	0	1	30	0.744	2.531	4.661	0.007	0.224	0.224	0.004	0.067	568.3	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	
Loader-1	11	240	0.36	1	1	1	30	0.120	2.600	2.320	0.005	0.088	0.088	0.004	0.152	489.5	0.02	0.50	0.44	0.00	0.02	0.02	0.00	0.03	93.24	0.00	0.01	0.01	0.00	0.00	0.00	1.40	132.45
Loader-2	11	240	0.36	1	1	1	30	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.152	487.9	0.01	0.42	0.05	0.00	0.00	0.00	0.03	92.93	0.00	0.01	0.00	0.00	0.00	0.00	1.39	132.45	
Mud Pump-1	11	600	0.74	0	0	1	30	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.020	568.3	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	
Mud Pump-2	11	600	0.74	0	0	1	30	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.020	568.3	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	
Pipelayer-1	11	260	0.29	1	1	1	30	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.153	491.4	0.01	0.37	0.04	0.00	0.00	0.00	0.03	81.69	0.00	0.01	0.00	0.00	0.00	0.00	1.23	115.59	
Pipelayer-2	11	260	0.29	1	1	1	30	0.060	2.200	0.260	0.005	0.008	0.008	0.004	0.153	491.4	0.01	0.37	0.04	0.00	0.00	0.00	0.03	81.69	0.00	0.01	0.00						

R-1402 L-130 Sacramento River Crossing Replacement

Table - 5 Fugitive Dust Emissions Calculations

March 29, 2022

Activity	Activity Code	Average Source	Peak Source	Source Units	Number of Days	Emission Factor	Emission Factor, Units	Peak Day Emissions (lbs/day)		Total Emissions (tons)	
								PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
Grading											
Site Mobilization	1	0.00	0.00	acres/day	10	0.429	lbs PM ₁₀ /day/acre	0.00	0.00	0.000	0.000
Fabricate 16" Pull Back Strings	2	0.00	0.00	acres/day	30	0.429	lbs PM ₁₀ /day/acre	0.00	0.00	0.000	0.000
Perform HDD Replacement/Tie-In/Commissioning	3	0.02	0.02	acres/day	60	0.429	lbs PM ₁₀ /day/acre	0.01	0.00	0.000	0.000
Conduct Pre-Project Riverbed Debris Survey	4	0.00	0.00	acres/day	10	0.429	lbs PM ₁₀ /day/acre	0.00	0.00	0.000	0.000
Mobilization to Site	5	0.00	0.00	acres/day	45	0.429	lbs PM ₁₀ /day/acre	0.00	0.00	0.000	0.000
Pig & Flush Crossing	6	0.00	0.00	acres/day	15	0.429	lbs PM ₁₀ /day/acre	0.00	0.00	0.000	0.000
Cement Pipeline Segments	7	0.00	0.00	acres/day	10	0.429	lbs PM ₁₀ /day/acre	0.00	0.00	0.000	0.000
Excavate/Remove Terrestrial Piping	8	0.05	0.05	acres/day	20	0.429	lbs PM ₁₀ /day/acre	0.02	0.00	0.000	0.000
Remove In Water Sections Of Pipe	9	0.00	0.00	acres/day	30	0.429	lbs PM ₁₀ /day/acre	0.00	0.00	0.000	0.000
Remove/Abandon in Place Segments	10	0.02	0.02	acres/day	30	0.429	lbs PM ₁₀ /day/acre	0.01	0.00	0.000	0.000
Site Restoration	11	0.01	0.01	acres/day	30	0.429	lbs PM ₁₀ /day/acre	0.00	0.00	0.000	0.000
Max per day:								0.02	0.00	--	--
Total:								--	--	0.00059	0.00005
Dumping											
Site Mobilization	1	0.0	0.0	tons/day	10	0.01421	lbs/ton	0.00	0.00	0.000	0.000
Fabricate 16" Pull Back Strings	2	0.0	0.0	tons/day	30	0.01421	lbs/ton	0.00	0.00	0.000	0.000
Perform HDD Replacement/Tie-In/Commissioning	3	0.0	0.0	tons/day	60	0.01421	lbs/ton	0.00	0.00	0.000	0.000
Conduct Pre-Project Riverbed Debris Survey	4	0.0	0.0	tons/day	10	0.01421	lbs/ton	0.00	0.00	0.000	0.000
Mobilization to Site	5	0.0	0.0	tons/day	45	0.01421	lbs/ton	0.00	0.00	0.000	0.000
Pig & Flush Crossing	6	0.0	0.0	tons/day	15	0.01421	lbs/ton	0.00	0.00	0.000	0.000
Cement Pipeline Segments	7	0.0	0.0	tons/day	10	0.01421	lbs/ton	0.00	0.00	0.000	0.000
Excavate/Remove Terrestrial Piping	8	0.0	0.0	tons/day	20	0.01421	lbs/ton	0.00	0.00	0.000	0.000
Remove In Water Sections Of Pipe	9	0.0	0.0	tons/day	30	0.01421	lbs/ton	0.00	0.00	0.000	0.000
Remove/Abandon in Place Segments	10	0.0	0.0	tons/day	30	0.01421	lbs/ton	0.00	0.00	0.000	0.000
Site Restoration	11	0.0	0.0	tons/day	30	0.01421	lbs/ton	0.00	0.00	0.000	0.000
Max per day:								0.00	0.00	--	--
Total:								--	--	0.00000	0.00000

R-1402 L-130 Sacramento River Crossing Replacement

Table - 5 Fugitive Dust Emissions Calculations

March 29, 2022

Activity	Activity Code	Average Source	Peak Source	Source Units	Number of Days	Emission Factor	Emission Factor, Units	Peak Day Emissions (lbs/day)		Total Emissions (tons)	
Unpaved Road Travel								PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
Site Mobilization	1	0.3	0.3	vehicle-miles/day	10	1.13	lbs/vehicle-mile	0.28	0.03	0.001	0.00014
Fabricate 16" Pull Back Strings	2	0.3	0.3	vehicle-miles/day	30	1.13	lbs/vehicle-mile	0.28	0.03	0.004	0.00043
Perform HDD Replacement/Tie-In/Commissioning	3	0.3	0.3	vehicle-miles/day	60	1.13	lbs/vehicle-mile	0.28	0.03	0.009	0.00085
Conduct Pre-Project Riverbed Debris Survey	4	0.3	0.3	vehicle-miles/day	10	1.13	lbs/vehicle-mile	0.28	0.03	0.001	0.00014
Mobilization to Site	5	0.3	0.3	vehicle-miles/day	45	1.13	lbs/vehicle-mile	0.28	0.03	0.006	0.00064
Pig & Flush Crossing	6	0.3	0.3	vehicle-miles/day	15	1.13	lbs/vehicle-mile	0.28	0.03	0.002	0.00021
Cement Pipeline Segments	7	0.3	0.3	vehicle-miles/day	10	1.13	lbs/vehicle-mile	0.28	0.03	0.001	0.00014
Excavate/Remove Terrestrial Piping	8	0.3	0.3	vehicle-miles/day	20	1.13	lbs/vehicle-mile	0.28	0.03	0.003	0.00028
Remove In Water Sections Of Pipe	9	0.3	0.3	vehicle-miles/day	30	1.13	lbs/vehicle-mile	0.28	0.03	0.004	0.00043
Remove/Abandon in Place Segments	10	0.3	0.3	vehicle-miles/day	30	1.13	lbs/vehicle-mile	0.28	0.03	0.004	0.00043
Site Restoration	11	0.3	0.3	vehicle-miles/day	30	1.13	lbs/vehicle-mile	0.28	0.03	0.004	0.00043
Max per day:								0.28	0.03	--	--
Total:								--	--	0.041	0.004
Demolition Dust											
Site Mobilization	1	0.0	0.0	tons/day	10	0.0079	lbs/ton	0.00	0.00	0.0000	0.00000
Fabricate 16" Pull Back Strings	2	0.0	0.0	tons/day	30	0.0079	lbs/ton	0.00	0.00	0.0000	0.00000
Perform HDD Replacement/Tie-In/Commissioning	3	0.0	0.0	tons/day	60	0.0079	lbs/ton	0.00	0.00	0.0000	0.00000
Conduct Pre-Project Riverbed Debris Survey	4	0.0	0.0	tons/day	10	0.0079	lbs/ton	0.00	0.00	0.0000	0.00000
Mobilization to Site	5	0.0	0.0	tons/day	45	0.0079	lbs/ton	0.00	0.00	0.0000	0.00000
Pig & Flush Crossing	6	0.0	0.0	tons/day	15	0.0079	lbs/ton	0.00	0.00	0.0000	0.00000
Cement Pipeline Segments	7	0.0	0.0	tons/day	10	0.0079	lbs/ton	0.00	0.00	0.0000	0.00000
Excavate/Remove Terrestrial Piping	8	50.0	50.0	tons/day	1	0.0079	lbs/ton	0.40	0.04	0.0002	0.00002
Remove In Water Sections Of Pipe	9	0.0	0.0	tons/day	30	0.0079	lbs/ton	0.00	0.00	0.0000	0.00000
Remove/Abandon in Place Segments	10	0.0	0.0	tons/day	30	0.0079	lbs/ton	0.00	0.00	0.0000	0.00000
Site Restoration	11	0.0	0.0	tons/day	30	0.0079	lbs/ton	0.00	0.00	0.0000	0.00000
Max per day:								0.40	0.04	--	--
Total:								--	--	0.00020	0.00002

Fugitive Dust Emissions: Inputs for the Table

Emission factors based on following inputs

Mean number of rain days per year	10.0	worst case
Silt content of soil, fill storage pile, %	1.5	SCAQMD default value
Roadway inputs (paved and unpaved, as per URBEMIS)		
Roads mean vehicle weight, tons	20.61	based on project description, HHDT + LDT and vehicles weight (average of full and empty)
unpaved dirt road silt content, %	8.4	AP-42 construction sites
Truck Loading inputs		
k, particle size multiplier, default=0.35 fpr pm10	0.35	
U, mean wind speed, mph range 1.3-15	8.15	
M, moisture content, default=12%	12	
PM2.5/PM10 ratio truck loading	0.15	
Site grading emissions from CalEEMod for grading	0.091	ratio of PM2.5/PM10 CalEEMod
Demolition materials, tons/yds3	1.000	estimated for concrete debris
Fill materials, tons/yds3	1.000	estimated for soils
Mitigation: demolition area watering (fraction reduction)		
	0.61	0.61 for watering every 3 hours (SCAQMD)
Mitigation: grading/dist area watering (fraction reduction)		
	0.61	0.61 for watering every 3 hours (SCAQMD)
Mitigation: dumping soil moisture (fraction reduction)		
	0.30	0.69 for minimum 12% soil moisture (SCAQMD)
Mitigation: roads (fraction reduction)		
	0.55	0.55 for watering 3X per day (SCAQMD), 0.80 for soil binders applied monthly (AP-42)

Notes:

PM_{2.5}/PM₁₀ ratio as per AP-42 k factor for PM₁₀ and PM_{2.5}

Demolition dust calculations as per EPA AP-42 11.19 and 13.2.4

Truck loading dumping cut/fill based on CalEEMod

Paved and unpaved road dust emissions based on AP-42 2006 (unpaved) Chapt 13. EPA AP-42 2006 is the same as URBEMIS and CalEEMod

One month assumes 22 days of activity, as per URBEMIS

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Table - 6 Emission Factors

March 29, 2022

Onsite

Equipment	Tier	Engine Size (bhp)	LF	Engine Year	Emission Factors (g/bhp-hr)								
					ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	N2O	CH4	CO2
Asphalt Fugitive	EF = lb/acre	--	--	--	2.620	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000
Air Compressor-1	3	50	0.48	--	0.120	3.700	2.740	0.007	0.192	0.192	0.0042	0.117	568.3
Air Compressor-2	4	50	0.48	--	0.120	3.700	2.740	0.007	0.008	0.008	0.0042	0.117	568.3
Air Compressor-3	3	540	0.43	--	0.093	0.685	3.542	0.005	0.062	0.060	0.0042	0.027	506.7
Air Compressor-4	4	50	0.48	--	0.120	3.700	2.740	0.007	0.008	0.008	0.0042	0.117	568.3
Concrete Pump	4	250	0.74	--	0.060	2.200	0.260	0.006	0.008	0.008	0.0042	0.021	568.3
Crew Boat	3	100	0.45	--	0.093	0.685	3.542	0.005	0.062	0.060	0.0042	0.002	506.7
Derrick Barge Crane	3	330	0.43	--	0.093	0.685	3.542	0.005	0.062	0.060	0.0042	0.153	506.7
Derrick Barge Generator	3	100	0.43	--	0.093	0.685	3.542	0.005	0.062	0.060	0.0042	0.041	506.7
Dozer-1	4	310	0.43	--	0.060	2.200	0.260	0.005	0.008	0.008	0.0042	0.154	493.5
Drilling Rig-1	4	700	0.5	--	0.060	2.200	0.260	0.005	0.008	0.008	0.0042	0.152	489.7
Drilling Rig-2	4	700	0.5	--	0.060	2.200	0.260	0.005	0.008	0.008	0.0042	0.152	489.7
Excavator-1	3	310	0.38	--	0.613	3.905	3.916	0.005	0.165	0.165	0.0042	0.152	489.1
Excavator-2	4	310	0.38	--	0.060	2.200	0.260	0.005	0.008	0.008	0.0042	0.152	489.1
Generator-1	3	50	0.74	--	0.120	3.700	2.740	0.006	0.192	0.192	0.0042	0.041	568.3
Generator-2	4	50	0.74	--	0.120	3.700	2.740	0.006	0.008	0.008	0.0042	0.041	568.3
Generator-3	3	75	0.43	--	0.120	3.700	2.740	0.006	0.192	0.192	0.0042	0.041	568.3
Generator-4	3	50	0.43	--	0.093	0.685	3.542	0.005	0.062	0.060	0.0042	0.080	506.7
Generator-5	3	400	0.43	--	0.093	0.685	3.542	0.005	0.062	0.060	0.0042	0.019	506.7
Hydroexcavator	4	300	0.46	--	0.060	2.200	0.260	0.005	0.008	0.008	0.0042	0.152	488.4
Light Plant-1	0	15	0.74	--	0.744	2.531	4.661	0.007	0.224	0.224	0.0042	0.067	568.3
Light Plant-2	0	15	0.74	--	0.744	2.531	4.661	0.007	0.224	0.224	0.0042	0.067	568.3
Light Plant-3	0	15	0.74	--	0.744	2.531	4.661	0.007	0.224	0.224	0.0042	0.067	568.3
Light Plant-4	0	15	0.74	--	0.744	2.531	4.661	0.007	0.224	0.224	0.0042	0.067	568.3
Loader-1	3	240	0.36	--	0.120	2.600	2.320	0.005	0.088	0.088	0.0042	0.152	489.5
Loader-2	4	240	0.36	--	0.060	2.200	0.260	0.005	0.008	0.008	0.0042	0.152	487.9
Mud Pump-1	4	600	0.74	--	0.060	2.200	0.260	0.005	0.008	0.008	0.0042	0.020	568.3
Mud Pump-2	4	600	0.74	--	0.060	2.200	0.260	0.005	0.008	0.008	0.0042	0.020	568.3
Pipelayer-1	4	260	0.29	--	0.060	2.200	0.260	0.005	0.008	0.008	0.0042	0.153	491.4
Pipelayer-2	4	260	0.29	--	0.060	2.200	0.260	0.005	0.008	0.008	0.0042	0.153	491.4
Pipelayer-3	3	260	0.29	--	0.120	2.600	2.320	0.005	0.088	0.088	0.0042	0.153	490.9
Pipelayer-4	3	260	0.29	--	0.120	2.600	2.320	0.005	0.088	0.088	0.0042	0.152	489.1
Survey Vessel	3	270	0.5	--	0.093	0.685	3.542	0.005	0.062	0.060	0.0042	0.002	506.7
Tug Boat	3	500	0.45	--	0.093	0.685	3.542	0.005	0.062	0.060	0.0042	0.002	506.7
Water Pump	0	20	0.74	--	0.807	2.531	4.661	0.007	0.232	0.232	0.0042	0.072	568.3
Welding Machine	0	20	0.45	--	0.807	2.531	4.661	0.007	0.232	0.232	0.0042	0.072	568.3

Notes:

Emission Factors for onshore construction equipment from CalEEMod, Appendix D

Emission Factors for offshore construction equipment and vessels from U.S. EPA 2020 Ports Emissions Inventory Guidance and CalEEMod, Appendix D

Asphalt fugitive EF lbs ROG/acre from CalEEMod, Appendix B.1

HP for onshore and offshore construction equipment and vessels from applicant data

LF for onshore construction equipment from CalEEMod Appendix D

LF for offshore construction equipment and vessels from U.S. EPA 2020 Ports Emissions Inventory Guidance

N₂O emssions factors from State (and Federal) Mandatory Reporting Rule, Table 6

-- Not Available or Applicable

R-1402 L-130 Sacramento River Crossing Replacement

Table - 7 Construction Schedule

March 29, 2022

												2nd QTR		3rd QTR		4th QTR			1st QTR		
												2022								2023	
												Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
Phase	Activity	Code	Duration, days	Heavy Truck Trips Round Trips / Day						Commuter Vehicles		1	2	3	4	5	6	7	8	9	10
				HT Avg (T-Export)*	HT Avg (T-Import)*	HT Avg (T-Equipment)*	HT Peak (T-Export)	HT Peak (T-Import)	HT Peak (T-Equipment)	Autos	LT										
1	Site Mobilization	1	10	0.0	0.0	2.4	0	0	3	3	2	1									
2	Fabricate 16" Pull Back Strings	2	30	0.0	0.0	0.4	0	0	1	12	4	1									
3	Perform HDD Replacement/Tie-In/Commissioning	3	60	1.5	1.3	0.6	2	2	1	23	7		1	1	1						
4	Conduct Pre-Project Riverbed Debris Survey	4	10	0.0	0.0	0.4	0	0	1	6	3		1								
5	Mobilization to Site	5	45	0.0	0.0	0.8	0	0	1	3	2		1	1	1						
6	Pig & Flush Crossing	6	15	0.7	0.7	0.4	1	1	1	8	4				1						
7	Cement Pipeline Segments	7	10	0.0	0.0	0.4	0	0	1	10	6				1						
8	Excavate/Remove Terrestrial Piping	8	20	0.5	0.0	0.4	1	0	1	12	4					1					
9	Remove In Water Sections Of Pipe	9	30	0.0	0.0	0.4	0	0	1	16	6					1	1				
10	Remove/Abandon in Place Segments	10	30	0.0	0.0	0.4	0	0	1	8	4						1	1			
11	Site Restoration	11	30	0.3	0.0	0.6	0	0	1	3	2							1	1		
Notes: Duration assumes 5 days per week *- SUM of truck trips divided by the duration in days.									Peak Export Trucks per day		0	2	2	3	1	0	1	1	0	0	
									Peak Import Trucks per day		0	2	2	2	0	0	0	0	0	0	0
									Peak Equip Trucks per day		3	2	2	3	1	1	1	1	0	0	
									Total Peak Trucks per day		3	6	6	8	2	1	2	2	0	0	
									Autos per day		15	32	26	44	28	24	11	3	0	0	
									Light Trucks per day		6	12	9	19	10	10	6	2	0	0	