Responses to CEC Workshop Requests: Nos. A1 through A32

Amended Application for Certification for HYDROGEN ENERGY CALIFORNIA (08-AFC-8A) Kern County, California

Prepared for:
Hydrogen Energy California LLC

hydrogen energy california

Submitted to:

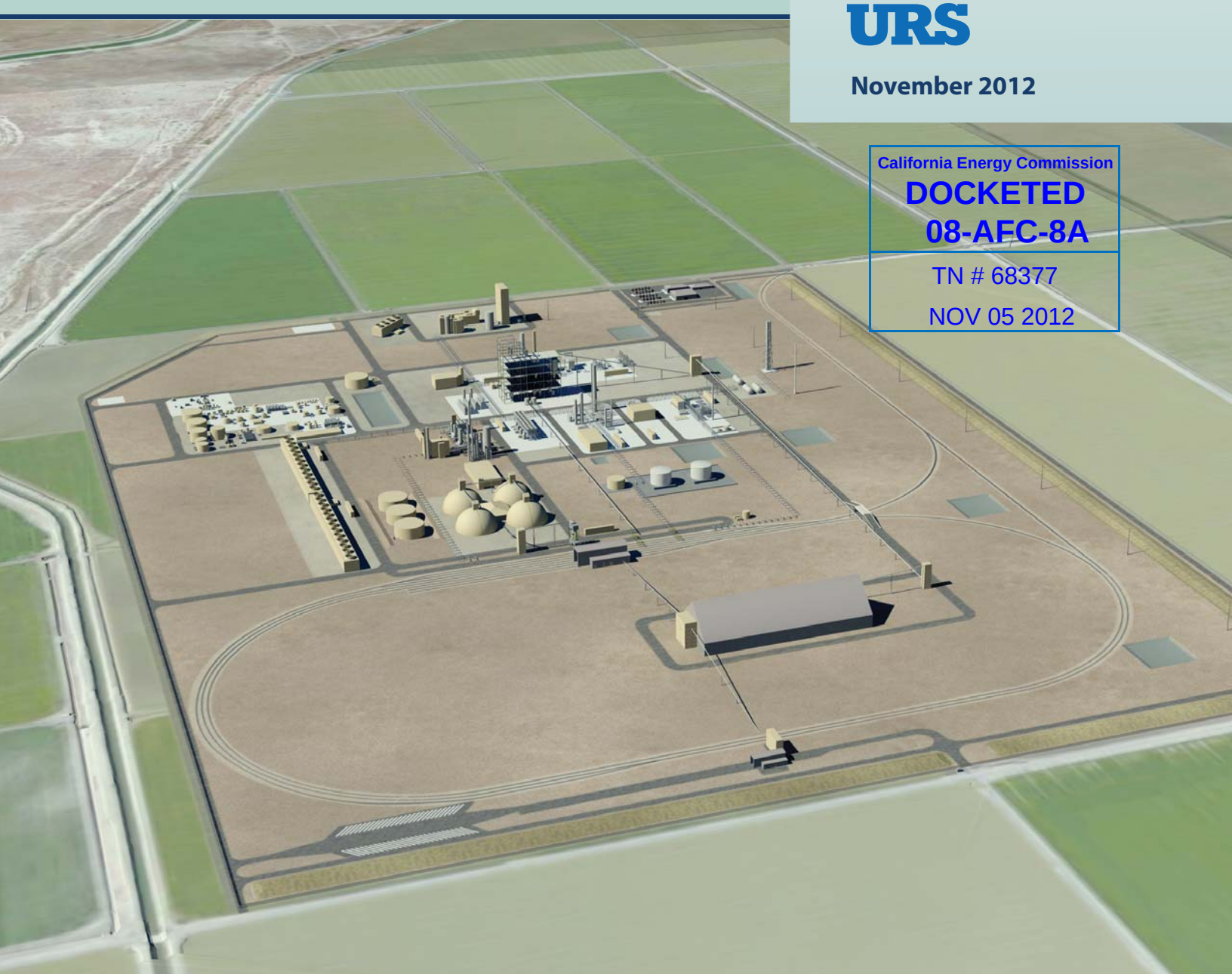
California Energy Commission

U.S Department of Energy

Prepared by:

URS

November 2012



RESPONSES TO WORKSHOP REQUESTS A1 THROUGH A32
FROM CALIFORNIA ENERGY COMMISSION (CEC)

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

LIST OF ACRONYMS AND ABBREVIATIONS USED IN RESPONSES

$\mu g/m^3$	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AFC	Application for Certification
BRSA	Biological Resources Study Area
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CEC	California Energy Commission
CO	carbon monoxide
CO_2	carbon dioxide
DBR	Daily Breathing Rate
DPM	Diesel Particulate Matter
DPR	Department of Parks and Recreation
EHOF	Elk Hills Oil Field
EPA	Environmental Protection Agency (see USEPA)
HECA	Hydrogen Energy California
HRA	Human Health Risk Assessment
lbs/day	pounds per day
m	meter
mg/kg	milligrams per kilogram
mph	miles per hour
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
PG&E	Pacific Gas and Electric Company
petcoke	petroleum coke
PM	particulate matter
PM_{10}	particulate matter 10 microns in diameter or less
$PM_{2.5}$	particulate matter 2.5 microns in diameter or less
PVMRM	Plume Volume Molar Ratio Method
ROG	Reactive organic gases
SCAQMD	South Coast Air Quality Management District
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	sulfur dioxide
Syngas	synthesis gas
TACs	toxic air contaminants
TDS	total dissolved solids
THIs	Total Hazard Indexes
USEPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator
VMT	vehicle miles traveled

Technical Area: Air Quality/Greenhouse Gases
Author: William Walters

WORKSHOP REQUEST

A1. Regarding Data Request A4/A5 – Please re-evaluate the daily travel distances for the scrapers and the graders. Please see the Caterpillar Handbook for means of developing estimates on productivity, where distances should be based on productivity, distances traveled for dumping scraped materials (scraper), etc. A fairly recent online version of the Caterpillar Handbook can be found at the following web site: http://www.cashmanequipment.com/blog/new/caterpillar-performance-handbook-41/

RESPONSE

Several issues related to estimated emissions from Project construction, particularly fugitive emissions, have been brought up in California Energy Commission (CEC) Data Request Sets 1 and 2, and at the September 27, 2012 Workshop. The relevant Data Requests are as follows:

A4. Please revise the scraper fugitive dust emissions factors to use the AP-42 Section 11.9, Table 11.9-4; and Section 13.2.2 calculations/factors that are properly related to scraper loading/unloading and travel—versus the use of grading factors from that section—which are appropriate for motor graders operating at low speeds, but not appropriate for scrapers.

A5. Please revise the daily vehicle miles traveled (VMT) numbers for the scrapers and motor graders to levels that are reasonable, given their relative daily hours of use and speed while in use (motor graders at 3 to 5 miles per hour (mph), scrapers at 5 to 30 mph, depending on operating function).

A7. Please correct the construction particulate matter (PM) PM_{10} (PM 10 microns in diameter or less) and $PM_{2.5}$ (PM 2.5 microns in diameter or less) modeling analysis if the fugitive dust emissions corrections noted above create a new worst case 24-hour or annual emissions period.

A133. Please correct the grading emissions estimate by removing the added emission control efficiency that double counts the effect of grading watered/moist soil.

A134. Please correct the fugitive dust emissions control efficiency to only include watering efficiencies, using an agency-referenced source for the control efficiency, for the fugitive dust causing activities that are not unpaved road travel.

To address CEC staff and interveners' questions, the Applicant has incorporated CEC staff suggestions into the construction emission calculations. The following discussion summarizes the changes to the calculation techniques, and the subsequent dispersion modeling. Maximum daily and annual onsite emissions during the construction period are presented in Table A1-1. Results from the dispersion modeling are presented in Table A1-2. The revised construction emissions are presented in Revised Appendix E-2 to the Amended Application for Certification (AFC), Construction Criteria Pollutant and Greenhouse Gas Emissions, included as Attachment A1-1 to this document.

Mitigation efficiencies

All mitigation efficiencies have been updated to those recommended by CEC staff from the South Coast Air Quality Management District (SCAQMD) Air Quality Analysis Handbook (under development; available at http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/MM_fugitive.html).

Fugitive emissions from vehicles

Updated information provided by the Applicant in response to Data Request A132 indicates that there will be an onsite paved road during construction. This road will stretch at a minimum from an entrance off Adohr Road in the north, through the Controlled Area, to the northern boundary of the Project Site. This distance is approximately one-quarter mile, and crosses the laydown area where delivery trucks will enter. Therefore, one-half mile of onsite delivery truck travel (distance in and out) will be on paved surfaces. Total fugitives from vehicle travel are therefore the sum of travel over gravel (AP-42 Section 13.2.2) and paved roads (AP-42 Section 13.2.1). Import soil trucks also include emissions from travel over dirt surfaces as they deliver the imported soil to its onsite location.

On gravel roads, the applicable mitigation measures include reduced travel speed (57% efficiency) and application of chemical dust suppressants (84% efficiency), for a combined mitigation efficiency of 93%. CEC staff stated in the background to Data Request A132 that the use of soil binders would be required on all onsite unpaved roads, including gravel.

On dirt surfaces, mitigation measures include reduced travel speed (57% efficiency) and watering (61% efficiency), for a combined mitigation efficiency of 83%. Although periodic street cleaning will occur on the onsite paved roads, no mitigation measures were included in the emission calculations for paved roads, because the actual frequency may not match that described in the control efficiency definition.

Dirt Piling or Material Handling and Bulldozing

As requested in CEC Data Request A133, applying water to disturbed areas has been removed as a mitigation measure from dirt piling and bulldozing activities, because the emission factor already accounts for soil moisture.

Scraping

Applicant has updated the emissions from scraping to use the emission factor recommended by CEC staff in AP-42 Table 11.9-4 for topsoil removal by scrapers. The CEIDARS database was consulted for the fraction of total suspended particulates that is PM_{10} and $PM_{2.5}$ in construction fugitives. Because the emission factor does not account for soil moisture, the mitigation efficiency for watering was applied.

Grading

The daily VMT for graders has been updated, assuming an average speed of 5.5 mph over half of the 10-hour construction day. The average speed is taken from the Cat Motor Grader Application Guide (page 11), which states that the equipment travel speed, in order to maximize productivity but prevent machine bounce, should be 4 to 7 mph. The midpoint of this range was assumed.

Assuming a speed of 5.5 mph for 5 hours per day gives a daily VMT of 27.5 miles. Because the emission factor does not account for soil moisture, the mitigation efficiency for watering was applied.

Cat Motor Grader Application Guide available at: http://www.cat.com/cda/files/2693967/7/AEGQ0947-00.pdf.

Covered Storage Piles

The mitigation efficiency for watering or covering storage piles (90% efficiency) has been updated to reflect the value in the most recent SCAQMD Air Quality Analysis Handbook.

Linears

All of the changes to mitigation measures and emission factors described above have been applied to the offsite linears as well.

Modeling

Because the estimated emissions from construction have increased as a result of the changes described above, maximum daily and annual emissions were modeled. All modeling techniques were identical to that described in the Amended AFC, Section 5.1.2.5, Dispersion Modeling Methodology. For PM_{10} and $PM_{2.5}$, the maximum monthly emissions occur in Month 3, and the maximum annual emissions occur in Months 1 through 12. For carbon monoxide (CO), oxides of nitrogen (NO_2) and sulfur dioxide (SO_2), the maximum monthly emissions occur in Month 24, and the maximum annual emissions occur in Months 20 through 31.

One revision to the previous construction modeling was the distribution of fugitives from the import soil trucks and the construction activity (scraping, bulldozing, etc.). Due to Project refinements, it is now apparent that the equipment producing these fugitives would not be operating in two distinct areas, but would be present in both of the previously defined fugitive area sources. Thus, the fugitives from the two sources of emissions were summed, divided by two, and then assigned to both Construction Area 1 (former Soil Import area), and Construction Area 2 (former Construction Equipment area).

As shown in Table A1-2, model results for all pollutants at all averaging times are less than significant. Kern County is currently classified as non-attainment for $PM_{2.5}$ (federal and state) and PM_{10} (state only), and background concentrations exceed the most stringent ambient air quality standards (AAQS). Thus, while the modeled worst-case impact exceeds the standards, the modeled impact from the Project is less than the AAQS.

The modeling files will be provided electronically in a separate submittal to CEC.

Table A1-1
Maximum Daily and Annual Onsite Construction Emissions

Activity	PM_{10}	$PM_{2.5}$	CO	ROG	NO_X	SO_X
Daily						
On-Road Total (lbs/day)	105.9	16.0	70.5	25.2	136.9	0.1
Off-Road Total (lbs/day)	202.3	69.1	168.2	52.7	253.5	0.3
Total Max. Daily Emissions (lbs/day)	308.2	85.1	238.7	77.9	390.4	0.5
Annual						
Total Max. Annual Emissions (tons/year)	27.4	8.1	29.6	9.6	48.1	0.1

Source: HECA Project

Notes:

a Total emissions were based on hours of equipment operation in a given day. Daily average hours of operation are shown in Appendix D.

b Worst-case annual emissions were estimated by summing emissions for each 12-month period (i.e., Months 1 to 12, 2 to 13, etc.) during the 49-month construction period and taking the maximum emissions for the worst 12-month period (i.e., Months 20 to 31 for CO, ROG, SO_X, and NO_X).

c The worst-case monthly and annual emissions varied by pollutant. For PM_{10} and $PM_{2.5}$, the worst month was Month 6, and the worst year was Months 1 through 12. For all other pollutants, the worst month was Month 24, and the worst year was Months 20 through 31. Results are presented for a given pollutant's worst month and year.

lbs/day = pounds per day

PM_{10} = particulate matter less than 10 microns in diameter

$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter

CO = carbon monoxide

ROGs = reactive organic gases

NO_x = nitrogen oxides

SO_x = sulfur oxides

Table A1-2
Maximum Modeled Criteria Pollutant Impacts Due to Construction Emissions

Pollutant	Averaging Period	Maximum Modeled Impact (µg/m^3)	Background[1] (µg/m^3)	Maximum Total Predicted Concentration (µg/m^3)	Most Stringent AAQS (µg/m^3)	UTM Coordinates	
						East (m)	North (m)
Construction Impacts							
CO	1 hour	96.3	4,581	4,677	23,000	284,150.0	3,911,750.0
	8 hour	25.3	2,485	2,510	10,000	283,966.1	3,911,900.0
NO_2	1 hour[2,3]	141.0	140	281	339	284,200.0	3,911,550.0
	Annual[2]	3.2	26	29	57	283,971.9	3,912,149.9
PM_{10}[4]	24 hour	48.8	263.6	312	50	283,967.8	3,911,974.9
	Annual	2.1	55.3	57	20	283,971.9	3,912,149.9
$PM_{2.5}$[4]	24 hour	11.5	195.5	207	35	283,967.8	3,911,974.9
	Annual	0.6	21.9	23	12	283,971.9	3,912,149.9
SO_2	1 hour[3]	0.2	41.9	42	655	284,150.0	3,911,750.0
	3 hour	0.1	26.0	26	1,300	284,000.2	3,912,084.5
	24 hour	0.03	13.1	13	105	283,969.6	3,912,049.9

Source: HECA Project

Notes:

1 Background Concentrations are maximum concentrations from the last 3 years of available EPA AirData and/or CARB data as presented in Section 5.1.1.2 of the AFC Amendment.

2 Results for NO_2 during construction used PVMRM with ambient O_3 data.

3 Although there are NAAQS for SO_2 1 hour, NO_2 1 hour these are statistical standards therefore impacts from construction activities are only compared to the CAAQS due to the infrequent nature of the construction activities.

4 PM_{10} and $PM_{2.5}$ background levels exceed ambient standards.

µg/m^3 = micrograms per cubic meter
AAQS = Ambient Air Quality Standard
CAAQS = California Ambient Air Quality Standards
CARB = California Air Resources Board
CO = carbon monoxide
EPA = U.S. Environmental Protection Agency
NAAQS = National Ambient Air Quality Standards
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in diameter
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
PVMRM = Plume Volume Molar Ratio Method
SO_2 = sulfur dioxide
UTM = Universal Transverse Mercator

WORKSHOP REQUEST

A2. Regarding Data Request A18 – Please provide maps that show the potential BNSF and UP routes for coal transport and provide a description of the methods and means (GIS, Google Earth, etc.) used to develop the rail travel distances used this data response.

RESPONSE

Please refer to the Applicant's responses to Data Requests A124 and A125. These responses provide maps of delivery routes for both Alternatives, and a discussion of how the rail lengths were determined.

WORKSHOP REQUEST

A3. Regarding Data Request A26 – For fugitive dust emissions our calculations for road dust do not match those provided in Volume II, Appendices, Construction Emissions Table A6 page 17 of 22 and Table A7 page 18 of 22. Energy Commission staff has provided an attached spreadsheet with fugitive dust calculations, using the input assumptions provided in the data response. Please review and correct the fugitive dust emissions calculations where necessary.

For the off-road equipment, Energy Commission staff cannot follow the methods used to determine the emissions factors; in this case the applicant's values seem high.

The emissions factors should change for each year based on change in the fleet composition and the same values are used for every year from 2014 through 2033. When Energy Commission staff used OFFROAD2011 to get a weighted hourly emissions factor (using the 150 hp grader as an example) we obtained a lb/hp value of 0.007888 for a 175 hp model (closest to 150 hp) vs. the applicant's value of 0.01965.

The applicant's value of 0.01965 would correspond to a gram/bhp value of 8.9 which is well above Tier 1 levels of 6.9 g/bhp and by 2014 the average population should be much better than Tier 1; whereas Energy Commission staff's determined value would be 3.57 g/bhp which is a more realistic value for a mix of engines (Tier 1 through 3) in 2014. Specifically, the inputs we used in the Access (.mdb) based OFFROAD2011 model are as follows.

- ***Year 2014***
- ***Baseline (not Scenario - although results are same for both)***
- ***San Joaquin Valley Air Basin***
- ***Do not show fleet specific emissions***
- ***Select Emissions for Individual Vehicle Types (graders selected)***
- ***Do not show emissions by engine model***
- ***Select horsepower categories (selected 120 and 175)***

Then using the output the emissions (tons/year) were divided by the activity (hours) and the average horsepower to determine the emissions factor per horsepower.

Energy Commission staff will need to understand the procedures used by the applicant to understand why the off-road emissions values seem so high in the A26 response.

RESPONSE

Please see Appendix B for OEHI's responses to Workshop Requests.

WORKSHOP REQUEST

A4. Regarding Data Request A28. Still looking for assumptions, if any, for emissions control for operation (or long-term construction) equipment that will not have stationary source permits. Specifically, does Oxy have an emissions reduction policy/plan/goals for the reduction of emissions from drill rig engines, including work over rigs, over time? If not, does Oxy just plan to have their drilling contractors abide by the CARB Portable Equipment Registration Program (PERP)?

RESPONSE

Please see Appendix B for OEHI's responses to Workshop Requests.

WORKSHOP REQUEST

A5. Regarding Data Request A33c. Energy Commission staff has been notified by the applicant that additional information on sulfur content question would be forthcoming.

RESPONSE

Please see Appendix B for OEHI's responses to Workshop Requests.

WORKSHOP REQUEST

A6. Regarding Data Request A38. Energy Commission staff has been notified by the applicant that a revised emissions estimate for operations was being performed and would be forthcoming.

RESPONSE

Please see Appendix B for OEHI's responses to Workshop Requests.

WORKSHOP REQUEST

A7. Question related to data responses and discussions:

Further review of the data in the visual resources section provided for the cooling towers showed a 25 percent drop in flow at the lowest of the ambient temperatures without a reduction in the number of operating cells. This is either an error and the number of operating cells (i.e. fans on) should be reduced or it would have to be assumed that the towers have two speed fans and several cells are operating with fans at half speed.

Energy Commission staff understands the issue of retaining water temperature high enough so areas around the air inlets don't freeze when the wet bulb temperature is below freezing, but for our plume analysis we need to understand if the flow is reduced in a number of cells or turned off entirely in 3 cells at the lowest ambient temperature condition and at what point the reduction in cells, or the shifting to half speed operation occurs so we can interpolate for the range of ambient conditions being modeled.

RESPONSE

The Applicant notes that the Hydrogen Energy California (HECA) Project's cooling towers have fixed-speed fans, and during normal ambient conditions, all towers and fans will be operating. During periods of extreme low temperature, one or more of the fans can be shut down so that the cooling water temperature remains above 60 degrees Fahrenheit.

Technical Area: Biological Resources
Author: Amy Golden

WORKSHOP REQUEST

A8. For the carbon dioxide pipeline route, habitat impact acreages were calculated as 0.11 acres of permanent impact and 28.89 acres of temporary impact. Of this acreage, what is the impact acreage of the CO_2 pipeline route that would occur on Elk Hills Oil Field (EHOF)? What is the acreage of the carbon dioxide route that would occur outside of the EHOF?

RESPONSE

Please see Appendix B for OEHI's responses to Workshop Requests.

WORKSHOP REQUEST

A9. Since Occidental Petroleum will construct, own, operate and perform maintenance (O&M) activities along the pipeline, what is the expected level of O&M vehicle travel (number of vehicles, times per year, pipeline replacement needs etc.)? Does this impact calculation include impacts for a maintenance road and if so, temporary or permanent impacts? Please discuss whether the maintenance road would be gravel or paved and whether the road would be open for public access.

RESPONSE

Please see Appendix B for OEHI's responses to Workshop Requests.

WORKSHOP REQUEST

A10. For the transmission line route, habitat impact acreages were calculated as 0.15 acres of permanent impact and 22.7 acres of temporary impact that include a temporary impact acreage for a 25-foot-wide maintenance road. Where was the impact for the proposed switchyard station included? What are the proposed location(s) for the PG&E switchyard? Since PG&E will perform O&M on the transmission line, what is the expected level of O&M vehicle travel (number and types of service vehicles, how many times per year, etc.)?

RESPONSE

The PG&E switching station would be at the eastern terminus of the transmission line route, entirely within a field that is currently used for alfalfa cultivation. The entire switchyard is located within the area surveyed for sensitive biological resources (Biological Resource Study Area [BRSA]). However, because the switching station would be constructed by Pacific Gas and Electric Company (PG&E), the Applicant did not include the switching station footprint in the impacted acreage calculations. As requested by the CEC, the Applicant is in the process of reviewing the switching station requirements, and if necessary, will prepare an impact analysis for the switching station and potential transmission grid improvements; this analysis will be submitted to the CEC as soon as it is completed.

It is anticipated that annual maintenance of the electrical transmission line will be provided for under an agreement between PG&E and the Project. The electrical transmission line is located entirely within areas that are actively farmed or are developed. Most of the maintenance will be routine, and can be scheduled during periods when damage to the crops and land can be minimized. Maintenance activities will be conducted by personnel trained to be aware of the presence of sensitive wildlife. Although maintenance activities on the transmission line will be performed by PG&E staff, and have not been finalized to date, the Applicant anticipates that maintenance activities will be conducted 1 to 3 times per year, with one Class 2 truck and one manlift.

WORKSHOP REQUEST

A11. Since the potable water pipeline route and transmission line would be built in the same corridor, would the same maintenance road be used for both linear facilities? If so, please provide combined vehicle O&M maintenance needs on service road for both the transmission line and potable water line, since PG&E would maintain the transmission line portion and HECA would maintain the potable water route portion.

RESPONSE

The same existing maintenance road will be used for the potable water line and the transmission line. See response to Workshop Request A10 for information on PG&E's maintenance activities on the transmission line.

HECA will own, operate, and maintain the approximately 1-mile-long potable water pipeline. It is anticipated that HECA maintenance activities on the potable water pipeline will be conducted 1 to 3 times per year with two Class 2 trucks. Maintenance activities on the pipeline would include:

- Annual reconnaissance of the pipeline right-of-way
- Annual inspection and exercising (opening and closing for one cycle) of valves, as necessary
- Annual vegetation removal, re-grading, and application of dirt for the access road after wet
- Periods and pipe work, as necessary
- As determined necessary by routine inspection, replacement of pipeline components (lining and coating, valves, and joints)

WORKSHOP REQUEST

A12. For the natural gas pipeline route, habitat impact acreages were calculated as 2.2 acres of permanent impact and 49.8 acres of temporary impact. Were impacts for a maintenance road included in these calculations and if so, permanent or temporary? Since PG&E will own and perform O&M on the pipeline, what is the expected level of O&M vehicle travel (number and types of service vehicles, times per year, etc.)? Please discuss whether the maintenance road would be gravel or paved and whether the road would be open to public access.

RESPONSE

The entire length of the natural gas pipeline route is paralleled by existing unimproved roads. No new roads and no improvements to the existing roads are proposed as part of the HECA Project. All temporary construction access impacts were included in the temporary impact calculations.

Although maintenance activities on the natural gas pipeline will be performed by PG&E staff and have not been finalized to date, HECA anticipates that maintenance activities will be conducted 1 to 3 times per year with one Class 2 truck. No new roads or improvements to the existing roads are proposed as part of the HECA Project.

WORKSHOP REQUEST

A13. As discussed in Section 5.0 of Appendix A-2, Biological Resources Study for Modified Alignment of CO_2 Supply Line, please provide a copy of Oxy's 12-year site-wide maintenance Streambed Alteration Agreement.

RESPONSE

Applicant requests additional time to address this Workshop Request.

WORKSHOP REQUEST

A14. Please provide a figure showing all collected kit fox sign GPS data, to date.

RESPONSE

Figure A14-1 illustrates the locations of burrows identified within the BRSA that could potentially be occupied by kit fox or burrowing owls. No kit fox signs (tracks, scat, prey remains) have been observed in the BRSA for the HECA Project.

Site 1

Several burrows observed in 2011;
not surveyed in 2012

Site 5

Site 3

Site 4

Site 2

Several burrows observed in 2011 - site occupied by California ground squirrels; site not surveyed in 2012

- Burrowing Owl Occurrence - 2012
- Burrowing Owl Occurrence - 2011
- San Joaquin Kit Fox Survey Area - 2012
- Biological Resources Study Area
- Project Site
- Construction Staging Area
- Controlled Area
- BVWSD Well Field
- Carbon Dioxide
- Natural Gas
- Potable Water
- Process Water
- Railroad
- Transmission

N

0 0.75 1.5 MILES

Site 1: approximately 10 historic kit fox dens (no sign of current use); one pair of Burrowing Owls in April 2012 - no nesting evident.
Site 2: few potential owl or fox burrows; one burrowing owl seen in late August 2012. Site occupied by California ground squirrels.
Site 3: few potential owl or fox burrows.
Site 4: few potential owl or fox burrows.
Site 5: few potential owl or fox burrows.

Source: USGS 7.5-minute quadrangles: Buttonwillow, published 1973 (rev 1976), East Elk Hills, published 1973 (rev 1977), Lokern, published 1973 (rev 1976), Tupman, published 1973 (rev 1977), West Elk Hills, published 1973 (rev 1976).

LOCATIONS OF BURROWS POTENTIALLY OCCUPIED BY SAN JOAQUIN KIT FOX AND BURROWING OWLS IN THE BIOLOGICAL RESOURCES STUDY AREA

November 2012
28068052

Hydrogen Energy California (HECA)
Kern County, California

URS

FIGURE A14-1

lyd U:\GIS\HECA\Projects\HECA_2012\Data Request 2012\FigA14-1_SJKF_BurrowOwl_Combo.mxd 10/30/2012 10:27:39 AM

WORKSHOP REQUEST

A15. Regarding data response A44, please provide more clarification on the "previously vacated dens observed along Site 1 near Magnolia Rd" following USFWS's San Joaquin Kit Fox Survey Protocol for the Northern Range (FWS 1999). Classify the dens as known, potential, atypical, or natal/non-natal and describe the sign observed to determine den status.

RESPONSE

The potential den observed at Site 1 near Magnolia Road (see Figure A14-1) had no kit fox sign, and did not appear to have been occupied within the past 5 years, based on the lack of disturbance and vegetation associated with the soil surrounding the potential den opening.

WORKSHOP REQUEST

A16. Please provide a draft Revegetation Plan for areas that would be temporarily disturbed during construction. Please identify performance standards, success criteria, and a monitoring plan to determine the effectiveness of the revegetation activities.

RESPONSE

The Applicant will prepare and submit a draft Revegetation Plan for the following locations within the HECA Project area:

- Natural gas pipeline (Site 1 adjacent to Magnolia Road)
- Natural gas pipeline (Sites 2 through 5 adjacent to SR 58) subject to landowner approval

The remaining temporary disturbance areas within the HECA Project area are currently in cultivation, or are currently part of actively used roads, parking areas, or other facilities that would not be appropriate for revegetation.

The Applicant will submit the draft plan concurrent with the submittal of the 401 Water Quality Certification/Waste Discharge Requirement application.

WORKSHOP REQUEST

A17. Provide status update on mitigation.

RESPONSE

The Applicant proposes to acquire mitigation credits from the Kern Water Bank Authority's mitigation bank to mitigate for impacts to habitats potentially used by listed wildlife species. In addition, HECA would develop a plan, in coordination with the California Department of Fish and Game and the CEC, to mitigate the permanent loss of cultivated lands used by foraging Swainson's hawks. This mitigation may include planting trees that would provide future nesting sites, and maintaining current agricultural land uses within the Controlled Area.

Technical Area: Cultural Resources
Authors: Gabriel Roark, Elizabeth A. Bagwell

WORKSHOP REQUEST

A18. All responses to these Data Requests containing references to specific archaeological site locations or information, or resources of concern to Native Americans, must be submitted under a request for confidentiality.

Regarding Data Requests A68–71: During the September 27, 2012, data requests workshop, the applicant and staff discussed an alternate approach to addressing data requests A68–71. The applicant pointed out that data requests A68–71 ask the applicant to implement a combined presence/absence-test excavation program to locate and determine the significance of a privy suspected to be located at historic archaeological site HECA-2010-2. The applicant inquired whether a presence/absence study could be conducted to locate the privy and, if found, prepare a research design and carry out a test excavation at a later time to determine the significance of the archaeological find. Staff finds this approach agreeable, but during the workshop cautioned the applicant that separating the presence/absence phase from evaluative test excavation could result in delays to the environment review process. The applicant perceives a schedule gain in conducting a presence/absence investigation—should a privy not be found—in that the work plan for such a study is typically less involved than research designs for test excavations.

Staff concurs with the applicant that they may conduct a presence/absence investigation at HECA-2010-2 with the following provisions:

1. ***Prepare a succinct work plan to determine whether buried privy or refuse pits are present in that portion of HECA-2010-2 within the archaeological resources study area. The work plan should be prepared by a historical archaeologist that meets the Secretary of the Interior's professional standards for archaeologists (see Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines, 36 Code of Federal Regulations 61). The work plan must include the following elements:***

2. ***A statement of methods.***

3. ***A figure that shows the contents of the Sketch Map on an aerial photographic base at a scale of 1 inch = 200 feet. The archaeological resources study area should be depicted on this figure.***

4. ***The preparer's resume and the resumes of other key staff that are expected to implement the work plan.***

5. ***Upon staff's approval of the research design described immediately above, please implement the archaeological investigation consistent with the approved work plan.***

6. ***Following completion of the archaeological investigation, please provide a memorandum that identifies the methods employed and results of the investigation. The report shall contain the following:***

- ***A description of the work plan and the methods employed during the study.***
- ***A description of the study results.***
- ***A location map on the East Elk Hills 7.5-minute topographic quadrangle.***
- ***A Sketch map that depicts the sampling locations and the location of any newly identified archaeological features.***
- ***Revised 2010 DPR 523 forms and a 2012 update.***

7. ***Should the presence/absence excavation locate a privy or other archaeological feature, the applicant shall implement the actions described in Data Requests A69–71.***

RESPONSE

As discussed in the workshop, there may not have been a privy and/or trash pit present at historic archaeological site HECA-2010-2. As indicated in the revised Department of Parks and Recreation (DPR) form, in situ sewer pipe was identified in the northwestern corner of the foundation at the time of recordation. Furthermore, massive grading has occurred since the recording of the resource, resulting in the complete removal of the foundation that was the primary feature of the site. This grading also increased the likelihood that any associated features may have been eradicated, or at least substantially impacted. Therefore, the Applicant appreciates the CEC's concurrence that a subsurface survey be conducted initially, and if historic features are found and the identified feature(s) cannot be avoided, then a research design will be prepared and a test excavation will be implemented at a later time to determine the significance of the identified archaeological feature. As indicated in the workshop, the Applicant does not currently have access to the property containing HECA-2010-2, and therefore cannot implement the investigation at this time. The Applicant will submit the requested archaeological subsurface survey work plan at a later date, once site access is obtained.

In review of the Workshop Request A19, the Applicant requests the following modifications shown in tracked changes (underline/strikeout) to the outlined provisions:

Regarding No. 1: The work plan should be prepared ~~by~~ under the direction of a historical archaeologist that meets the Secretary of the Interior's professional standards for archaeologists.

Regarding No. 5: Upon staff's approval of the ~~research design~~ work plan described immediately above, please implement the archaeological investigation consistent with the approved work plan.

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WORKSHOP REQUEST

A19. Regarding Data Requests A72–75: During a September 20, 2012 site visit with the applicant, an applicant's representative stated that the applicant would like to demolish two historic structures in the Controlled Area, MR 7 and MR 9. In responses to data requests A72–75, the applicant earlier stated that no ground disturbance would occur at MR 7 and MR 9. Please confirm that there will be no ground disturbance at MR 7 and MR 9.

RESPONSE

These structures will not be demolished. Previous responses to Data Requests A72-A75 are accurate. Although they will not be demolished, it should be noted herein that these structures were not found to be historic (JRP 2012 Appendix G to the Amended AFC).

Technical Area: Land Use
Author: Jonathan Fong

WORKSHOP REQUEST

A20. In Section 2 "Project Description" of the Amended AFC, Table 2-1 "Disturbed Acreage" includes temporary and permanent disturbance associated with the HECA project. Please verify that the Table 2-1 is consistent with the proposed rail line design as depicted in the Applicant Responses to Energy Commission data requests.

RESPONSE

The industrial railroad spur route presented in the Applicant's responses to CEC Data Requests is the same route as presented in the Confidential Railroad and Natural Gas Linears document submitted in May 2012 with the Amended AFC, and is consistent with Amended AFC Table 2-1.

WORKSHOP REQUEST

A21. In Section 5 "Land Use and Agriculture" of the Amended AFC, Table 5.4-4 "Important Farmland in the Study Area" includes acreages of classified farmlands within a 1-mile radius of the project site and 0.25-mile radius of the associated linear facilities.

Energy Commission staff requests either a new table or a revision to Table 5.4-4 providing a breakdown of the impacts to classified farmlands based on the permanent disturbed acreage as determined in Table 2-1. This revision would allow staff to analyze the impacts to agricultural farmland as part of the HECA project.

RESPONSE

Presented in Table A21-1 is a breakdown of classified farmland areas in the study area that would permanently be disturbed by the Project, as described in Amended AFC Table 2-1.

Table A21-1
Permanent Disturbance to Farmland in the Study Area

Farmland Map Category	Permanent Disturbance (acres)
Project Site	
Prime Farmland	453.0
Subtotal	453.0
Electrical Transmission Line	
Prime Farmland	0.17
Subtotal	0.17
Natural Gas Linear	
Farmland of Statewide Importance	0.23
Subtotal	0.23
BVWSD Well Field and Process Water Pipeline	
Prime Farmland	0.29
Subtotal	0.29
Potable Water Pipeline	
Subtotal	-
Railroad Spur	
Farmland of Statewide Importance	2.84
Prime Farmland	34.77
Semi-Agricultural and Rural Commercial Land	0.82
Vacant or Disturbed Land	0.02
Subtotal	38.46
Temporary Construction Areas	
Subtotal	-
OEHI CO_2 Pipeline	
Nonagricultural or Natural Vegetation	0.057
Prime Farmland	0.057
Subtotal	0.11

Notes:

BVWSD = Buena Vista Water Storage District

CO_2 = carbon dioxide

OEHI = Occidental of Elk Hills, Inc.

Technical Area: Traffic and Transportation
Author: John Hope

WORKSHOP REQUEST

A22. Energy Commission staff is requesting from the applicant a record of conversation regarding their meetings with Caltrans and Kern County regarding the weight limits of the bridges. Essentially, Energy Commission staff requires clarification regarding weight limits on bridges. Staff needs information regarding whether or not bridges have the capability to support the weight of heavy trucks used to transport project components (e.g., turbines) to the site.

RESPONSE

The Applicant engaged a specialized heavy haul contractor to evaluate the route from the Port of Stockton, and from rail off-loading near Buttonwillow to the Project Site. The evaluation concluded that the bridges have the capability to support the estimated heavy haul loads using specialized conveyance equipment.

Technical Area: Visual Resources
Author: Elliott Lum

WORKSHOP REQUEST

A23. Confirm whether the former Port Organics plant will be removed.

RESPONSE

The Port Organics plant will not be removed for the Project.

Technical Area: Socioeconomics
Authors: Aaron J. Nousaine

BACKGROUND

The Amended Application for Certification (AFC) presents the estimated direct, indirect, and induced economic impacts of the Hydrogen Energy California (HECA) project derived from an application of the IMPLAN economic modeling software using economic data specific to Kern County for 2009. The AFC does not provide a clear explanation of the assumptions and input values used in the IMPLAN economic model. To undertake an independent assessment of the economic impacts of the proposed project, Energy Commission staff requires a complete project budget that identifies major expenditures for construction and operation of all major project components. This should include all aspects of both the HECA and the Occidental of Elk Hills, Inc. (OEHI) projects. It should also identify the value and percentage of total spending within each expense category that will be spent locally within Kern County.

The economic impact estimates in the AFC report indirect and induced construction and operations impacts as combined figures. For example, the AFC states on page 5.8-12 that the two projects combined will produce approximately $1.67 billion in labor income, of which approximately $294 million would represent the indirect and induced effects of construction related activities. To fully understand the economic impacts of the project it is necessary that the direct, indirect, and induced economic impacts are reported independently, because each represents a different type of economic effect.

The AFC also does not report the estimated fiscal impacts of purchases associated with project operations and maintenance. According to the data provided on page 5.8-23 of the AFC, the HECA project is expected to generate approximately $77.4 million in taxable sales (7.25 percent sales tax on $1.06 billion worth of locally purchased materials) during project construction. However, no data is provided on the estimated amount of state and local sales taxes that are likely to be generated by project operations.

WORKSHOP REQUEST

A24. To the extent possible, provide staff with detail regarding the anticipated project budget for construction, operations, and maintenance for both the HECA and OEHI projects. This should include details by expense category and estimated timelines for construction, operations and maintenance of each project component.

RESPONSE

The requested information is being submitted confidentially to CEC.

WORKSHOP REQUEST

A25. Please provide clarification regarding the types of occupations associated with the craft labor estimates provided in Table 5.8-11 of the AFC. In particular, identify the occupations associated with Off-plot Construction Staff, Management, Engineering, Document Control, Subcontractors Staff, Commissioning, and Admin/Operating Staff. This should include a description of the work conducted by each type of worker and the identification of an associated SOC code, where applicable.

RESPONSE

Clarification on Staff Occupation Types:

- Off-Plot Construction Staff is expected to include similar occupations types to those listed for Management, Engineering, and Document Control.
- Management includes—but is not limited to—the following types of occupations: Construction Managers, Quality Assurance Managers, Social and Community Services Managers, Warehouse Managers, Purchasing Managers and Clerks, Miscellaneous Managers, Contract Administrators and Clerks, Cost Accountants, Financial Specialists, Auditors, Computer Support Specialists, Occupation Health and Safety Technicians, Cost Estimators, Schedulers, Compliance Officers, Security Guards, Human Resources Specialists and Assistants, and Office Clerks.
- Engineering includes Field Construction Engineers with expertise in the following types of occupations: Mechanical Engineering, Civil Engineering, Structural Engineering, Electrical Engineering, Instrument and Control Engineering, Quality Engineering, and Surveying.
- Document Control includes the following types of occupations: Technical Document Managers, Office Clerks, File Clerks, and Expediting Clerks.
- Subcontractor Staff is expected to include similar occupation types to those listed for Management, Engineering, and Document Control.
- Commissioning include, but is not limited to, the following types of occupations: Commissioning Manager, Commissioning Shift Supervisors, Mechanical Engineering, Civil Engineering, Structural Engineering, Instrument and Control Engineering, DCS Commissioning Specialists, and Supplier Service Engineering.
- Admin/Operating Staff includes, but is not limited to, the following types of occupations: Facility Manager, Operations Shift Supervisors, Schedulers and Production Planning, Equipment Maintenance Technicians, Electrical Technicians, Instrument and Control Technicians, Warehouse Managers, Purchasing Managers and Clerks, Occupation Health and Safety Technicians, Human Resources Specialists and Assistants, Office Clerks, and Laboratory Technicians.

In addition to clarifying Off-Plot Construction Staff above, the following Table A25-1 provides the types of Off-Plot Construction Craft shown in Amended AFC Table 5.8-11.

Table A25-1
Preliminary Estimate of Off-Plot Construction Craft by Occupational Type

Job Category	Months after Construction Mobilization											
	11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**
Laborers	8	8	12	12	12	14	14	11	11	12	8	8
Operators	6	6	8	8	8	12	12	10	10	10	6	6
Linemen	0	0	8	8	8	10	10	6	6	6	6	6
Carpenters	2	2	2	4	4	4	4	2	2	2	2	2
Pipefitters	10	10	14	12	12	14	14	10	10	10	4	4
Off-Plot Construction Craft Total	26	26	44	44	44	54	54	39	39	40	26	26

WORKSHOP REQUEST

A26. Provide a complete list of operations workers by occupation type, including the number of workers needed in each category.

RESPONSE

Clarification on Operations Staff by Occupational Type is provided in Table A26-1.

Table A26-1
Estimate of Operations Staff by Operational Type

Occupational Type	Estimated Number of Workers
Management and Administration	6
Operations Crew	88
Production Planning	5
Equipment Maintenance	65
Instrument, Electrical, and Control Support	4
Material Coordinating, Inventory, and Procurement	9
Health, Safety, Security, and Environmental Protection	8
Administrative Support	9
Benefits and Human Resources	1
Training	2
Laboratory Functions	3
Total	**200**

Technical Area: Power Plant Reliability and Efficiency
Authors: Edward Brady, Shahab Khoshmashrab

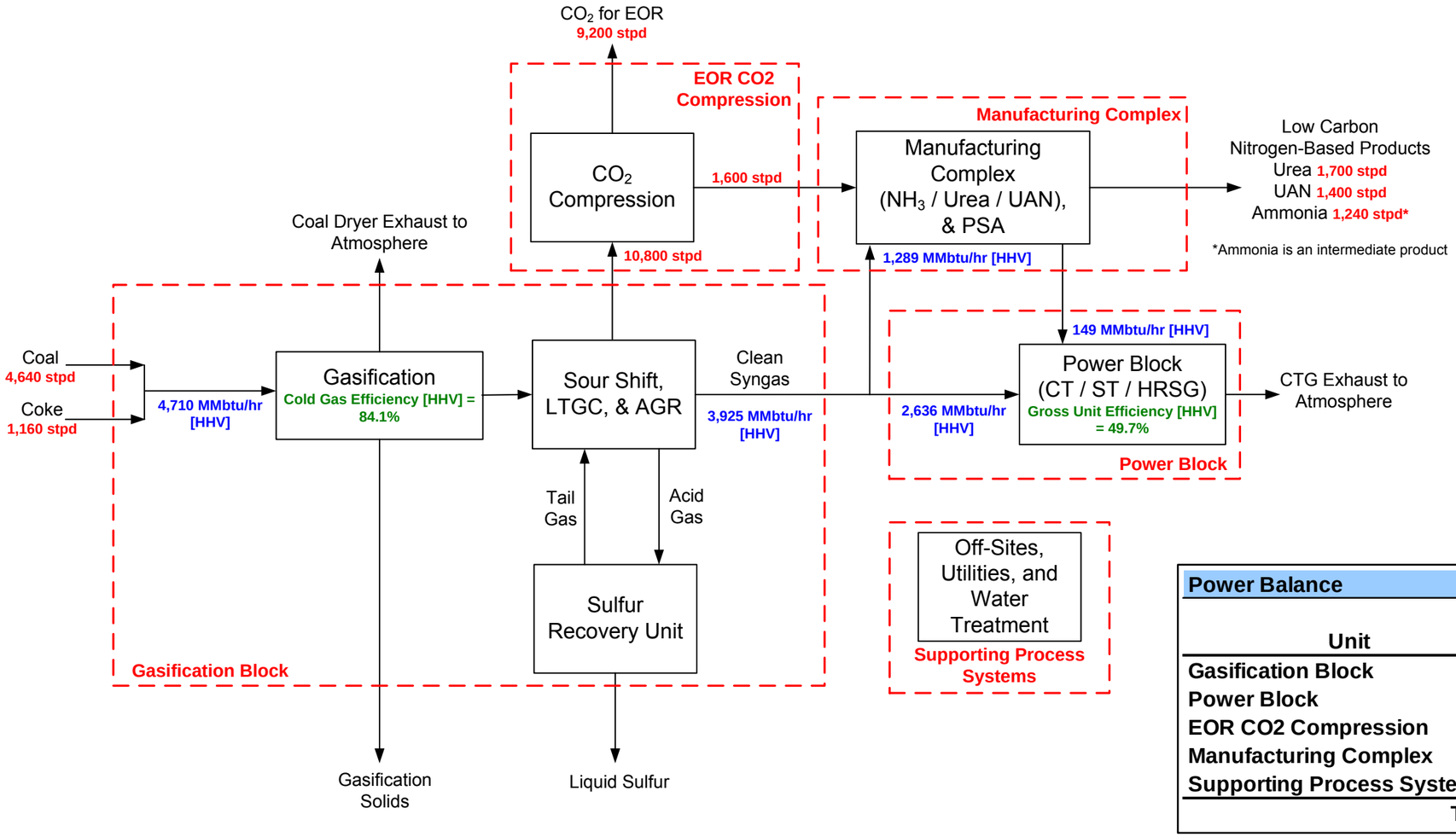
WORKSHOP REQUEST

A27. Regarding Data Requests A14-A16, A90: Provide additional detail on heat and energy balances. Provide balances for four categories to address efficiency and production in each category.

RESPONSE

The Applicant has prepared Figure A27-1 to provide additional detail on heat and energy balances for the four categories (i.e., Gasification Block, Power Block, Manufacturing Complex, and Enhanced Oil Recovery CO_2 Compression). This figure supplements the previous response provided to Data Request A14. The fuel energy content of the process streams flowing into and out of each block is shown. Also shown is the Gasification Block cold gas efficiency and the gross Power Block efficiency. Power generation and auxiliary load consumption are shown in the table included on Figure A27-1.

Simplified Block Flow Diagram with Energy Flows
Maximum Power Production 97°F



Power Balance		
Unit	Auxiliary Load MWe	Generation MWe
Gasification Block	30	-
Power Block	12	405
EOR CO2 Compression	40	-
Manufacturing Complex	25	-
Supporting Process Systems	31	-
Total:	138	405

Source:
Fluor; Figure A14-2 Rev. B (16 Oct 12)

SIMPLIFIED BLOCK FLOW DIAGRAM

November 2012
28068052

Hydrogen Energy California (HECA)
Kern County, California

URS

FIGURE A27-1

10/30/12 vsa. T:\HECA-SCS 2012\Data Requests\DRs_workshop\Fig\A27-1_smpl_block_flow_dia.ai

Technical Area: Waste Management
Author: Ellie Townsend-Hough

WORKSHOP REQUEST

A28. Provide update on discussions with Kern County and updates on how waste would be disposed.

RESPONSE

HECA has scheduled a meeting with Kern County Planning Department staff to discuss waste management in early November 2012, and will provide further updates to the CEC following this meeting. HECA has contracted Charah, a coal combustion product management consultant, to assist in the identification of potential recycling opportunities. For 25 years, Charah has specialized in Integrated Gasification Combined Cycle gasification solids beneficiation to address the recycling needs of the coal gasification power industry (http://charah.com/).

WORKSHOP REQUEST

A29. Provide a white paper to describe potential uses for gasification solids.

RESPONSE

Applicant requests additional time to address this Workshop Request.

WORKSHOP REQUEST

A30. Provide a white paper with a table to verify the probability that the waste is nonhazardous.

RESPONSE

Applicant requests additional time to address this Workshop Request.

Technical Area: Public Health
Author: Alvin Greenberg

WORKSHOP REQUEST

A31. Regarding Data Request A105: Update the analysis provided to include all TACs, not just DPM.

RESPONSE:

The health risk assessment (HRA) conducted in response to Data Request A105 has been expanded to include all Project toxic air contaminants (TACs). The AERMOD, HARP On-Ramp and HARP models were used to conduct this analysis. The HRA included emissions from the diesel delivery trucks along Station Road, plus all onsite TAC emissions from both stationary and mobile sources. Alternatives 1 and 2 were modeled separately. The onsite sources were modeled using the same techniques as outlined in the 2012 Amended AFC. The offsite sources were modeled in the same manner as described in the Response to Data Request A105.

TAC emissions were updated to include the revised fugitive TAC emissions, as described in Response to Data Request A16. Two new fugitive sources were included in the modeling to account for fugitives from the CO_2 compression and Pressure Swing Absorber unit. Mercury emissions from the heat recovery steam generator and feedstock dryer were updated to incorporate the revised emissions described in Response to Data Request A135 for Mercury and Air Toxics Standard compliance. Ammonia emissions from the nitric acid unit were revised to incorporate newer vendor information. These emissions were included in Attachment 3 of the document "Correspondence with San Joaquin Valley Air Pollution Control District and Notice of Incomplete Application," docketed on September 18, 2012.

All sensitive and residential receptors identified in the 2012 Amended AFC were included in the HRA modeling. The HRA was conducted using maximum hourly and annual emissions for all TAC sources. All of the same AERMOD and HARP model settings—including the same meteorological data used in HRA modeling in the 2012 Amended AFC and Response to Data Request A105—were used in this HRA.

Dispersion modeling was performed using AERMOD to calculate the "X/Q" concentrations per source and receptor using a unit emission rate of 1 grams per second (g/s) for each source for both the 1-hour and annual averaging times. These files were converted with HARP On-Ramp for input into the HARP model. The HARP model was run to estimate the cancer health risk and the chronic and acute non-cancer health risk factors. The cancer risk was estimated based on a 70-year exposure, while the acute risk assumed exposure occurs over a 1-hour period, and chronic risk assumes an exposure over a 1-year period. The cancer risk is an over-estimation of potential impacts, because the project design life is only 25 years.

Table A31-1 presents the results of the HRA at the nearest sensitive or residential receptor. All health risks were predicted to be below the significance thresholds. The estimated cancer risk at all locations is below the significance criterion of 10 in 1 million; thus, the Project emissions are expected to pose a less-than-significant increase in terms of carcinogenic health risk. The estimated chronic and acute Total Hazard Indexes (THIs) are below the significance criterion of 1; thus, the Project emissions of noncarcinogenic TACs would not be expected to pose a significant risk.

The modeling files will be provided electronically in a separate submittal to CEC.

Table A31-1
Estimated Cancer Risk, Acute and Chronic Non-Cancer THI Due to HECA Operations at Nearby Sensitive and Residential Receptors

Location	Cancer Risk		Chronic Non-Cancer Total Hazard Index		Acute Non-Cancer Total Hazard Index	
	Alternative 1	**Alternative 2**	**Alternative 1**	**Alternative 2**	**Alternative 1**	**Alternative 2**
Peak risk at a Residence	4.21	7.15	0.29	0.29	0.38	0.38
	excess risk in 1 million		total hazard index		total hazard index	
Coordinates in UTM NAD83 (m) easting northing	283,989	284,401	283,989	283,989	284,401	284,401
	3,910,951	3,912,477	3,910,951	3,910,951	3,912,477	3,912,477
Significance threshold	10 in 1 million		1		1	
Below significance?	Yes	Yes	Yes	Yes	Yes	Yes

Notes:
The cancer risk is based on a 70-year exposure.
m = meters
THI = total hazard index
UTM = Universal Transverse Mercator

WORKSHOP REQUEST

A32. Regarding Data Request A106: For the transportation route from the Santa Maria refineries, conduct a diesel particulate matter HRA from the feedstock trucks and the impact on 1 sensitive receptor. Look at the whole route to select a sensitive receptor, but don't need to analyze all receptors. Model one receptor and explain what resources (e.g., Google Earth) were used to identify the receptor.

RESPONSE

Heavy-duty diesel trucks may pass by sensitive receptors on the transportation route between the Conoco Phillips Refinery in Nipomo, California, near Santa Maria, and the HECA facility, if this option is chosen for the Project's petroleum coke (petcoke) needs. Petcoke will not be transported by train for either alternative; therefore, the number of trucks transporting petcoke for either alternative is the same.

The route between the refinery and the HECA site would include travel on U.S. 101 south to CA 166 east, then to Interstate 5 north, to Stockdale Highway, and finally to Station Road into the HECA facility. Communities passed through would include Nipomo, Cuyama, Maricopa, and southwest Bakersfield. Three schools were identified using Google Earth and Google Maps near an intersection just east of the refinery along the truck route in Nipomo. The schools are Dana School, Little Bits Preschool, and Dayspring Preschool, all approximately 900 feet southwest of the Pomeroy Road and West Tefft Street intersection in Nipomo. These schools were the closest sensitive receptors located near a signalized intersection along the truck route.

An HRA for diesel particulate matter (DPM) was conducted to determine the potential increase in cancer risk due to emissions from the diesel petcoke delivery trucks to the three sensitive receptors near the intersection. The delivery trucks were modeled both while moving, and while idling at the intersection. It was conservatively assumed that trucks would idle for 2 minutes at Pomeroy and West Tefft, both when going to and coming back from the Project Site. This assumption is conservative, because the intersection is in a smaller community, and the signal is likely less than 1 minute long.

Emissions associated with delivery truck movement were calculated using heavy-heavy duty diesel truck emission factors from the CARB on-road emissions model EMFAC2007, and using the same calculation method as described in the 2012 Amended AFC. Emission factors were remodeled for the South Central Coast Air Basin. Emission factors from the model are provided in terms of grams per mile, which were converted to grams per second for the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) dispersion model, based on the distance traveled, the number of trucks and frequency of truck trips. Moving trucks were modeled using volume sources, while idling trucks were modeled using point sources. Transportation sources were modeled using the same techniques outlined in the Amended AFC, and previous responses to data requests, which follow San Joaquin Valley Air Pollution Control District *(SJVAPCD) Guidance for Air Dispersion Modeling* and *Volume II of the ISC User's Guide.* Emissions from moving trucks were spread evenly across all volume sources.

The HRA was conducted using the maximum annual DPM emissions from the delivery trucks. Five years of AERMET meteorological data were obtained from the Santa Barbara Air Pollution Control District for the Santa Maria Airport surface station and the Vandenberg Air Force Base upper air station to represent meteorological conditions in the modeled area. The AERMOD model was used to estimate the maximum annual PM_{10} concentration, from which the cancer risk factor was calculated. Even though attendance at the schools would be less than 10 years,

the cancer risk was estimated based on a 25-year exposure, which is the life of the Project. HRA calculations are presented in Table A32-1.

For carcinogenic health effects, an exposure is considered significant when the predicted increase in lifetime cancer risk exceeds 10 in 1 million (10×10^6). Table A32-2 presents the peak PM_{10} annual concentration predicted with AERMOD and cancer risk due to Project-related petcoke truck DPM emissions at the maximally exposed school during operations. As shown in this table, the cancer risk from DPM at all three sensitive school receptors was predicted to be well below the cancer risk significance threshold. Therefore, the incremental cancer risk due to DPM emissions from the Project-related petcoke delivery trucks is considered less than significant.

The modeling files will be provided electronically in a separate submittal to CEC.

Table A32-1
HRA Calculations and Results

DPM Cancer Risk Calculations		
Maximum annual PM_{10} concentration at sensitive receptor (school) south of intersection	6.20E-04	$\mu g/m^3$
Inhalation Cancer Potency Factor for diesel particulate matter (from OEHHA)	1.10E+00	$(mg/kg\text{-}day)^{-1}$
Inhalation dose[1]	2.22E-06	mg/kg-day
Inhalation cancer risk[2]	0.09	in 1 million

Notes:

1 Inhalation dose (mg/kg-day) = Annual conc * DBR * A * EF * ED * 1E-6 / AT
where
DBR = daily breathing rate (L/kg-day), used 95th percentile (high end) = 393 L/kg-day
A = Inhalation absorption factor (fraction of chemical absorbed), default = 1
EF = Exposure frequency (days/year) = 350 days/year
ED = Exposure duration (years), Project duration = 25 years
AT = Averaging time period over which exposure is averaged (days), default = 25,550 days
(e.g., 25,550 days for 70-year cancer risk)

2 Inhalation cancer risk = (Inhalation dose) * (cancer potency factor)

DPM = diesel particulate matter
HRA = health risk assessment
mg/kg = milligrams per kilogram
OEHHA = Office of Environmental Health Hazard Assessment
$\mu g/m^3$ = micrograms per cubic meter

Table A32-2
Estimated PM_{10} Concentration and Cancer Risk from DPM
Due to Offsite Diesel Truck Exhaust

Maximum Annual Modeled PM_{10} Result ($\mu g/m^3$)	DPM Cancer Risk	Significance Threshold	Location	Below Significance?
6.20E-04	0.09 in 1 million	10 in 1 million	Little Bits Preschool 255 Pomeroy Road, Nipomo, CA	Yes

Notes:

[1] DPM cancer risk is based on 25-year exposure.

$\mu g/m^3$ = micrograms per cubic meter

DPM = diesel particulate matter

PM_{10} = particulate matter less than 10 microns in diameter

References:

SJVAPCD. *Guidance for Air Dispersion Modeling.* 2007.

USEPA. *User's Guide for the Industrial Source Complex (ISC3) Dispersion Models. Volume II-Description of Model Algorithms.* 1995.

APPENDIX A
(REVISED APPENDIX E-2 FROM AMENDED AFC)

Estimated Daily Maximum Construction Emissions of Criteria Pollutants (lbs/day)						
Activity	**PM_{10}**	**$PM_{2.5}$**	**CO**	**ROG**	**NO_x**	**SO_2**
Project Construction Emissions						
On-Site Combustion Emissions						
Construction Equipment - On-road	4.72	4.25	63.46	23.48	131.41	0.13
Construction Equipment - Off-road	13.02	11.98	168.18	52.74	253.50	0.32
Worker Vehicles	0.00	0.00	4.82	0.37	0.39	0.008
Delivery Trucks	1.824	1.654	2.205	1.359	5.138	0.004
On-Site Fugitive Emissions						
Construction Equipment - On-road	9.10	0.91				
Construction Equipment - Off-road	1.35	0.13				
Worker Vehicles	1.09	0.11				
Delivery Trucks	89.19	9.08				
Construction Activity	187.87	57.02				
Subtotal of Project Emissions	**308.2**	**85.1**	**238.7**	**77.9**	**390.4**	**0.5**
Off-Site Construction Emissions						
Off-Site Combustion Emissions						
Worker Vehicles	0.16	0.08	369.57	11.37	44.24	0.437
Delivery Trucks	11.13	9.54	15.40	3.40	78.16	0.07
Off-Site Paved Road Fugitive Dust Emissions						
Worker Vehicles	0.35	0.09				
Delivery Trucks	14.00	3.44				
Subtotal of Off-Site Emissions	**25.65**	**13.15**	**384.96**	**14.77**	**122.41**	**0.51**
Total Maximum Daily Emissions (lbs/day)	**334**	**98**	**624**	**93**	**513**	**1**

Estimated Annual Maximum Construction Emissions of Criteria Pollutants (tons/yr)						
Activity	**PM_{10}**	**$PM_{2.5}$**	**CO**	**ROG**	**NO_x**	**SO_2**
Project Construction Emissions						
On-Site Combustion Emissions						
Construction Equipment - On-road	0.78	0.70	8.32	3.07	17.22	0.02
Construction Equipment - Off-road	1.48	1.37	20.31	6.33	30.15	0.04
Worker Vehicles	0.00	0.00	0.68	0.05	0.05	0.001
Delivery Trucks	0.158	0.143	0.291	0.179	0.678	0.001
Linear Combustion Emissions	0.14	0.13	2.43	0.76	3.90	0.00
Subtotal of Project Combustion Emissions	**2.57**	**2.34**	**32.02**	**10.39**	**52.01**	**0.06**
On-Site Fugitive Emissions						
Construction Equipment - On-road	1.10	0.11				
Construction Equipment - Off-road	0.15	0.01				
Worker Vehicles	0.30	0.03				
Delivery Trucks	6.69	0.68				
Construction Activity	16.70	5.07				
Linear Fugitive Emissions	0.06	0.01				
Subtotal of Project Fugitive Emissions	**27.58**	**5.91**				
Subtotal of On-site Emissions (no linears)	**27.37**	**8.12**	**29.59**	**9.64**	**48.11**	**0.06**
Subtotal of Project Emissions	**30.15**	**8.25**	**32.02**	**10.39**	**52.01**	**0.06**
Off-Site Construction Emissions						
Off-Site Combustion Emissions						
Worker Vehicles	0.07	0.03	52.22	1.61	6.25	0.062
Delivery Trucks	1.01	0.86	2.03	0.45	10.32	0.01
Subtotal of Off-Site Combustion Emissions	**1.07**	**0.90**	**54.25**	**2.06**	**16.57**	**0.07**
Off-Site Paved Road Fugitive Dust Emissions						
Worker Vehicles	0.14	0.04				
Delivery Trucks	1.28	0.31				
Subtotal of Off-Site Fugitive Emissions	**1.42**	**0.35**				
Subtotal of Off-Site Emissions	**2.50**	**1.25**	**54.25**	**2.06**	**16.57**	**0.07**
Total Maximum Annual Emissions (tons/year)	**33**	**9.5**	**86**	**12**	**69**	**0**

Estimated Emissions of GHG Pollutants, Entire Construction Period (tons)				
Activity	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
Project Construction Emissions				
On-Site Combustion Emissions				
Construction Equipment - On-road	5,749.3	0.1	0.1	5,781.3
Construction Equipment - Off-road	9,143.5	1.6	0.2	9,243.2
Worker Vehicles	271.9	0.0	0.0	275.4
Delivery Trucks	388.2	0.0	0.0	390.0
Linear Combustion Emissions	2,682.5	0.3	0.0	2,701.6
Subtotal of Project Emissions	**18,235.3**	**2.0**	**0.4**	**18,391.6**
Off-Site On-Road Emissions				
Off-Site Combustion Emissions				
Worker Vehicles	15,381.0	3.6	1.8	16,023.5
Delivery Trucks	5,864.5	0.3	0.2	5,926.7
Subtotal of Off-Site Emissions	**21,245.5**	**3.9**	**2.0**	**21,950.2**
Total Maximum Daily Emissions (tons)	**39,480.9**	**5.9**	**2.4**	**40,341.7**

Estimated Emissions of GHG Pollutants, Entire Construction Period (metric tonnes)				
Activity	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
Project Construction Emissions				
On-Site Combustion Emissions				
Construction Equipment - On-road	5,215.7	0.1	0.1	5,244.7
Construction Equipment - Off-road	8,294.8	1.4	0.2	8,385.2
Worker Vehicles	246.6	0.0	0.0	249.9
Delivery Trucks	352.2	0.0	0.0	353.8
Linear Combustion Emissions	2,433.5	0.3	0.0	2,450.9
Subtotal of Project Emissions	**16,542.8**	**1.8**	**0.3**	**16,684.5**
Off-Site On-Road Emissions				
Off-Site Combustion Emissions				
Worker Vehicles	13,953.4	3.3	1.7	14,536.2
Delivery Trucks	5,320.2	0.2	0.2	5,376.6
Subtotal of Off-Site Emissions	**19,273.6**	**3.5**	**1.8**	**19,912.9**
Total Maximum Daily Emissions (tonnes)	**35,816.4**	**5.3**	**2.2**	**36,597.4**

Hydrogen Energy California, Kern County Power Project
Carbon Monoxide (CO) Emissions by Month
8/14/2012

CO — MONTHLY EMISSIONS (lbs/day)

CO	1	2	3	4	5	6	7	8	9	10	11	12	13
ON-SITE													
CONSTRUCTION VEHICLES													
On-Road Vehicles													
18 cy fill mat'l haul truck	0	0	13	13	26	26	26	26	13	13	13	13	7
Bus	3	3	3	3	4	4	4	4	4	4	7	7	7
Concrete Pumper Truck	0	0	0	0	0	3	3	3	3	3	3	3	3
Dump Truck	4	5	5	4	4	4	4	4	4	4	3	3	3
Diesel Tractor (Yard Dog)	0	0	0	0	0	3	3	3	3	3	3	6	6
Service Truck - 1 ton	3	3	3	5	5	5	5	3	3	3	3	3	3
Pile Driver Truck	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube	1	1	1	1	1	1	1	1	1	1	1	1	1
Tractor Truck 5th Wheel	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks - Pickup 3/4 ton	3	3	3	3	3	4	4	5	10	10	10	10	16
Trucks - 3 ton	1	1	1	1	1	3	3	3	5	5	5	5	8
Truck - Water	7	7	7	7	7	7	4	4	4	4	4	4	4
Off Road Vehicles													
Air Compressor 185 CFM	3	3	3	3	4	4	4	4	4	4	4	4	4
Air Compressor 750 CFM	0	0	0	0	2	2	2	2	3	3	3	3	3
Articulating Boom Platform	0	0	0	0	0	0	0	0	0	0	0	0	0
Bob cat loader	0	0	2	2	2	2	2	8	8	8	8	8	6
Bulldozer D10R	17	17	17	11	11	11	11	11	11	6	6	0	0
Bulldozer D6C	9	9	9	9	6	6	6	6	6	6	3	3	3
Concrete Trowel Machine	0	0	0	0	0	1	1	1	1	1	1	1	1
Concrete Vibrators	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes - Mobile 35 ton	0	0	0	0	0	0	2	2	2	6	6	6	6
Cranes - Mobile 45 ton	0	0	0	0	0	0	0	0	0	0	4	4	4
Crane - Mobile 65 ton	0	0	0	0	0	0	0	0	0	0	0	2	2
Cranes 100 / 150 ton cap	0	0	0	0	0	0	0	0	0	0	1	1	3
Diesel Powered Welder	0	0	0	3	3	3	3	3	3	3	3	3	3
Excavator - Backhoe/loader	3	3	5	7	7	7	7	7	7	7	7	3	3
Excavator - Earth Scraper 637	56	56	56	56	32	32	16	0	0	0	0	0	0
Excavator - loader	4	4	4	4	4	4	4	4	4	4	4	4	2
Excavator - Motor Grader (CAT140H)	0	3	3	3	9	9	0	0	0	0	0	0	0
Excavator - Trencher (CAT320)	0	0	0	0	0	7	7	7	7	7	7	7	7
Fired Heaters (2,000 BTU)	0	0	0	0	1	1	1	1	1	1	2	2	2
Forklift	3	3	3	3	3	3	3	3	3	3	3	3	3
Fusion Welder	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 600 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 1,000 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0
Light Plants	0	0	1	1	3	3	3	3	1	1	2	2	3
Man lifts - telescoping	0	0	0	0	0	0	0	0	5	5	5	9	9
Man lift - scissor	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction Roller	0	0	12	12	12	12	12	12	5	5	5	5	5
Portable Compaction - Vibratory Plate	0	0	0	0	0	0	0	1	1	1	1	1	1
Portable Compaction - Ram	0	0	0	0	0	0	0	0	0	0	0	0	0
Pumps	1	1	1	2	2	2	2	2	2	2	2	2	2
Portable Power Generators	8	8	8	8	12	12	12	12	12	20	20	20	20
Truck Crane - Greater than 300 ton	0	0	0	0	0	0	0	0	0	0	0	2	2
Truck Crane - Greater than 200 ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Vibratory Roller Ingersol-Rand 20 ton	8	8	8	8	8	8	8	8	8	5	5	5	5
WORKER VEHICLES													
Personal commuting vehicles	0	0	0	0	0	0	1	1	1	1	1	1	2
DELIVERY TRUCKS													
Light delivery truck (e.g. Fed-Ex)	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	2	2	2	2	2	2	2	2	2	2	2	2	2
Import fill trucks	10	10	10	10	10	10	10	0	0	0	0	0	0
ONSITE TOTAL (lbs/day)	**146**	**151**	**180**	**181**	**185**	**200**	**175**	**153**	**145**	**150**	**155**	**158**	**159**
OFF-SITE													
WORKER VEHICLES													
Personal commuting vehicles	7	12	16	20	30	38	45	60	67	80	100	112	132
DELIVERY TRUCKS													
Light delivery truck (e.g. Fed-Ex)	1	1	1	1	1	1	1	1	1	1	1	1	1
Heavy delivery truck (e.g. flat beds carrying construction eqp)	15	15	15	15	15	15	15	15	15	15	15	15	15
Import fill trucks	47	47	47	47	47	47	47	0	0	0	0	0	0
LINEARS													
ON ROAD													
Dump Truck	0	0	0	0	0	0	0	0	0	0	5	5	8
Service Truck (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	3	3	3
Pipe Haul Truck and Trailer (HHDT-DSL)	0	0	0	0	0	0	0	0	0	0	4	4	4
3/4 Ton Pickup (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	6	6	6
Truck - water	0	0	0	0	0	0	0	0	0	0	3	3	5
OFF ROAD													
Air Compressor (185 CFM)	0	0	0	0	0	0	0	0	0	0	3	3	5
Bore Machine (Hydraulic)	0	0	0	0	0	0	0	0	0	0	0	0	0
12 Ton Hydra Crane	0	0	0	0	0	0	0	0	0	0	3	5	5
Backhoe/loader	0	0	0	0	0	0	0	0	0	0	10	10	16
Excavator - Trencher	0	0	0	0	0	0	0	0	0	0	0	3	3
Forklift	0	0	0	0	0	0	0	0	0	0	1	1	2
Welding Generator	0	0	0	0	0	0	0	0	0	0	16	16	16
3 to 5 Ton AC Roller	0	0	0	0	0	0	0	0	0	0	0	3	3
Pipe Bending Machine	0	0	0	0	0	0	0	0	0	0	3	3	7
RAIL													
AIR COMPRESSOR 185	0	0	0	0	0	0	0	0	0	0	0	0	0
BOOM TRUCK 12 TON	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 325 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	3
CAT 330 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT DOZER D-6	0	0	0	0	0	0	0	0	0	0	0	0	9
CAT MODEL 12 MOTOR GRADER	0	0	0	0	0	0	0	0	0	0	0	0	6
CAT ROLLER-COMPACTOR 563	0	0	0	0	0	0	0	0	0	0	0	0	5
CAT RUBBER TIRE LOADER 966	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT SCRAPER 615	0	0	0	0	0	0	0	0	0	0	0	0	8
CRANE-ROUGH TERRAIN 45T	0	0	0	0	0	0	0	0	0	0	0	0	0
GENSET 5KW	0	0	0	0	0	0	0	0	0	0	0	0	0
JOHN DEERE TRACTOR 9400	0	0	0	0	0	0	0	0	0	0	0	0	3
PICK-UP CRAFT	0	0	0	0	0	0	0	0	0	0	0	0	10
PICK-UP OVERHEAD	0	0	0	0	0	0	0	0	0	0	0	0	7
RAIL BALLAST REGULATOR	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL CLIP MACHINE	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL MOVER-SHUTTLE WAGON	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL TAMPER	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL WELDER	0	0	0	0	0	0	0	0	0	0	0	0	0
RAMEX WALK BEHIND COMPACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0
TRI-AXLE DUMP TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	5
TRUCK FLATBED 14 FOOT	0	0	0	0	0	0	0	0	0	0	0	0	1
TRUCK TRACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0
WATER TRUCK, 4M ON-ROAD	0	0	0	0	0	0	0	0	0	0	0	0	1
WELDING MACHINE 350 AMP	0	0	0	0	0	0	0	0	0	0	0	0	0
LINEARS TOTAL (lbs/day)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**56**	**65**	**143**
OFFSITE VEHICLES TOTAL (lbs/day)	**69**	**74**	**78**	**83**	**92**	**100**	**107**	**75**	**82**	**96**	**115**	**127**	**148**
TOTAL PROJECT (lbs/day)	216	225	258	264	277	300	282	229	227	245	327	350	449

CO	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
ON-SITE																					
CONSTRUCTION VEHICLES																					
On-Road Vehicles																					
18 cy fill mat'l haul truck	7	7	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus	7	7	7	9	9	9	13	13	13	13	18	18	18	18	18	18	18	18	18	18	18
Concrete Pumper Truck	4	4	4	3	3	3	3	3	0	0	0	0	0	0	1	1	1	1	0	0	0
Dump Truck	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3
Diesel Tractor (Yard Dog)	6	6	6	12	12	12	12	12	12	12	15	15	15	15	15	15	15	15	15	15	15
Service Truck - 1 ton	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Pile Driver Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Tractor Truck 5th Wheel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks - Pickup 3/4 ton	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Trucks - 3 ton	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Truck - Water	4	4	4	4	4	4	4	4	4	4	3	4	3	3	3	3	3	3	3	3	3
Off Road Vehicles																					
Air Compressor 185 CFM	8	8	8	10	10	10	13	13	13	13	15	15	15	15	15	15	15	15	15	15	15
Air Compressor 750 CFM	3	3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	3	3	3	3	2
Articulating Boom Platform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bob cat loader	6	6	6	6	6	4	4	4	4	4	4	0	0	0	0	0	0	0	0	0	0
Bulldozer D10R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulldozer D6C	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	0	0	0
Concrete Trowel Machine	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
Concrete Vibrators	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes - Mobile 35 ton	11	11	11	11	11	11	11	11	11	11	11	11	11	8	8	8	8	8	8	8	8
Cranes - Mobile 45 ton	4	4	4	4	4	8	8	8	8	8	8	8	8	8	8	8	4	4	4	4	4
Crane - Mobile 65 ton	4	8	10	10	10	12	12	12	12	12	12	12	12	12	12	12	12	10	10	8	4
Cranes 100 / 150 ton cap	3	4	4	5	5	5	5	5	5	5	5	5	5	5	5	3	3	1	1	1	1
Diesel Powered Welder	3	3	4	4	4	5	5	5	5	5	7	7	7	7	7	7	7	7	7	4	4
Excavator - Backhoe/loader	3	3	3	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0
Excavator - Earth Scraper 637	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - loader	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	0	0	0
Excavator - Motor Grader (CAT140H)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	0	0	0
Excavator - Trencher (CAT320)	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fired Heaters (2,000 BTU)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1
Forklift	3	3	3	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3
Fusion Welder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 600 tn Crane	0	0	0	0	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0	0
Heavy Haul / 1,000 tn Crane	0	0	0	0	0	0	4	4	4	4	4	4	0	0	0	0	0	0	0	0	0
Light Plants	3	3	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	3
Man lifts - telescoping	9	9	9	9	9	9	14	14	14	14	19	19	19	19	19	19	19	19	19	19	19
Man lift - scissor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction Roller	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0	5	5	5	5	5	5
Portable Compaction - Vibratory Plate	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction - Ram	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pumps	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Portable Power Generators	20	20	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	41	41	41	41
Truck Crane - Greater than 300 ton	2	2	2	5	5	7	7	9	9	9	9	9	9	9	9	9	7	7	5	5	5
Truck Crane - Greater than 200 ton	0	1	1	1	1	1	3	3	3	4	4	4	4	4	4	4	3	0	0	0	0
Vibratory Roller Ingersol-Rand 20 ton	5	3	3	3	3	0	0	0	0	0	0	0	0	0	5	5	5	5	0	0	0
WORKER VEHICLES																					
Personal commuting vehicles	2	2	3	3	3	3	4	4	4	4	5	5	5	6	6	6	6	6	6	6	6
DELIVERY TRUCKS																					
Light delivery truck (e.g. Fed-Ex)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Import fill trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ONSITE TOTAL (lbs/day)	**171**	**174**	**185**	**193**	**196**	**195**	**211**	**214**	**212**	**223**	**239**	**230**	**225**	**219**	**236**	**237**	**226**	**220**	**201**	**196**	**190**
OFF-SITE																					
WORKER VEHICLES																					
Personal commuting vehicles	155	187	211	230	244	257	272	286	320	344	370	393	398	437	468	483	486	491	484	479	458
DELIVERY TRUCKS																					
Light delivery truck (e.g. Fed-Ex)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Heavy delivery truck (e.g. flat beds carrying construction eqp)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Import fill trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LINEARS																					
ON ROAD																					
Dump Truck	8	8	8	8	8	8	8	5	5	0	0	0	0	0	0	0	0	0	0	0	0
Service Truck (MHD-DSL)	3	3	3	4	4	4	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0
Pipe Haul Truck and Trailer (HHDT-DSL)	4	4	4	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0
3/4 Ton Pickup (MHD-DSL)	6	6	6	10	10	10	10	10	10	0	0	0	0	0	0	0	0	0	0	0	0
Truck - water	5	5	5	5	5	5	5	3	3	0	0	0	0	0	0	0	0	0	0	0	0
OFF ROAD																					
Air Compressor (185 CFM)	5	8	8	8	8	5	5	3	3	0	0	0	0	0	0	0	0	0	0	0	0
Bore Machine (Hydraulic)	0	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 Ton Hydra Crane	8	8	8	8	8	8	8	5	5	0	0	0	0	0	0	0	0	0	0	0	0
Backhoe/loader	16	16	16	16	16	16	16	10	10	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Trencher	3	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0
Forklift	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Welding Generator	16	16	16	16	16	16	16	16	16	0	0	0	0	0	0	0	0	0	0	0	0
3 to 5 Ton AC Roller	3	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0
Pipe Bending Machine	7	7	7	7	7	7	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL																					
AIR COMPRESSOR 185	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BOOM TRUCK 12 TON	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 325 BACKHOE	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 330 BACKHOE	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT DOZER D-6	9	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT MODEL 12 MOTOR GRADER	6	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT ROLLER-COMPACTOR 563	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT RUBBER TIRE LOADER 966	0	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT SCRAPER 615	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRANE-ROUGH TERRAIN 45T	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENSET 5KW	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JOHN DEERE TRACTOR 9400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP CRAFT	10	10	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP OVERHEAD	22	22	18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL BALLAST REGULATOR	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL CLIP MACHINE	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL MOVER-SHUTTLE WAGON	0	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL TAMPER	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL WELDER	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAMEX WALK BEHIND COMPACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRI-AXLE DUMP TRUCK	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK FLATBED 14 FOOT	1	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK TRACTOR	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WATER TRUCK, 4M ON-ROAD	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WELDING MACHINE 350 AMP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LINEARS TOTAL (lbs/day)	**162**	**155**	**151**	**155**	**94**	**91**	**86**	**69**	**65**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
OFFSITE VEHICLES TOTAL (lbs/day)	**170**	**202**	**226**	**246**	**260**	**273**	**288**	**301**	**335**	**359**	**385**	**408**	**413**	**453**	**484**	**499**	**501**	**506**	**499**	**495**	**473**
TOTAL PROJECT (lbs/day)	503	530	562	594	550	559	586	584	612	582	624	638	638	671	719	735	727	726	700	690	663

CO	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
ON-SITE															
CONSTRUCTION VEHICLES															
On-Road Vehicles															
18 cy fill mat'l haul truck	0	4	4	4	4	1	1	1	0	0	0	0	0	0	0
Bus	18	16	16	16	13	13	7	7	4	4	3	3	3	1	1
Concrete Pumper Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dump Truck	3	3	4	4	4	3	1	1	1	1	1	0	0	0	0
Diesel Tractor (Yard Dog)	15	6	6	6	6	6	6	6	0	0	0	0	0	0	0
Service Truck - 1 ton	3	3	3	3	3	3	3	3	1	1	1	1	1	1	1
Pile Driver Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Tractor Truck 5th Wheel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks - Pickup 3/4 ton	16	16	16	16	16	16	16	16	10	10	6	6	6	6	3
Trucks - 3 ton	5	4	4	4	4	3	3	3	1	1	1	1	0	0	0
Truck - Water	3	3	3	3	3	3	3	3	1	1	1	1	1	1	1
Off Road Vehicles															
Air Compressor 185 CFM	15	10	10	10	8	8	8	8	5	5	5	3	3	1	1
Air Compressor 750 CFM	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Articulating Boom Platform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bob cat loader	0	2	2	2	2	2	2	2	0	0	0	0	0	0	0
Bulldozer D10R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulldozer D6C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete Trowel Machine	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0
Concrete Vibrators	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes - Mobile 35 ton	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2
Cranes - Mobile 45 ton	4	4	4	4	4	4	2	2	0	0	0	0	0	0	0
Crane - Mobile 65 ton	4	4	4	4	2	2	2	2	2	2	2	0	0	0	0
Cranes 100 / 150 ton cap	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Diesel Powered Welder	4	4	4	3	3	3	3	3	1	1	1	1	1	1	1
Excavator - Backhoe/loader	0	3	3	3	3	2	2	2	0	0	0	0	0	0	0
Excavator - Earth Scraper 637	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - loader	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0
Excavator - Motor Grader (CAT140H)	0	6	6	6	6	3	3	3	0	0	0	0	0	0	0
Excavator - Trencher (CAT320)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fired Heaters (2,000 BTU)	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Forklift	3	3	3	3	3	3	3	3	1	1	1	1	1	1	1
Fusion Welder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 600 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 1,000 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Light Plants	3	3	3	3	3	3	2	2	2	2	2	1	1	1	1
Man lifts - telescoping	19	14	14	14	9	9	9	9	5	5	5	5	2	2	2
Man lift - scissor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction Roller	0	0	0	5	5	5	2	2	0	0	0	0	0	0	0
Portable Compaction - Vibratory Plate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction - Ram	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pumps	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Portable Power Generators	41	31	31	31	31	20	20	20	20	20	20	10	10	10	4
Truck Crane - Greater than 300 ton	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0
Truck Crane - Greater than 200 ton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vibratory Roller Ingersol-Rand 20 ton	0	0	0	3	3	3	3	0	0	0	0	0	0	0	0
WORKER VEHICLES															
Personal commuting vehicles	6	5	5	5	4	3	3	2	1	1	1	1	1	1	1
DELIVERY TRUCKS															
Light delivery truck (e.g. Fed-Ex)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Import fill trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ONSITE TOTAL (lbs/day)	**175**	**157**	**158**	**166**	**154**	**130**	**113**	**109**	**65**	**65**	**61**	**43**	**36**	**33**	**23**
OFF-SITE															
WORKER VEHICLES															
Personal commuting vehicles	433	420	381	369	313	255	202	137	110	109	109	101	86	79	59
DELIVERY TRUCKS															
Light delivery truck (e.g. Fed-Ex)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Heavy delivery truck (e.g. flat beds carrying construction eqp)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Import fill trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LINEARS															
ON ROAD															
Dump Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Service Truck (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipe Haul Truck and Trailer (HHDT-DSL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/4 Ton Pickup (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OFF ROAD															
Air Compressor (185 CFM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bore Machine (Hydraulic)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 Ton Hydra Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Backhoe/loader	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Trencher	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Forklift	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Welding Generator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 to 5 Ton AC Roller	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipe Bending Machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL															
AIR COMPRESSOR 185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BOOM TRUCK 12 TON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 325 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 330 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT DOZER D-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT MODEL 12 MOTOR GRADER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT ROLLER-COMPACTOR 563	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT RUBBER TIRE LOADER 966	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT SCRAPER 615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRANE-ROUGH TERRAIN 45T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENSET 5KW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JOHN DEERE TRACTOR 9400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP CRAFT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP OVERHEAD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL BALLAST REGULATOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL CLIP MACHINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL MOVER-SHUTTLE WAGON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL TAMPER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL WELDER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAMEX WALK BEHIND COMPACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRI-AXLE DUMP TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK FLATBED 14 FOOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK TRACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WATER TRUCK, 4M ON-ROAD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WELDING MACHINE 350 AMP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LINEARS TOTAL (lbs/day)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
OFFSITE VEHICLES TOTAL (lbs/day)	**449**	**435**	**397**	**384**	**329**	**270**	**217**	**153**	**125**	**125**	**125**	**117**	**101**	**94**	**75**
TOTAL PROJECT (lbs/day)	624	593	555	551	482	400	330	262	190	190	186	159	138	127	98

Notes:

1. According to schedules provided by Fluor, Linear construction (except rail) takes place in months 11-22.
2. According to schedules provided by Fluor, Rail construction occurs in months 13-17.

Hydrogen Energy California, Kern County Power Project
Carbon Dioxide (CO2) Emissions by Month
8/14/2012

CO2

MONTHLY EMISSIONS (lbs/day)

CONSTRUCTION VEHICLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ON-SITE																
On-Road Vehicles																
18 cy fill mat'l haul truck	0	0	2,861	2,861	5,722	5,722	5,722	5,722	2,861	2,861	2,861	2,861	1,431	1,431	1,431	1,431
Bus	572	572	572	572	858	858	858	858	858	858	1,431	1,431	1,431	1,431	1,431	1,431
Concrete Pumper Truck	0	0	0	0	0	572	572	572	572	572	572	572	572	858	858	858
Dump Truck	858	1,144	1,144	858	858	858	858	858	858	858	572	572	572	572	572	0
Diesel Tractor (Yard Dog)	0	0	0	0	0	649	649	649	649	649	649	1,298	1,298	1,298	1,298	1,298
Service Truck - 1 ton	572	572	572	1,144	1,144	1,144	1,144	572	572	572	572	572	572	572	572	572
Pile Driver Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272
Tractor Truck 5th Wheel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks - Pickup 3/4 ton	680	680	680	680	680	816	952	1,088	2,041	2,041	2,041	2,041	3,401	3,401	3,401	3,401
Trucks - 3 ton	286	286	286	286	286	572	572	572	1,144	1,144	1,144	1,144	1,717	1,717	1,717	1,717
Truck - Water	1,431	1,431	1,431	1,431	1,431	1,431	858	858	858	858	858	858	858	858	858	858
Off Road Vehicles																
Air Compressor 185 CFM	214	214	214	214	320	320	320	320	320	320	320	320	320	641	641	641
Air Compressor 750 CFM	0	0	0	0	225	225	225	225	450	450	450	450	450	450	450	901
Articulating Boom Platform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bob cat loader	0	0	168	168	168	168	168	672	672	672	672	672	504	504	504	504
Bulldozer D10R	4,584	4,584	4,584	3,056	3,056	3,056	3,056	3,056	3,056	1,528	1,528	0	0	0	0	0
Bulldozer D6C	1,164	1,164	1,164	1,164	776	776	776	776	776	776	388	388	388	388	388	0
Concrete Trowel Machine	0	0	0	0	0	138	138	138	138	138	138	138	138	138	138	138
Concrete Vibrators	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes - Mobile 35 ton	0	0	0	0	0	0	215	215	215	862	862	862	862	1,508	1,508	1,508
Cranes - Mobile 45 ton	0	0	0	0	0	0	0	0	0	0	690	690	690	690	690	690
Crane - Mobile 65 ton	0	0	0	0	0	0	0	0	0	0	0	345	345	690	1,381	1,726
Cranes 100 / 150 ton cap	0	0	0	0	0	0	0	0	0	0	482	482	964	964	1,446	1,446
Diesel Powered Welder	0	0	0	507	507	507	507	507	507	507	507	507	507	507	507	761
Excavator - Backhoe/loader	481	481	721	961	961	961	961	961	961	961	961	481	481	481	481	481
Excavator - Earth Scraper 637	14,837	14,837	14,837	14,837	8,478	8,478	4,239	0	0	0	0	0	0	0	0	0
Excavator - loader	636	636	636	636	636	636	636	636	636	636	636	636	318	318	0	0
Excavator - Motor Grader (CAT140H)	0	431	431	431	1,292	1,292	0	0	0	0	0	0	0	0	0	0
Excavator - Trencher (CAT320)	0	0	0	0	0	901	901	901	901	901	901	901	901	901	901	901
Fired Heaters (2,000 BTU)	0	0	0	0	327	327	327	327	246	246	409	409	409	409	409	409
Forklift	264	264	264	264	264	264	264	264	264	264	264	264	264	264	264	264
Fusion Welder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 600 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 1,000 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Light Plants	82	82	164	327	655	655	655	655	327	327	491	491	655	655	819	819
Man lifts - telescoping	0	0	0	0	0	0	0	0	495	495	495	990	990	990	990	990
Man lift - scissor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction Roller	0	0	1,694	1,694	1,694	1,694	1,694	1,694	678	678	678	678	678	678	678	678
Portable Compaction - Vibratory Plate	0	0	0	0	0	0	0	111	111	111	111	111	111	111	111	111
Portable Compaction - Ram	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pumps	246	246	246	491	491	491	491	491	491	491	491	491	491	491	491	491
Portable Power Generators	906	906	906	906	1,358	1,358	1,358	1,358	1,358	2,264	2,264	2,264	2,264	2,264	2,264	3,396
Truck Crane - Greater than 300 ton	0	0	0	0	0	0	0	0	0	0	0	774	774	774	774	774
Truck Crane - Greater than 200 ton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	482	482
Vibratory Roller Ingersol-Rand 20 ton	1,394	1,394	1,394	1,394	1,394	1,394	1,394	1,394	1,394	929	929	929	929	929	465	465
WORKER VEHICLES																
Personal commuting vehicles	15	25	34	44	65	82	98	131	146	175	218	243	288	338	407	460
DELIVERY TRUCKS																
Light delivery truck (e.g. Fed-Ex)	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Heavy delivery truck (e.g. flat beds carrying construction eqp)	424	424	424	424	424	424	424	424	424	424	424	424	424	424	424	424
Import fill trucks	2,035	2,035	2,035	2,035	2,035	2,035	2,035	0	0	0	0	0	0	0	0	0
ONSITE TOTAL (lbs/day)	**31,956**	**32,684**	**37,738**	**37,663**	**36,386**	**39,086**	**33,350**	**27,289**	**25,261**	**24,850**	**26,290**	**26,569**	**27,276**	**28,924**	**30,028**	**31,302**
OFF-SITE																
WORKER VEHICLES																
Personal commuting vehicles	837	1,441	1,934	2,497	3,664	4,629	5,520	7,415	8,245	9,927	12,310	13,762	16,308	19,127	23,026	26,019
DELIVERY TRUCKS																
Light delivery truck (e.g. Fed-Ex)	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457
Heavy delivery truck (e.g. flat beds carrying construction eqp)	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182
Import fill trucks	22,688	22,688	22,688	22,688	22,688	22,688	22,688	0	0	0	0	0	0	0	0	0
LINEARS																
ON ROAD																
Dump Truck	0	0	0	0	0	0	0	0	0	0	1,144	1,144	1,717	1,717	1,717	1,717
Service Truck (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	572	572	572	572	572	572
Pipe Haul Truck and Trailer (HHDT-DSL)	0	0	0	0	0	0	0	0	0	0	858	858	858	858	858	858
3/4 Ton Pickup (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	1,360	1,360	1,360	1,360	1,360	1,360
Truck - water	0	0	0	0	0	0	0	0	0	0	572	572	1,144	1,144	1,144	1,144
OFF ROAD																
Air Compressor (185 CFM)	0	0	0	0	0	0	0	0	0	0	214	214	427	427	641	641
Bore Machine (Hydraulic)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233	233
12 Ton Hydra Crane	0	0	0	0	0	0	0	0	0	0	964	1,927	1,927	2,891	2,891	2,891
Backhoe/loader	0	0	0	0	0	0	0	0	0	0	1,442	1,442	2,403	2,403	2,403	2,403
Excavator - Trencher	0	0	0	0	0	0	0	0	0	0	0	427	427	427	427	427
Forklift	0	0	0	0	0	0	0	0	0	0	88	88	176	176	176	176
Welding Generator	0	0	0	0	0	0	0	0	0	0	1,811	1,811	1,811	1,811	1,811	1,811
3 to 5 Ton AC Roller	0	0	0	0	0	0	0	0	0	0	0	299	299	299	299	299
Pipe Bending Machine	0	0	0	0	0	0	0	0	0	0	347	347	694	694	694	694
RAIL																
AIR COMPRESSOR 185	0	0	0	0	0	0	0	0	0	0	0	0	0	214	214	214
BOOM TRUCK 12 TON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	286	286
CAT 325 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	471	471	0	0
CAT 330 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	798	0
CAT DOZER D-6	0	0	0	0	0	0	0	0	0	0	0	0	1,429	1,429	0	0
CAT MODEL 12 MOTOR GRADER	0	0	0	0	0	0	0	0	0	0	0	0	861	861	431	431
CAT ROLLER-COMPACTOR 563	0	0	0	0	0	0	0	0	0	0	0	0	678	678	339	0
CAT RUBBER TIRE LOADER 966	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,608	1,608
CAT SCRAPER 615	0	0	0	0	0	0	0	0	0	0	0	0	2,763	1,381	0	0
CRANE-ROUGH TERRAIN 45T	0	0	0	0	0	0	0	0	0	0	0	0	0	345	345	0
GENSET 5KW	0	0	0	0	0	0	0	0	0	0	0	0	0	302	151	0
JOHN DEERE TRACTOR 9400	0	0	0	0	0	0	0	0	0	0	0	0	1,602	0	0	0
PICK-UP CRAFT	0	0	0	0	0	0	0	0	0	0	0	0	4,725	4,725	4,725	4,725
PICK-UP OVERHEAD	0	0	0	0	0	0	0	0	0	0	0	0	1,320	3,959	3,959	3,299
RAIL BALLAST REGULATOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	660
RAIL CLIP MACHINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	173
RAIL MOVER-SHUTTLE WAGON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	660	660
RAIL TAMPER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	660
RAIL WELDER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	101
RAMEX WALK BEHIND COMPACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0
TRI-AXLE DUMP TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	1,144	1,717	572	0
TRUCK FLATBED 14 FOOT	0	0	0	0	0	0	0	0	0	0	0	0	286	286	858	858
TRUCK TRACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,116	1,116
WATER TRUCK, 4M ON-ROAD	0	0	0	0	0	0	0	0	0	0	0	0	286	286	286	286
WELDING MACHINE 350 AMP	0	0	0	0	0	0	0	0	0	0	0	0	51	51	51	51
LINEARS TOTAL (lbs/day)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9,373**	**11,062**	**29,431**	**31,502**	**31,623**	**30,352**
OFFSITE VEHICLES TOTAL (lbs/day)	**31,164**	**31,769**	**32,261**	**32,824**	**33,991**	**34,956**	**35,847**	**15,054**	**15,884**	**17,567**	**19,949**	**21,401**	**23,947**	**26,766**	**30,665**	**33,658**
TOTAL PROJECT (lbs/day)	63,121	64,452	69,999	70,487	70,377	74,042	69,197	42,343	41,144	42,416	55,611	59,032	80,654	87,192	92,316	95,312

CONSTRUCTION VEHICLES	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
ON-SITE																	
On-Road Vehicles																	
18 cy fill mat'l haul truck	1,431	1,431	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus	2,003	2,003	2,003	2,861	2,861	2,861	2,861	4,006	4,006	4,006	4,006	4,006	4,006	4,006	4,006	4,006	4,006
Concrete Pumper Truck	572	572	572	572	572	0	0	0	0	0	0	286	286	286	286	0	0
Dump Truck	0	0	0	0	0	0	0	0	0	0	0	572	572	572	572	572	572
Diesel Tractor (Yard Dog)	2,596	2,596	2,596	2,596	2,596	2,596	2,596	3,245	3,245	3,245	3,245	3,245	3,245	3,245	3,245	3,245	3,245
Service Truck - 1 ton	572	572	572	572	572	572	572	572	572	572	572	572	572	572	572	572	572
Pile Driver Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272
Tractor Truck 5th Wheel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks - Pickup 3/4 ton	3,401	3,401	3,401	3,401	3,401	3,401	3,401	3,401	3,401	3,401	3,401	3,401	3,401	3,401	3,401	3,401	3,401
Trucks - 3 ton	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717
Truck - Water	858	858	858	858	858	858	858	572	858	572	572	572	572	572	572	572	572
Off Road Vehicles																	
Air Compressor 185 CFM	854	854	854	1,068	1,068	1,068	1,068	1,282	1,282	1,282	1,282	1,282	1,282	1,282	1,282	1,282	1,282
Air Compressor 750 CFM	901	901	901	901	901	901	901	901	901	901	901	901	901	450	450	450	450
Articulating Boom Platform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bob cat loader	504	504	336	336	336	336	336	336	0	0	0	0	0	0	0	0	0
Bulldozer D10R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulldozer D6C	0	0	0	0	0	0	0	0	0	0	0	388	388	388	388	0	0
Concrete Trowel Machine	138	138	138	138	138	138	138	138	138	138	138	138	0	0	0	0	0
Concrete Vibrators	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes - Mobile 35 ton	1,508	1,508	1,508	1,508	1,508	1,508	1,508	1,508	1,508	1,508	1,077	1,077	1,077	1,077	1,077	1,077	1,077
Cranes - Mobile 45 ton	690	690	1,381	1,381	1,381	1,381	1,381	1,381	1,381	1,381	1,381	1,381	1,381	690	690	690	690
Crane - Mobile 65 ton	1,726	1,726	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	1,726	1,726	1,381
Cranes 100 / 150 ton cap	1,927	1,927	1,927	1,927	1,927	1,927	1,927	1,927	1,927	1,927	1,927	1,927	964	964	482	482	482
Diesel Powered Welder	761	761	1,015	1,015	1,015	1,015	1,015	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	761
Excavator - Backhoe/loader	240	240	240	240	240	240	240	240	0	0	0	0	0	0	0	0	0
Excavator - Earth Scraper 637	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - loader	0	0	0	0	0	0	0	0	0	0	0	318	318	318	318	0	0
Excavator - Motor Grader (CAT140H)	0	0	0	0	0	0	0	0	0	0	0	431	431	431	431	0	0
Excavator - Trencher (CAT320)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fired Heaters (2,000 BTU)	409	409	409	409	409	409	409	409	409	409	409	409	409	409	409	409	246
Forklift	352	352	352	352	352	352	352	352	352	352	352	264	264	264	264	264	264
Fusion Welder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 600 tn Crane	0	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	0	0	0	0	0	0	0
Heavy Haul / 1,000 tn Crane	0	0	0	1,302	1,302	1,302	1,302	1,302	1,302	0	0	0	0	0	0	0	0
Light Plants	1,146	1,146	1,146	1,146	1,146	1,146	1,146	1,146	1,146	1,146	1,146	1,146	1,146	1,146	1,146	819	819
Man lifts - telescoping	990	990	990	1,484	1,484	1,484	1,484	1,979	1,979	1,979	1,979	1,979	1,979	1,979	1,979	1,979	1,979
Man lift - scissor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction Roller	678	678	678	678	678	678	678	678	0	0	0	0	678	678	678	678	678
Portable Compaction - Vibratory Plate	111	111	111	111	111	111	0	0	0	0	0	56	56	56	56	0	0
Portable Compaction - Ram	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pumps	491	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246
Portable Power Generators	3,396	3,396	3,396	3,396	3,396	3,396	4,528	4,528	4,528	4,528	4,528	4,528	4,528	4,528	4,528	4,528	4,528
Truck Crane - Greater than 300 ton	1,547	1,547	2,321	2,321	3,095	3,095	3,095	3,095	3,095	3,095	3,095	3,095	3,095	2,321	2,321	1,547	1,547
Truck Crane - Greater than 200 ton	482	482	482	964	964	964	1,446	1,446	1,446	1,446	1,446	1,446	1,446	964	0	0	0
Vibratory Roller Ingersol-Rand 20 ton	465	465	0	0	0	0	0	0	0	0	0	929	929	929	929	0	0
WORKER VEHICLES																	
Personal commuting vehicles	502	533	561	594	623	697	749	806	857	867	954	1,021	1,054	1,060	1,071	1,055	1,045
DELIVERY TRUCKS																	
Light delivery truck (e.g. Fed-Ex)	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Heavy delivery truck (e.g. flat beds carrying construction eqp)	424	424	424	424	424	424	424	424	424	424	424	424	424	424	424	424	424
Import fill trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ONSITE TOTAL (lbs/day)	**33,671**	**34,758**	**34,786**	**38,170**	**38,973**	**38,475**	**40,030**	**42,556**	**41,639**	**40,061**	**38,414**	**41,373**	**40,983**	**38,592**	**36,812**	**33,288**	**32,262**
OFF-SITE																	
WORKER VEHICLES																	
Personal commuting vehicles	28,397	30,137	31,729	33,615	35,250	39,447	42,401	45,600	48,495	49,067	53,947	57,764	59,641	59,975	60,565	59,688	59,142
DELIVERY TRUCKS																	
Light delivery truck (e.g. Fed-Ex)	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457
Heavy delivery truck (e.g. flat beds carrying construction eqp)	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182
Import fill trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LINEARS																	
ON ROAD																	
Dump Truck	1,717	1,717	1,717	1,717	1,144	1,144	0	0	0	0	0	0	0	0	0	0	0
Service Truck (MHD-DSL)	858	858	858	858	858	858	0	0	0	0	0	0	0	0	0	0	0
Pipe Haul Truck and Trailer (HHDT-DSL)	572	572	572	572	572	572	0	0	0	0	0	0	0	0	0	0	0
3/4 Ton Pickup (MHD-DSL)	2,041	2,041	2,041	2,041	2,041	2,041	0	0	0	0	0	0	0	0	0	0	0
Truck - water	1,144	1,144	1,144	1,144	572	572	0	0	0	0	0	0	0	0	0	0	0
OFF ROAD																	
Air Compressor (185 CFM)	641	641	427	427	214	214	0	0	0	0	0	0	0	0	0	0	0
Bore Machine (Hydraulic)	233	233	233	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 Ton Hydra Crane	2,891	2,891	2,891	2,891	1,927	1,927	0	0	0	0	0	0	0	0	0	0	0
Backhoe/loader	2,403	2,403	2,403	2,403	1,442	1,442	0	0	0	0	0	0	0	0	0	0	0
Excavator - Trencher	427	427	427	427	427	427	0	0	0	0	0	0	0	0	0	0	0
Forklift	176	176	176	176	176	88	0	0	0	0	0	0	0	0	0	0	0
Welding Generator	1,811	1,811	1,811	1,811	1,811	1,811	0	0	0	0	0	0	0	0	0	0	0
3 to 5 Ton AC Roller	299	299	299	299	299	299	0	0	0	0	0	0	0	0	0	0	0
Pipe Bending Machine	694	694	694	347	347	0	0	0	0	0	0	0	0	0	0	0	0
RAIL																	
AIR COMPRESSOR 185	214	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BOOM TRUCK 12 TON	286	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 325 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 330 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT DOZER D-6	714	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT MODEL 12 MOTOR GRADER	431	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT ROLLER-COMPACTOR 563	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT RUBBER TIRE LOADER 966	1,608	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT SCRAPER 615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRANE-ROUGH TERRAIN 45T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENSET 5KW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JOHN DEERE TRACTOR 9400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP CRAFT	4,725	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP OVERHEAD	3,299	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL BALLAST REGULATOR	660	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL CLIP MACHINE	173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL MOVER-SHUTTLE WAGON	660	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL TAMPER	660	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL WELDER	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAMEX WALK BEHIND COMPACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRI-AXLE DUMP TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK FLATBED 14 FOOT	858	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK TRACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WATER TRUCK, 4M ON-ROAD	286	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WELDING MACHINE 350 AMP	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LINEARS TOTAL (lbs/day)	**30,581**	**15,906**	**15,692**	**15,113**	**11,830**	**11,395**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
OFFSITE VEHICLES TOTAL (lbs/day)	**36,036**	**37,776**	**39,368**	**41,255**	**42,889**	**47,086**	**50,040**	**53,240**	**56,134**	**56,706**	**61,586**	**65,403**	**67,281**	**67,614**	**68,204**	**67,327**	**66,781**
TOTAL PROJECT (lbs/day)	100,288	88,441	89,847	94,538	93,692	96,956	90,069	95,795	97,773	96,767	100,000	106,777	108,263	106,206	105,016	100,615	99,043

CONSTRUCTION VEHICLES	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
ON-SITE																
On-Road Vehicles																
18 cy fill mat'l haul truck	0	0	858	858	858	858	286	286	286	0	0	0	0	0	0	0
Bus	4,006	4,006	3,433	3,433	3,433	2,861	2,861	1,431	1,431	858	858	572	572	572	286	286
Concrete Pumper Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dump Truck	572	572	572	858	858	858	572	286	286	286	286	286	0	0	0	0
Diesel Tractor (Yard Dog)	3,245	3,245	1,298	1,298	1,298	1,298	1,298	1,298	1,298	0	0	0	0	0	0	0
Service Truck - 1 ton	572	572	572	572	572	572	572	572	572	286	286	286	286	286	286	286
Pile Driver Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube	272	272	272	272	272	272	136	136	136	136	136	136	136	0	0	0
Tractor Truck 5th Wheel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks - Pickup 3/4 ton	3,401	3,401	3,401	3,401	3,401	3,401	3,401	3,401	3,401	2,041	2,041	1,360	1,360	1,360	1,360	680
Trucks - 3 ton	1,717	1,144	858	858	858	858	572	572	572	286	286	286	286	0	0	0
Truck - Water	572	572	572	572	572	572	572	572	572	286	286	286	286	286	286	286
Off Road Vehicles																
Air Compressor 185 CFM	1,282	1,282	854	854	854	641	641	641	641	427	427	427	214	214	107	107
Air Compressor 750 CFM	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225
Articulating Boom Platform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bob cat loader	0	0	168	168	168	168	168	168	168	0	0	0	0	0	0	0
Bulldozer D10R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulldozer D6C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete Trowel Machine	0	0	0	138	138	138	138	138	138	0	0	0	0	0	0	0
Concrete Vibrators	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes - Mobile 35 ton	1,077	431	431	431	431	431	431	431	431	431	431	431	215	215	215	215
Cranes - Mobile 45 ton	690	690	690	690	690	690	690	345	345	0	0	0	0	0	0	0
Crane - Mobile 65 ton	690	690	690	690	690	345	345	345	345	345	345	345	0	0	0	0
Cranes 100 / 150 ton cap	482	482	482	0	0	0	0	0	0	0	0	0	0	0	0	0
Diesel Powered Welder	761	761	761	761	507	507	507	507	507	254	254	254	254	152	152	101
Excavator - Backhoe/loader	0	0	481	481	481	481	240	240	240	0	0	0	0	0	0	0
Excavator - Earth Scraper 637	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - loader	0	0	0	0	318	318	318	0	0	0	0	0	0	0	0	0
Excavator - Motor Grader (CAT140H)	0	0	861	861	861	861	431	431	431	0	0	0	0	0	0	0
Excavator - Trencher (CAT320)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fired Heaters (2,000 BTU)	246	246	164	164	164	164	164	164	164	164	164	164	164	82	82	82
Forklift	264	264	264	264	264	264	264	264	264	88	88	88	88	44	44	44
Fusion Welder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 600 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 1,000 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Light Plants	819	819	819	819	819	819	819	409	409	409	409	409	327	327	164	164
Man lifts - telescoping	1,979	1,979	1,484	1,484	1,484	990	990	990	990	495	495	495	495	198	198	198
Man lift - scissor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction Roller	678	0	0	0	678	678	678	339	339	0	0	0	0	0	0	0
Portable Compaction - Vibratory Plate	0	0	74	74	74	74	74	37	37	0	0	0	0	0	0	0
Portable Compaction - Ram	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pumps	246	246	246	246	246	246	246	246	246	164	164	164	164	164	164	164
Portable Power Generators	4,528	4,528	3,396	3,396	3,396	3,396	2,264	2,264	2,264	2,264	2,264	2,264	1,132	1,132	1,132	453
Truck Crane - Greater than 300 ton	1,547	774	774	774	774	774	0	0	0	0	0	0	0	0	0	0
Truck Crane - Greater than 200 ton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vibratory Roller Ingersol-Rand 20 ton	0	0	0	0	465	465	465	465	0	0	0	0	0	0	0	0
WORKER VEHICLES																
Personal commuting vehicles	998	945	915	832	805	683	555	440	299	239	238	238	221	187	171	129
DELIVERY TRUCKS																
Light delivery truck (e.g. Fed-Ex)	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Heavy delivery truck (e.g. flat beds carrying construction eqp)	424	424	424	424	424	424	424	424	424	424	424	424	424	424	424	424
Import fill trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ONSITE TOTAL (lbs/day)	**31,299**	**28,576**	**26,047**	**25,906**	**27,086**	**25,338**	**21,353**	**18,073**	**17,467**	**10,114**	**10,113**	**9,147**	**6,855**	**5,875**	**5,303**	**3,850**
OFF-SITE																
WORKER VEHICLES																
Personal commuting vehicles	56,484	53,466	51,785	47,061	45,535	38,644	31,407	24,884	16,929	13,513	13,488	13,488	12,479	10,584	9,698	7,310
DELIVERY TRUCKS																
Light delivery truck (e.g. Fed-Ex)	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457
Heavy delivery truck (e.g. flat beds carrying construction eqp)	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182	7,182
Import fill trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LINEARS																
ON ROAD																
Dump Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Service Truck (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipe Haul Truck and Trailer (HHDT-DSL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/4 Ton Pickup (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OFF ROAD																
Air Compressor (185 CFM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bore Machine (Hydraulic)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 Ton Hydra Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Backhoe/loader	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Trencher	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Forklift	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Welding Generator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 to 5 Ton AC Roller	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipe Bending Machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL																
AIR COMPRESSOR 185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BOOM TRUCK 12 TON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 325 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 330 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT DOZER D-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT MODEL 12 MOTOR GRADER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT ROLLER-COMPACTOR 563	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT RUBBER TIRE LOADER 966	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT SCRAPER 615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRANE-ROUGH TERRAIN 45T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENSET 5KW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JOHN DEERE TRACTOR 9400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP CRAFT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP OVERHEAD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL BALLAST REGULATOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL CLIP MACHINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL MOVER-SHUTTLE WAGON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL TAMPER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL WELDER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAMEX WALK BEHIND COMPACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRI-AXLE DUMP TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK FLATBED 14 FOOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK TRACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WATER TRUCK, 4M ON-ROAD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WELDING MACHINE 350 AMP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LINEARS TOTAL (lbs/day)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
OFFSITE VEHICLES TOTAL (lbs/day)	**64,123**	**61,105**	**59,424**	**54,701**	**53,174**	**46,283**	**39,046**	**32,524**	**24,568**	**21,152**	**21,127**	**21,127**	**20,118**	**18,223**	**17,337**	**14,949**
TOTAL PROJECT (lbs/day)	95,422	89,681	85,471	80,607	80,260	71,621	60,399	50,596	42,036	31,266	31,241	30,274	26,973	24,098	22,640	18,800

Notes:

1. According to schedules provided by Fluor, Linear construction (except rail) takes place in months 11-22.
2. According to schedules provided by Fluor, Rail construction occurs in months 13-17.

Hydrogen Energy California, Kern County Power Project
Methane (CH4) Emissions by Month
8/14/2012

CH4

MONTHLY EMISSIONS (lbs/day)

CONSTRUCTION VEHICLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ON-SITE																
On-Road Vehicles																
18 cy fill mat'l haul truck	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Pumper Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Tractor (Yard Dog)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck - 1 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pile Driver Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Fuel/Lube	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tractor Truck 5th Wheel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - Pickup 3/4 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - 3 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Off Road Vehicles																
Air Compressor 185 CFM	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.3
Air Compressor 750 CFM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Articulating Boom Platform	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bob cat loader	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Bulldozer D10R	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Bulldozer D6C	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Concrete Trowel Machine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 35 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Cranes - Mobile 45 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Crane - Mobile 65 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2
Cranes 100 / 150 ton cap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Diesel Powered Welder	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Excavator - Backhoe/loader	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Excavator - Earth Scraper 637	1.3	1.3	1.3	1.3	0.8	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - loader	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Excavator - Motor Grader (CAT140H)	0.0	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher (CAT320)	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Fired Heaters (2,000 BTU)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Fusion Welder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 600 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 1,000 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Plants	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Man lifts - telescoping	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.3
Man lift - scissor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction Roller	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Portable Compaction - Vibratory Plate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Ram	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumps	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Portable Power Generators	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.6	0.6	0.6	1.0
Truck Crane - Greater than 300 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Truck Crane - Greater than 200 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vibratory Roller Ingersol-Rand 20 ton	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
WORKER VEHICLES																
Personal commuting vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DELIVERY TRUCKS																
Light delivery truck (e.g. Fed-Ex)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Import fill trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ONSITE TOTAL (lbs/day)	**2.8**	**2.9**	**3.3**	**3.3**	**3.2**	**3.4**	**2.9**	**2.6**	**2.6**	**2.8**	**2.9**	**2.9**	**2.9**	**3.2**	**3.2**	**3.7**
OFF-SITE																
WORKER VEHICLES																
Personal commuting vehicles	0.2	0.3	0.5	0.6	0.9	1.1	1.3	1.7	1.9	2.3	2.9	3.2	3.8	4.5	5.4	6.1
DELIVERY TRUCKS																
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Import fill trucks	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																
ON ROAD																
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Haul Truck and Trailer (HHDT-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4 Ton Pickup (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Truck - water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OFF ROAD																
Air Compressor (185 CFM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3
Bore Machine (Hydraulic)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 Ton Hydra Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2
Backhoe/loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.3	0.3	0.3
Excavator - Trencher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Forklift	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Welding Generator	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5
3 to 5 Ton AC Roller	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Pipe Bending Machine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2
RAIL																
AIR COMPRESSOR 185	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
BOOM TRUCK 12 TON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 325 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 330 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
CAT DOZER D-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0
CAT MODEL 12 MOTOR GRADER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
CAT ROLLER-COMPACTOR 563	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
CAT RUBBER TIRE LOADER 966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
CAT SCRAPER 615	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0
CRANE-ROUGH TERRAIN 45T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENSET 5KW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JOHN DEERE TRACTOR 9400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
PICK-UP CRAFT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2
PICK-UP OVERHEAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.3
RAIL BALLAST REGULATOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
RAIL CLIP MACHINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL MOVER-SHUTTLE WAGON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
RAIL TAMPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
RAIL WELDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMEX WALK BEHIND COMPACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRI-AXLE DUMP TRUCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK FLATBED 14 FOOT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK TRACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
WATER TRUCK, 4M ON-ROAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WELDING MACHINE 350 AMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS TOTAL (lbs/day)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**1.1**	**1.4**	**2.9**	**3.2**	**3.1**	**3.0**
OFFSITE VEHICLES TOTAL (lbs/day)	**1.6**	**1.8**	**1.9**	**2.0**	**2.3**	**2.5**	**2.7**	**2.1**	**2.3**	**2.7**	**3.3**	**3.6**	**4.2**	**4.9**	**5.8**	**6.5**
TOTAL PROJECT (lbs/day)	4.5	4.7	5.2	5.4	5.5	5.9	5.6	4.7	4.9	5.4	7.2	7.9	10.0	11.2	12.1	13.2

CONSTRUCTION VEHICLES	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
ON-SITE																	
On-Road Vehicles																	
18 cy fill mat'l haul truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bus	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Concrete Pumper Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Tractor (Yard Dog)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Service Truck - 1 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pile Driver Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Fuel/Lube	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tractor Truck 5th Wheel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - Pickup 3/4 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - 3 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Off Road Vehicles																	
Air Compressor 185 CFM	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Air Compressor 750 CFM	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Articulating Boom Platform	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bob cat loader	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D10R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D6C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
Concrete Trowel Machine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 35 ton	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Cranes - Mobile 45 ton	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Crane - Mobile 65 ton	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Cranes 100 / 150 ton cap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0
Diesel Powered Welder	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Excavator - Backhoe/loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Earth Scraper 637	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Motor Grader (CAT140H)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
Excavator - Trencher (CAT320)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fired Heaters (2,000 BTU)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Fusion Welder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 600 tn Crane	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 1,000 tn Crane	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Plants	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Man lifts - telescoping	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Man lift - scissor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction Roller	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Portable Compaction - Vibratory Plate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Ram	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumps	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Power Generators	1.0	1.0	1.0	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Truck Crane - Greater than 300 ton	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
Truck Crane - Greater than 200 ton	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Vibratory Roller Ingersol-Rand 20 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
WORKER VEHICLES																	
Personal commuting vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DELIVERY TRUCKS																	
Light delivery truck (e.g. Fed-Ex)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Import fill trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ONSITE TOTAL (lbs/day)	**3.7**	**3.8**	**3.9**	**4.3**	**4.4**	**4.4**	**4.7**	**5.0**	**4.8**	**4.7**	**4.5**	**4.8**	**4.8**	**4.5**	**4.4**	**4.0**	**3.8**
OFF-SITE																	
WORKER VEHICLES																	
Personal commuting vehicles	6.7	7.1	7.5	7.9	8.3	9.3	10.0	10.7	11.4	11.6	12.7	13.6	14.1	14.1	14.3	14.1	13.9
DELIVERY TRUCKS																	
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																	
ON ROAD																	
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Haul Truck and Trailer (HHDT-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4 Ton Pickup (MHD-DSL)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OFF ROAD																	
Air Compressor (185 CFM)	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bore Machine (Hydraulic)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 Ton Hydra Crane	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Backhoe/loader	0.3	0.3	0.3	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Welding Generator	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 to 5 Ton AC Roller	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Bending Machine	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL																	
AIR COMPRESSOR 185	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BOOM TRUCK 12 TON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 325 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 330 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT DOZER D-6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT MODEL 12 MOTOR GRADER	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT ROLLER-COMPACTOR 563	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT RUBBER TIRE LOADER 966	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT SCRAPER 615	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CRANE-ROUGH TERRAIN 45T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENSET 5KW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JOHN DEERE TRACTOR 9400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP CRAFT	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP OVERHEAD	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL BALLAST REGULATOR	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL CLIP MACHINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL MOVER-SHUTTLE WAGON	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL TAMPER	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL WELDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMEX WALK BEHIND COMPACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRI-AXLE DUMP TRUCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK FLATBED 14 FOOT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK TRACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WATER TRUCK, 4M ON-ROAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WELDING MACHINE 350 AMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS TOTAL (lbs/day)	**3.1**	**1.9**	**1.8**	**1.7**	**1.4**	**1.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
OFFSITE VEHICLES TOTAL (lbs/day)	**7.0**	**7.5**	**7.8**	**8.3**	**8.7**	**9.7**	**10.3**	**11.1**	**11.8**	**11.9**	**13.1**	**14.0**	**14.4**	**14.5**	**14.6**	**14.4**	**14.3**
TOTAL PROJECT (lbs/day)	13.8	13.2	13.6	14.3	14.5	15.3	15.1	16.1	16.6	16.6	17.6	18.8	19.2	19.0	19.0	18.4	18.1

CONSTRUCTION VEHICLES	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
ON-SITE																
On-Road Vehicles																
18 cy fill mat'l haul truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bus	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Pumper Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Tractor (Yard Dog)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck - 1 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pile Driver Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Fuel/Lube	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tractor Truck 5th Wheel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - Pickup 3/4 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - 3 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Off Road Vehicles																
Air Compressor 185 CFM	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0
Air Compressor 750 CFM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Articulating Boom Platform	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bob cat loader	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D10R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D6C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Trowel Machine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 35 ton	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Cranes - Mobile 45 ton	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crane - Mobile 65 ton	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes 100 / 150 ton cap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Powered Welder	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Backhoe/loader	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Earth Scraper 637	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Motor Grader (CAT140H)	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher (CAT320)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fired Heaters (2,000 BTU)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fusion Welder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 600 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 1,000 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Plants	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Man lifts - telescoping	0.6	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Man lift - scissor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction Roller	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Vibratory Plate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Ram	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumps	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Power Generators	1.3	1.3	1.0	1.0	1.0	1.0	0.6	0.6	0.6	0.6	0.6	0.6	0.3	0.3	0.3	0.1
Truck Crane - Greater than 300 ton	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck Crane - Greater than 200 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vibratory Roller Ingersol-Rand 20 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WORKER VEHICLES																
Personal commuting vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DELIVERY TRUCKS																
Light delivery truck (e.g. Fed-Ex)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Import fill trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ONSITE TOTAL (lbs/day)	**3.7**	**3.4**	**3.0**	**3.0**	**3.1**	**2.8**	**2.3**	**2.1**	**2.1**	**1.4**	**1.4**	**1.3**	**0.8**	**0.7**	**0.6**	**0.4**
OFF-SITE																
WORKER VEHICLES																
Personal commuting vehicles	13.3	12.6	12.2	11.1	10.7	9.1	7.4	5.9	4.0	3.2	3.2	3.2	2.9	2.5	2.3	1.7
DELIVERY TRUCKS																
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																
ON ROAD																
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Haul Truck and Trailer (HHDT-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4 Ton Pickup (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OFF ROAD																
Air Compressor (185 CFM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bore Machine (Hydraulic)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 Ton Hydra Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Backhoe/loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Welding Generator	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 to 5 Ton AC Roller	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Bending Machine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL																
AIR COMPRESSOR 185	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BOOM TRUCK 12 TON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 325 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 330 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT DOZER D-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT MODEL 12 MOTOR GRADER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT ROLLER-COMPACTOR 563	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT RUBBER TIRE LOADER 966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT SCRAPER 615	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CRANE-ROUGH TERRAIN 45T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENSET 5KW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JOHN DEERE TRACTOR 9400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP CRAFT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP OVERHEAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL BALLAST REGULATOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL CLIP MACHINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL MOVER-SHUTTLE WAGON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL TAMPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL WELDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMEX WALK BEHIND COMPACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRI-AXLE DUMP TRUCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK FLATBED 14 FOOT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK TRACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WATER TRUCK, 4M ON-ROAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WELDING MACHINE 350 AMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS TOTAL (lbs/day)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
OFFSITE VEHICLES TOTAL (lbs/day)	**13.7**	**13.0**	**12.6**	**11.4**	**11.1**	**9.5**	**7.8**	**6.2**	**4.3**	**3.5**	**3.5**	**3.5**	**3.3**	**2.8**	**2.6**	**2.1**
TOTAL PROJECT (lbs/day)	17.4	16.4	15.6	14.4	14.2	12.3	10.1	8.3	6.4	4.9	4.9	4.9	4.1	3.5	3.3	2.5

Notes:

1. According to schedules provided by Fluor, Linear construction (except rail) takes place in months 11-22.
2. According to schedules provided by Fluor, Rail construction occurs in months 13-17.

N2O

MONTHLY EMISSIONS (lbs/day)

CONSTRUCTION VEHICLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
ON-SITE																																																	
On-Road Vehicles																																																	
18 cy fill mat'l haul truck	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Pumper Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Tractor (Yard Dog)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck - 1 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pile Driver Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Fuel/Lube	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tractor Truck 5th Wheel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - Pickup 3/4 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - 3 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Off Road Vehicles																																																	
Air Compressor 185 CFM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Air Compressor 750 CFM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Articulating Boom Platform	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bob cat loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D10R	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D6C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Trowel Machine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 35 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 45 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crane - Mobile 65 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes 100 / 150 ton cap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Powered Welder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Backhoe/loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Earth Scraper 637	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Motor Grader (CAT140H)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher (CAT320)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fired Heaters (2,000 BTU)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fusion Welder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 600 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 1,000 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Plants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Man lifts - telescoping	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Man lift - scissor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction Roller	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Vibratory Plate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Ram	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumps	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Power Generators	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck Crane - Greater than 300 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck Crane - Greater than 200 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vibratory Roller Ingersol-Rand 20 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WORKER VEHICLES																																																	
Personal commuting vehicles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
DELIVERY TRUCKS																																																	
Light delivery truck (e.g. Fed-Ex)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Import fill trucks	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ONSITE TOTAL (lbs/day)	**0.6**	**0.6**	**0.7**	**0.7**	**0.7**	**0.7**	**0.6**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.6**	**0.6**	**0.6**	**0.7**	**0.7**	**0.8**	**0.8**	**0.9**	**0.9**	**0.9**	**0.9**	**1.0**	**0.9**	**0.9**	**0.9**	**0.9**	**0.9**	**0.8**	**0.8**	**0.7**	**0.7**	**0.7**	**0.6**	**0.5**	**0.5**	**0.6**	**0.5**	**0.4**	**0.4**	**0.4**	**0.2**	**0.2**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**
OFF-SITE																																																	
WORKER VEHICLES																																																	
Personal commuting vehicles	0.10	0.17	0.23	0.30	0.44	0.55	0.66	0.88	0.98	1.18	1.46	1.63	1.94	2.27	2.73	3.09	3.37	3.58	3.77	3.99	4.19	4.68	5.04	5.42	5.76	5.83	6.41	6.86	7.08	7.12	7.19	7.09	7.02	6.71	6.35	6.15	5.59	5.41	4.59	3.73	2.96	2.01	1.60	1.60	1.60	1.48	1.26	1.15	0.87
DELIVERY TRUCKS																																																	
Light delivery truck (e.g. Fed-Ex)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Import fill trucks	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LINEARS																																																	
ON ROAD																																																	
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Haul Truck and Trailer (HHDT-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4 Ton Pickup (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OFF ROAD																																																	
Air Compressor (185 CFM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bore Machine (Hydraulic)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 Ton Hydra Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Backhoe/loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Welding Generator	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 to 5 Ton AC Roller	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Bending Machine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL																																																	
AIR COMPRESSOR 185	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BOOM TRUCK 12 TON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 325 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 330 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT DOZER D-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT MODEL 12 MOTOR GRADER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT ROLLER-COMPACTOR 563	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT RUBBER TIRE LOADER 966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT SCRAPER 615	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CRANE-ROUGH TERRAIN 45T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENSET 5KW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JOHN DEERE TRACTOR 9400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP CRAFT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP OVERHEAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL BALLAST REGULATOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL CLIP MACHINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL MOVER-SHUTTLE WAGON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL TAMPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL WELDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMEX WALK BEHIND COMPACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRI-AXLE DUMP TRUCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK FLATBED 14 FOOT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK TRACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WATER TRUCK, 4M ON-ROAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WELDING MACHINE 350 AMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS TOTAL (lbs/day)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.2**	**0.3**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**0.3**	**0.3**	**0.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
OFFSITE VEHICLES TOTAL (lbs/day)	**1.0**	**1.1**	**1.1**	**1.2**	**1.4**	**1.5**	**1.6**	**1.1**	**1.2**	**1.4**	**1.7**	**1.9**	**2.2**	**2.5**	**3.0**	**3.3**	**3.6**	**3.8**	**4.0**	**4.2**	**4.4**	**4.9**	**5.3**	**5.7**	**6.0**	**6.1**	**6.6**	**7.1**	**7.3**	**7.4**	**7.4**	**7.3**	**7.3**	**6.9**	**6.6**	**6.4**	**5.8**	**5.6**	**4.8**	**4.0**	**3.2**	**2.3**	**1.8**	**1.8**	**1.8**	**1.7**	**1.5**	**1.4**	**1.1**
TOTAL PROJECT (lbs/day)	1.6	1.7	1.8	1.9	2.0	2.2	2.2	1.7	1.7	1.9	2.4	2.7	3.1	3.5	4.0	4.4	4.7	4.9	5.1	5.4	5.6	6.1	6.2	6.6	6.9	7.0	7.5	8.0	8.2	8.2	8.2	8.0	8.0	7.6	7.2	6.9	6.4	6.2	5.4	4.4	3.6	2.6	2.1	2.1	2.0	1.9	1.6	1.5	1.2

Notes:

1. According to schedules provided by Fluor, Linear construction (except rail) takes place in months 11-22.
2. According to schedules provided by Fluor, Rail construction occurs in months 13-17.

Hydrogen Energy California, Kern County Power Project
Nitrogen Oxides (NOx) Emissions by Month
8/14/2012

NOx

MONTHLY EMISSIONS (lbs/day)

CONSTRUCTION VEHICLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
ON-SITE																																																	
On-Road Vehicles																																																	
18 cy fill mat'l haul truck	0	0	28	28	57	57	57	57	28	28	28	28	14	14	14	14	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	9	9	3	3	3	0	0	0	0	0	0	0
Bus	6	6	6	6	9	9	9	9	9	9	14	14	14	14	14	14	20	20	20	28	28	28	28	40	40	40	40	40	40	40	40	40	40	40	40	34	34	34	28	28	14	14	9	9	6	6	6	3	3
Concrete Pumper Truck	0	0	0	0	0	6	6	6	6	6	6	6	6	9	9	9	6	6	6	6	6	0	0	0	0	0	0	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dump Truck	9	11	11	9	9	9	9	9	9	9	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	6	6	6	9	9	9	6	3	3	3	3	3	0	0	0	0
Diesel Tractor (Yard Dog)	0	0	0	0	0	6	6	6	6	6	6	13	13	13	13	13	26	26	26	26	26	26	26	32	32	32	32	32	32	32	32	32	32	32	32	13	13	13	13	13	13	13	0	0	0	0	0	0	0
Service Truck - 1 ton	6	6	6	11	11	11	11	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	3	3	3	3	3	3	3
Pile Driver Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	0	0	0
Tractor Truck 5th Wheel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks - Pickup 3/4 ton	6	6	6	6	6	7	8	9	17	17	17	17	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	17	17	11	11	11	11	6
Trucks - 3 ton	3	3	3	3	3	6	6	6	11	11	11	11	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	11	9	9	9	9	6	6	6	3	3	3	3	0	0	0
Truck - Water	14	14	14	14	14	14	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	6	9	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	3	3	3	3	3	3	3
Off Road Vehicles																																																	
Air Compressor 185 CFM	2	2	2	2	3	3	3	3	3	3	3	3	3	7	7	7	9	9	9	11	11	11	11	13	13	13	13	13	13	13	13	13	13	13	13	9	9	9	7	7	7	7	4	4	4	2	2	1	1
Air Compressor 750 CFM	0	0	0	0	3	3	3	3	5	5	5	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	5	5	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Articulating Boom Platform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bob cat loader	0	0	2	2	2	2	2	7	7	7	7	7	5	5	5	5	5	5	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	0	0	0	0	0	0	0
Bulldozer D10R	40	40	40	26	26	26	26	26	26	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulldozer D6C	14	14	14	14	9	9	9	9	9	9	5	5	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete Trowel Machine	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0
Concrete Vibrators	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes - Mobile 35 ton	0	0	0	0	0	0	2	2	2	9	9	9	9	17	17	17	17	17	17	17	17	17	17	17	17	17	12	12	12	12	12	12	12	12	5	5	5	5	5	5	5	5	5	5	5	2	2	2	2
Cranes - Mobile 45 ton	0	0	0	0	0	0	0	0	0	0	7	7	7	7	7	7	7	7	13	13	13	13	13	13	13	13	13	13	13	7	7	7	7	7	7	7	7	7	7	7	3	3	0	0	0	0	0	0	0
Crane - Mobile 65 ton	0	0	0	0	0	0	0	0	0	0	0	3	3	7	13	17	17	17	20	20	20	20	20	20	20	20	20	20	20	20	17	17	13	7	7	7	7	7	3	3	3	3	3	3	3	0	0	0	0
Cranes 100 / 150 ton cap	0	0	0	0	0	0	0	0	0	0	4	4	9	9	13	13	17	17	17	17	17	17	17	17	17	17	17	17	9	9	4	4	4	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Diesel Powered Welder	0	0	0	5	5	5	5	5	5	5	5	5	5	5	5	7	7	7	9	9	9	9	9	12	12	12	12	12	12	12	12	12	7	7	7	7	7	5	5	5	5	5	2	2	2	2	1	1	1
Excavator - Backhoe/loader	4	4	6	8	8	8	8	8	8	8	8	4	4	4	4	4	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4	2	2	2	0	0	0	0	0	0	0
Excavator - Earth Scraper 637	131	131	131	131	75	75	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - loader	6	6	6	6	6	6	6	6	6	6	6	6	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	0	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0
Excavator - Motor Grader (CAT140H)	0	4	4	4	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4	0	0	0	0	9	9	9	9	4	4	4	0	0	0	0	0	0	0
Excavator - Trencher (CAT320)	0	0	0	0	0	11	11	11	11	11	11	11	11	11	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fired Heaters (2,000 BTU)	0	0	0	0	3	3	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Forklift	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1	1	1	1	0	0	0
Fusion Welder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 600 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11	11	11	11	11	11	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 1,000 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11	11	11	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Light Plants	1	1	1	3	5	5	5	5	3	3	4	4	5	5	6	6	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	6	6	6	6	6	6	6	6	6	3	3	3	3	3	3	3	1	1
Man lifts - telescoping	0	0	0	0	0	0	0	0	5	5	5	9	9	9	9	9	9	9	9	14	14	14	14	19	19	19	19	19	19	19	19	19	19	19	19	14	14	14	9	9	9	9	5	5	5	5	2	2	2
Man lift - scissor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction Roller	0	0	18	18	18	18	18	18	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	0	0	0	0	7	7	7	7	7	7	0	0	0	7	7	7	4	4	0	0	0	0	0	0	0
Portable Compaction - Vibratory Plate	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Portable Compaction - Ram	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pumps	2	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1
Portable Power Generators	9	9	9	9	13	13	13	13	13	22	22	22	22	22	22	32	32	32	32	32	32	32	43	43	43	43	43	43	43	43	43	43	43	43	43	32	32	32	32	22	22	22	22	22	22	11	11	11	4
Truck Crane - Greater than 300 ton	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6	12	12	18	18	24	24	24	24	24	24	24	24	24	18	18	12	12	12	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0
Truck Crane - Greater than 200 ton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	9	9	9	13	13	13	13	13	13	13	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vibratory Roller Ingersol-Rand 20 ton	13	13	13	13	13	13	13	13	13	9	9	9	9	9	4	4	4	4	0	0	0	0	0	0	0	0	0	9	9	9	9	0	0	0	0	0	0	4	4	4	4	0	0	0	0	0	0	0	0
WORKER VEHICLES																																																	
Personal commuting vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DELIVERY TRUCKS																																																	
Light delivery truck (e.g. Fed-Ex)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Heavy delivery truck (e.g. flat beds carrying construction eqp)	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Import fill trucks	24.2	24.2	24.2	24.2	24.2	24.2	24.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ONSITE TOTAL (lbs/day)	**298**	**305**	**356**	**355**	**348**	**376**	**324**	**263**	**242**	**240**	**252**	**255**	**259**	**275**	**284**	**296**	**314**	**323**	**321**	**351**	**358**	**352**	**366**	**390**	**381**	**367**	**352**	**381**	**378**	**356**	**340**	**307**	**298**	**289**	**263**	**238**	**238**	**250**	**234**	**198**	**168**	**163**	**94**	**94**	**85**	**63**	**54**	**49**	**36**
OFF-SITE																																																	
WORKER VEHICLES																																																	
Personal commuting vehicles	0.8	1.4	1.9	2.4	3.6	4.5	5.4	7.2	8.0	9.6	11.9	13.4	15.8	18.6	22.3	25.2	27.6	29.2	30.8	32.6	34.2	38.3	41.1	44.2	47.1	47.6	52.3	56.0	57.9	58.2	58.8	57.9	57.4	54.8	51.9	50.2	45.7	44.2	37.5	30.5	24.1	16.4	13.1	13.1	13.1	12.1	10.3	9.4	7.1
DELIVERY TRUCKS																																																	
Light delivery truck (e.g. Fed-Ex)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Heavy delivery truck (e.g. flat beds carrying construction eqp)	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6
Import fill trucks	232.4	232.4	232.4	232.4	232.4	232.4	232.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																																																	
ON ROAD																																																	
Dump Truck	0	0	0	0	0	0	0	0	0	0	11	11	17	17	17	17	17	17	17	17	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Service Truck (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipe Haul Truck and Trailer (HHDT-DSL)	0	0	0	0	0	0	0	0	0	0	9	9	9	9	9	9	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/4 Ton Pickup (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	11	11	11	11	11	11	17	17	17	17	17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - water	0	0	0	0	0	0	0	0	0	0	6	6	11	11	11	11	11	11	11	11	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OFF ROAD																																																	
Air Compressor (185 CFM)	0	0	0	0	0	0	0	0	0	0	2	2	4	4	7	7	7	7	4	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bore Machine (Hydraulic)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 Ton Hydra Crane	0	0	0	0	0	0	0	0	0	0	9	17	17	26	26	26	26	26	26	26	17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Backhoe/loader	0	0	0	0	0	0	0	0	0	0	13	13	21	21	21	21	21	21	21	21	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Trencher	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Forklift	0	0	0	0	0	0	0	0	0	0	1	1	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Welding Generator	0	0	0	0	0	0	0	0	0	0	17	17	17	17	17	17	17	17	17	17	17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 to 5 Ton AC Roller	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipe Bending Machine	0	0	0	0	0	0	0	0	0	0	3	3	6	6	6	6	6	6	6	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL																																																	
AIR COMPRESSOR 185	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BOOM TRUCK 12 TON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 325 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 330 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT DOZER D-6	0	0	0	0	0	0	0	0	0	0	0	0	15	15	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT MODEL 12 MOTOR GRADER	0	0	0	0	0	0	0	0	0	0	0	0	9	9	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT ROLLER-COMPACTOR 563	0	0	0	0	0	0	0	0	0	0	0	0	7	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT RUBBER TIRE LOADER 966	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT SCRAPER 615	0	0	0	0	0	0	0	0	0	0	0	0	27	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRANE-ROUGH TERRAIN 45T	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENSET 5KW	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JOHN DEERE TRACTOR 9400	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP CRAFT	0	0	0	0	0	0	0	0	0	0	0	0	28	28	28	28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP OVERHEAD	0	0	0	0	0	0	0	0	0	0	0	0	10	30	30	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL BALLAST REGULATOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL CLIP MACHINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL MOVER-SHUTTLE WAGON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL TAMPER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL WELDER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAMEX WALK BEHIND COMPACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRI-AXLE DUMP TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	11	17	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK FLATBED 14 FOOT	0	0	0	0	0	0	0	0	0	0	0	0	3	3	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK TRACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WATER TRUCK, 4M ON-ROAD	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WELDING MACHINE 350 AMP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LINEARS TOTAL (lbs/day)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**87**	**103**	**256**	**275**	**266**	**254**	**259**	**147**	**145**	**140**	**109**	**105**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
OFFSITE VEHICLES TOTAL (lbs/day)	**311**	**312**	**312**	**313**	**314**	**315**	**316**	**85**	**86**	**88**	**90**	**92**	**94**	**97**	**101**	**103**	**106**	**107**	**109**	**111**	**112**	**116**	**119**	**122**	**125**	**126**	**131**	**134**	**136**	**136**	**137**	**136**	**136**	**133**	**130**	**128**	**124**	**122**	**116**	**109**	**102**	**95**	**91**	**91**	**91**	**90**	**88**	**88**	**85**
TOTAL PROJECT (lbs/day)	609	617	668	668	662	691	640	349	328	328	430	450	608	647	651	653	679	578	575	602	579	574	485	513	506	493	483	515	514	493	477	443	434	422	393	367	362	373	350	307	270	258	185	185	176	153	142	136	121

Notes:

1. According to schedules provided by Fluor, Linear construction (except rail) takes place in months 11-22.
2. According to schedules provided by Fluor, Rail construction occurs in months 13-17.

Hydrogen Energy California, Kern County Power Project
PM10 Emissions by Month - from Combustion Sources
8/14/2012

PM10 - Combustion

MONTHLY EMISSIONS (lbs/day)

CONSTRUCTION VEHICLES	1	2	3	4	5	6	7	8	9	10	11	12	13
ON-SITE													
On-Road Vehicles													
18 cy fill mat'l haul truck	0.00	0.00	1.77	1.77	3.53	3.53	3.53	3.53	1.77	1.77	1.77	1.77	0.88
Bus	0.35	0.35	0.35	0.35	0.53	0.53	0.53	0.53	0.53	0.53	0.88	0.88	0.88
Concrete Pumper Truck	0.00	0.00	0.00	0.00	0.00	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Dump Truck	0.53	0.71	0.71	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.35	0.35	0.35
Diesel Tractor (Yard Dog)	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.40	0.40	0.40	0.40	0.80	0.80
Service Truck - 1 ton	0.35	0.35	0.35	0.71	0.71	0.71	0.71	0.35	0.35	0.35	0.35	0.35	0.35
Pile Driver Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck - Fuel/Lube	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Tractor Truck 5th Wheel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks - Pickup 3/4 ton	0.34	0.34	0.34	0.34	0.34	0.41	0.48	0.55	1.03	1.03	1.03	1.03	1.72
Trucks - 3 ton	0.18	0.18	0.18	0.18	0.18	0.35	0.35	0.35	0.71	0.71	0.71	0.71	1.06
Truck - Water	0.88	0.88	0.88	0.88	0.88	0.88	0.53	0.53	0.53	0.53	0.53	0.53	0.53
Off Road Vehicles													
Air Compressor 185 CFM	0.23	0.23	0.23	0.23	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Air Compressor 750 CFM	0.00	0.00	0.00	0.00	0.24	0.24	0.24	0.24	0.48	0.48	0.48	0.48	0.48
Articulating Boom Platform	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bob cat loader	0.00	0.00	0.16	0.16	0.16	0.16	0.16	0.63	0.63	0.63	0.63	0.63	0.47
Bulldozer D10R	1.54	1.54	1.54	1.02	1.02	1.02	1.02	1.02	1.02	0.51	0.51	0.00	0.00
Bulldozer D6C	1.19	1.19	1.19	1.19	0.80	0.80	0.80	0.80	0.80	0.80	0.40	0.40	0.40
Concrete Trowel Machine	0.00	0.00	0.00	0.00	0.00	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Concrete Vibrators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes - Mobile 35 ton	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.21	0.21	0.85	0.85	0.85	0.85
Cranes - Mobile 45 ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.38
Crane - Mobile 65 ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.19
Cranes 100 / 150 ton cap	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.30
Diesel Powered Welder	0.00	0.00	0.00	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Excavator - Backhoe/loader	0.35	0.35	0.53	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.35	0.35
Excavator - Earth Scraper 637	5.08	5.08	5.08	5.08	2.90	2.90	1.45	0.00	0.00	0.00	0.00	0.00	0.00
Excavator - loader	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.28
Excavator - Motor Grader (CAT140H)	0.00	0.39	0.39	0.39	1.16	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator - Trencher (CAT320)	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Fired Heaters (2,000 BTU)	0.00	0.00	0.00	0.00	0.10	0.10	0.10	0.10	0.08	0.08	0.13	0.13	0.13
Forklift	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
Fusion Welder	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heavy Haul / 600 tn Crane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heavy Haul / 1,000 tn Crane	0.00	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 Plants	0.03	0.03	0.05	0.10	0.20	0.20	0.20	0.20	0.10	0.10	0.15	0.15	0.20
Man lifts - telescoping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.42	0.42	0.85	0.85
Man lift - scissor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compaction Roller	0.00	0.00	1.53	1.53	1.53	1.53	1.53	1.53	0.61	0.61	0.61	0.61	0.61
Portable Compaction - Vibratory Plate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.03	0.03
Portable Compaction - Ram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pumps	0.08	0.08	0.08	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Portable Power Generators	0.75	0.75	0.75	0.75	1.12	1.12	1.12	1.12	1.12	1.87	1.87	1.87	1.87
Truck Crane - Greater than 300 ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.22
Truck Crane - Greater than 200 ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vibratory Roller Ingersol-Rand 20 ton	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.47	0.47	0.47	0.47
WORKER VEHICLES													
Personal commuting vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DELIVERY TRUCKS													
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Import fill trucks	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
ONSITE TOTAL (lbs/day)	**15.35**	**15.91**	**19.57**	**19.83**	**20.91**	**22.95**	**20.26**	**17.53**	**16.22**	**16.85**	**17.27**	**17.64**	**17.56**
OFF-SITE													
WORKER VEHICLES													
Personal commuting vehicles	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1.0	1.2	1.4
DELIVERY TRUCKS													
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Import fill trucks	8.4	8.4	8.4	8.4	8.4	8.4	8.4	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS													
ON ROAD													
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	1.06
Service Truck (MHD-DSL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.35	0.35
Pipe Haul Truck and Trailer (HHDT-DSL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.53
3/4 Ton Pickup (MHD-DSL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.69
Truck - water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.35	0.71
OFF ROAD													
Air Compressor (185 CFM)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.23	0.46
Bore Machine (Hydraulic)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12 Ton Hydra Crane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.60	0.60
Backhoe/loader	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	1.06	1.77
Excavator - Trencher	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.34
Forklift	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.15
Welding Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50	1.50	1.50
3 to 5 Ton AC Roller	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.28
Pipe Bending Machine	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.51
RAIL													
AIR COMPRESSOR 185	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BOOM TRUCK 12 TON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT 325 BACKHOE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
CAT 330 BACKHOE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT DOZER D-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
CAT MODEL 12 MOTOR GRADER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
CAT ROLLER-COMPACTOR 563	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
CAT RUBBER TIRE LOADER 966	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT SCRAPER 615	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
CRANE-ROUGH TERRAIN 45T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GENSET 5KW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JOHN DEERE TRACTOR 9400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
PICK-UP CRAFT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
PICK-UP OVERHEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
RAIL BALLAST REGULATOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL CLIP MACHINE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL MOVER-SHUTTLE WAGON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL TAMPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL WELDER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMEX WALK BEHIND COMPACTOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRI-AXLE DUMP TRUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
TRUCK FLATBED 14 FOOT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
TRUCK TRACTOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WATER TRUCK, 4M ON-ROAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
WELDING MACHINE 350 AMP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
LINEARS TOTAL (lbs/day)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**6.05**	**6.97**	**15.26**
OFFSITE VEHICLES TOTAL (lbs/day)	**11.20**	**11.25**	**11.30**	**11.34**	**11.44**	**11.52**	**11.60**	**3.33**	**3.40**	**3.54**	**3.74**	**3.86**	**4.08**
TOTAL PROJECT (lbs/day)	26.55	27.17	30.86	31.18	32.35	34.47	31.86	20.86	19.62	20.40	27.06	28.47	36.90

CONSTRUCTION VEHICLES	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
ON-SITE																					
On-Road Vehicles																					
18 cy fill mat'l haul truck	0.88	0.88	0.88	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bus	0.88	0.88	0.88	1.24	1.24	1.24	1.77	1.77	1.77	1.77	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47
Concrete Pumper Truck	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.18	0.00	0.00	0.00
Dump Truck	0.35	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Diesel Tractor (Yard Dog)	0.80	0.80	0.80	1.60	1.60	1.60	1.60	1.60	1.60	1.60	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Service Truck - 1 ton	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Pile Driver Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck - Fuel/Lube	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Tractor Truck 5th Wheel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks - Pickup 3/4 ton	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72
Trucks - 3 ton	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Truck - Water	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.35	0.53	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Off Road Vehicles																					
Air Compressor 185 CFM	0.69	0.69	0.69	0.92	0.92	0.92	1.15	1.15	1.15	1.15	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37
Air Compressor 750 CFM	0.48	0.48	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.48	0.48	0.48	0.48	0.24
Articulating Boom Platform	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bob cat loader	0.47	0.47	0.47	0.47	0.47	0.31	0.31	0.31	0.31	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bulldozer D10R	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bulldozer D6C	0.40	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.40	0.40	0.00	0.00	0.00
Concrete Trowel Machine	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes - Mobile 35 ton	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Cranes - Mobile 45 ton	0.38	0.38	0.38	0.38	0.38	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.38	0.38	0.38	0.38	0.38
Crane - Mobile 65 ton	0.38	0.76	0.95	0.95	0.95	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	0.95	0.95	0.76	0.38
Cranes 100 / 150 ton cap	0.30	0.45	0.45	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.30	0.30	0.15	0.15	0.15	0.15
Diesel Powered Welder	0.30	0.30	0.45	0.45	0.45	0.60	0.60	0.60	0.60	0.60	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.45	0.45
Excavator - Backhoe/loader	0.35	0.35	0.35	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator - Earth Scraper 637	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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 - loader	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.28	0.28	0.28	0.00	0.00	0.00
Excavator - Motor Grader (CAT140H)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39	0.39	0.39	0.00	0.00	0.00
Excavator - Trencher (CAT320)	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fired Heaters (2,000 BTU)	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.08	0.08
Forklift	0.23	0.23	0.23	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.23	0.23	0.23	0.23	0.23	0.23	0.23
Fusion Welder	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heavy Haul / 600 tn Crane	0.00	0.00	0.00	0.00	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heavy Haul / 1,000 tn Crane	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.38	0.38	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Light Plants	0.20	0.25	0.25	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.25	0.25	0.25
Man lifts - telescoping	0.85	0.85	0.85	0.85	0.85	0.85	1.27	1.27	1.27	1.27	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.69
Man lift - scissor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compaction Roller	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.61	0.61	0.61
Portable Compaction - Vibratory Plate	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.00	0.00	0.00
Portable Compaction - Ram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pumps	0.15	0.15	0.15	0.15	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Portable Power Generators	1.87	1.87	2.80	2.80	2.80	2.80	2.80	2.80	2.80	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74
Truck Crane - Greater than 300 ton	0.22	0.22	0.22	0.45	0.45	0.67	0.67	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.67	0.67	0.45	0.45	0.45
Truck Crane - Greater than 200 ton	0.00	0.15	0.15	0.15	0.15	0.15	0.30	0.30	0.30	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.30	0.00	0.00	0.00	0.00
Vibratory Roller Ingersol-Rand 20 ton	0.47	0.24	0.24	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.47	0.47	0.47	0.00	0.00	0.00
WORKER VEHICLES																					
Personal commuting vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DELIVERY TRUCKS																					
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ONSITE TOTAL (lbs/day)	**18.91**	**19.13**	**20.13**	**20.79**	**21.10**	**20.77**	**22.48**	**22.71**	**22.36**	**23.42**	**25.15**	**24.23**	**23.67**	**22.88**	**24.89**	**25.09**	**23.86**	**23.21**	**21.16**	**20.62**	**19.99**
OFF-SITE																					
WORKER VEHICLES																					
Personal commuting vehicles	1.6	1.9	2.2	2.4	2.5	2.7	2.8	2.9	3.3	3.5	3.8	4.1	4.1	4.5	4.8	5.0	5.0	5.1	5.0	4.9	4.7
DELIVERY TRUCKS																					
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																					
ON ROAD																					
Dump Truck	1.06	1.06	1.06	1.06	1.06	1.06	1.06	0.71	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Service Truck (MHD-DSL)	0.35	0.35	0.35	0.53	0.53	0.53	0.53	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pipe Haul Truck and Trailer (HHDT-DSL)	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/4 Ton Pickup (MHD-DSL)	0.69	0.69	0.69	1.03	1.03	1.03	1.03	1.03	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck - water	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.35	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OFF ROAD																					
Air Compressor (185 CFM)	0.46	0.69	0.69	0.69	0.69	0.46	0.46	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bore Machine (Hydraulic)	0.00	0.09	0.09	0.09	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12 Ton Hydra Crane	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.60	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Backhoe/loader	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.06	1.06	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 - Trencher	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forklift	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welding Generator	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 to 5 Ton AC Roller	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pipe Bending Machine	0.51	0.51	0.51	0.51	0.51	0.51	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL																					
AIR COMPRESSOR 185	0.23	0.23	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BOOM TRUCK 12 TON	0.00	0.18	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT 325 BACKHOE	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT 330 BACKHOE	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT DOZER D-6	0.84	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT MODEL 12 MOTOR GRADER	0.77	0.39	0.39	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT ROLLER-COMPACTOR 563	0.61	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT RUBBER TIRE LOADER 966	0.00	0.45	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT SCRAPER 615	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CRANE-ROUGH TERRAIN 45T	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GENSET 5KW	0.18	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JOHN DEERE TRACTOR 9400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PICK-UP CRAFT	0.91	0.91	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PICK-UP OVERHEAD	1.56	1.56	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL BALLAST REGULATOR	0.00	0.00	0.26	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL CLIP MACHINE	0.00	0.00	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL MOVER-SHUTTLE WAGON	0.00	0.26	0.26	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL TAMPER	0.00	0.00	0.26	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL WELDER	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMEX WALK BEHIND COMPACTOR	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRI-AXLE DUMP TRUCK	1.06	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRUCK FLATBED 14 FOOT	0.18	0.53	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRUCK TRACTOR	0.00	0.26	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WATER TRUCK, 4M ON-ROAD	0.18	0.18	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WELDING MACHINE 350 AMP	0.03	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LINEARS TOTAL (lbs/day)	**16.71**	**15.65**	**14.98**	**15.45**	**9.91**	**9.68**	**9.34**	**7.39**	**7.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
OFFSITE VEHICLES TOTAL (lbs/day)	**4.31**	**4.64**	**4.89**	**5.09**	**5.23**	**5.37**	**5.52**	**5.66**	**6.01**	**6.26**	**6.53**	**6.77**	**6.82**	**7.22**	**7.54**	**7.70**	**7.73**	**7.78**	**7.70**	**7.66**	**7.44**
TOTAL PROJECT (lbs/day)	39.93	39.41	40.00	41.33	36.24	35.82	37.35	35.76	35.44	29.68	31.68	31.00	30.49	30.10	32.43	32.79	31.58	30.99	28.86	28.28	27.43

CONSTRUCTION VEHICLES	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
ON-SITE															
On-Road Vehicles															
18 cy fill mat'l haul truck	0.00	0.53	0.53	0.53	0.53	0.18	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bus	2.47	2.12	2.12	2.12	1.77	1.77	0.88	0.88	0.53	0.53	0.35	0.35	0.35	0.18	0.18
Concrete Pumper Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dump Truck	0.35	0.35	0.53	0.53	0.53	0.35	0.18	0.18	0.18	0.18	0.18	0.00	0.00	0.00	0.00
Diesel Tractor (Yard Dog)	2.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Service Truck - 1 ton	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Pile Driver Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck - Fuel/Lube	0.14	0.14	0.14	0.14	0.14	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.00	0.00	0.00
Tractor Truck 5th Wheel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks - Pickup 3/4 ton	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.03	1.03	0.69	0.69	0.69	0.69	0.34
Trucks - 3 ton	0.71	0.53	0.53	0.53	0.53	0.35	0.35	0.35	0.18	0.18	0.18	0.18	0.00	0.00	0.00
Truck - Water	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Off Road Vehicles															
Air Compressor 185 CFM	1.37	0.92	0.92	0.92	0.69	0.69	0.69	0.69	0.46	0.46	0.46	0.23	0.23	0.11	0.11
Air Compressor 750 CFM	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Articulating Boom Platform	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bob cat loader	0.00	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bulldozer D10R	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bulldozer D6C	0.00	0.00	0.00	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 Trowel Machine	0.00	0.00	0.12	0.12	0.12	0.12	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes - Mobile 35 ton	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.21	0.21	0.21	0.21
Cranes - Mobile 45 ton	0.38	0.38	0.38	0.38	0.38	0.38	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crane - Mobile 65 ton	0.38	0.38	0.38	0.38	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.00	0.00	0.00	0.00
Cranes 100 / 150 ton cap	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diesel Powered Welder	0.45	0.45	0.45	0.30	0.30	0.30	0.30	0.30	0.15	0.15	0.15	0.15	0.09	0.09	0.06
Excavator - Backhoe/loader	0.00	0.35	0.35	0.35	0.35	0.18	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator - Earth Scraper 637	0.00	0.00	0.00	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 - loader	0.00	0.00	0.00	0.28	0.28	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator - Motor Grader (CAT140H)	0.00	0.77	0.77	0.77	0.77	0.39	0.39	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator - Trencher (CAT320)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fired Heaters (2,000 BTU)	0.08	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03
Forklift	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.08	0.08	0.08	0.08	0.04	0.04	0.04
Fusion Welder	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heavy Haul / 600 tn Crane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heavy Haul / 1,000 tn Crane	0.00	0.00	0.00	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 Plants	0.25	0.25	0.25	0.25	0.25	0.25	0.13	0.13	0.13	0.13	0.13	0.10	0.10	0.05	0.05
Man lifts - telescoping	1.69	1.27	1.27	1.27	0.85	0.85	0.85	0.85	0.42	0.42	0.42	0.42	0.17	0.17	0.17
Man lift - scissor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compaction Roller	0.00	0.00	0.00	0.61	0.61	0.61	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compaction - Vibratory Plate	0.00	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compaction - Ram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pumps	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Portable Power Generators	3.74	2.80	2.80	2.80	2.80	1.87	1.87	1.87	1.87	1.87	1.87	0.93	0.93	0.93	0.37
Truck Crane - Greater than 300 ton	0.22	0.22	0.22	0.22	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck Crane - Greater than 200 ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vibratory Roller Ingersol-Rand 20 ton	0.00	0.00	0.00	0.24	0.24	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WORKER VEHICLES															
Personal commuting vehicles	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DELIVERY TRUCKS															
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ONSITE TOTAL (lbs/day)	**18.17**	**16.43**	**16.57**	**17.55**	**16.34**	**13.83**	**11.85**	**11.61**	**6.73**	**6.73**	**6.21**	**4.44**	**3.81**	**3.47**	**2.53**
OFF-SITE															
WORKER VEHICLES															
Personal commuting vehicles	4.5	4.3	3.9	3.8	3.2	2.6	2.1	1.4	1.1	1.1	1.1	1.0	0.9	0.8	0.6
DELIVERY TRUCKS															
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS															
ON ROAD															
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Service Truck (MHD-DSL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pipe Haul Truck and Trailer (HHDT-DSL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/4 Ton Pickup (MHD-DSL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck - water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OFF ROAD															
Air Compressor (185 CFM)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bore Machine (Hydraulic)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12 Ton Hydra Crane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Backhoe/loader	0.00	0.00	0.00	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 - Trencher	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forklift	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welding Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 to 5 Ton AC Roller	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pipe Bending Machine	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL															
AIR COMPRESSOR 185	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BOOM TRUCK 12 TON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT 325 BACKHOE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT 330 BACKHOE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT DOZER D-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT MODEL 12 MOTOR GRADER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT ROLLER-COMPACTOR 563	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT RUBBER TIRE LOADER 966	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAT SCRAPER 615	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CRANE-ROUGH TERRAIN 45T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GENSET 5KW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JOHN DEERE TRACTOR 9400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PICK-UP CRAFT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PICK-UP OVERHEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL BALLAST REGULATOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL CLIP MACHINE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL MOVER-SHUTTLE WAGON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL TAMPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAIL WELDER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMEX WALK BEHIND COMPACTOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRI-AXLE DUMP TRUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRUCK FLATBED 14 FOOT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRUCK TRACTOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WATER TRUCK, 4M ON-ROAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WELDING MACHINE 350 AMP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LINEARS TOTAL (lbs/day)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
OFFSITE VEHICLES TOTAL (lbs/day)	**7.18**	**7.04**	**6.65**	**6.52**	**5.94**	**5.34**	**4.79**	**4.13**	**3.84**	**3.84**	**3.84**	**3.76**	**3.60**	**3.52**	**3.33**
TOTAL PROJECT (lbs/day)	25.35	23.47	23.22	24.07	22.29	19.17	16.65	15.73	10.57	10.57	10.05	8.19	7.41	6.99	5.86

Notes:

1. According to schedules provided by Fluor, Linear construction (except rail) takes place in months 11-22.
2. According to schedules provided by Fluor, Rail construction occurs in months 13-17.

PM2.5 - Combustion

MONTHLY EMISSIONS (lbs/day)

Months 1–17

CONSTRUCTION VEHICLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
ON-SITE																	
On-Road Vehicles																	
18 cy fill mat'l haul truck	0.0	0.0	1.6	1.6	3.2	3.2	3.2	3.2	1.6	1.6	1.6	1.6	0.8	0.8	0.8	0.8	0.8
Bus	0.3	0.3	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.8	0.8	0.8	0.8	0.8	1.1
Concrete Pumper Truck	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.5	0.3
Dump Truck	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.0	0.0
Diesel Tractor (Yard Dog)	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.7	0.7	0.7	0.7	1.4
Service Truck - 1 ton	0.3	0.3	0.3	0.6	0.6	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Pile Driver Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Fuel/Lube	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Tractor Truck 5th Wheel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - Pickup 3/4 ton	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.9	0.9	0.9	0.9	1.6	1.6	1.6	1.6	1.6
Trucks - 3 ton	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.6	0.6	0.6	0.6	1.0	1.0	1.0	1.0	1.0
Truck - Water	0.8	0.8	0.8	0.8	0.8	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Off Road Vehicles																	
Air Compressor 185 CFM	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.6	0.6	0.8
Air Compressor 750 CFM	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.9
Articulating Boom Platform	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bob cat loader	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4
Bulldozer D10R	1.4	1.4	1.4	0.9	0.9	0.9	0.9	0.9	0.9	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D6C	1.1	1.1	1.1	1.1	0.7	0.7	0.7	0.7	0.7	0.7	0.4	0.4	0.4	0.4	0.4	0.0	0.0
Concrete Trowel Machine	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Concrete Vibrators	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 35 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.8	0.8	0.8	0.8	1.4	1.4	1.4	1.4
Cranes - Mobile 45 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Crane - Mobile 65 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.4	0.7	0.9	0.9
Cranes 100 / 150 ton cap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.3	0.4	0.4	0.6
Diesel Powered Welder	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4
Excavator - Backhoe/loader	0.3	0.3	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.3	0.3	0.3	0.3	0.3	0.2
Excavator - Earth Scraper 637	4.7	4.7	4.7	4.7	2.7	2.7	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - loader	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.0	0.0	0.0
Excavator - Motor Grader (CAT140H)	0.0	0.4	0.4	0.4	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher (CAT320)	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.0
Fired Heaters (2,000 BTU)	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Forklift	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
Fusion Welder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 600 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 1,000 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Plants	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3
Man lifts - telescoping	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.8
Man lift - scissor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction Roller	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Portable Compaction - Vibratory Plate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Ram	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumps	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Portable Power Generators	0.7	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.7	1.7	1.7	1.7	1.7	1.7	2.6	2.6
Truck Crane - Greater than 300 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.4
Truck Crane - Greater than 200 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Vibratory Roller Ingersol-Rand 20 ton	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2
WORKER VEHICLES																	
Personal commuting vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DELIVERY TRUCKS																	
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Import fill trucks	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ONSITE TOTAL (lbs/day)	**14.0**	**14.6**	**17.9**	**18.1**	**19.1**	**20.9**	**18.5**	**16.0**	**14.8**	**15.4**	**15.8**	**16.1**	**16.0**	**17.2**	**17.5**	**18.4**	**19.0**
OFF-SITE																	
WORKER VEHICLES																	
Personal commuting vehicles	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.6	0.7	0.8	1.0	1.1	1.2
DELIVERY TRUCKS																	
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Import fill trucks	7.2	7.2	7.2	7.2	7.2	7.2	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																	
ON ROAD																	
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	1.0	1.0	1.0	1.0	1.0
Service Truck (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.5
Pipe Haul Truck and Trailer (HHDT-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.3
3/4 Ton Pickup (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.9
Truck - water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.6	0.6	0.6	0.6	0.6
OFF ROAD																	
Air Compressor (185 CFM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.4	0.4	0.6	0.6	0.6
Bore Machine (Hydraulic)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
12 Ton Hydra Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.6	0.8	0.8	0.8	0.8
Backhoe/loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.6	1.6	1.6	1.6	1.6
Excavator - Trencher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3
Forklift	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Welding Generator	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
3 to 5 Ton AC Roller	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3
Pipe Bending Machine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.5	0.5	0.5	0.5	0.5
RAIL																	
AIR COMPRESSOR 185	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2
BOOM TRUCK 12 TON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
CAT 325 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0
CAT 330 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
CAT DOZER D-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.4
CAT MODEL 12 MOTOR GRADER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.4	0.4	0.4
CAT ROLLER-COMPACTOR 563	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.3	0.0	0.0
CAT RUBBER TIRE LOADER 966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4
CAT SCRAPER 615	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.0	0.0
CRANE-ROUGH TERRAIN 45T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0
GENSET 5KW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0
JOHN DEERE TRACTOR 9400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
PICK-UP CRAFT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8
PICK-UP OVERHEAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.4	1.4	1.2	1.2
RAIL BALLAST REGULATOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
RAIL CLIP MACHINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
RAIL MOVER-SHUTTLE WAGON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
RAIL TAMPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
RAIL WELDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
RAMEX WALK BEHIND COMPACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRI-AXLE DUMP TRUCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.0	0.3	0.0	0.0
TRUCK FLATBED 14 FOOT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.5	0.5	0.5
TRUCK TRACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0
WATER TRUCK, 4M ON-ROAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2
WELDING MACHINE 350 AMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS TOTAL (lbs/day)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**5.5**	**6.4**	**14.0**	**15.3**	**14.3**	**13.7**	**14.1**
OFFSITE VEHICLES TOTAL (lbs/day)	**9.6**	**9.6**	**9.6**	**9.7**	**9.7**	**9.7**	**9.8**	**2.6**	**2.7**	**2.8**	**2.9**	**2.9**	**3.0**	**3.2**	**3.3**	**3.5**	**3.6**
TOTAL PROJECT (lbs/day)	23.6	24.2	27.5	27.8	28.8	30.7	28.3	18.6	17.5	18.1	24.1	25.4	33.0	35.7	35.1	35.5	36.7

Months 18–34

CONSTRUCTION VEHICLES	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
ON-SITE																	
On-Road Vehicles																	
18 cy fill mat'l haul truck	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bus	1.1	1.1	1.6	1.6	1.6	1.6	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Concrete Pumper Truck	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.0	0.0	0.0
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Diesel Tractor (Yard Dog)	1.4	1.4	1.4	1.4	1.4	1.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Service Truck - 1 ton	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Pile Driver Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Fuel/Lube	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Tractor Truck 5th Wheel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - Pickup 3/4 ton	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Trucks - 3 ton	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Truck - Water	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Off Road Vehicles																	
Air Compressor 185 CFM	0.8	0.8	1.1	1.1	1.1	1.1	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Air Compressor 750 CFM	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.4	0.4	0.4	0.4	0.2
Articulating Boom Platform	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bob cat loader	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D10R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D6C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0
Concrete Trowel Machine	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 35 ton	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Cranes - Mobile 45 ton	0.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.4	0.4	0.4	0.4	0.4
Crane - Mobile 65 ton	0.9	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	0.9	0.7	0.4
Cranes 100 / 150 ton cap	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.3	0.3	0.1	0.1	0.1	0.1
Diesel Powered Welder	0.4	0.5	0.5	0.5	0.5	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.4	0.4
Excavator - Backhoe/loader	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Earth Scraper 637	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.0	0.0	0.0
Excavator - Motor Grader (CAT140H)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0
Excavator - Trencher (CAT320)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fired Heaters (2,000 BTU)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Forklift	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Fusion Welder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 600 tn Crane	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 1,000 tn Crane	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Plants	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
Man lifts - telescoping	0.8	0.8	1.2	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Man lift - scissor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction Roller	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6
Portable Compaction - Vibratory Plate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Ram	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumps	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Portable Power Generators	2.6	2.6	2.6	2.6	2.6	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Truck Crane - Greater than 300 ton	0.4	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6	0.6	0.4	0.4	0.4
Truck Crane - Greater than 200 ton	0.1	0.1	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.0	0.0	0.0	0.0
Vibratory Roller Ingersol-Rand 20 ton	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0
WORKER VEHICLES																	
Personal commuting vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DELIVERY TRUCKS																	
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ONSITE TOTAL (lbs/day)	**19.2**	**19.0**	**20.5**	**20.7**	**20.4**	**21.4**	**23.0**	**22.1**	**21.6**	**20.9**	**22.7**	**22.9**	**21.8**	**21.2**	**19.3**	**18.8**	**18.2**
OFF-SITE																	
WORKER VEHICLES																	
Personal commuting vehicles	1.3	1.4	1.5	1.5	1.7	1.9	2.0	2.1	2.2	2.4	2.5	2.6	2.6	2.7	2.6	2.6	2.5
DELIVERY TRUCKS																	
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																	
ON ROAD																	
Dump Truck	1.0	1.0	1.0	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck (MHD-DSL)	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Haul Truck and Trailer (HHDT-DSL)	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4 Ton Pickup (MHD-DSL)	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - water	0.6	0.6	0.6	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OFF ROAD																	
Air Compressor (185 CFM)	0.6	0.4	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bore Machine (Hydraulic)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 Ton Hydra Crane	0.8	0.8	0.8	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Backhoe/loader	1.6	1.6	1.6	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Welding Generator	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 to 5 Ton AC Roller	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Bending Machine	0.5	0.5	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL																	
AIR COMPRESSOR 185	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BOOM TRUCK 12 TON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 325 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 330 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT DOZER D-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT MODEL 12 MOTOR GRADER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT ROLLER-COMPACTOR 563	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT RUBBER TIRE LOADER 966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT SCRAPER 615	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CRANE-ROUGH TERRAIN 45T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENSET 5KW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JOHN DEERE TRACTOR 9400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP CRAFT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP OVERHEAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL BALLAST REGULATOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL CLIP MACHINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL MOVER-SHUTTLE WAGON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL TAMPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL WELDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMEX WALK BEHIND COMPACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRI-AXLE DUMP TRUCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK FLATBED 14 FOOT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK TRACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WATER TRUCK, 4M ON-ROAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WELDING MACHINE 350 AMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS TOTAL (lbs/day)	**9.0**	**8.8**	**8.5**	**6.7**	**6.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
OFFSITE VEHICLES TOTAL (lbs/day)	**3.6**	**3.7**	**3.8**	**3.9**	**4.0**	**4.2**	**4.3**	**4.4**	**4.5**	**4.7**	**4.9**	**4.9**	**4.9**	**5.0**	**4.9**	**4.9**	**4.8**
TOTAL PROJECT (lbs/day)	31.9	31.5	32.8	31.3	30.9	25.6	27.3	26.6	26.1	25.6	27.6	27.8	26.7	26.1	24.2	23.7	23.0

Months 35–49

CONSTRUCTION VEHICLES	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
ON-SITE															
On-Road Vehicles															
18 cy fill mat'l haul truck	0.0	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bus	2.2	1.9	1.9	1.9	1.6	1.6	0.8	0.8	0.5	0.5	0.3	0.3	0.3	0.2	0.2
Concrete Pumper Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	0.3	0.3	0.5	0.5	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0
Diesel Tractor (Yard Dog)	1.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck - 1 ton	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Pile Driver Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Fuel/Lube	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Tractor Truck 5th Wheel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - Pickup 3/4 ton	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.9	0.9	0.6	0.6	0.6	0.6	0.3
Trucks - 3 ton	0.6	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.0	0.0	0.0
Truck - Water	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Off Road Vehicles															
Air Compressor 185 CFM	1.3	0.8	0.8	0.8	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.2	0.2	0.1	0.1
Air Compressor 750 CFM	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Articulating Boom Platform	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bob cat loader	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D10R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D6C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Trowel Machine	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 35 ton	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.2
Cranes - Mobile 45 ton	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crane - Mobile 65 ton	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0
Cranes 100 / 150 ton cap	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Powered Welder	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Excavator - Backhoe/loader	0.0	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Earth Scraper 637	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - loader	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Motor Grader (CAT140H)	0.0	0.7	0.7	0.7	0.7	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher (CAT320)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fired Heaters (2,000 BTU)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Fusion Welder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 600 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 1,000 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Plants	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Man lifts - telescoping	1.6	1.2	1.2	1.2	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4	0.2	0.2	0.2
Man lift - scissor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction Roller	0.0	0.0	0.0	0.6	0.6	0.6	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Vibratory Plate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Ram	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumps	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Power Generators	3.4	2.6	2.6	2.6	2.6	1.7	1.7	1.7	1.7	1.7	1.7	0.9	0.9	0.9	0.3
Truck Crane - Greater than 300 ton	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck Crane - Greater than 200 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vibratory Roller Ingersol-Rand 20 ton	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WORKER VEHICLES															
Personal commuting vehicles	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DELIVERY TRUCKS															
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ONSITE TOTAL (lbs/day)	**16.5**	**15.0**	**15.1**	**16.0**	**14.9**	**12.6**	**10.8**	**10.6**	**6.1**	**6.1**	**5.7**	**4.0**	**3.5**	**3.2**	**2.3**
OFF-SITE															
WORKER VEHICLES															
Personal commuting vehicles	2.3	2.3	2.1	2.0	1.7	1.4	1.1	0.7	0.6	0.6	0.6	0.5	0.5	0.4	0.3
DELIVERY TRUCKS															
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS															
ON ROAD															
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Haul Truck and Trailer (HHDT-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4 Ton Pickup (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OFF ROAD															
Air Compressor (185 CFM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bore Machine (Hydraulic)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 Ton Hydra Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Backhoe/loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Welding Generator	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 to 5 Ton AC Roller	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Bending Machine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL															
AIR COMPRESSOR 185	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BOOM TRUCK 12 TON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 325 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 330 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT DOZER D-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT MODEL 12 MOTOR GRADER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT ROLLER-COMPACTOR 563	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT RUBBER TIRE LOADER 966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT SCRAPER 615	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CRANE-ROUGH TERRAIN 45T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENSET 5KW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JOHN DEERE TRACTOR 9400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP CRAFT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP OVERHEAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL BALLAST REGULATOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL CLIP MACHINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL MOVER-SHUTTLE WAGON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL TAMPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL WELDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMEX WALK BEHIND COMPACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRI-AXLE DUMP TRUCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK FLATBED 14 FOOT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK TRACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WATER TRUCK, 4M ON-ROAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WELDING MACHINE 350 AMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS TOTAL (lbs/day)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
OFFSITE VEHICLES TOTAL (lbs/day)	**4.7**	**4.6**	**4.4**	**4.3**	**4.0**	**3.7**	**3.4**	**3.1**	**2.9**	**2.9**	**2.9**	**2.9**	**2.8**	**2.7**	**2.6**
TOTAL PROJECT (lbs/day)	21.2	19.6	19.5	20.3	18.9	16.3	14.2	13.6	9.0	9.0	8.6	6.9	6.3	5.9	4.9

Notes:

1. According to schedules provided by Fluor, Linear construction (except rail) takes place in months 11-22.
2. According to schedules provided by Fluor, Rail construction occurs in months 13-17.

Hydrogen Energy California, Kern County Power Project
Sulfur Dioxide (SO2) Emissions by Month
8/14/2012

SO2

MONTHLY EMISSIONS (lbs/day)

CONSTRUCTION VEHICLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
ON-SITE																																																	
On-Road Vehicles																																																	
18 cy fill mat'l haul truck	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Pumper Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Tractor (Yard Dog)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck - 1 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pile Driver Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Fuel/Lube	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tractor Truck 5th Wheel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - Pickup 3/4 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - 3 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Off Road Vehicles																																																	
Air Compressor 185 CFM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Air Compressor 750 CFM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Articulating Boom Platform	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bob cat loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D10R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D6C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Trowel Machine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 35 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 45 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crane - Mobile 65 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes 100 / 150 ton cap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Powered Welder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Backhoe/loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Earth Scraper 637	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Motor Grader (CAT140H)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher (CAT320)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fired Heaters (2,000 BTU)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fusion Welder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 600 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 1,000 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Plants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Man lifts - telescoping	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Man lift - scissor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction Roller	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Vibratory Plate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Ram	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumps	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Power Generators	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck Crane - Greater than 300 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck Crane - Greater than 200 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vibratory Roller Ingersol-Rand 20 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WORKER VEHICLES																																																	
Personal commuting vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DELIVERY TRUCKS																																																	
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ONSITE TOTAL (lbs/day)	**0.3**	**0.3**	**0.4**	**0.4**	**0.4**	**0.4**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**0.5**	**0.5**	**0.4**	**0.4**	**0.5**	**0.4**	**0.4**	**0.4**	**0.4**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.2**	**0.2**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.0**
OFF-SITE																																																	
WORKER VEHICLES																																																	
Personal commuting vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DELIVERY TRUCKS																																																	
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Import fill trucks	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																																																	
ON ROAD																																																	
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Haul Truck and Trailer (HHDT-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4 Ton Pickup (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OFF ROAD																																																	
Air Compressor (185 CFM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bore Machine (Hydraulic)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 Ton Hydra Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Backhoe/loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Welding Generator	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 to 5 Ton AC Roller	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Bending Machine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL																																																	
AIR COMPRESSOR 185	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BOOM TRUCK 12 TON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 325 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 330 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT DOZER D-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT MODEL 12 MOTOR GRADER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT ROLLER-COMPACTOR 563	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT RUBBER TIRE LOADER 966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT SCRAPER 615	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CRANE-ROUGH TERRAIN 45T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENSET 5KW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JOHN DEERE TRACTOR 9400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP CRAFT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP OVERHEAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL BALLAST REGULATOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL CLIP MACHINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL MOVER-SHUTTLE WAGON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL TAMPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL WELDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMEX WALK BEHIND COMPACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRI-AXLE DUMP TRUCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK FLATBED 14 FOOT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK TRACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WATER TRUCK, 4M ON-ROAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WELDING MACHINE 350 AMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS TOTAL (lbs/day)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.1**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.2**	**0.2**	**0.2**	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
OFFSITE VEHICLES TOTAL (lbs/day)	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.3**	**0.3**	**0.3**	**0.3**	**0.4**	**0.4**	**0.4**	**0.4**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.6**	**0.6**	**0.6**	**0.6**	**0.7**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.5**	**0.5**	**0.4**	**0.4**	**0.3**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.1**
TOTAL PROJECT (lbs/day)	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.4	0.4	0.4	0.6	0.6	0.8	0.9	1.0	1.0	1.0	0.9	0.9	1.0	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2

Notes:

1. According to schedules provided by Fluor, Linear construction (except rail) takes place in months 11-22.
2. According to schedules provided by Fluor, Rail construction occurs in months 13-17.

Hydrogen Energy California, Kern County Power Project
Reactive Organic Gases (ROG) Emissions by Month
8/14/2012

ROG

MONTHLY EMISSIONS (lbs/day)

ROG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
ON-SITE																																																	
CONSTRUCTION VEHICLES																																																	
On-Road Vehicles																																																	
18 cy fill mat'l haul truck	0.0	0.0	6.2	6.2	12.4	12.4	12.4	12.4	6.2	6.2	6.2	6.2	3.1	3.1	3.1	3.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bus	1.2	1.2	1.2	1.2	1.9	1.9	1.9	1.9	1.9	1.9	3.1	3.1	3.1	3.1	3.1	3.1	4.3	4.3	4.3	6.2	6.2	6.2	6.2	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	7.4	7.4	7.4	6.2	6.2	3.1	3.1	1.9	1.9	1.2	1.2	1.2	0.6	0.6
Concrete Pumper Truck	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.9	1.9	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	1.9	2.5	2.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.9	1.9	1.2	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0
Diesel Tractor (Yard Dog)	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	2.8	2.8	2.8	2.8	2.8	5.6	5.6	5.6	5.6	5.6	5.6	5.6	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck - 1 ton	1.2	1.2	1.2	2.5	2.5	2.5	2.5	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Pile Driver Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Fuel/Lube	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Tractor Truck 5th Wheel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - Pickup 3/4 ton	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.9	0.9	0.9	0.9	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.9	0.9	0.6	0.6	0.6	0.6	0.3
Trucks - 3 ton	0.6	0.6	0.6	0.6	0.6	1.2	1.2	1.2	2.5	2.5	2.5	2.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	2.5	1.9	1.9	1.9	1.9	1.2	1.2	1.2	0.6	0.6	0.6	0.6	0.0	0.0	0.0
Truck - Water	3.1	3.1	3.1	3.1	3.1	3.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.2	1.9	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Off Road Vehicles																																																	
Air Compressor 185 CFM	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.9	2.9	2.9	3.9	3.9	3.9	4.9	4.9	4.9	4.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	3.9	3.9	3.9	2.9	2.9	2.9	2.9	2.0	2.0	2.0	1.0	1.0	0.5	0.5
Air Compressor 750 CFM	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0.9	0.9	0.9	0.9	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Articulating Boom Platform	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bob cat loader	0.0	0.0	0.6	0.6	0.6	0.6	0.6	2.6	2.6	2.6	2.6	2.6	1.9	1.9	1.9	1.9	1.9	1.9	1.3	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D10R	4.5	4.5	4.5	3.0	3.0	3.0	3.0	3.0	3.0	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D6C	2.3	2.3	2.3	2.3	1.5	1.5	1.5	1.5	1.5	1.5	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Trowel Machine	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 35 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	1.6	1.6	1.6	1.6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4
Cranes - Mobile 45 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crane - Mobile 65 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.9	1.8	2.2	2.2	2.2	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.2	2.2	1.8	0.9	0.9	0.9	0.9	0.9	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
Cranes 100 / 150 ton cap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.9	0.9	1.3	1.3	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.9	0.9	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Powered Welder	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	1.5	1.5	1.5	1.5	1.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.3	0.3	0.2
Excavator - Backhoe/loader	0.6	0.6	1.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.6	0.6	0.6	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Earth Scraper 637	14.7	14.7	14.7	14.7	8.4	8.4	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - loader	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Motor Grader (CAT140H)	0.0	0.7	0.7	0.7	2.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher (CAT320)	0.0	0.0	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fired Heaters (2,000 BTU)	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Forklift	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.3	0.3	0.3	0.3	0.1	0.1	0.1
Fusion Welder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 600 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 1,000 tn Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Plants	0.1	0.1	0.2	0.4	0.8	0.8	0.8	0.8	0.4	0.4	0.6	0.6	0.8	0.8	1.0	1.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.2	0.2
Man lifts - telescoping	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	4.9	4.9	4.9	4.9	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	4.9	4.9	4.9	3.3	3.3	3.3	3.3	1.6	1.6	1.6	1.6	0.7	0.7	0.7
Man lift - scissor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction Roller	0.0	0.0	2.8	2.8	2.8	2.8	2.8	2.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	1.1	1.1	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Vibratory Plate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Ram	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumps	0.3	0.3	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Portable Power Generators	2.9	2.9	2.9	2.9	4.3	4.3	4.3	4.3	4.3	7.2	7.2	7.2	7.2	7.2	7.2	10.7	10.7	10.7	10.7	10.7	10.7	10.7	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	10.7	10.7	10.7	10.7	7.2	7.2	7.2	7.2	7.2	7.2	3.6	3.6	3.6	1.4
Truck Crane - Greater than 300 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	0.7	1.3	1.3	2.0	2.0	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.0	2.0	1.3	1.3	1.3	0.7	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck Crane - Greater than 200 ton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.9	0.9	0.9	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vibratory Roller Ingersol-Rand 20 ton	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.1	1.1	1.1	1.1	1.1	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WORKER VEHICLES																																																	
Personal commuting vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DELIVERY TRUCKS																																																	
Light delivery truck (e.g. Fed-Ex)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Import fill trucks	6.5	6.5	6.5	6.5	6.5	6.5	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ONSITE TOTAL (lbs/day)	**46.2**	**47.6**	**57.7**	**58.6**	**62.9**	**68.5**	**61.3**	**51.5**	**46.9**	**48.9**	**50.5**	**52.6**	**50.8**	**54.5**	**55.5**	**58.9**	**63.0**	**63.8**	**62.1**	**68.1**	**68.8**	**67.6**	**71.5**	**77.9**	**75.8**	**74.1**	**72.2**	**77.0**	**76.7**	**73.9**	**72.1**	**67.3**	**65.7**	**64.3**	**60.1**	**51.4**	**52.0**	**53.7**	**49.3**	**41.4**	**35.6**	**35.0**	**20.8**	**20.8**	**19.9**	**13.8**	**11.7**	**10.4**	**7.8**
OFF-SITE																																																	
WORKER VEHICLES																																																	
Personal commuting vehicles	0.2	0.4	0.5	0.6	0.9	1.2	1.4	1.8	2.1	2.5	3.1	3.4	4.1	4.8	5.7	6.5	7.1	7.5	7.9	8.4	8.8	9.8	10.6	11.4	12.1	12.2	13.5	14.4	14.9	15.0	15.1	14.9	14.8	14.1	13.3	12.9	11.7	11.4	9.6	7.8	6.2	4.2	3.4	3.4	3.4	3.1	2.6	2.4	1.8
DELIVERY TRUCKS																																																	
Light delivery truck (e.g. Fed-Ex)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Heavy delivery truck (e.g. flat beds carrying construction eqp)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Import fill trucks	10.4	10.4	10.4	10.4	10.4	10.4	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																																																	
ON ROAD																																																	
Dump Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.9	1.9	1.9	1.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Haul Truck and Trailer (HHDT-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	1.9	1.9	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4 Ton Pickup (MHD-DSL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OFF ROAD																																																	
Air Compressor (185 CFM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	2.0	2.0	2.9	2.9	2.9	2.9	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bore Machine (Hydraulic)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 Ton Hydra Crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.8	1.8	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Backhoe/loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	1.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Welding Generator	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 to 5 Ton AC Roller	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Bending Machine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL																																																	
AIR COMPRESSOR 185	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BOOM TRUCK 12 TON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 325 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 330 BACKHOE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT DOZER D-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT MODEL 12 MOTOR GRADER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT ROLLER-COMPACTOR 563	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT RUBBER TIRE LOADER 966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT SCRAPER 615	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CRANE-ROUGH TERRAIN 45T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENSET 5KW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JOHN DEERE TRACTOR 9400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP CRAFT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7	2.7	2.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP OVERHEAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.5	3.5	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL BALLAST REGULATOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL CLIP MACHINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL MOVER-SHUTTLE WAGON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL TAMPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL WELDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMEX WALK BEHIND COMPACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRI-AXLE DUMP TRUCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK FLATBED 14 FOOT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	1.9	1.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK TRACTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WATER TRUCK, 4M ON-ROAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WELDING MACHINE 350 AMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS TOTAL (lbs/day)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**18.1**	**20.8**	**43.5**	**47.3**	**45.8**	**44.0**	**44.3**	**29.2**	**28.2**	**27.1**	**21.4**	**20.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
OFFSITE VEHICLES TOTAL (lbs/day)	**14.0**	**14.1**	**14.3**	**14.4**	**14.7**	**14.9**	**15.2**	**5.2**	**5.5**	**5.9**	**6.5**	**6.8**	**7.5**	**8.2**	**9.1**	**9.9**	**10.5**	**10.9**	**11.3**	**11.8**	**12.2**	**13.2**	**14.0**	**14.8**	**15.5**	**15.6**	**16.9**	**17.8**	**18.3**	**18.4**	**18.5**	**18.3**	**18.1**	**17.5**	**16.7**	**16.3**	**15.1**	**14.8**	**13.0**	**11.2**	**9.6**	**7.6**	**6.8**	**6.8**	**6.8**	**6.5**	**6.0**	**5.8**	**5.2**
TOTAL PROJECT (lbs/day)	60.2	61.7	71.9	73.0	77.6	83.4	76.5	56.8	52.4	54.8	75.1	80.2	101.8	110.0	110.4	112.8	117.8	104.0	101.6	107.0	102.4	101.1	85.5	92.7	91.3	89.7	89.1	94.8	95.0	92.2	90.6	85.6	83.8	81.8	76.8	67.7	67.1	68.4	62.3	52.6	45.2	42.6	27.6	27.6	26.7	20.3	17.7	16.2	13.0

Notes:

1. According to schedules provided by Fluor, Linear construction (except rail) takes place in months 11-22.
2. According to schedules provided by Fluor, Rail construction occurs in months 13-17.

Hydrogen Energy California, Kern County Power Project
Carbon Dioxide Equivalents (CO2e) Emissions by Month
8/14/2012

CO2e

MONTHLY EMISSIONS (lbs/day)

CO2e	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
ON-SITE																	
CONSTRUCTION VEHICLES																	
On-Road Vehicles																	
18 cy fill mat'l haul truck	0	0	2,876	2,876	5,753	5,753	5,753	5,753	2,876	2,876	2,876	2,876	1,438	1,438	1,438	1,438	1,438
Bus	575	575	575	575	863	863	863	863	863	863	1,438	1,438	1,438	1,438	1,438	1,438	2,013
Concrete Pumper Truck	0	0	0	0	0	575	575	575	575	575	575	575	575	863	863	863	575
Dump Truck	863	1,151	1,151	863	863	863	863	863	863	863	575	575	575	575	575	0	0
Diesel Tractor (Yard Dog)	0	0	0	0	0	652	652	652	652	652	652	1,305	1,305	1,305	1,305	1,305	2,610
Service Truck - 1 ton	575	575	575	1,151	1,151	1,151	1,151	575	575	575	575	575	575	575	575	575	575
Pile Driver Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube	274	274	274	274	274	274	274	274	274	274	274	274	274	274	274	274	274
Tractor Truck 5th Wheel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks - Pickup 3/4 ton	684	684	684	684	684	821	958	1,095	2,053	2,053	2,053	2,053	3,422	3,422	3,422	3,422	3,422
Trucks - 3 ton	288	288	288	288	288	575	575	575	1,151	1,151	1,151	1,151	1,726	1,726	1,726	1,726	1,726
Truck - Water	1,438	1,438	1,438	1,438	1,438	1,438	863	863	863	863	863	863	863	863	863	863	863
Off Road Vehicles																	
Air Compressor 185 CFM	217	217	217	217	326	326	326	326	326	326	326	326	326	651	651	651	869
Air Compressor 750 CFM	0	0	0	0	228	228	228	228	456	456	456	456	456	456	456	912	912
Articulating Boom Platform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bob cat loader	0	0	170	170	170	170	170	681	681	681	681	681	511	511	511	511	511
Bulldozer D10R	4,624	4,624	4,624	3,082	3,082	3,082	3,082	3,082	3,082	1,541	1,541	0	0	0	0	0	0
Bulldozer D6C	1,176	1,176	1,176	1,176	784	784	784	784	784	784	392	392	392	392	392	0	0
Concrete Trowel Machine	0	0	0	0	0	141	141	141	141	141	141	141	141	141	141	141	141
Concrete Vibrators	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes - Mobile 35 ton	0	0	0	0	0	0	218	218	218	872	872	872	872	1,526	1,526	1,526	1,526
Cranes - Mobile 45 ton	0	0	0	0	0	0	0	0	0	0	697	697	697	697	697	697	697
Crane - Mobile 65 ton	0	0	0	0	0	0	0	0	0	0	0	349	349	697	1,395	1,743	1,743
Cranes 100 / 150 ton cap	0	0	0	0	0	0	0	0	0	0	486	486	973	973	1,459	1,459	1,946
Diesel Powered Welder	0	0	0	513	513	513	513	513	513	513	513	513	513	513	513	770	770
Excavator - Backhoe/loader	486	486	729	972	972	972	972	972	972	972	972	486	486	486	486	486	243
Excavator - Earth Scraper 637	14,945	14,945	14,945	14,945	8,540	8,540	4,270	0	0	0	0	0	0	0	0	0	0
Excavator - loader	642	642	642	642	642	642	642	642	642	642	642	642	321	321	0	0	0
Excavator - Motor Grader (CAT140H)	0	434	434	434	1,303	1,303	0	0	0	0	0	0	0	0	0	0	0
Excavator - Trencher (CAT320)	0	0	0	0	0	910	910	910	910	910	910	910	910	910	910	910	0
Fired Heaters (2,000 BTU)	0	0	0	0	330	330	330	330	248	248	413	413	413	413	413	413	413
Forklift	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	358
Fusion Welder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 600 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 1,000 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Light Plants	83	83	165	330	661	661	661	661	330	330	496	496	661	661	826	826	1,156
Man lifts - telescoping	0	0	0	0	0	0	0	0	502	502	502	1,005	1,005	1,005	1,005	1,005	1,005
Man lift - scissor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction Roller	0	0	1,712	1,712	1,712	1,712	1,712	1,712	685	685	685	685	685	685	685	685	685
Portable Compaction - Vibratory Plate	0	0	0	0	0	0	0	113	113	113	113	113	113	113	113	113	113
Portable Compaction - Ram	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pumps	248	248	248	496	496	496	496	496	496	496	496	496	496	496	496	496	496
Portable Power Generators	916	916	916	916	1,374	1,374	1,374	1,374	1,374	2,291	2,291	2,291	2,291	2,291	2,291	3,436	3,436
Truck Crane - Greater than 300 ton	0	0	0	0	0	0	0	0	0	0	0	783	783	783	783	783	1,565
Truck Crane - Greater than 200 ton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	486	486	486
Vibratory Roller Ingersol-Rand 20 ton	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	937	937	937	937	937	468	468	468
WORKER VEHICLES																	
Personal commuting vehicles	15.0	25.8	34.6	44.7	65.6	82.9	98.8	132.8	147.6	177.8	220.4	246.4	292.0	342.5	412.3	465.9	508.5
DELIVERY TRUCKS																	
Light delivery truck (e.g. Fed-Ex)	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Heavy delivery truck (e.g. flat beds carrying construction eqp)	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8
Import fill trucks	2,043.7	2,043.7	2,043.7	2,043.7	2,043.7	2,043.7	2,043.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ONSITE TOTAL (lbs/day)	**32,197**	**32,930**	**38,023**	**37,949**	**36,661**	**39,382**	**33,604**	**27,509**	**25,471**	**25,062**	**26,515**	**26,800**	**27,512**	**29,178**	**30,294**	**31,587**	**33,975**
OFF-SITE																	
WORKER VEHICLES																	
Personal commuting vehicles	871.8	1,501.4	2,014.3	2,600.8	3,816.8	4,822.4	5,750.7	7,724.7	8,589.0	######	######	######	######	######	######	######	29,582.9
DELIVERY TRUCKS																	
Light delivery truck (e.g. Fed-Ex)	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2
Heavy delivery truck (e.g. flat beds carrying construction eqp)	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0
Import fill trucks	22,921.5	######	######	######	######	######	######	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																	
ON ROAD																	
Dump Truck	0	0	0	0	0	0	0	0	0	0	1,151	1,151	1,726	1,726	1,726	1,726	1,726
Service Truck (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	575	575	575	575	575	575	863
Pipe Haul Truck and Trailer (HHDT-DSL)	0	0	0	0	0	0	0	0	0	0	863	863	863	863	863	863	575
3/4 Ton Pickup (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	1,376	1,376	1,376	1,376	1,376	1,376	2,064
Truck - water	0	0	0	0	0	0	0	0	0	0	575	575	1,151	1,151	1,151	1,151	1,151
OFF ROAD																	
Air Compressor (185 CFM)	0	0	0	0	0	0	0	0	0	0	217	217	434	434	651	651	651
Bore Machine (Hydraulic)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	234	234	234
12 Ton Hydra Crane	0	0	0	0	0	0	0	0	0	0	973	1,946	1,946	2,919	2,919	2,919	2,919
Backhoe/loader	0	0	0	0	0	0	0	0	0	0	1,457	1,457	2,429	2,429	2,429	2,429	2,429
Excavator - Trencher	0	0	0	0	0	0	0	0	0	0	0	430	430	430	430	430	430
Forklift	0	0	0	0	0	0	0	0	0	0	90	90	179	179	179	179	179
Welding Generator	0	0	0	0	0	0	0	0	0	0	1,832	1,832	1,832	1,832	1,832	1,832	1,832
3 to 5 Ton AC Roller	0	0	0	0	0	0	0	0	0	0	0	303	303	303	303	303	303
Pipe Bending Machine	0	0	0	0	0	0	0	0	0	0	351	351	701	701	701	701	701
RAIL																	
AIR COMPRESSOR 185	0	0	0	0	0	0	0	0	0	0	0	0	0	217	217	217	217
BOOM TRUCK 12 TON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	288	288	288
CAT 325 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	472	472	0	0	0
CAT 330 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	799	0	0
CAT DOZER D-6	0	0	0	0	0	0	0	0	0	0	0	0	1,432	1,432	0	0	716
CAT MODEL 12 MOTOR GRADER	0	0	0	0	0	0	0	0	0	0	0	0	864	864	432	432	432
CAT ROLLER-COMPACTOR 563	0	0	0	0	0	0	0	0	0	0	0	0	680	680	340	0	0
CAT RUBBER TIRE LOADER 966	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,610	1,610	1,610
CAT SCRAPER 615	0	0	0	0	0	0	0	0	0	0	0	0	2,768	1,384	0	0	0
CRANE-ROUGH TERRAIN 45T	0	0	0	0	0	0	0	0	0	0	0	0	0	346	346	0	0
GENSET 5KW	0	0	0	0	0	0	0	0	0	0	0	0	0	303	151	0	0
JOHN DEERE TRACTOR 9400	0	0	0	0	0	0	0	0	0	0	0	0	1,604	0	0	0	0
PICK-UP CRAFT	0	0	0	0	0	0	0	0	0	0	0	0	4,730	4,730	4,730	4,730	4,730
PICK-UP OVERHEAD	0	0	0	0	0	0	0	0	0	0	0	0	1,322	3,965	3,965	3,304	3,304
RAIL BALLAST REGULATOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	661	661
RAIL CLIP MACHINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	174	174
RAIL MOVER-SHUTTLE WAGON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	661	661	661
RAIL TAMPER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	661	661
RAIL WELDER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102	51
RAMEX WALK BEHIND COMPACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0
TRI-AXLE DUMP TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	1,151	1,726	575	0	0
TRUCK FLATBED 14 FOOT	0	0	0	0	0	0	0	0	0	0	0	0	288	288	863	863	863
TRUCK TRACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,117	1,117	0
WATER TRUCK, 4M ON-ROAD	0	0	0	0	0	0	0	0	0	0	0	0	288	288	288	288	288
WELDING MACHINE 350 AMP	0	0	0	0	0	0	0	0	0	0	0	0	51	51	51	51	51
LINEARS TOTAL (lbs/day)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9,460**	**11,166**	**29,595**	**31,683**	**31,804**	**30,529**	**30,765**
OFFSITE VEHICLES TOTAL (lbs/day)	**31,515**	**32,144**	**32,657**	**33,244**	**34,460**	**35,465**	**36,393**	**15,446**	**16,310**	**18,063**	**20,545**	**22,058**	**24,710**	**27,647**	**31,708**	**34,827**	**37,304**
TOTAL PROJECT (lbs/day)	63,712	65,075	70,680	71,192	71,120	74,847	69,997	42,955	41,782	43,125	56,520	60,024	81,817	88,508	93,806	96,943	102,044

CO2e	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
ON-SITE																
CONSTRUCTION VEHICLES																
On-Road Vehicles																
18 cy fill mat'l haul truck	1,438	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus	2,013	2,013	2,876	2,876	2,876	2,876	4,027	4,027	4,027	4,027	4,027	4,027	4,027	4,027	4,027	4,027
Concrete Pumper Truck	575	575	575	575	0	0	0	0	0	0	288	288	288	288	0	0
Dump Truck	0	0	0	0	0	0	0	0	0	0	575	575	575	575	575	575
Diesel Tractor (Yard Dog)	2,610	2,610	2,610	2,610	2,610	2,610	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262
Service Truck - 1 ton	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575
Pile Driver Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube	274	274	274	274	274	274	274	274	274	274	274	274	274	274	274	274
Tractor Truck 5th Wheel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks - Pickup 3/4 ton	3,422	3,422	3,422	3,422	3,422	3,422	3,422	3,422	3,422	3,422	3,422	3,422	3,422	3,422	3,422	3,422
Trucks - 3 ton	1,726	1,726	1,726	1,726	1,726	1,726	1,726	1,726	1,726	1,726	1,726	1,726	1,726	1,726	1,726	1,726
Truck - Water	863	863	863	863	863	863	575	863	575	575	575	575	575	575	575	575
Off Road Vehicles																
Air Compressor 185 CFM	869	869	1,086	1,086	1,086	1,086	1,303	1,303	1,303	1,303	1,303	1,303	1,303	1,303	1,303	1,303
Air Compressor 750 CFM	912	912	912	912	912	912	912	912	912	912	912	912	456	456	456	456
Articulating Boom Platform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bob cat loader	511	340	340	340	340	340	340	0	0	0	0	0	0	0	0	0
Bulldozer D10R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulldozer D6C	0	0	0	0	0	0	0	0	0	0	392	392	392	392	0	0
Concrete Trowel Machine	141	141	141	141	141	141	141	141	141	141	141	0	0	0	0	0
Concrete Vibrators	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes - Mobile 35 ton	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,090	1,090	1,090	1,090	1,090	1,090	1,090
Cranes - Mobile 45 ton	697	1,395	1,395	1,395	1,395	1,395	1,395	1,395	1,395	1,395	1,395	1,395	697	697	697	697
Crane - Mobile 65 ton	1,743	2,092	2,092	2,092	2,092	2,092	2,092	2,092	2,092	2,092	2,092	2,092	2,092	1,743	1,743	1,395
Cranes 100 / 150 ton cap	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	973	973	486	486	486
Diesel Powered Welder	770	1,026	1,026	1,026	1,026	1,026	1,283	1,283	1,283	1,283	1,283	1,283	1,283	1,283	1,283	770
Excavator - Backhoe/loader	243	243	243	243	243	243	243	0	0	0	0	0	0	0	0	0
Excavator - Earth Scraper 637	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - loader	0	0	0	0	0	0	0	0	0	0	321	321	321	321	0	0
Excavator - Motor Grader (CAT140H)	0	0	0	0	0	0	0	0	0	0	434	434	434	434	0	0
Excavator - Trencher (CAT320)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fired Heaters (2,000 BTU)	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	248
Forklift	358	358	358	358	358	358	358	358	358	358	269	269	269	269	269	269
Fusion Welder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 600 tn Crane	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	0	0	0	0	0	0	0
Heavy Haul / 1,000 tn Crane	0	0	1,315	1,315	1,315	1,315	1,315	1,315	0	0	0	0	0	0	0	0
Light Plants	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	826	826
Man lifts - telescoping	1,005	1,005	1,507	1,507	1,507	1,507	2,009	2,009	2,009	2,009	2,009	2,009	2,009	2,009	2,009	2,009
Man lift - scissor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction Roller	685	685	685	685	685	685	685	0	0	0	0	685	685	685	685	685
Portable Compaction - Vibratory Plate	113	113	113	113	113	0	0	0	0	0	56	56	56	56	0	0
Portable Compaction - Ram	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pumps	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248
Portable Power Generators	3,436	3,436	3,436	3,436	3,436	4,581	4,581	4,581	4,581	4,581	4,581	4,581	4,581	4,581	4,581	4,581
Truck Crane - Greater than 300 ton	1,565	2,348	2,348	3,130	3,130	3,130	3,130	3,130	3,130	3,130	3,130	3,130	2,348	2,348	1,565	1,565
Truck Crane - Greater than 200 ton	486	486	973	973	973	1,459	1,459	1,459	1,459	1,459	1,459	1,459	973	0	0	0
Vibratory Roller Ingersol-Rand 20 ton	468	0	0	0	0	0	0	0	0	0	937	937	937	937	0	0
WORKER VEHICLES																
Personal commuting vehicles	539.7	568.2	601.9	631.2	706.4	759.3	816.5	868.4	878.6	966.0	1,034.4	1,068.0	1,073.9	1,084.5	1,068.8	1,059.0
DELIVERY TRUCKS																
Light delivery truck (e.g. Fed-Ex)	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Heavy delivery truck (e.g. flat beds carrying construction eqp)	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ONSITE TOTAL (lbs/day)	**35,073**	**35,110**	**38,528**	**39,340**	**38,840**	**40,412**	**42,960**	**42,032**	**40,439**	**38,775**	**41,757**	**41,362**	**38,946**	**37,148**	**33,592**	**32,555**
OFF-SITE																
WORKER VEHICLES																
Personal commuting vehicles	######	######	######	######	######	######	######	50,520.9	######	56,199.9	60,176.9	62,132.5	62,479.6	63,095.0	62,181.3	61,612.0
DELIVERY TRUCKS																
Light delivery truck (e.g. Fed-Ex)	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2
Heavy delivery truck (e.g. flat beds carrying construction eqp)	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																
ON ROAD																
Dump Truck	1,726	1,726	1,726	1,151	1,151	0	0	0	0	0	0	0	0	0	0	0
Service Truck (MHD-DSL)	863	863	863	863	863	0	0	0	0	0	0	0	0	0	0	0
Pipe Haul Truck and Trailer (HHDT-DSL)	575	575	575	575	575	0	0	0	0	0	0	0	0	0	0	0
3/4 Ton Pickup (MHD-DSL)	2,064	2,064	2,064	2,064	2,064	0	0	0	0	0	0	0	0	0	0	0
Truck - water	1,151	1,151	1,151	575	575	0	0	0	0	0	0	0	0	0	0	0
OFF ROAD																
Air Compressor (185 CFM)	651	434	434	217	217	0	0	0	0	0	0	0	0	0	0	0
Bore Machine (Hydraulic)	234	234	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 Ton Hydra Crane	2,919	2,919	2,919	1,946	1,946	0	0	0	0	0	0	0	0	0	0	0
Backhoe/loader	2,429	2,429	2,429	1,457	1,457	0	0	0	0	0	0	0	0	0	0	0
Excavator - Trencher	430	430	430	430	430	0	0	0	0	0	0	0	0	0	0	0
Forklift	179	179	179	179	90	0	0	0	0	0	0	0	0	0	0	0
Welding Generator	1,832	1,832	1,832	1,832	1,832	0	0	0	0	0	0	0	0	0	0	0
3 to 5 Ton AC Roller	303	303	303	303	303	0	0	0	0	0	0	0	0	0	0	0
Pipe Bending Machine	701	701	351	351	0	0	0	0	0	0	0	0	0	0	0	0
RAIL																
AIR COMPRESSOR 185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BOOM TRUCK 12 TON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 325 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 330 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT DOZER D-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT MODEL 12 MOTOR GRADER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT ROLLER-COMPACTOR 563	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT RUBBER TIRE LOADER 966	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT SCRAPER 615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRANE-ROUGH TERRAIN 45T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENSET 5KW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JOHN DEERE TRACTOR 9400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP CRAFT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP OVERHEAD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL BALLAST REGULATOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL CLIP MACHINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL MOVER-SHUTTLE WAGON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL TAMPER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL WELDER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAMEX WALK BEHIND COMPACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRI-AXLE DUMP TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK FLATBED 14 FOOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK TRACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WATER TRUCK, 4M ON-ROAD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WELDING MACHINE 350 AMP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LINEARS TOTAL (lbs/day)	**16,058**	**15,841**	**15,256**	**11,944**	**11,503**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
OFFSITE VEHICLES TOTAL (lbs/day)	**39,117**	**40,776**	**42,741**	**44,443**	**48,816**	**51,893**	**55,226**	**58,242**	**58,838**	**63,921**	**67,898**	**69,854**	**70,201**	**70,816**	**69,903**	**69,333**
TOTAL PROJECT (lbs/day)	90,249	91,727	96,525	95,727	99,159	92,305	98,187	100,274	99,277	102,696	109,655	111,216	109,147	107,965	103,494	101,888

CO2e	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
ON-SITE																
CONSTRUCTION VEHICLES																
On-Road Vehicles																
18 cy fill mat'l haul truck	0	0	863	863	863	863	288	288	288	0	0	0	0	0	0	0
Bus	4,027	4,027	3,452	3,452	3,452	2,876	2,876	1,438	1,438	863	863	575	575	575	288	288
Concrete Pumper Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dump Truck	575	575	575	863	863	863	575	288	288	288	288	288	0	0	0	0
Diesel Tractor (Yard Dog)	3,262	3,262	1,305	1,305	1,305	1,305	1,305	1,305	1,305	0	0	0	0	0	0	0
Service Truck - 1 ton	575	575	575	575	575	575	575	575	575	288	288	288	288	288	288	288
Pile Driver Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube	274	274	274	274	274	274	137	137	137	137	137	137	137	0	0	0
Tractor Truck 5th Wheel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks - Pickup 3/4 ton	3,422	3,422	3,422	3,422	3,422	3,422	3,422	3,422	3,422	2,053	2,053	1,369	1,369	1,369	1,369	684
Trucks - 3 ton	1,726	1,151	863	863	863	863	575	575	575	288	288	288	288	0	0	0
Truck - Water	575	575	575	575	575	575	575	575	575	288	288	288	288	288	288	288
Off Road Vehicles																
Air Compressor 185 CFM	1,303	1,303	869	869	869	651	651	651	651	434	434	434	217	217	109	109
Air Compressor 750 CFM	228	228	228	228	228	228	228	228	228	228	228	228	228	228	228	228
Articulating Boom Platform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bob cat loader	0	0	170	170	170	170	170	170	170	0	0	0	0	0	0	0
Bulldozer D10R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulldozer D6C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete Trowel Machine	0	0	0	141	141	141	141	141	141	0	0	0	0	0	0	0
Concrete Vibrators	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes - Mobile 35 ton	1,090	436	436	436	436	436	436	436	436	436	436	436	218	218	218	218
Cranes - Mobile 45 ton	697	697	697	697	697	697	697	349	349	0	0	0	0	0	0	0
Crane - Mobile 65 ton	697	697	697	697	697	349	349	349	349	349	349	349	0	0	0	0
Cranes 100 / 150 ton cap	486	486	486	0	0	0	0	0	0	0	0	0	0	0	0	0
Diesel Powered Welder	770	770	770	770	513	513	513	513	513	257	257	257	257	154	154	103
Excavator - Backhoe/loader	0	0	486	486	486	486	243	243	243	0	0	0	0	0	0	0
Excavator - Earth Scraper 637	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - loader	0	0	0	0	321	321	321	0	0	0	0	0	0	0	0	0
Excavator - Motor Grader (CAT140H)	0	0	869	869	869	869	434	434	434	0	0	0	0	0	0	0
Excavator - Trencher (CAT320)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fired Heaters (2,000 BTU)	248	248	165	165	165	165	165	165	165	165	165	165	165	83	83	83
Forklift	269	269	269	269	269	269	269	269	269	90	90	90	90	45	45	45
Fusion Welder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 600 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 1,000 tn Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Light Plants	826	826	826	826	826	826	826	413	413	413	413	413	330	330	165	165
Man lifts - telescoping	2,009	2,009	1,507	1,507	1,507	1,005	1,005	1,005	1,005	502	502	502	502	201	201	201
Man lift - scissor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction Roller	685	0	0	0	685	685	685	342	342	0	0	0	0	0	0	0
Portable Compaction - Vibratory Plate	0	0	75	75	75	75	75	38	38	0	0	0	0	0	0	0
Portable Compaction - Ram	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pumps	248	248	248	248	248	248	248	248	248	165	165	165	165	165	165	165
Portable Power Generators	4,581	4,581	3,436	3,436	3,436	3,436	2,291	2,291	2,291	2,291	2,291	2,291	1,145	1,145	1,145	458
Truck Crane - Greater than 300 ton	1,565	783	783	783	783	783	0	0	0	0	0	0	0	0	0	0
Truck Crane - Greater than 200 ton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vibratory Roller Ingersol-Rand 20 ton	0	0	0	0	468	468	468	468	0	0	0	0	0	0	0	0
WORKER VEHICLES																
Personal commuting vehicles	1,011.4	957.4	927.3	842.7	815.4	692.0	562.4	445.6	303.1	242.0	241.5	241.5	223.5	189.5	173.7	130.9
DELIVERY TRUCKS																
Light delivery truck (e.g. Fed-Ex)	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Heavy delivery truck (e.g. flat beds carrying construction eqp)	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ONSITE TOTAL (lbs/day)	**31,582**	**28,832**	**26,280**	**26,137**	**27,327**	**25,560**	**21,538**	**18,233**	**17,622**	**10,207**	**10,206**	**9,234**	**6,917**	**5,927**	**5,350**	**3,884**
OFF-SITE																
WORKER VEHICLES																
Personal commuting vehicles	######	######	######	######	######	######	######	######	######	######	######	######	######	######	######	7,615.6
DELIVERY TRUCKS																
Light delivery truck (e.g. Fed-Ex)	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2
Heavy delivery truck (e.g. flat beds carrying construction eqp)	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0	7,256.0
Import fill trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																
ON ROAD																
Dump Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Service Truck (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipe Haul Truck and Trailer (HHDT-DSL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/4 Ton Pickup (MHD-DSL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OFF ROAD																
Air Compressor (185 CFM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bore Machine (Hydraulic)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 Ton Hydra Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Backhoe/loader	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Trencher	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Forklift	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Welding Generator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 to 5 Ton AC Roller	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipe Bending Machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL																
AIR COMPRESSOR 185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BOOM TRUCK 12 TON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 325 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 330 BACKHOE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT DOZER D-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT MODEL 12 MOTOR GRADER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT ROLLER-COMPACTOR 563	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT RUBBER TIRE LOADER 966	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT SCRAPER 615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRANE-ROUGH TERRAIN 45T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENSET 5KW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JOHN DEERE TRACTOR 9400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP CRAFT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PICK-UP OVERHEAD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL BALLAST REGULATOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL CLIP MACHINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL MOVER-SHUTTLE WAGON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL TAMPER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAIL WELDER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAMEX WALK BEHIND COMPACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRI-AXLE DUMP TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK FLATBED 14 FOOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK TRACTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WATER TRUCK, 4M ON-ROAD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WELDING MACHINE 350 AMP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LINEARS TOTAL (lbs/day)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
OFFSITE VEHICLES TOTAL (lbs/day)	**66,564**	**63,420**	**61,669**	**56,748**	**55,158**	**47,979**	**40,440**	**33,645**	**25,358**	**21,799**	**21,773**	**21,773**	**20,722**	**18,747**	**17,824**	**15,337**
TOTAL PROJECT (lbs/day)	98,146	92,252	87,949	82,885	82,486	73,539	61,978	51,878	42,980	32,005	31,979	31,007	27,638	24,674	23,174	19,221

Notes:

1. According to schedules provided by Fluor, Linear construction (except rail) takes place in months 11-22.
2. According to schedules provided by Fluor, Rail construction occurs in months 13-17.

PM10 - Fugitives

MONTHLY EMISSIONS (lbs/day)

CONSTRUCTION VEHICLES	Round Trips per day per unit	Round Trip Distance (miles/vehicle/day)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
ON-SITE																																																			
On-Road Vehicles																																																			
18 cy fill mat'l haul truck	1	1.8	0.0	0.0	1.5	1.4	2.7	2.7	2.6	1.9	0.9	0.9	0.8	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bus	1	0.75	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Concrete Pumper Truck	2	0.75	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	8	0.75	1.5	2.0	2.0	1.4	1.4	1.3	1.3	0.9	0.9	0.9	0.6	0.6	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.7	0.7	0.5	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0
Diesel Tractor (Yard Dog)	2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck - 1 ton	10	0.5	0.9	0.8	0.8	1.6	1.5	1.5	1.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Pile Driver Truck	2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Fuel/Lube	8	0.75	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.0	0.0	0.0
Tractor Truck 5th Wheel	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - Pickup 3/4 ton	10	0.5	2.1	2.1	2.0	2.0	1.9	2.2	2.5	2.1	3.7	3.5	3.5	3.5	5.5	5.4	5.4	5.2	5.2	5.2	5.1	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.4	4.4	4.4	4.5	4.5	4.6	4.7	4.8	5.2	3.1	3.1	2.1	2.1	2.1	2.2	1.2
Trucks - 3 ton	2	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Water	4	1	1.7	1.7	1.6	1.6	1.5	1.5	0.9	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Off Road Vehicles																																																			
Air Compressor 185 CFM	1	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Air Compressor 750 CFM	1	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Articulating Boom Platform	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bob cat loader	0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D10R	0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D6C	0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Trowel Machine	1	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 35 ton	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 45 ton	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crane - Mobile 65 ton	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes 100 / 150 ton cap	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Powered Welder	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Backhoe/loader	0	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Earth Scraper 637	0	0.909	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - loader	0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Motor Grader (CAT140H)	0	1.439	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher (CAT320)	0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fired Heaters (2,000 BTU)	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	5	0.5	1.3	1.2	1.2	1.2	1.1	1.1	1.1	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Fusion Welder	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 600 tn Crane	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 1,000 tn Crane	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Plants	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Man lifts - telescoping	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Man lift - scissor	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction Roller	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Vibratory Plate	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Ram	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumps	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Power Generators	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck Crane - Greater than 300 ton	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck Crane - Greater than 200 ton	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vibratory Roller Ingersol-Rand 20 ton	2	0.25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WORKER VEHICLES																																																			
Personal commuting vehicles			0.5	0.8	1.1	1.4	1.9	2.4	2.8	2.6	2.8	3.2	3.9	4.4	4.9	5.7	6.8	7.5	8.1	8.6	9.0	9.6	10.0	10.9	11.6	12.3	13.0	13.0	14.0	14.8	15.1	15.0	14.9	14.6	14.4	13.8	13.0	12.6	11.6	11.3	9.8	8.1	6.6	4.8	3.9	3.9	3.9	3.6	3.1	2.9	2.3
DELIVERY TRUCKS																																																			
Light delivery truck (e.g. Fed-Ex)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)			2.1	2.1	2.1	2.0	1.9	1.9	1.8	1.3	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.2
Import fill trucks			91.0	88.7	87.1	84.0	81.1	79.0	77.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTRUCTION ACTIVITY																																																			
Dirt Piling - Bob cat loader			0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt Piling - Trencher (CAT320)			0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt Piling - Backhoe/loader			0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt Piling - loader			0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grading - Earth Scraper 637			22.3	22.3	22.3	22.3	22.3	22.3	22.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grading - Motor Grader (CAT140H)			0.0	9.9	9.9	9.9	29.8	29.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	9.9	9.9	9.9	0.0	0.0	0.0	0.0	19.9	19.9	19.9	19.9	9.9	9.9	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozing - Bulldozer D10R			77.4	77.4	77.4	51.6	51.6	51.6	51.6	51.6	51.6	25.8	25.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozing - Bulldozer D6C			77.4	77.4	77.4	77.4	51.6	51.6	51.6	51.6	51.6	51.6	25.8	25.8	25.8	25.8	25.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.8	25.8	25.8	25.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Covered Storage Piles			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5																																									
ONSITE TOTAL (lbs/day)			**280.5**	**288.6**	**288.6**	**259.8**	**252.5**	**251.3**	**220.0**	**116.0**	**116.0**	**90.4**	**64.9**	**39.6**	**41.7**	**42.4**	**43.3**	**17.5**	**18.3**	**18.8**	**18.7**	**19.5**	**19.9**	**20.4**	**21.0**	**21.7**	**22.0**	**21.8**	**22.5**	**59.8**	**59.9**	**59.7**	**59.4**	**22.8**	**22.7**	**22.0**	**21.1**	**41.1**	**40.4**	**40.2**	**38.7**	**26.6**	**25.0**	**23.7**	**9.3**	**9.3**	**8.2**	**7.7**	**6.9**	**6.8**	**5.3**
OFF-SITE																																																			
WORKER VEHICLES																																																			
Personal commuting vehicles			0.2	0.3	0.4	0.5	0.7	0.8	1.0	1.4	1.5	1.8	2.2	2.5	3.0	3.5	4.2	4.8	5.2	5.5	5.8	6.1	6.4	7.2	7.7	8.3	8.9	9.0	9.8	10.5	10.9	11.0	11.1	10.9	10.8	10.3	9.8	9.5	8.6	8.3	7.1	5.7	4.5	3.1	2.5	2.5	2.5	2.3	1.9	1.8	1.3
DELIVERY TRUCKS																																																			
Light delivery truck (e.g. Fed-Ex)			0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Heavy delivery truck (e.g. flat beds carrying construction eqp)			3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Import fill trucks			10.4	10.4	10.4	10.4	10.4	10.4	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																																																			
ON ROAD																																																			
Dump Truck			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck (MHD-DSL)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Haul Truck and Trailer (HHDT-DSL)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4 Ton Pickup (MHD-DSL)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - water			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OFF ROAD																																																			
Air Compressor (185 CFM)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bore Machine (Hydraulic)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 Ton Hydra Crane			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Backhoe/loader			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Welding Generator			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 to 5 Ton AC Roller			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Bending Machine			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTRUCTION ACTIVITY																																																			
Dirt piling - Backhoe			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt piling - Excavator			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt piling - CAT 325 BACKHOE			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt piling - CAT 330 BACKHOE			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt piling - CAT DOZER D-6			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt piling - CAT RUBBER TIRE LOADER 966			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grading - CAT MODEL 12 MOTOR GRADER			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.9	19.9	9.9	9.9	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grading - CAT SCRAPER 615			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	120.7	60.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Storage Piles													0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2																											
RAIL																																																			
AIR COMPRESSOR 185			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BOOM TRUCK 12 TON			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 325 BACKHOE			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 330 BACKHOE			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT DOZER D-6			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT MODEL 12 MOTOR GRADER			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT ROLLER-COMPACTOR 563			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT RUBBER TIRE LOADER 966			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT SCRAPER 615			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CRANE-ROUGH TERRAIN 45T			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENSET 5KW			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JOHN DEERE TRACTOR 9400			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP CRAFT			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP OVERHEAD			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0	1.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL BALLAST REGULATOR			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL CLIP MACHINE			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL MOVER-SHUTTLE WAGON			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL TAMPER			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL WELDER			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMEX WALK BEHIND COMPACTOR			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRI-AXLE DUMP TRUCK			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK FLATBED 14 FOOT			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK TRACTOR			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WATER TRUCK, 4M ON-ROAD			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WELDING MACHINE 350 AMP			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS TOTAL (lbs/day)			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**2.7**	**3.2**	**147.4**	**88.3**	**18.0**	**17.4**	**17.4**	**4.7**	**4.7**	**4.7**	**3.7**	**3.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
OFFSITE VEHICLES TOTAL (lbs/day)			**14.2**	**14.3**	**14.4**	**14.5**	**14.7**	**14.8**	**15.0**	**5.0**	**5.1**	**5.4**	**5.9**	**6.1**	**6.6**	**7.1**	**7.8**	**8.4**	**8.8**	**9.1**	**9.4**	**9.8**	**10.1**	**10.8**	**11.4**	**11.9**	**12.5**	**12.6**	**13.5**	**14.2**	**14.5**	**14.6**	**14.7**	**14.5**	**14.4**	**13.9**	**13.4**	**13.1**	**12.2**	**11.9**	**10.7**	**9.4**	**8.2**	**6.7**	**6.1**	**6.1**	**6.1**	**5.9**	**5.6**	**5.4**	**5.0**
TOTAL PROJECT (lbs/day)			294.6	302.9	303.0	274.2	267.2	266.1	235.0	120.9	121.2	95.8	73.4	48.9	195.6	137.8	69.2	43.2	44.5	32.6	32.8	33.9	33.6	34.6	32.4	33.6	34.5	34.3	35.9	74.0	74.4	74.2	74.1	37.3	37.1	35.9	34.5	54.2	52.6	52.1	49.4	36.0	33.1	30.4	15.4	15.4	14.3	13.6	12.5	12.2	10.2

Notes:

1. According to schedules provided by Fluor, Linear construction (except rail) takes place in months 11-22.
2. According to schedules provided by Fluor, Rail construction occurs in months 13-17.
3. According to schedule on "onsite equipment" tab, site prep/pilling occurs in months 1-8. Assume onsite covered storage piles are only present during these months.
4. Assume linear covered storage piles are present during entire 12 months of linear construction, months 11-22.

PM2.5 - Fugitives

MONTHLY EMISSIONS (lbs/day)

CONSTRUCTION VEHICLES	Round Trips per day per unit	Round Trip Distance (miles/vehicle/day)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
ON-SITE																																																			
On-Road Vehicles																																																			
18 cy fill mat'l haul truck	1	1.8	0.0	0.0	0.1	0.1	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bus	1	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Pumper Truck	2	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	8	0.75	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Tractor (Yard Dog)	2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck - 1 ton	10	0.5	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pile Driver Truck	2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Fuel/Lube	8	0.75	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tractor Truck 5th Wheel	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks - Pickup 3/4 ton	10	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.4	0.3	0.3	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.1
Trucks - 3 ton	2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - Water	4	1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Off Road Vehicles																																																			
Air Compressor 185 CFM	1	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Air Compressor 750 CFM	1	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Articulating Boom Platform	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bob cat loader	0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D10R	0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozer D6C	0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Trowel Machine	1	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 35 ton	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes - Mobile 45 ton	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crane - Mobile 65 ton	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes 100 / 150 ton cap	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Powered Welder	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Backhoe/loader	0	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Earth Scraper 637	0	0.909	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - loader	0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Motor Grader (CAT140H)	0	1.439	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher (CAT320)	0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fired Heaters (2,000 BTU)	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift	5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fusion Welder	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 600 tn Crane	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy Haul / 1,000 tn Crane	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Plants	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Man lifts - telescoping	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Man lift - scissor	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction Roller	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Vibratory Plate	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compaction - Ram	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumps	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Power Generators	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck Crane - Greater than 300 ton	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck Crane - Greater than 200 ton	1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vibratory Roller Ingersol-Rand 20 ton	2	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WORKER VEHICLES																																																			
Personal commuting vehicles			0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.3	1.3	1.2	1.1	1.0	0.8	0.7	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2
DELIVERY TRUCKS																																																			
Light delivery truck (e.g. Fed-Ex)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Heavy delivery truck (e.g. flat beds carrying construction eqp)			0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Import fill trucks			9.2	9.0	8.8	8.5	8.2	8.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTRUCTION ACTIVITY																																																			
Dirt Piling - Bob cat loader			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt Piling - Trencher (CAT320)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt Piling - Backhoe/loader			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt Piling - loader			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grading - Earth Scraper 637			4.6	4.6	4.6	4.6	4.6	4.6	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grading - Motor Grader (CAT140H)			0.0	0.9	0.9	0.9	2.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozing - Bulldozer D10R			25.6	25.6	25.6	17.1	17.1	17.1	17.1	17.1	17.1	8.5	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulldozing - Bulldozer D6C			25.6	25.6	25.6	25.6	17.1	17.1	17.1	17.1	17.1	17.1	8.5	8.5	8.5	8.5	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	8.5	8.5	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Covered Storage Piles			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1																																									
ONSITE TOTAL (lbs/day)			**66.5**	**67.3**	**67.3**	**58.4**	**51.6**	**51.5**	**48.5**	**35.5**	**35.5**	**27.0**	**18.5**	**10.0**	**10.2**	**10.2**	**10.3**	**1.8**	**1.9**	**1.9**	**1.9**	**2.0**	**2.0**	**2.1**	**2.1**	**2.2**	**2.2**	**2.2**	**2.3**	**11.9**	**11.9**	**11.9**	**11.9**	**2.3**	**2.3**	**2.2**	**2.1**	**4.0**	**4.0**	**4.0**	**3.8**	**2.6**	**2.5**	**2.4**	**0.9**	**0.9**	**0.8**	**0.8**	**0.7**	**0.7**	**0.5**
OFF-SITE																																																			
WORKER VEHICLES																																																			
Personal commuting vehicles			0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.6	0.6	0.7	0.9	1.0	1.2	1.3	1.4	1.4	1.5	1.6	1.8	1.9	2.0	2.2	2.2	2.4	2.6	2.7	2.7	2.7	2.7	2.7	2.5	2.4	2.3	2.1	2.0	1.7	1.4	1.1	0.8	0.6	0.6	0.6	0.6	0.5	0.4	0.3
DELIVERY TRUCKS																																																			
Light delivery truck (e.g. Fed-Ex)			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Heavy delivery truck (e.g. flat beds carrying construction eqp)			0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Import fill trucks			2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS																																																			
ON ROAD																																																			
Dump Truck			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service Truck (MHD-DSL)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Haul Truck and Trailer (HHDT-DSL)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4 Ton Pickup (MHD-DSL)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck - water			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OFF ROAD																																																			
Air Compressor (185 CFM)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bore Machine (Hydraulic)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 Ton Hydra Crane			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Backhoe/loader			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator - Trencher			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forklift			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Welding Generator			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 to 5 Ton AC Roller			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipe Bending Machine			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTRUCTION																																																			
Dirt piling - Backhoe			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt piling - Excavator			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt piling - CAT 325 BACKHOE			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt piling - CAT 330 BACKHOE			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt piling - CAT DOZER D-6			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dirt piling - CAT RUBBER TIRE LOADER 966			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grading - CAT MODEL 12 MOTOR GRADER			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grading - CAT SCRAPER 615			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.2	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Storage Piles													0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																											
RAIL																																																			
AIR COMPRESSOR 185			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BOOM TRUCK 12 TON			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 325 BACKHOE			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT 330 BACKHOE			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT DOZER D-6			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT MODEL 12 MOTOR GRADER			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT ROLLER-COMPACTOR 563			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT RUBBER TIRE LOADER 966			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAT SCRAPER 615			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CRANE-ROUGH TERRAIN 45T			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENSET 5KW			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JOHN DEERE TRACTOR 9400			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP CRAFT			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PICK-UP OVERHEAD			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL BALLAST REGULATOR			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL CLIP MACHINE			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL MOVER-SHUTTLE WAGON			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL TAMPER			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAIL WELDER			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMEX WALK BEHIND COMPACTOR			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRI-AXLE DUMP TRUCK			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK FLATBED 14 FOOT			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUCK TRACTOR			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WATER TRUCK, 4M ON-ROAD			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WELDING MACHINE 350 AMP			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LINEARS TOTAL (lbs/day)			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.3**	**0.4**	**27.8**	**15.3**	**1.8**	**1.7**	**1.7**	**0.5**	**0.5**	**0.5**	**0.4**	**0.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
OFFSITE VEHICLES TOTAL (lbs/day)			**3.5**	**3.5**	**3.5**	**3.5**	**3.6**	**3.6**	**3.7**	**1.2**	**1.3**	**1.3**	**1.4**	**1.5**	**1.6**	**1.7**	**1.9**	**2.1**	**2.2**	**2.2**	**2.3**	**2.4**	**2.5**	**2.7**	**2.8**	**2.9**	**3.1**	**3.1**	**3.3**	**3.5**	**3.6**	**3.6**	**3.6**	**3.6**	**3.5**	**3.4**	**3.3**	**3.2**	**3.0**	**2.9**	**2.6**	**2.3**	**2.0**	**1.6**	**1.5**	**1.5**	**1.5**	**1.4**	**1.4**	**1.3**	**1.2**
TOTAL PROJECT (lbs/day)			70.0	70.8	70.8	61.9	55.2	55.1	52.2	36.8	36.8	28.3	20.2	11.8	39.6	27.3	14.0	5.6	5.8	4.7	4.7	4.9	4.9	5.1	4.9	5.1	5.3	5.3	5.6	15.4	15.5	15.5	15.5	5.8	5.8	5.6	5.4	7.3	7.0	6.9	6.4	4.9	4.5	4.0	2.4	2.4	2.3	2.2	2.1	2.0	1.8

Notes:

1. According to schedules provided by Fluor, Linear construction (except rail) takes place in months 11-22.
2. According to schedules provided by Fluor, Rail construction occurs in months 13-17.
3. According to schedule on "onsite equipment" tab, site prep/pilling occurs in months 1-8. Assume covered storage piles are only present during these months.
4. Assume linear covered storage piles are present during entire 12 months of linear construction, months 11-22.

Hydrogen Energy California, Kern
County Power Project

Calculation of maximum short-term
(daily) and annual emissions
10/26/2012

PROJECT MONTHLY EMISSIONS (lbs/month)

PROJECT EMISSIONS (on-site + linears)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
CO	3,222	3,320	3,952	3,991	4,067	4,408	3,847	3,371	3,186	3,290	4,650	4,916	6,641	7,324	7,225	7,394	7,670	6,382	6,299	6,551	6,233	6,091	4,903	5,250	5,061	4,949	4,808
CO2	703,040	719,044	830,245	828,597	800,494	859,890	733,697	600,356	555,736	546,695	784,578	827,886	1,247,557	1,329,371	1,356,321	1,356,399	1,413,544	1,114,617	1,110,530	1,172,230	1,117,660	1,097,139	880,652	936,225	916,053	881,339	845,114
CH4	62	64	73	73	70	75	63	58	57	61	87	94	127	139	139	147	150	127	127	133	128	125	104	111	106	103	100
N2O	13	13	15	15	15	16	14	12	11	11	16	17	20	21	22	23	24	25	25	27	25	25	20	21	21	20	19
NOx	6,550	6,711	7,829	7,819	7,657	8,282	7,121	5,796	5,326	5,286	7,469	7,879	11,316	12,114	12,101	12,084	12,612	10,347	10,259	10,813	10,275	10,061	8,056	8,590	8,374	8,080	7,745
PM10 - comb + fug	6,508.2	6,699.8	6,779.6	6,151.7	6,015.1	6,033.1	5,285.1	2,936.5	2,909.3	2,359.4	1,999.4	1,483.1	4,881.1	3,659.0	2,114.3	1,538.6	1,582.8	1,198.5	1,183.4	1,230.8	1,179.8	1,169.4	977.7	1,030.5	1,016.7	999.7	997.4
PM2.5 - comb + fug	1,772.1	1,800.1	1,873.1	1,683.5	1,554.7	1,592.8	1,472.8	1,133.5	1,106.3	931.6	880.7	721.0	1,494.2	1,278.1	965.4	783.0	807.2	675.8	664.6	693.9	658.0	644.9	517.7	553.8	535.2	523.5	508.9
SO2	7	7	8	8	8	9	8	6	6	6	9	9	14	14	15	15	15	12	12	13	12	12	10	10	10	10	9
ROG	1,017	1,046	1,268	1,289	1,384	1,507	1,350	1,134	1,032	1,076	1,511	1,615	2,074	2,240	2,228	2,264	2,361	2,047	1,986	2,095	1,985	1,932	1,574	1,715	1,669	1,630	1,589
CO2e	708,343	724,467	836,506	834,869	806,541	866,396	739,285	605,201	560,370	551,369	791,452	835,251	1,256,345	1,338,945	1,366,145	1,366,549	1,424,275	1,124,895	1,120,929	1,183,254	1,128,243	1,107,556	889,059	945,130	924,702	889,662	853,056

12-month Rolling Emissions (tons/yr)

PROJECT EMISSIONS (on-site + linears)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
CO	-	-	-	-	-	-	-	-	-	-	-	23	25	27	28	30	32	33	34	36	37	39	39	38.98	38.19	37.00	36
CO2	-	-	-	-	-	-	-	-	-	-	-	4395	4667	4973	5236	5499	5806	5933	6122	6408	6689	6964	7012	7066	6900	6676	6421
CH4	-	-	-	-	-	-	-	-	-	-	-	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
N2O	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOx	-	-	-	-	-	-	-	-	-	-	-	42	44	47	49	51	54	55	56	59	61	64	64	64	63	61	59
PM10 - comb + fug	-	-	-	-	-	-	-	-	-	-	-	27.6	26.8	25.2	22.9	20.6	18.4	16.0	13.9	13.1	12.2	11.6	11.1	10.9	8.9	7.6	7.1
PM2.5 - comb + fug	-	-	-	-	-	-	-	-	-	-	-	8.3	8.1	7.9	7.4	7.0	6.6	6.1	5.7	5.5	5.3	5.1	5.0	4.9	4.4	4.0	3.8
SO2	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ROG	-	-	-	-	-	-	-	-	-	-	-	8	8	9	9	10	10	10	11	11	12	12	12.20	12.25	12.05	11.74	11.42
CO2e	-	-	-	-	-	-	-	-	-	-	-	4430	4704	5011	5276	5542	5851	5980	6171	6460	6744	7022	7071	7126	6960	6735	6479

Construction days per month: 22

ONSITE MONTHLY EMISSIONS (lbs/month)

ONSITE EMISSIONS (no linears)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
CO	3,222	3,320	3,952	3,991	4,067	4,408	3,847	3,371	3,186	3,290	3,411	3,481	3,491	3,759	3,822	4,078	4,251	4,317	4,291	4,653	4,706	4,659	4,903	5,250	5,061	4,949	4,808
CO2	703,040	719,044	830,245	828,597	800,494	859,890	733,697	600,356	555,736	546,695	578,374	584,527	600,074	636,327	660,620	688,647	740,771	764,687	765,299	839,744	857,402	846,445	880,652	936,225	916,053	881,339	845,114
CH4	62	64	73	73	70	75	63	58	57	61	63	64	63	69	71	80	82	84	86	95	96	96	104	111	106	103	100
N2O	13	13	15	15	15	16	14	12	11	11	12	12	12	13	14	15	16	17	17	19	20	19	20	21	21	20	19
NOx	6,550	6,711	7,829	7,819	7,657	8,282	7,121	5,796	5,326	5,286	5,545	5,616	5,694	6,058	6,254	6,503	6,914	7,105	7,066	7,732	7,867	7,742	8,056	8,590	8,374	8,080	7,745
PM10 - comb + fug	6,508.2	6,699.8	6,779.6	6,151.7	6,015.1	6,033.1	5,285.1	2,936.5	2,909.3	2,359.4	1,807.6	1,259.4	1,303.6	1,349.1	1,373.9	826.9	860.7	878.0	867.9	922.9	936.3	940.3	977.7	1,030.5	1,016.7	999.7	997.4
PM2.5 - comb + fug	1,772.1	1,800.1	1,873.1	1,683.5	1,554.7	1,592.8	1,472.8	1,133.5	1,106.3	931.6	752.5	573.0	576.0	604.8	611.2	443.5	458.3	465.6	459.0	495.2	500.6	494.8	517.7	553.8	535.2	523.5	508.9
SO2	7	7	8	8	8	9	8	6	6	6	6	6	6	7	7	8	8	8	8	9	9	9	10	10	10	10	9
ROG	1,017	1,046	1,268	1,289	1,384	1,507	1,350	1,134	1,032	1,076	1,112	1,156	1,117	1,200	1,220	1,295	1,386	1,405	1,365	1,499	1,514	1,488	1,574	1,715	1,669	1,630	1,589
CO2e	708,343	724,467	836,506	834,869	806,541	866,396	739,285	605,201	560,370	551,369	583,325	589,594	605,257	641,919	666,468	694,913	747,446	771,617	772,428	847,622	865,481	854,479	889,059	945,130	924,702	889,662	853,056

12-month Rolling Emissions (tons/yr)

ONSITE EMISSIONS (no linears)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
CO	-	-	-	-	-	-	-	-	-	-	-	22	22	22	22	22	22	22	22	23	24	24	25	26.09	26.88	27.47	28
CO2	-	-	-	-	-	-	-	-	-	-	-	4170	4119	4078	3993	3923	3893	3845	3861	3981	4132	4281	4433	4608	4766	4889	4981
CH4	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
N2O	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOx	-	-	-	-	-	-	-	-	-	-	-	40	39	39	38	38	37	37	37	38	39	40	41	43	44	45	46
PM10 - comb + fug	-	-	-	-	-	-	-	-	-	-	-	27.4	24.8	22.1	19.4	16.7	14.2	11.6	9.4	8.4	7.4	6.7	6.2	6.1	6.0	5.8	5.6
PM2.5 - comb + fug	-	-	-	-	-	-	-	-	-	-	-	8.1	7.5	6.9	6.3	5.7	5.1	4.6	4.1	3.7	3.4	3.2	3.1	3.1	3.1	3.0	3.0
SO2	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ROG	-	-	-	-	-	-	-	-	-	-	-	7	7	7	7	7	7	7	7	7	8	8	8.11	8.39	8.66	8.88	9.06
CO2e	-	-	-	-	-	-	-	-	-	-	-	4203	4152	4110	4025	3955	3926	3878	3895	4016	4169	4320	4473	4651	4811	4935	5028

Construction days per month: 22

TOTAL MONTHLY EMISSIONS (lbs/month)

TOTAL EMISSIONS (onsite + linears + offsite)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
CO	4,744	4,949	5,670	5,809	6,092	6,606	6,204	5,032	4,995	5,399	7,183	7,708	9,887	11,073	11,669	12,372	13,072	12,094	12,295	12,883	12,857	13,463	12,802	13,720	14,046	14,036	14,765
CO2	1,388,652	1,417,953	1,539,984	1,550,723	1,548,297	1,628,932	1,522,341	931,547	905,178	933,158	1,223,453	1,298,709	1,774,386	1,918,227	2,030,943	2,096,875	2,206,334	1,945,691	1,976,634	2,079,830	2,061,216	2,133,033	1,981,527	2,107,495	2,151,011	2,128,874	2,200,002
CH4	98	103	114	118	120	131	123	104	107	120	159	173	220	246	266	289	305	291	299	315	318	338	332	355	365	366	387
N2O	35	37	41	42	45	48	48	36	38	42	54	59	68	77	88	96	104	109	113	120	123	133	136	146	153	153	165
NOx	13,400	13,573	14,702	14,705	14,568	15,213	14,070	7,674	7,222	7,217	9,451	9,892	13,384	14,242	14,312	14,359	14,937	12,709	12,656	13,250	12,747	12,623	10,680	11,282	11,129	10,847	10,616
PM10 - comb + fug	7,066.1	7,261.2	7,343.9	6,719.4	6,589.6	6,613.3	5,870.4	3,119.4	3,097.0	2,556.9	2,210.9	1,703.1	5,116.0	3,910.4	2,388.6	1,830.4	1,888.5	1,514.4	1,508.6	1,567.0	1,525.7	1,539.8	1,365.5	1,437.0	1,440.1	1,426.4	1,452.8
PM2.5 - comb + fug	2,059.3	2,088.4	2,162.4	1,974.0	1,847.4	1,887.4	1,769.1	1,218.5	1,193.0	1,021.5	975.3	818.4	1,596.5	1,386.0	1,080.9	904.3	933.2	805.2	797.1	830.0	797.3	792.4	670.9	713.4	700.3	689.8	684.7
SO2	14	14	15	15	15	16	15	10	9	10	13	14	19	20	21	22	23	20	20	21	21	22	20	21	22	22	22
ROG	1,325	1,358	1,582	1,606	1,708	1,835	1,683	1,250	1,152	1,206	1,653	1,765	2,239	2,420	2,429	2,481	2,591	2,287	2,235	2,354	2,254	2,223	1,881	2,040	2,009	1,974	1,960
CO2e	1,401,665	1,431,640	1,554,962	1,566,229	1,564,651	1,646,631	1,539,941	945,013	919,195	948,761	1,243,445	1,320,527	1,799,966	1,947,183	2,063,732	2,132,741	2,244,965	1,985,469	2,017,996	2,123,550	2,105,997	2,181,504	2,030,702	2,160,109	2,206,028	2,184,092	2,259,321

12-month Rolling Emissions (tons/yr)

TOTAL EMISSIONS (onsite + linears + offsite)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
CO	-	-	-	-	-	-	-	-	-	-	-	35	38	41	44	47	51	53	56	60	64	68	71	74.09	76.17	77.65	79
CO2	-	-	-	-	-	-	-	-	-	-	-	7944	8137	8387	8633	8906	9235	9393	9621	10195	10773	11373	11752	12156	12344	12450	12534
CH4	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2
N2O	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
NOx	-	-	-	-	-	-	-	-	-	-	-	71	71	71	71	71	71	70	69	72	75	77	78	79	77	76	74
PM10 - comb + fug	-	-	-	-	-	-	-	-	-	-	-	30.1	29.1	27.4	24.9	22.5	20.2	17.6	15.4	14.6	13.9	13.4	12.9	12.8	11.0	9.7	9.2
PM2.5 - comb + fug	-	-	-	-	-	-	-	-	-	-	-	9.5	9.3	8.9	8.4	7.8	7.4	6.9	6.4	6.2	6.0	5.9	5.7	5.7	5.2	4.9	4.7
SO2	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ROG	-	-	-	-	-	-	-	-	-	-	-	9	10	10	10	11	11	12	12	12	13	13	13.58	13.72	13.60	13.38	13.14
CO2e	-	-	-	-	-	-	-	-	-	-	-	8041	8240	8498	8753	9036	9376	9545	9784	10374	10967	11584	11977	12397	12600	12718	12816

Hydrogen Energy California, Kern County Power Project

Calculation of maximum short-term (daily) and annual emissions
10/26/2012

PROJECT EMISSIONS (on-site + linears)

	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
CO	5,185	5,206	4,968	4,840	4,426	4,305	4,173	3,853	3,464	3,485	3,662	3,384	2,860	2,484	2,407	1,437	1,437	1,338	939	800	726	510
CO2	910,216	901,616	849,028	809,862	732,331	709,759	688,585	628,670	573,042	569,938	595,888	557,441	469,766	397,598	384,283	222,503	222,493	201,234	150,808	129,251	116,660	84,708
CH4	106	105	100	96	88	85	82	76	66	66	69	63	51	46	45	30	30	30	18	15	14	9
N2O	20	20	18	17	16	15	15	13	12	12	12	12	10	8	8	5	5	4	3	3	2	2
NOx	8,382	8,324	7,837	7,482	6,761	6,557	6,354	5,780	5,241	5,238	5,511	5,159	4,367	3,691	3,595	2,058	2,058	1,870	1,383	1,188	1,074	795
PM10 - comb + fug	1,863.4	1,870.2	1,837.6	1,817.2	966.8	952.0	923.6	863.8	1,265.2	1,253.6	1,270.4	1,210.6	890.0	810.1	776.6	353.1	353.0	317.6	267.4	236.4	225.0	172.0
PM2.5 - comb + fug	762.2	766.4	740.9	727.3	474.6	463.4	449.3	410.5	418.2	419.5	438.8	411.3	335.5	292.2	284.4	155.7	155.7	143.0	106.1	91.9	84.7	62.6
SO2	10	10	9	9	8	8	7	7	6	6	6	6	5	4	4	2	2	2	2	1	1	1
ROG	1,693	1,688	1,625	1,586	1,480	1,444	1,415	1,322	1,130	1,143	1,181	1,084	911	783	770	458	458	438	304	257	228	172
CO2e	918,660	909,963	856,806	817,263	739,019	716,209	694,806	634,294	578,153	575,014	601,197	562,328	473,842	401,124	387,689	224,549	224,539	203,152	152,170	130,393	117,693	85,447

PROJECT EMISSIONS (on-site + linears)

	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
CO	35	33	33	32	31	30	29	29	28	27	26	25	24	23	22	20	18	17	15	14	12	11
CO2	6198	5942	5809	5659	5439	5235	5030	4904	4723	4550	4407	4263	4043	3791	3559	3265	3010	2756	2487	2237	2009	1766
CH4	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
N2O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOx	57	55	53	52	50	48	46	45	43	42	41	39	37	35	33	30	28	25	23	21	19	16
PM10 - comb + fug	7.2	7.4	7.7	8.0	7.9	7.7	7.6	7.6	7.7	7.8	7.9	8.0	7.6	7.0	6.5	5.8	5.5	5.1	4.8	4.5	4.0	3.4
PM2.5 - comb + fug	3.8	3.8	3.8	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.0	2.8	2.6	2.3	2.1	2.0	1.8	1.6	1.5	1.3
SO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ROG	11.14	10.80	10.59	10.39	10.08	10	10	9	9	9	9	8	8	8	7	7	6	6	5	4	4	4
CO2e	6255	5998	5864	5712	5490	5284	5077	4950	4766	4591	4447	4302	4079	3825	3590	3294	3037	2780	2509	2257	2027	1782

Construction days per month:

ONSITE EMISSIONS (no linears)

	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
CO	5,185	5,206	4,968	4,840	4,426	4,305	4,173	3,853	3,464	3,485	3,662	3,384	2,860	2,484	2,407	1,437	1,437	1,338	939	800	726	510
CO2	910,216	901,616	849,028	809,862	732,331	709,759	688,585	628,670	573,042	569,938	595,888	557,441	469,766	397,598	384,283	222,503	222,493	201,234	150,808	129,251	116,660	84,708
CH4	106	105	100	96	88	85	82	76	66	66	69	63	51	46	45	30	30	30	18	15	14	9
N2O	20	20	18	17	16	15	15	13	12	12	12	12	10	8	8	5	5	4	3	3	2	2
NOx	8,382	8,324	7,837	7,482	6,761	6,557	6,354	5,780	5,241	5,238	5,511	5,159	4,367	3,691	3,595	2,058	2,058	1,870	1,383	1,188	1,074	795
PM10 - comb + fug	1,863.4	1,870.2	1,837.6	1,817.2	966.8	952.0	923.6	863.8	1,265.2	1,253.6	1,270.4	1,210.6	890.0	810.1	776.6	353.1	353.0	317.6	267.4	236.4	225.0	172.0
PM2.5 - comb + fug	762.2	766.4	740.9	727.3	474.6	463.4	449.3	410.5	418.2	419.5	438.8	411.3	335.5	292.2	284.4	155.7	155.7	143.0	106.1	91.9	84.7	62.6
SO2	10	10	9	9	8	8	7	7	6	6	6	6	5	4	4	2	2	2	2	1	1	1
ROG	1,693	1,688	1,625	1,586	1,480	1,444	1,415	1,322	1,130	1,143	1,181	1,084	911	783	770	458	458	438	304	257	228	172
CO2e	918,660	909,963	856,806	817,263	739,019	716,209	694,806	634,294	578,153	575,014	601,197	562,328	473,842	401,124	387,689	224,549	224,539	203,152	152,170	130,393	117,693	85,447

ONSITE EMISSIONS (no linears)

	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
CO	29	29	29	30	29	29	29	29	28	27	26	25	24	23	22	20	18	17	15	14	12	11
CO2	5092	5172	5215	5237	5183	5109	5030	4904	4723	4550	4407	4263	4043	3791	3559	3265	3010	2756	2487	2237	2009	1766
CH4	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
N2O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOx	47	48	48	48	48	47	46	45	43	42	41	39	37	35	33	30	28	25	23	21	19	16
PM10 - comb + fug	6.1	6.7	7.1	7.6	7.6	7.6	7.6	7.6	7.7	7.8	7.9	8.0	7.6	7.0	6.5	5.8	5.5	5.1	4.8	4.5	4.0	3.4
PM2.5 - comb + fug	3.1	3.3	3.4	3.6	3.6	3.5	3.5	3.5	3.4	3.3	3.3	3.2	3.0	2.8	2.6	2.3	2.1	2.0	1.8	1.6	1.5	1.3
SO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ROG	9.26	9.41	9.52	9.64	9.63	10	10	9	9	9	9	8	8	8	7	7	6	6	5	4	4	4
CO2e	5140	5221	5264	5286	5232	5157	5077	4950	4766	4591	4447	4302	4079	3825	3590	3294	3037	2780	2509	2257	2027	1782

Construction days per month:

TOTAL EMISSIONS (onsite + linears + offsite)

	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
CO	15,823	16,179	16,000	15,978	15,407	15,188	14,582	13,724	13,036	12,214	12,120	10,613	8,799	7,259	5,764	4,185	4,181	4,082	3,503	3,026	2,794	2,152
CO2	2,349,090	2,381,788	2,336,529	2,310,359	2,213,533	2,178,940	2,099,283	1,972,980	1,880,368	1,773,350	1,765,726	1,575,658	1,328,783	1,113,117	924,789	687,847	687,296	666,038	593,410	530,157	498,072	413,595
CH4	413	422	418	418	405	399	382	361	342	318	313	271	222	183	141	108	107	107	91	78	72	55
N2O	176	181	180	181	177	175	167	158	153	140	137	118	97	79	57	45	45	45	41	36	33	26
NOx	11,335	11,316	10,837	10,494	9,755	9,539	9,280	8,641	8,066	7,962	8,202	7,703	6,757	5,942	5,675	4,066	4,066	3,877	3,369	3,134	3,001	2,671
PM10 - comb + fug	2,341.1	2,358.9	2,328.2	2,311.3	1,455.7	1,437.8	1,393.8	1,316.4	1,707.9	1,668.6	1,676.5	1,576.3	1,213.4	1,095.3	1,015.1	571.7	571.5	536.1	479.9	437.8	421.2	354.3
PM2.5 - comb + fug	945.5	953.3	928.5	916.0	661.6	649.3	630.0	585.4	589.8	581.8	598.2	557.2	467.3	411.3	388.0	252.7	252.6	239.9	201.1	183.1	174.2	147.5
SO2	24	24	24	23	22	22	21	20	19	18	18	16	13	11	9	7	7	7	6	5	5	4
ROG	2,085	2,090	2,029	1,993	1,882	1,844	1,800	1,690	1,489	1,476	1,505	1,371	1,158	994	937	607	607	587	447	390	356	287
CO2e	2,412,420	2,446,746	2,401,224	2,375,220	2,276,874	2,241,540	2,159,212	2,029,540	1,934,869	1,823,476	1,814,684	1,617,862	1,363,524	1,141,316	945,557	704,117	703,543	682,157	608,046	542,832	509,823	422,858

TOTAL EMISSIONS (onsite + linears + offsite)

	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
CO	81	82	84	86	88	89	89	90	89	88	88	85	82	77	72	66	61	55	50	44	39	34
CO2	12660	12748	12944	13110	13177	13236	13219	13215	13101	12913	12731	12419	11909	11274	10568	9757	8994	8238	7485	6763	6072	5392
CH4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1
N2O	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
NOx	72	71	70	69	67	65	64	63	61	59	58	57	54	52	49	46	43	40	37	34	32	29
PM10 - comb + fug	9.5	9.7	10.1	10.5	10.5	10.4	10.4	10.3	10.5	10.6	10.7	10.8	10.2	9.6	8.9	8.1	7.6	7.2	6.7	6.3	5.6	5.0
PM2.5 - comb + fug	4.7	4.7	4.8	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.1	3.8	3.5	3.2	3.0	2.8	2.6	2.4	2.2	1.9
SO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ROG	12.95	12.70	12.57	12.45	12.21	12	12	12	11	11	11	11	10	10	9	8	8	7	6	6	5	5
CO2e	12956	13057	13265	13443	13520	13588	13577	13576	13464	13272	13088	12767	12242	11590	10862	10026	9240	8460	7684	6941	6228	5528

Hydrogen Energy California, Kern County Power Project
Emission Factors for Onroad Vehicles
10/26/2012

ONSITE - 5 MPH			Distance Traveled (miles)				EF (lbs/mile)									
Onroad Vehicle	Fuel Type	Vehicle Type	Total	Dirt	Gravel	Paved	TOC	CO	NOx	PM_{10}	SO_2	$PM_{2.5}$	CO_2	N_2O	CH_4	CO_2e
Personal Commuting Vehicles	G/D	LDA/ LDT	0.22	0	0.22	0	0.0012	0.0154	0.0012	0.0002	2.43E-05	0.0001	2.57E+00	9.55E-05	1.90E-04	2.604
Light delivery truck (e.g. Fed-Ex)	D	LHDT	0.5	0	0	0.5	0.0011	0.0073	0.0174	0.0003	1.10E-05	0.0003	1.16E+00	6.61E-05	2.20E-05	1.178
Heavy delivery truck (e.g. flat beds carrying construction eqp)	D	HHDT	1	0	0.5	0.5	0.0271	0.0434	0.1010	0.0063	8.16E-05	0.0057	8.48E+00	1.10E-04	1.76E-04	8.515
Import Fill Trucks	D	HHDT	1.5	0.25	0.75	0.5	0.0271	0.0434	0.1010	0.0063	0.0001	0.0057	8.4774	0.0001	0.0002	8.5153

OFFSITE - 50 MPH			Distance Traveled (miles)				EF (lbs/mile)									
Onroad Vehicle	Fuel Type	Vehicle Type	Total	Dirt	Gravel	Paved	TOC	CO	NOx	PM_{10}	SO_2	$PM_{2.5}$	CO_2	N_2O	CH_4	CO_2e
Personal Commuting Vehicles	G/D	LDA/ LDT	39.8	-	-	39.8	0.0002	0.0065	0.0008	0.0001	7.72E-06	0.0000	8.04E-01	9.55E-05	1.90E-04	0.838
Light delivery truck (e.g. Fed-Ex)	D	LHDT	39.5	-	-	39.5	0.0003	0.0013	0.0116	0.0001	1.10E-05	0.0001	1.16E+00	6.61E-05	2.20E-05	1.178
Heavy delivery truck (e.g. flat beds carrying construction eqp)	D	HHDT	39	-	-	39	0.0017	0.0076	0.0377	0.0014	3.53E-05	0.0012	3.68E+00	1.10E-04	1.76E-04	3.721
Import Fill Trucks	D	HHDT	38.5	-	-	38.5	0.0017	0.0076	0.0377	0.0014	0.0000	0.0012	3.6832	0.0001	0.0002	3.7210

Onsite distance for worker vehicles based on parking areas of 100m x 250 m. Assume average one way trip is 175m, round trip of 350 m, or 0.22 miles.
Emission factors from EMFAC2007 (version 2.3) for year 2010
Emission factors for personal commuting vehicles are based on the assumption 50% LDA and 50% LDT
CH_4 and N_2O emission factor for personal commuting vehicles is based on the average factor for gasoline and diesel passenger vehicles from CCAR, GRP Version 3.0, Table C.5
CH_4 and N_2O emission factor for light delivery trucks is based on the factor for diesel light duty trucks from CCAR, GRP Version 3.0, Table C.5
CH_4 and N_2O emission factor for heavy duty tucks is based on the factor for diesel heavy duty trucks from CCAR, GRP Version 3.0, Table C.5

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Number of Worker/ Day	34	59	79	101	149	188	224	301	335	403	500	559	663	777	935	1057
Avg Daily Vehicles/ Day	26	45	60	78	114	145	173	232	258	310	385	430	510	598	720	813
Light delivery trucks	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Heavy delivery trucks	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Import fill trucks	160	160	160	160	160	160	160	0	0	0	0	0	0	0	0	0

Month	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Number of Worker/ Day	1154	1224	1289	1366	1432	1603	1723	1853	1970	1993	2192	2347	2423	2437	2461	2425
Avg Daily Vehicles/ Day	887	942	992	1051	1102	1233	1325	1425	1516	1533	1686	1805	1864	1874	1893	1865
Light delivery trucks	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Heavy delivery trucks	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Import fill trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Month	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
Number of Worker/ Day	2403	2295	2172	2104	1912	1850	1570	1276	1011	688	549	548	548	507	430	394	297
Avg Daily Vehicles/ Day	1848	1765	1671	1618	1471	1423	1208	982	778	529	422	422	422	390	331	303	228
Light delivery trucks	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Heavy delivery trucks	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Import fill trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Number of workers per commuter vehicle = 1.3
Actual worker schedule data updated 4/3/12 with data from Table 2-28 HECA Manpower R5 04 02 12.xls
Vehicle occupancy rate is based on information from Section 2.0 Project Description.

Assumptions:
Assumed average distance traveled off site for all employees commuting will be 20 miles
times 2 for return trip = 40 miles
22 days per month of construction, average

CO_2 GWP (SAR, 1996) = 1
CH_4 GWP (SAR, 1996) = 21
N_2O GWP (SAR, 1996) = 310

Hydrogen Energy California, Kern County Power Project
Onsite Fugitive Dust Emissions
10/26/2012

ASSUMPTIONS:

1	month of dirt moving	
22	construction days per month	
10	construction hours per day	
19	M, moisture content of surface material (%)	(average of soil borings taken onsite at 5 ft)
50	s, silt content of surface material (%)	(from soil boring B-4)

Dirt Piling or Material Handling

$E = k * 0.0032 * (U/5)^{1.3} / (M/2)^{1.4}$ USEPA AP42 Chapter 13.2.4 (Aggregate Handling And Storage Piles)

0.35	k for PM_{10}
0.053	k for $PM_{2.5}$
6.25	U = Mean Wind speed (mph) average for Bakersfield Airport 2000-2004
19	M = Moisture content of surface material (%)
0.00006	lb of PM_{10}/ ton of material
0.00001	lb of $PM_{2.5}$/ ton of material

MATERIAL HANDLED (tons/day)	Mitigation Efficiency[1]	MONTH:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		# pieces of equip:	4	4	6	7	7	9	9	12	12	12	12	10	8	8	7	7
Bob cat loader			0	0	1,207	1,034	1,034	805	805	2,414	2,414	2,414	2,414	2,896	2,715	2,715	3,103	3,103
Excavator - Trencher (CAT320)		tons/day material handled:	0	0	0	0	0	1,609	1,609	1,207	1,207	1,207	1,207	1,448	1,810	1,810	2,069	2,069
Excavator - Backhoe/loader			3,620	3,620	3,620	4,138	4,138	3,218	3,218	2,414	2,414	2,414	2,414	1,448	1,810	1,810	2,069	2,069
Excavator - loader			3,620	3,620	2,414	2,069	2,069	1,609	1,609	1,207	1,207	1,207	1,207	1,448	905	905	0	0
TOTAL material handled			7,241	7,241	7,241	7,241	7,241	7,241	7,241	7,241	7,241	7,241	7,241	7,241	7,241	7,241	7,241	7,241

MATERIAL HANDLED (tons/day)	Mitigation Efficiency[1]	MONTH:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
		# pieces of equip:	4	4	3	3	3	3	3	3	0	0	0	1	1	1	1	0
Bob cat loader			5,431	5,431	4,827	4,827	4,827	4,827	4,827	4,827	0	0	0	0	0	0	0	0
Excavator - Trencher (CAT320)		tons/day material handled:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Backhoe/loader			1,810	1,810	2,414	2,414	2,414	2,414	2,414	2,414	0	0	0	0	0	0	0	0
Excavator - loader			0	0	0	0	0	0	0	0	0	0	0	7,241	7,241	7,241	7,241	0
TOTAL material handled			7,241	7,241	7,241	7,241	7,241	7,241	7,241	7,241	0	0	0	7,241	7,241	7,241	7,241	0

MATERIAL HANDLED (tons/day)	Mitigation Efficiency[1]	MONTH:	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
		# pieces of equip:	0	0	0	3	3	4	4	3	2	2	0	0	0	0	0	0	0
Bob cat loader			0	0	0	2,414	2,414	1,810	1,810	2,414	3,620	3,620	0	0	0	0	0	0	0
Excavator - Trencher (CAT320)		tons/day material handled:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Backhoe/loader			0	0	0	4,827	4,827	3,620	3,620	2,414	3,620	3,620	0	0	0	0	0	0	0
Excavator - loader			0	0	0	0	0	1,810	1,810	2,414	0	0	0	0	0	0	0	0	0
TOTAL material handled			0	0	0	7,241	7,241	7,241	7,241	7,241	7,241	7,241	0	0	0	0	0	0	0

Do not include capacity factor because emissions are based on material handled.

6,136	yd^3/day	7,241 ton/day	2,360 density of soil (lb/yd^3)
135,000	yd^3	159,300 tons	(USDA NRCS Physical Soil Properties from Kern County for Lockern-Buttonwillow clay)
	Excavation	850,000 Cubic yds	
	Imported Fill	500,000 Cubic yds	(assume 10% of entire site in any given month; with equipment present over 35 months, this is a conservative estimate of the max amount of material handled)

Scraping Emissions Factor

E =	0.058	lb TSP/ton material handled	USEPA AP42 Chapter 11.9 (Western Surface Coal Mining), Table 11.9-4
Material	850,000	cubic yards, total excavation	
	0.31	fraction of total excavation handled by scrapers	0.31 <-- fraction of all earth moving equipment in months 1-7 that are scrapers
	1705	cubic yards per day, for all scrapers, based on 7 months of scrapers	
	2012	tons/day	
TSP	116.7	lb TSP/day	
fraction of TSP that is PM10	0.489	from CEIDARS database for construction fugitives	
fraction of TSP that is PM2.5	0.102	from CEIDARS database for construction fugitives	
PM10	57.1	lb/day	
PM2.5	11.9	lb/day	
Mitigation for watering	61%	(the emission factor does not account for soil moisture)	
Mitigated PM10	**22.3**	**lb/day**	
Mitigated PM2.5	**4.6**	**lb/day**	

Grading Emissions Factor **To be used for all grading activities**

$E = 0.051(S)^{2.0}$ for particles ≤ 15 um — USEPA AP42 Chapter 13.2.3 (Heavy Construction Operations), Table 13.2.3-1 - refers to

$E = 0.040(S)^{2.5}$ for TSP ≤ 30 um — USEPA AP42 Chapter 11.9 (Western Surface Coal Mining), Table 11.9-1

multiply PM15 equation by 0.60 for PM_{10}

multiply TSP equation by 0.031 for $PM_{2.5}$

S = mean vehicle speed (mph)

S =	5.5	mph	the Cat Motor Grader Application Guide states typical operation speed is 4-7 mph; take midpoint of 5.5 mph	
	2.84	lb ≤ 30 µm/VMT		
	1.54	lb ≤ 15 µm/VMT		
PM_{10} =	0.93	lb PM_{10}/VMT	percent of day operational:	0.5
$PM_{2.5}$ =	0.09	lb $PM_{2.5}$/VMT	VMT:	27.5
Mitigated PM_{10} =	0.36	lb PM_{10}/VMT		
Mitigated $PM_{2.5}$ =	0.03	lb $PM_{2.5}$/VMT		

Equipment	Daily VMT	Mitigation Efficiency[1]	PM10 Emissions (lb/day)	PM2.5 Emissions (lb/day)
Excavator - Motor Grader (CAT140H)	27.500	61%	9.928	0.943
		Total	**9.93**	**0.94**

Formula based on lbs per VMT, not hours, so no capacity factor included.

Bulldozing/Earth clearing

$E = 1.0(s)^{1.5}/(M)^{1.4}$ for particles ≤ 15 um — USEPA AP42 Chapter 13.2.3 (Heavy Construction Operations), Table 13.2.3-1 - refers to

$E = 5.7(s)^{1.2}/(M)^{1.3}$ for TSP ≤ 30 um — USEPA AP42 Chapter 11.9 (Western Surface Coal Mining), Table 11.9-1, 11.9-3

multiply PM15 equation by 0.75 for PM_{10}

multiply TSP equation by 0.105 for $PM_{2.5}$

50	s = Silt content (%)
19	M = Moisture content of surface material (%)
4.30	lb/hr of PM_{10}
1.42	lb/hr of $PM_{2.5}$
4.30	lb/hr of PM_{10} (mitigated)
1.42	lb/hr of $PM_{2.5}$ (mitigated)

Equipment	Hours per day	Activity Factor	Mitigation Efficiency[1]	PM10 Emissions (lb/hr)	PM10 Emissions (lb/day)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (lb/day)
Bulldozer D10R	6	100.0%		4.30	25.79	1.42	8.54
Bulldozer D6C	6	100.0%		4.30	25.79	1.42	8.54
			Total	**8.60**	**51.58**	**2.85**	**17.09**

Hydrogen Energy California, Kern County Power Project
Onsite Fugitive Dust Emissions
10/26/2012

Covered Storage Piles

SCAQMD Table A9-9-E
E = 1.7 * G/1.5 * (365-H)/235 * I/15 * J
PM10 Emission factor from wind erosion of storage piles per day per acre

50 G = Silt content (%)
37 H = Mean number of days per year with at least 0.01 inches of precipitation (from WRCC for Bakersfield Airport Station)
I = Percentage of time that the unobstructed wind speed exceeds 12 mph at mean pile height (wind speed percentage and average
0.3 based on 2000-04 (5 yrs) of wind speed data as recorded at Bakersfield Airport station)
0.5 J = Fraction of TSP that is PM_{10} = 0.5
0.791 lb PM_{10}/acre/day
0.08 Mitigated lb PM_{10}/acre/day

Source	Quantity	Size of Pile (acre)	Hours/Day	Mitigation Efficiency[1]	PM10 Emissions (lb/hr)	PM10 Emissions (lb/day)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (lb/day)
Cover Storage Pile	25	0.25	24	90%	0.02	0.49	0.004	0.103

Pile size and number are assumed
Assume PM2.5 is 20.8% of PM10

Travel onsite - paved and unpaved roads

USEPA AP42 Chapter 13.2.2 (Unpaved Roads)
E = k * (s/12)^a * (W/3)^b
Size specific emission factor for vehicle travel on unpaved roads at industrial sites (eqn 1a; lb/VMT)

Constants:	PM2.5	PM10	TSP
k (lb/VMT)	0.15	1.5	4.9
a	0.9	0.9	0.7
b	0.45	0.45	0.45

4 s = Surface material silt content (%) (value for gravel road)
50 s = Surface material silt content (%) (value for dirt surfaces)
value listed in table W = Mean vehicle weight (ton) * weighted mean based on monthly equipment schedule in "onsite equipment" tab

AP 42 13.2.1 Paved Roads, updated January 2011
For a daily basis,
E = [k (sL)^0.91 x (W)^1.02](1-P/4N) equation (2)

P = number of "wet" days with at least 0.254 mm (0.01 in) of precipitation during the averaging period
W = average weight (tons) of vehicles traveling the road
k = particle size multiplier for particle size range and units of interest
sL = road surface silt loading (g/m^2)
N = number of days in the averaging period

SOURCE
Days/year Buttonwillow Station 1940-2011, WRCC
"Avg vehicle weight" tab
Values from Table 13.2.1-1, PARTICLE SIZE MULTIPLIERS FOR PAVED ROAD EQUATION
Default value from URBEMIS 9.2 for Kern County

	P	k	sL	N
	#	lb/VMT	g/m2	#
PM2.5	36	0.00054	0.031	365
PM10	36	0.0022	0.031	365

UNMITIGATED EMISSION FACTORS FOR VEHICLES, BY MONTH

Month	Mitigation Efficiency[1]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Weighted Mean Vehicle Weight (tons)		17.68	16.69	16.05	14.79	13.67	12.91	12.39	5.79	5.10	4.76	4.53	4.50	4.08	3.96	3.83	3.61
PM10 EF (lbs/VMT) - Paved	0%	0.0004	0.0004	0.0004	0.0003	0.0003	0.0003	0.0003	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
PM2.5 EF (lbs/VMT) - Paved		0.0017	0.0016	0.0015	0.0014	0.0013	0.0012	0.0012	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0003
PM10 EF (lbs/VMT) - Gravel	93%	1.24	1.21	1.19	1.14	1.10	1.08	1.06	0.75	0.71	0.69	0.67	0.67	0.64	0.63	0.62	0.61
PM2.5 EF (lbs/VMT) - Gravel		0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06
PM10 EF (lbs/VMT) - DIRT	83%	12.04	11.73	11.52	11.11	10.72	10.45	10.26	7.29	6.88	6.67	6.53	6.51	6.22	6.14	6.05	5.89
PM2.5 EF (lbs/VMT) - DIRT		1.20	1.17	1.15	1.11	1.07	1.05	1.03	0.73	0.69	0.67	0.65	0.65	0.62	0.61	0.60	0.59

Month	Mitigation Efficiency[1]	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Weighted Mean Vehicle Weight (tons)		3.59	3.58	3.49	3.53	3.50	3.30	3.24	3.16	3.11	3.04	2.87	2.82	2.74	2.65	2.55	2.52
PM10 EF (lbs/VMT) - Paved	0%	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
PM2.5 EF (lbs/VMT) - Paved		0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002
PM10 EF (lbs/VMT) - Gravel	93%	0.60	0.60	0.60	0.60	0.60	0.58	0.58	0.57	0.57	0.56	0.55	0.54	0.54	0.53	0.52	0.52
PM2.5 EF (lbs/VMT) - Gravel		0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05
PM10 EF (lbs/VMT) - DIRT	83%	5.87	5.87	5.80	5.83	5.81	5.66	5.61	5.55	5.50	5.45	5.31	5.27	5.20	5.13	5.04	5.01
PM2.5 EF (lbs/VMT) - DIRT		0.59	0.59	0.58	0.58	0.58	0.57	0.56	0.56	0.55	0.55	0.53	0.53	0.52	0.51	0.50	0.50

Month	Mitigation Efficiency[1]	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
Weighted Mean Vehicle Weight (tons)		2.52	2.52	2.50	2.52	2.59	2.63	2.73	2.85	3.03	3.51	3.59	3.59	3.58	3.61	3.84	3.99	4.62
PM10 EF (lbs/VMT) - Paved	0%	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
PM2.5 EF (lbs/VMT) - Paved		0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0004	0.0004	0.0004
PM10 EF (lbs/VMT) - Gravel	93%	0.52	0.52	0.51	0.52	0.52	0.53	0.53	0.55	0.56	0.60	0.60	0.61	0.60	0.61	0.62	0.63	0.68
PM2.5 EF (lbs/VMT) - Gravel		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07
PM10 EF (lbs/VMT) - DIRT	83%	5.01	5.01	5.00	5.01	5.07	5.11	5.19	5.29	5.44	5.82	5.87	5.88	5.86	5.89	6.05	6.16	6.58
PM2.5 EF (lbs/VMT) - DIRT		0.50	0.50	0.50	0.50	0.51	0.51	0.52	0.53	0.54	0.58	0.59	0.59	0.59	0.59	0.61	0.62	0.66

Mitigation Measure[1]	Control Efficiency
Apply water every three hours to disturbed surfaces[3]	61%
Traffic speeds on all unpaved roads to be reduced to 15 mph or less	57%
Apply chemical dust suppressant annually to unpaved parking areas/disturbed areas	84%
Combined Mitigation Efficiency - reduced speed + suppressants	**93%**
Combined Mitigation Efficiency - reduced speed + watering	**83%**
Water the storage pile by hand or apply cover when wind events are declared.	90%

*CEC stated in the background to DR A132 that they will be requiring the use of soil binders on all onsite unpaved roads, including gravel

Notes:

1. Mitigation efficiencies from SCAQMD Table XI-A and Table XI-E (South Coast Air Quality Management District, Air Quality Analysis Handbook (under development), accessed at http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/MM_fugitive.html).
2. Equipment weight from SCAQMD Table A9-9-D-3 and various websites.
3. Water trucks operate at least 4 times per day.

Hydrogen Energy California, Kern County Power Project
Calculation of Mean Vehicle Weight by Month
10/26/2012

VEHICLE INVENTORY BY MONTH	Vehicle Weight	MONTHLY VEHICLE COUNT (#)																												
Vehicle Type	(tons)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Avg Daily Worker Vehicles	1.6	26	45	60	78	114	145	173	232	258	310	385	430	510	598	720	813	887	942	992	1051	1102	1233	1325	1425	1516	1533	1686	1805
Light delivery trucks	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Heavy delivery trucks	17.5	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Import fill trucks	25	160	160	160	160	160	160	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 cy fill mat'l haul truck	30			10	10	20	20	20	20	10	10	10	10	5	5	5	5	5	5										
Bus	15	2	2	2	2	3	3	3	3	3	3	5	5	5	5	5	5	7	7	7	10	10	10	10	14	14	14	14	14
Concrete Pumper Truck	30						2	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2							1
Dump Truck	15	3	4	4	3	3	3	3	3	3	3	2	2	2	2	2													2
Diesel Tractor (Yard Dog)	11						2	2	2	2	2	2	4	4	4	4	4	8	8	8	8	8	8	8	10	10	10	10	10
Service Truck - 1 ton	15	2	2	2	4	4	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Pile Driver Truck	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube	15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Tractor Truck 5th Wheel	0																												
Trucks - Pickup 3/4 ton	3	5	5	5	5	5	6	7	8	15	15	15	15	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Trucks - 3 ton	11	1	1	1	1	1	2	2	2	4	4	4	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Truck - Water	25	5	5	5	5	5	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2	2	2
Air Compressor 185 CFM	0.5	2	2	2	2	3	3	3	3	3	3	3	3	3	6	6	6	8	8	8	10	10	10	10	12	12	12	12	12
Air Compressor 750 CFM	0.5					1	1	1	1	2	2	2	2	2	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4
Articulating Boom Platform	0																												
Bob cat loader	0			1	1	1	1	1	4	4	4	4	4	3	3	3	3	3	3	2	2	2	2	2	2				
Bulldozer D10R	0	3	3	3	2	2	2	2	2	2	1	1																	
Bulldozer D6C	0	3	3	3	3	2	2	2	2	2	2	1	1	1	1	1													1
Concrete Trowel Machine	15						2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Concrete Vibrators	0	4	4	4	4	4	4	4	4	4	8	8	8	8	8	8	8	8	4	4	4	2	2	2	2	2	2	2	2
Cranes - Mobile 35 ton	25							1	1	1	4	4	4	4	7	7	7	7	7	7	7	7	7	7	7	7	7	5	5
Cranes - Mobile 45 ton	35											2	2	2	2	2	2	2	2	4	4	4	4	4	4	4	4	4	4
Crane - Mobile 65 ton	45												1	1	2	4	5	5	5	6	6	6	6	6	6	6	6	6	6
Cranes 100 / 150 ton cap	50											1	1	2	2	3	3	4	4	4	4	4	4	4	4	4	4	4	4
Diesel Powered Welder	0				10	10	10	10	10	10	10	10	10	10	10	10	15	15	15	20	20	20	20	20	25	25	25	25	25
Excavator - Backhoe/loader	0	2	2	3	4	4	4	4	4	4	4	4	2	2	2	2	2	1	1	1	1	1	1	1	1				
Excavator - Earth Scraper 637	0	7	7	7	7	4	4	2																					
Excavator - loader	0	2	2	2	2	2	2	2	2	2	2	2	2	1	1														1
Excavator - Motor Grader (CAT140H)	0		1	1	1	3	3																						1
Excavator - Trencher (CAT320)	0						2	2	2	2	2	2	2	2	2	2	2												
Fired Heaters (2,000 BTU)	0					4	4	4	4	3	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Forklift	10	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	8	8	8	8	8	8	8	8	8	8	8	6
Fusion Welder	0					2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Heavy Haul / 600 tn Crane	75																		1	1	1	1	1	1	1	1	1		
Heavy Haul / 1,000 tn Crane	75																				1	1	1	1	1	1			
Light Plants	0	1	1	2	4	8	8	8	8	4	4	6	6	8	8	10	10	14	14	14	14	14	14	14	14	14	14	14	14
Man lifts - telescoping	7									5	5	5	10	10	10	10	10	10	10	10	15	15	15	15	20	20	20	20	20
Man lift - scissor	2.5								5	5	5	5	10	10	10	10	10	10	10	10	15	15	15	15	20	20	20	20	20
Portable Compaction Roller	0			5	5	5	5	5	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2				
Portable Compaction - Vibratory Plate	0								6	6	6	6	6	6	6	6	6	6	6	6	6	6	6						3
Portable Compaction - Ram	0																												
Pumps	0	3	3	3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	3	3	3	3	3	3	3	3	3	3	3
Portable Power Generators	0	4	4	4	4	6	6	6	6	6	10	10	10	10	10	10	15	15	15	15	15	15	15	20	20	20	20	20	20
Truck Crane - Greater than 200 ton	50												1	1	1	1	1	2	2	3	3	4	4	4	4	4	4	4	4
Truck Crane - Greater than 300 ton	60															1	1	1	1	1	2	2	2	3	3	3	3	3	3
Vibratory Roller Ingersol-Rand 20 ton	20	3	3	3	3	3	3	3	3	3	2	2	2	2	2	1	1	1	1										2
TOTAL VEHICLES		**306**	**327**	**360**	**394**	**453**	**494**	**517**	**428**	**451**	**512**	**594**	**650**	**738**	**834**	**960**	**1063**	**1149**	**1198**	**1250**	**1326**	**1376**	**1505**	**1597**	**1719**	**1806**	**1821**	**1971**	**2099**

Hydrogen Energy California, Kern County Power Proj
Calculation of Mean Vehicle Weight by Month
10/26/2012

VEHICLE INVENTORY BY MONTH	Vehicle Weight																					
Vehicle Type	(tons)	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
Avg Daily Worker Vehicles	1.6	1864	1874	1893	1865	1848	1765	1671	1618	1471	1423	1208	982	778	529	422	422	422	390	331	303	228
Light delivery trucks	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Heavy delivery trucks	17.5	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Import fill trucks	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 cy fill mat'l haul truck	30								3	3	3	3	1	1	1							
Bus	15	14	14	14	14	14	14	14	12	12	12	10	10	5	5	3	3	2	2	2	1	1
Concrete Pumper Truck	30	1	1	1																		
Dump Truck	15	2	2	2	2	2	2	2	2	3	3	3	2	1	1	1	1	1				
Diesel Tractor (Yard Dog)	11	10	10	10	10	10	10	10	4	4	4	4	4	4	4							
Service Truck - 1 ton	15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1
Pile Driver Truck	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube	15	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1			
Tractor Truck 5th Wheel	0																					
Trucks - Pickup 3/4 ton	3	25	25	25	25	25	25	25	25	25	25	25	25	25	25	15	15	10	10	10	10	5
Trucks - 3 ton	11	6	6	6	6	6	6	4	3	3	3	3	2	2	2	1	1	1	1			
Truck - Water	25	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1
Air Compressor 185 CFM	0.5	12	12	12	12	12	12	12	8	8	8	6	6	6	6	4	4	4	2	2	1	1
Air Compressor 750 CFM	0.5	4	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Articulating Boom Platform	0																					
Bob cat loader	0								1	1	1	1	1	1	1							
Bulldozer D10R	0																					
Bulldozer D6C	0	1	1	1																		
Concrete Trowel Machine	15									2	2	2	2	2	2							
Concrete Vibrators	0	2	2	2	2	2	2															
Cranes - Mobile 35 ton	25	5	5	5	5	5	5	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1
Cranes - Mobile 45 ton	35	4	2	2	2	2	2	2	2	2	2	2	2	1	1							
Crane - Mobile 65 ton	45	6	6	5	5	4	2	2	2	2	2	1	1	1	1	1	1	1				
Cranes 100 / 150 ton cap	50	2	2	1	1	1	1	1	1													
Diesel Powered Welder	0	25	25	25	25	15	15	15	15	15	10	10	10	10	10	5	5	5	5	3	3	2
Excavator - Backhoe/loader	0								2	2	2	2	1	1	1							
Excavator - Earth Scraper 637	0																					
Excavator - loader	0	1	1	1							1	1	1									
Excavator - Motor Grader (CAT140H)	0	1	1	1					2	2	2	2	1	1	1							
Excavator - Trencher (CAT320)	0																					
Fired Heaters (2,000 BTU)	0	5	5	5	5	3	3	3	2	2	2	2	2	2	2	2	2	2	2	1	1	1
Forklift	10	6	6	6	6	6	6	6	6	6	6	6	6	6	6	2	2	2	2	1	1	1
Fusion Welder	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Heavy Haul / 600 tn Crane	75																					
Heavy Haul / 1,000 tn Crane	75																					
Light Plants	0	14	14	14	10	10	10	10	10	10	10	10	10	5	5	5	5	5	4	4	2	2
Man lifts - telescoping	7	20	20	20	20	20	20	20	15	15	15	10	10	10	10	5	5	5	5	2	2	2
Man lift - scissor	2.5	20	20	20	20	20	20	20	15	15	15	10	10	10	10	10	10	10	10	5	5	5
Portable Compaction Roller	0	2	2	2	2	2	2				2	2	2	1	1							
Portable Compaction - Vibratory Plate	0	3	3	3					4	4	4	4	4	2	2							
Portable Compaction - Ram	0																					
Pumps	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2
Portable Power Generators	0	20	20	20	20	20	20	20	15	15	15	15	10	10	10	10	10	10	5	5	5	2
Truck Crane - Greater than 200 ton	50	4	3	3	2	2	2	1	1	1	1	1										
Truck Crane - Greater than 300 ton	60	3	2																			
Vibratory Roller Ingersol-Rand 20 ton	20	2	2	2							1	1	1	1								
TOTAL VEHICLES		**2154**	**2158**	**2173**	**2131**	**2101**	**2015**	**1911**	**1841**	**1696**	**1647**	**1417**	**1178**	**958**	**708**	**554**	**554**	**548**	**505**	**432**	**400**	**316**

Hydrogen Energy California, Kern County Power Project
Calculation of Mean Vehicle Weight by Month
10/26/2012

CALCULATION OF WEIGHTED MEAN VEHICLE WEIGHT		MONTHLY VEHICLE GROSS WEIGHT (tons)																										
Vehicle Type		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**
Avg Daily Worker Vehicles		42	72	97	125	183	231	276	371	412	496	616	688	815	956	1151	1301	1420	1507	1587	1681	1763	1972	2120	2280	2425	2454	2698	2888
Light delivery trucks		90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Heavy delivery trucks		875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875
Import fill trucks		4000	4000	4000	4000	4000	4000	4000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 cy fill mat'l haul truck		0	0	300	300	600	600	600	600	300	300	300	300	150	150	150	150	150	150	0	0	0	0	0	0	0	0	0	0
Bus		30	30	30	30	45	45	45	45	45	45	75	75	75	75	75	75	105	105	105	150	150	150	150	210	210	210	210	210
Concrete Pumper Truck		0	0	0	0	0	60	60	60	60	60	60	60	60	90	90	90	60	60	60	60	60	0	0	0	0	0	0	30
Dump Truck		45	60	60	45	45	45	45	45	45	45	30	30	30	30	30	0	0	0	0	0	0	0	0	0	0	0	0	30
Diesel Tractor (Yard Dog)		0	0	0	0	0	22	22	22	22	22	22	44	44	44	44	44	88	88	88	88	88	88	88	110	110	110	110	110
Service Truck - 1 ton		30	30	30	60	60	60	60	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Pile Driver Truck		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Tractor Truck 5th Wheel		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks - Pickup 3/4 ton		15	15	15	15	15	18	21	24	45	45	45	45	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Trucks - 3 ton		11	11	11	11	11	22	22	22	44	44	44	44	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66
Truck - Water		125	125	125	125	125	125	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	50	75	50	50	50
Air Compressor 185 CFM		1	1	1	1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3	3	3	4	4	4	5	5	5	5	6	6	6	6	6
Air Compressor 750 CFM		0	0	0	0	0.5	0.5	0.5	0.5	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Articulating Boom Platform		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bob cat loader		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulldozer D10R		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulldozer D6C		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete Trowel Machine		0	0	0	0	0	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Concrete Vibrators		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes - Mobile 35 ton		0	0	0	0	0	0	25	25	25	100	100	100	100	175	175	175	175	175	175	175	175	175	175	175	175	175	125	125
Cranes - Mobile 45 ton		0	0	0	0	0	0	0	0	0	0	70	70	70	70	70	70	70	70	140	140	140	140	140	140	140	140	140	140
Crane - Mobile 65 ton		0	0	0	0	0	0	0	0	0	0	0	45	45	90	180	225	225	225	270	270	270	270	270	270	270	270	270	270
Cranes 100 / 150 ton cap		0	0	0	0	0	0	0	0	0	0	50	50	100	100	150	150	200	200	200	200	200	200	200	200	200	200	200	200
Diesel Powered Welder		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Backhoe/loader		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Earth Scraper 637		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - loader		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Motor Grader (CAT140H)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Trencher (CAT320)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fired Heaters (2,000 BTU)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Forklift		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	80	80	80	80	80	80	80	80	80	80	80	60
Fusion Welder		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 600 tn Crane		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	75	75	75	75	75	75	75	75	75	0
Heavy Haul / 1,000 tn Crane		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	75	75	75	75	75	0	0	0
Light Plants		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Man lifts - telescoping		0	0	0	0	0	0	0	0	35	35	35	70	70	70	70	70	70	70	70	105	105	105	105	140	140	140	140	140
Man lift - scissor		0	0	0	0	0	0	0	12.5	12.5	12.5	12.5	25	25	25	25	25	25	25	25	37.5	37.5	37.5	37.5	50	50	50	50	50
Portable Compaction Roller		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction - Vibratory Plate		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction - Ram		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pumps		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Power Generators		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck Crane - Greater than 200 ton		0	0	0	0	0	0	0	0	0	0	0	50	50	50	50	50	100	100	150	150	200	200	200	200	200	200	200	200
Truck Crane - Greater than 300 ton		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	60	60	60	60	120	120	120	180	180	180	180	180	180
Vibratory Roller Ingersol-Rand 20 ton		60	60	60	60	60	60	60	60	60	40	40	40	40	40	20	20	20	20	0	0	0	0	0	0	0	0	0	40
Weighted Mean Vehicle Weight (tons)		**17.7**	**16.7**	**16.0**	**14.8**	**13.7**	**12.9**	**12.4**	**5.8**	**5.1**	**4.8**	**4.5**	**4.5**	**4.1**	**4.0**	**3.8**	**3.6**	**3.6**	**3.6**	**3.5**	**3.5**	**3.5**	**3.3**	**3.2**	**3.2**	**3.1**	**3.0**	**2.9**	**2.8**

Hydrogen Energy California, Kern County Power Proj
Calculation of Mean Vehicle Weight by Month
10/26/2012

CALCULATION OF WEIGHTED MEAN VEHICLE WEIGHT																						
Vehicle Type		**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**
Avg Daily Worker Vehicles		2982	2999	3028	2985	2957	2824	2673	2589	2353	2277	1932	1570	1244	847	676	674	674	624	529	485	366
Light delivery trucks		90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Heavy delivery trucks		875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875
Import fill trucks		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 cy fill mat'l haul truck		0	0	0	0	0	0	0	90	90	90	90	30	30	30	0	0	0	0	0	0	0
Bus		210	210	210	210	210	210	210	180	180	180	150	150	75	75	45	45	30	30	30	15	15
Concrete Pumper Truck		30	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dump Truck		30	30	30	30	30	30	30	30	45	45	45	30	15	15	15	15	15	0	0	0	0
Diesel Tractor (Yard Dog)		110	110	110	110	110	110	110	44	44	44	44	44	44	44	0	0	0	0	0	0	0
Service Truck - 1 ton		30	30	30	30	30	30	30	30	30	30	30	30	30	30	15	15	15	15	15	15	15
Pile Driver Truck		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube		30	30	30	30	30	30	30	30	30	30	30	15	15	15	15	15	15	15	0	0	0
Tractor Truck 5th Wheel		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks - Pickup 3/4 ton		75	75	75	75	75	75	75	75	75	75	75	75	75	75	45	45	30	30	30	30	15
Trucks - 3 ton		66	66	66	66	66	66	44	33	33	33	33	22	22	22	11	11	11	11	0	0	0
Truck - Water		50	50	50	50	50	50	50	50	50	50	50	50	50	50	25	25	25	25	25	25	25
Air Compressor 185 CFM		6	6	6	6	6	6	6	4	4	4	3	3	3	3	2	2	2	1	1	0.5	0.5
Air Compressor 750 CFM		2	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Articulating Boom Platform		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bob cat loader		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulldozer D10R		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulldozer D6C		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete Trowel Machine		0	0	0	0	0	0	0	0	30	30	30	30	30	30	0	0	0	0	0	0	0
Concrete Vibrators		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes - Mobile 35 ton		125	125	125	125	125	125	50	50	50	50	50	50	50	50	50	50	50	25	25	25	25
Cranes - Mobile 45 ton		140	70	70	70	70	70	70	70	70	70	70	70	35	35	0	0	0	0	0	0	0
Crane - Mobile 65 ton		270	270	225	225	180	90	90	90	90	90	45	45	45	45	45	45	45	0	0	0	0
Cranes 100 / 150 ton cap		100	100	50	50	50	50	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0
Diesel Powered Welder		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Backhoe/loader		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Earth Scraper 637		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - loader		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Motor Grader (CAT140H)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator - Trencher (CAT320)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fired Heaters (2,000 BTU)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Forklift		60	60	60	60	60	60	60	60	60	60	60	60	60	60	20	20	20	20	10	10	10
Fusion Welder		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 600 tn Crane		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Haul / 1,000 tn Crane		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Light Plants		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Man lifts - telescoping		140	140	140	140	140	140	140	105	105	105	70	70	70	70	35	35	35	35	14	14	14
Man lift - scissor		50	50	50	50	50	50	50	37.5	37.5	37.5	25	25	25	25	25	25	25	25	12.5	12.5	12.5
Portable Compaction Roller		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction - Vibratory Plate		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Compaction - Ram		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pumps		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable Power Generators		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck Crane - Greater than 200 ton		200	150	150	100	100	100	50	50	50	50	50	0	0	0	0	0	0	0	0	0	0
Truck Crane - Greater than 300 ton		180	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vibratory Roller Ingersol-Rand 20 ton		40	40	40	0	0	0	0	0	0	20	20	20	20	0	0	0	0	0	0	0	0
Weighted Mean Vehicle Weight (tons)		**2.7**	**2.7**	**2.6**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.6**	**2.6**	**2.7**	**2.8**	**3.0**	**3.5**	**3.6**	**3.6**	**3.6**	**3.6**	**3.8**	**4.0**	**4.6**

Hydrogen Energy California, Kern County Power Project
Off-Site Linears Fugitive Dust Emissions
10/26/2012

ASSUMPTIONS:
12 months of soil disturbance
10 total construction hours per work day
22 construction days per month

Dirt Piling or Material Handling

$E = k * (0.0032) * (U/5)^{1.3} / (M/2)^{1.4}$ PM Emissions from Dirt Piling or Material Handling (lb/ton) from USEPA AP42, Chapter 13.2.4 (Aggregate Handling and Storage Piles)

0.053 k for PM2.5
0.35 k for PM10
6.25 U = Mean Wind speed (mph) average for Bakersfield Airport 2000-2004
15 M = Moisture content of surface material (%) (from SCAQMD Table A9-9-G-1 for moist dirt)
0.00001 lb of $PM_{2.5}$/ ton of material
0.00009 lb of PM_{10}/ ton of material

MATERIAL HANDLED (tons/day)	Mitigation Efficiency[1]	MONTH:	1	2	3	4	5	6	7	8	9	10	11	12	13	14
		# pieces of equip:	0	0	0	0	0	0	0	0	0	0	6	7	14	14
Backhoe			0	0	0	0	0	0	0	0	0	0	5454	4675	3896	3896
Excavator			0	0	0	0	0	0	0	0	0	0	0	779	390	390
CAT 325 BACKHOE		tons/day material handled:	0	0	0	0	0	0	0	0	0	0	0	0	390	390
CAT 330 BACKHOE			0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT DOZER D-6			0	0	0	0	0	0	0	0	0	0	0	0	779	779
CAT RUBBER TIRE LOADER 966			0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL material handled			0	0	0	0	0	0	0	0	0	0	5454	5454	5454	5454

MATERIAL HANDLED (tons/day)	Mitigation Efficiency[1]	MONTH:	15	16	17	18	19	20	21	22	23	24	25	26	27	28
		# pieces of equip:	14	13	14	11	11	11	7	7	0	0	0	0	0	0
Backhoe			3896	4195	3896	4958	4958	4958	4675	4675	0	0	0	0	0	0
Excavator			390	420	390	496	496	496	779	779	0	0	0	0	0	0
CAT 325 BACKHOE		tons/day material handled:	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 330 BACKHOE			390	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT DOZER D-6			0	0	390	0	0	0	0	0	0	0	0	0	0	0
CAT RUBBER TIRE LOADER 966			779	839	779	0	0	0	0	0	0	0	0	0	0	0
TOTAL material handled			5454	5454	5454	5454	5454	5454	5454	5454	0	0	0	0	0	0

MATERIAL HANDLED (tons/day)	Mitigation Efficiency[1]	MONTH:	29	30	31	32	33	34	35	36	37	38	39	40	41	42
		# pieces of equip:	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Backhoe			0	0	0	0	0	0	0	0	0	0	0	0	0	0
Excavator			0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 325 BACKHOE		tons/day material handled:	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT 330 BACKHOE			0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT DOZER D-6			0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAT RUBBER TIRE LOADER 966			0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL material handled			0	0	0	0	0	0	0	0	0	0	0	0	0	0

MATERIAL HANDLED (tons/day)	Mitigation Efficiency[1]	MONTH:	43	44	45	46	47	48	49
		# pieces of equip:	0	0	0	0	0	0	0
Backhoe			0	0	0	0	0	0	0
Excavator			0	0	0	0	0	0	0
CAT 325 BACKHOE		tons/day material handled:	0	0	0	0	0	0	0
CAT 330 BACKHOE			0	0	0	0	0	0	0
CAT DOZER D-6			0	0	0	0	0	0	0
CAT RUBBER TIRE LOADER 966			0	0	0	0	0	0	0
TOTAL material handled			0	0	0	0	0	0	0

Disturbed Acreage	Length (miles)	ROW width (ft)	Area (ft2)	Area (acres)
Electrical transmission line	2.1	100	1108800	25.45
Natural gas linear	13	50	3432000	78.78
Process water pipeline	14.4	50	3801600	87.27
CO_2 pipeline	3.4	50	897600	20.61
Potable water pipeline	1.2	10	63360	1.45
Railway	5.3	60	1679040	38.54
Sources:		TOTAL:		**252.11**

Lengths: email from William Becktel, 3/26/12
ROW Width: Table 2-01 March 20 from Fluor.doc

Assume tons/day of material is evenly split among the number of pieces of equipment operating in a given month.
Do not include capacity factor because emissions are based on material handled, not hours of operation.

4622 yd^3/day 5454 ton/day
1,220,222 yd^3 1,439,862 tons 2360 density of soil (lb/yd^3)
(USDA NRCS Physical Soil Properties from Kern County Lockern-Buttonwillow clay soil)
252.11 acres = 1,220,222 cubic yds, assume depth of soils moved is 1 yd

Scraping Emissions Factor

E = 0.058 lb/ton material handled USEPA AP42 Chapter 11.9 (Western Surface Coal Mining), Table 11.9-4
Material 1,220,222 cubic yards, total excavation
0.17 fraction of total excavation handled by scrapers 0.17 <-- fraction of all earth moving equipment in months 11-22 that are scrapers
4622 cubic yards per day, for all scrapers, based on two months of scrapers in use
5454 tons/day

TSP 316.3 lb TSP/day
fraction of TSP that is PM10 0.489 from CEIDARS database for construction fugitives
fraction of TSP that is PM2.5 0.102 from CEIDARS database for construction fugitives
PM10 154.7 lb/day
PM2.5 32.3 lb/day
Mitigation for watering 61% (the emission factor does not account for soil moisture)
Mitigated PM10 60.3 lb/day
Mitigated PM2.5 12.6 lb/day

Grading Emissions Factor To be used for all scraping and grading activities

$E = 0.051(S)^{2.0}$ for particles ≤ 15 um USEPA AP42 Chapter 13.2.3 (Heavy Construction Operations), Table 13.2.3-1 - refers to
$E = 0.040(S)^{2.5}$ for TSP ≤ 30 um USEPA AP42 Chapter 11.9 (Western Surface Coal Mining), Table 11.9-1

multiply by 0.60 for PM_{10}
multiply TSP equation by 0.031 for $PM_{2.5}$
S = mean vehicle speed (mph)

S = 5.5 mph the Cat Motor Grader Application Guide states typical operation speed is 4-7 mph; take midpoint of 5.5 mph
2.84 lb ≤ 30 µm/VMT
1.54 lb ≤ 15 µm/VMT
PM_{10} = 0.93 lb PM_{10}/VMT
$PM_{2.5}$ = 0.09 lb $PM_{2.5}$/VMT

Equipment	Daily VMT	Mitigation Efficiency[1]	PM10 Emissions (lb/day)	PM2.5 Emissions (lb/day)
CAT MODEL 12 MOTOR GRADER	27.5	61%	9.928	0.943
		Total	**9.93**	**0.94**

* mileage based on assumed maximum for scrapers in CalEEMod calculations

Formula based on lbs per VMT, not hours, so no capacity factor included.

Off-Site Linears Fugitive Dust Emissions
10/26/2012

Storage Piles

SCAQMD Table A9-9-E
E = 1.7 * G/1.5 * (365-H)/235 * I/15 * J
PM10 Emission factor from wind erosion of storage piles per day per acre

50 G = Silt content (%) (from Geotechnical Investigaion, AFC Appendix P)
37 H = Mean number of days per year with at least 0.01 inches of precipitation (from WRCC for Bakersfield Airport Station)
0.3 I = Percentage of time that the unobstructed wind speed exceeds 12 mph at mean pile height (based on 2000-04 (5 yrs) of wind speed data as recorded at Bakersfield Airport station)
0.5 J = Fraction of TSP that is PM_{10} = 0.5
0.791 lb/acre/day

Source	Quantity	Size of Pile (acre)	Mitigation Efficiency[1]	PM_{10} Emissions (lbs/day)	$PM_{2.5}$ Emissions (lbs/day)
Storage Piles	8	0.25	90%	0.16	0.033

Pile size and number are assumed
Days per year accounts for weekend days also, not just work days
Assume PM2.5 is 20.8% of PM10

Travel on unpaved roads

E = k * (s/12)^a * (W/3)^b USEPA AP42 Chapter 13.2.2 (Unpaved Roads)
Size specific emission factor for vehicle travel on unpaved roads at industrial sites (eqn 1a; lb/VMT)

Constants:	PM2.5	PM10	TSP
k (lb/VMT)	0.15	1.5	4.9
a	0.9	0.9	0.7
b	0.45	0.45	0.45

4 s = Surface material silt content (%) (value for gravel road)
value listed in tableW = Mean vehicle weight (ton)

Vehicle Type	Round Trips /Day/ Unit	Round Trip Distance on Dirt Surface (mile)	Mean Vehicle Weight (tons)[2]	PM2.5 EF[5] (lbs/VMT)	PM_{10} EF (lbs/VMT)	Mitigation Efficiency[1]	If weight = 0, where is source included
ON ROAD							
Dump Truck	4	0.25	17	0.12	1.22	83%	
Service Truck (MHD-DSL)	1	0.125	4	0.06	0.64	83%	
Pipe Haul Truck and Trailer (HHDT-DSL)			15	0.12	1.15	83%	
Truck (Pickup 3/4 Ton) - MHD-DSL	2	0.25	1	0.03	0.34	83%	
Truck - water	4	0.25	25	0.14	1.45	83%	
OFF ROAD							
Air Compressor	0			0.00	0.00	83%	
Bore Machine (Hydraulic)	0			0.00	0.00	83%	
Crane	1	0.25	12	0.10	1.04	83%	
Backhoe	0		0	0.00	0.00	83%	Dirt piling
Excavator	1	0.25	0	0.00	0.00	83%	Dirt piling
Forklift	4	0.25	10	0.10	0.96	83%	
Welding Generator	0			0.00	0.00	83%	
Roller	4	0.25	20	0.13	1.31	83%	
Pipe Bending Machine	0			0.00	0.00	83%	
RAIL							
AIR COMPRESSOR 185	0	0	1	0.03	0.34	83%	
BOOM TRUCK 12 TON	4	0.25	12	0.10	1.04	83%	
CAT 325 BACKHOE	4	0.25	0	0.00	0.00	83%	Dirt piling
CAT 330 BACKHOE	4	0.25	0	0.00	0.00	83%	Dirt piling
CAT DOZER D-6	4	0.25	0	0.00	0.00	83%	Dirt piling
CAT MODEL 12 MOTOR GRADER	4	0.25	0	0.00	0.00	83%	Grading
CAT ROLLER-COMPACTOR 563	4	0.25	3	0.06	0.56	83%	
CAT RUBBER TIRE LOADER 966	4	0.25	0	0.00	0.00	83%	Dirt piling
CAT SCRAPER 615	4	0.25	0	0.00	0.00	83%	Grading
CRANE-ROUGH TERRAIN 45T	4	0.25	45	0.19	1.89	83%	
GENSET 5KW	0	0	0.5	0.02	0.25	83%	
JOHN DEERE TRACTOR 9400	4	0.25	20	0.13	1.31	83%	
PICK-UP CRAFT	4	0.25	10	0.10	0.96	83%	
PICK-UP OVERHEAD	4	0.25	10	0.10	0.96	83%	
RAIL BALLAST REGULATOR	4	0.25	1	0.03	0.34	83%	
RAIL CLIP MACHINE	4	0.25	0.3	0.02	0.20	83%	
RAIL MOVER-SHUTTLE WAGON	4	0.25	27.5	0.15	1.51	83%	
RAIL TAMPER	4	0.25	27	0.15	1.50	83%	
RAIL WELDER	0	0	0.5	0.02	0.25	83%	
RAMEX WALK BEHIND COMPACTOR	4	0.25	0.1	0.01	0.12	83%	
TRI-AXLE DUMP TRUCK	4	0.25	17	0.12	1.22	83%	
TRUCK FLATBED 14 FOOT	4	0.25	10	0.10	0.96	83%	
TRUCK TRACTOR	4	0.25	10	0.10	0.96	83%	
WATER TRUCK, 4M ON-ROAD	4	0.25	25	0.14	1.45	83%	
WELDING MACHINE 350 AMP	0	0	0.5	0.02	0.25	83%	

Mitigation Measure[1]	Unpaved Roads
Apply water every three hours to disturbed surfaces[3]	61%
Traffic speeds on all unpaved roads to be reduced to 15 mph or less	57%
Combined Mitigation Efficiency	**83%**
Water the storage pile by hand or apply cover when wind events are declared.	90%

Notes:

1. Mitigation efficiencies from SCAQMD Table XI-A and Table XI-E (South Coast Air Quality Management District, Air Quality Analysis Handbook (under development), accessed at http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/MM_fugitive.html).
2. Equipment weight from SCAQMD Table A9-9-D-3 and various websites.
3. Water trucks operate at least 4 times per day.
4. Assumed maximum travel speed is 5 mph.
5. An emission factor based on mean vehicle weight could not be calculated for the linear equipment since the equipment will be scattered over various linears at different locations. Therefore, emissions remain calculated based on the weight of each piece of equipment; this is a more conservative estimate.

Hydrogen Energy California, Kern County Power Project
Fugitive Dust on Paved Roads
10/26/2012

AP 42 13.2.1 Paved Roads, updated January 2011

For a daily basis,
E = [k (sL)^0.91 x (W)^1.02](1-P/4N) equation (2)

P = number of "wet" days with at least 0.254 mm (0.01 in) of precipitation during the averaging period
W = average weight (tons) of vehicles treaveling the road
k = particle size multiplier for particle size range and units of interest
sL = road surface silt loading (g/m^2)
N = number of days in the averaging period

	k
	lb/VMT
PM2.5	0.00054
PM10	0.0022

Table 13.2.1-1
PARTICLE SIZE MULTIPLIERS FOR PAVED ROAD EQUATION

Heavy Duty Trucks

			Empty	Full	
W=	17.5	tons, average	5	30	tons
sL=	0.031	g/m2	Default value from URBEMIS 9.2 for Kern County		
P=	36	days/year	Buttonwillow Station 1940-2011, WRCC		

E=
0.00041 lb/VMT PM2.5 large delivery trucks
0.00169 lb/VMT PM10 large delivery trucks

Light Duty (Delivery) Trucks

W=	9	tons, average	
sL=	0.031	g/m2	Default value from URBEMIS 9.2 for Kern County
P=	36	days/year	Buttonwillow Station 1940-2011, WRCC

E=
0.00021 lb/VMT PM2.5 large delivery trucks
0.00086 lb/VMT PM10 large delivery trucks

Worker Vehicles

W=	1.6	tons	
sL=	0.031	g/m2	Default value from URBEMIS 9.2 for Kern County
P=	36	days/year	Buttonwillow Station 1940-2011, WRCC

E=
0.00004 lb/VMT PM2.5 O&M vehicles
0.00015 lb/VMT PM10 O&M vehicles

Hydrogen Energy California, Kern County Power Project
Emission Factors for Onsite Equipment
10/26/2012

Equipment Description	EMFAC designation	Horsepower	Source	Capacity Factor[1]	Emission Factors (lbs/hr) CO	CO_2	CH_4	N_2O	NO_x	PM_{10}	$PM_{2.5}$	SO_x	ROG[2]	CO_2e
On-Road Vehicles														
18 cy fill mat'l haul truck	HHD-DSL		EMFAC	41.0%	0.320	69.786	0.0013	0.001	0.694	0.043	0.039	0.001	0.151	70.16
Bus	HHD-DSL		EMFAC	41.0%	0.320	69.786	0.0013	0.001	0.694	0.043	0.039	0.001	0.151	70.16
Concrete Pumper Truck	HHD-DSL		EMFAC	41.0%	0.320	69.786	0.0013	0.001	0.694	0.043	0.039	0.001	0.151	70.16
Dump Truck	HHD-DSL		EMFAC	41.0%	0.320	69.786	0.0013	0.001	0.694	0.043	0.039	0.001	0.151	70.16
Diesel Tractor (Yard Dog)	HHD-DSL		EMFAC	46.5%	0.320	69.786	0.0013	0.001	0.694	0.043	0.039	0.001	0.151	70.16
Service Truck - 1 ton	HHD-DSL		EMFAC	41.0%	0.320	69.786	0.0013	0.001	0.694	0.043	0.039	0.001	0.151	70.16
Pile Driver Truck	HHD-DSL		EMFAC	41.0%	0.320	69.786	0.0013	0.001	0.694	0.043	0.039	0.001	0.151	70.16
Truck - Fuel/Lube	MHD-DSL		EMFAC	41.0%	0.155	33.180	0.0002	0.001	0.279	0.017	0.015	3.09E-04	0.014	33.39
Tractor Truck 5th Wheel	HHD-DSL		EMFAC	41.0%	0.320	69.786	0.0013	0.001	0.694	0.043	0.039	0.001	0.151	70.16
Trucks - Pickup 3/4 ton	MHD-DSL		EMFAC	41.0%	0.155	33.180	0.0002	0.001	0.279	0.017	0.015	3.09E-04	0.014	33.39
Trucks - 3 ton	HHD-DSL		EMFAC	41.0%	0.320	69.786	0.0013	0.001	0.694	0.043	0.039	0.001	0.151	70.16
Truck - Water	HHD-DSL		EMFAC	41.0%	0.320	69.786	0.0013	0.001	0.694	0.043	0.039	0.001	0.151	70.16
Off Road Vehicles	**Fuel Type**													
Air Compressor 185 CFM	D	50	OFFROAD - Air Compressors	48.0%	0.269	22.251	0.009	0.001	0.227	0.024	0.022	0.000	0.102	22.619
Air Compressor 750 CFM	D	120	OFFROAD - Air Compressors	48.0%	0.331	46.908	0.008	0.001	0.529	0.050	0.046	0.001	0.090	47.498
Articulating Boom Platform	D	50	OFFROAD - Aerial Lifts	50.5%	0.246	38.038	0.006	0.001	0.396	0.032	0.030	0.000	0.061	38.328
Bobcat Loader	D	50	OFFROAD - Rubber Tired Loaders	54.0%	0.363	31.122	0.011	0.001	0.311	0.029	0.027	0.000	0.120	31.523
Bulldozer D10R	D	500	OFFROAD - Crawler Tractors	59.0%	0.951	258.997	0.023	0.006	2.236	0.087	0.080	0.003	0.254	261.224
Bulldozer D6.C	D	120	OFFROAD - Crawler Tractors	59.0%	0.485	65.751	0.012	0.001	0.767	0.067	0.062	0.001	0.129	66.415
Concrete Trowel Machine	D	50	OFFROAD - Surfacing Equipment	49.0%	0.140	14.095	0.004	0.001	0.136	0.012	0.011	0.000	0.048	14.360
Concrete Vibrators	Electric	50	N/A	43.0%										
Cranes - Mobile 35 ton	D	120	OFFROAD - Cranes	43.0%	0.361	50.103	0.008	0.001	0.550	0.049	0.045	0.001	0.092	50.696
Cranes - Mobile 45 ton	D	175	OFFROAD - Cranes	43.0%	0.482	80.272	0.009	0.002	0.775	0.044	0.041	0.001	0.103	81.078
Crane - Mobile 65 ton	D	175	OFFROAD - Cranes	43.0%	0.482	80.272	0.009	0.002	0.775	0.044	0.041	0.001	0.103	81.078
Cranes 100 / 150 ton cap	D	250	OFFROAD - Cranes	43.0%	0.295	112.058	0.009	0.003	0.993	0.035	0.032	0.001	0.104	113.128
Diesel Powered Welder	D	25	OFFROAD - Welders	45.0%	0.060	11.276	0.002	0.000	0.104	0.007	0.006	0.000	0.022	11.404
Backhoe/loader	D	120	OFFROAD - Tractors/Loaders/Backhoes	46.5%	0.352	51.682	0.006	0.001	0.455	0.038	0.035	0.001	0.069	52.232
Earth Scraper	D	500	OFFROAD - Scrapers	66.0%	1.212	321.140	0.029	0.006	2.826	0.110	0.101	0.003	0.319	323.489
Loader	D	120	OFFROAD - Rubber Tired Loaders	54.0%	0.415	58.861	0.009	0.001	0.600	0.052	0.048	0.001	0.097	59.463
Motor Grader	D	120	OFFROAD - Graders	57.5%	0.530	74.898	0.011	0.001	0.771	0.067	0.062	0.001	0.125	75.553
Excavator - Trencher	D	120	OFFROAD - Trenchers	69.5%	0.468	64.837	0.012	0.001	0.785	0.067	0.061	0.001	0.128	65.498
Fired Heaters	D	25	OFFROAD - Other Construction Equipment	62.0%	0.054	13.205	0.001	0.000	0.101	0.004	0.004	0.000	0.016	13.323
Forklift	D	50	OFFROAD - Forklifts	30.0%	0.167	14.659	0.004	0.001	0.145	0.013	0.012	0.000	0.048	14.925
Fusion Welder	Electric	50	N/A	45.0%										
Heavy Haul / Cranes	D	750	OFFROAD - Cranes	43.0%	0.891	302.773	0.024	0.008	2.451	0.088	0.081	0.003	0.262	305.888
Heavy Haul / Cranes	D	750	OFFROAD - Cranes	43.0%	0.891	302.773	0.024	0.008	2.451	0.088	0.081	0.003	0.262	305.888
Light Plants	D	25	OFFROAD - Other Construction Equipment	62.0%	0.054	13.205	0.001	0.000	0.101	0.004	0.004	0.000	0.016	13.323
Man lifts - telescoping	D	50	OFFROAD - Aerial Lifts	50.5%	0.184	19.595	0.006	0.001	0.188	0.017	0.015	0.000	0.065	19.893
Man lift - scissor	Electric		N/A	50.5%										
Portable Compaction Roller	D	120	OFFROAD - Rollers	57.5%	0.406	58.936	0.009	0.001	0.624	0.053	0.049	0.001	0.098	59.541
Portable Compaction - Vibratory Plate	D	15	OFFROAD - Plate Compactors	43.0%	0.026	4.310	0.000	0.000	0.031	0.001	0.001	0.000	0.005	4.372
Portable Compaction - Vibratory Ram	D	50	OFFROAD - Surfacing Equipment	49.0%	0.140	14.095	0.004	0.001	0.136	0.012	0.011	0.000	0.048	14.360
Pumps	D	25	OFFROAD - Other Construction Equipment	62.0%	0.054	13.205	0.001	0.000	0.101	0.004	0.004	0.000	0.016	13.323
Portable Power Generators	D	50	OFFROAD - Generator Sets	74.0%	0.276	30.595	0.009	0.001	0.291	0.025	0.023	0.000	0.097	30.953
Truck Crane - Greater than 300 ton	D	500	OFFROAD - Cranes	43.0%	0.529	179.940	0.014	0.006	1.421	0.052	0.048	0.002	0.155	181.979
Truck Crane - Greater than 200 ton	D	250	OFFROAD - Cranes	43.0%	0.295	112.058	0.009	0.003	0.993	0.035	0.032	0.001	0.104	113.128
Vibratory Roller 20 ton	D	175	OFFROAD - Rollers	43.0%	0.619	108.049	0.011	0.002	1.009	0.055	0.050	0.001	0.124	108.896

Notes:

[1] Capacity factors from SCAQMD Table A9-8-D

[2] Assuming ROGs are equivalent to VOCs

- Emission factors for on-road vehicles are based on results from Emfac Emissions Model 2007 Version 2.3 (HHDT-DSL=heavy heavy-duty trucks-diesel; MHD-DSL=medium heavy duty-diesel). EMFAC scenario year was 2010 and the selected area was Kern County. PM_{10} values include break wear and tire wear.

- Emission factors for off-road vehicles are based on output from Offroad 2007, calendar year 2013 for Kern County.
  On-Road Vehicles:
  - $PM_{2.5}$ Fraction of PM_{10}, Diesel: 0.920
  Off-Road Vehicles:
  - PM2.5 Fraction of PM10, Diesel: 0.920

- CH_4 and N_2O factors are derived from California Climate Action Registry General Reporting Protocol Version 3.0 (April 2008), Table C.5 for LDT, MHD, and HHD diesel fueled trucks in the San Joaquin Valley Air Basin (MHD =HHD). These emissions are in g/mile. On-road vehicles are limited to 10 mph, which is used to convert to lb/hr. (See GHG Reference Info tab)

- N_2O factors for off-road vehicles are derived from California Climate Action Registry General Reporting Protocol Version 3.0 (April 2008), Table C.5 (distillate fuel factors for the industrial sector) using the following to convert from kg/gallon to lb/hp-hour, and then multiplying by the rated horsepower rating: 1 gallon/137,000 Btu, 7,000 Btu/hp-hour, and 2.2046 lb/kg. CH_4 factors are from the SCAQMD data.

CO_2 GWP (SAR, 1996) =	1
CH_4 GWP (SAR, 1996) =	21
N_2O GWP (SAR, 1996) =	310

Hydrogen Energy California, Kern County Power Project
Construction Equipment Usage Schedule (on site)
10/26/2012

Month

EQUIPMENT	# of units	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
On Road Vehicles																																																		
18 cy fill mat'l haul truck	185			10	10	20	20	20	20	10	10	10	10	5	5	5	5	5	5																		3	3	3	3	1	1	1							
Bus	365	2	2	2	2	3	3	3	3	3	3	5	5	5	5	5	5	7	7	7	10	10	10	10	14	14	14	14	14	14	14	14	14	14	14	14	12	12	12	10	10	5	5	3	3	2	2	2	1	1
Concrete Pumper Truck	39						2	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2							1	1	1	1																		
Dump Truck	76	3	4	4	3	3	3	3	3	3	3	2	2	2	2	2													2	2	2	2	2	2	2	2	2	3	3	3	2	1	1	1	1	1				
Diesel Tractor (Yard Dog)	236						2	2	2	2	2	2	4	4	4	4	4	8	8	8	8	8	8	8	10	10	10	10	10	10	10	10	10	10	10	10	4	4	4	4	4	4	4							
Service Truck - 1 ton	99	2	2	2	4	4	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1
Pile Driver Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck - Fuel/Lube	85	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1			
Tractor Truck 5th Wheel	0																																																	
Trucks - Pickup 3/4 ton	931	5	5	5	5	5	6	7	8	15	15	15	15	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	15	15	10	10	10	10	5
Trucks - 3 ton	185	1	1	1	1	1	2	2	2	4	4	4	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	4	3	3	3	3	2	2	2	1	1	1	1			
Truck - Water	127	5	5	5	5	5	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1
Off Road Vehicles																																																		
Air Compressor 185 CFM	327	2	2	2	2	3	3	3	3	3	3	3	3	3	6	6	6	8	8	8	10	10	10	10	12	12	12	12	12	12	12	12	12	12	12	12	8	8	8	6	6	6	6	4	4	4	2	2	1	1
Air Compressor 750 CFM	98					1	1	1	1	2	2	2	2	2	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Articulating Boom Platform	0																																																	
Bob cat loader	62			1	1	1	1	1	4	4	4	4	4	3	3	3	3	3	3	2	2	2	2	2	2												1	1	1	1	1	1	1							
Bulldozer D10R	23	3	3	3	2	2	2	2	2	2	1	1																																						
Bulldozer D6C	33	3	3	3	3	2	2	2	2	2	2	1	1	1	1	1													1	1	1	1																		
Concrete Trowel Machine	58						2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2									2	2	2	2	2	2							
Concrete Vibrators	140	4	4	4	4	4	4	4	4	4	8	8	8	8	8	8	8	8	4	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2															
Cranes - Mobile 35 ton	176							1	1	1	4	4	4	4	7	7	7	7	7	7	7	7	7	7	7	7	7	5	5	5	5	5	5	5	5	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1
Cranes - Mobile 45 ton	84											2	2	2	2	2	2	2	2	4	4	4	4	4	4	4	4	4	4	4	2	2	2	2	2	2	2	2	2	2	2	1	1							
Crane - Mobile 65 ton	126												1	1	2	4	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	5	5	4	2	2	2	2	2	1	1	1	1	1	1	1				
Cranes 100 / 150 ton cap	70											1	1	2	2	3	3	4	4	4	4	4	4	4	4	4	4	4	4	2	2	1	1	1	1	1	1													
Diesel Powered Welder	643				10	10	10	10	10	10	10	10	10	10	10	10	15	15	15	20	20	20	20	20	25	25	25	25	25	25	25	25	25	15	15	15	15	15	10	10	10	10	10	5	5	5	5	3	3	2
Excavator - Backhoe/loader	68	2	2	3	4	4	4	4	4	4	4	4	2	2	2	2	2	1	1	1	1	1	1	1	1												2	2	2	2	1	1	1							
Excavator - Earth Scraper 637	38	7	7	7	7	4	4	2																																										
Excavator - loader	33	2	2	2	2	2	2	2	2	2	2	2	2	1	1														1	1	1	1							1	1	1									
Excavator - Motor Grader (CAT140H)	24		1	1	1	3	3																						1	1	1	1					2	2	2	2	1	1	1							
Excavator - Trencher (CAT320)	22						2	2	2	2	2	2	2	2	2	2	2																																	
Fired Heaters (2,000 BTU)	166					4	4	4	4	3	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	3	2	2	2	2	2	2	2	2	2	2	2	1	1	1
Forklift	285	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	8	8	8	8	8	8	8	8	8	8	8	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	2	2	2	2	1	1	1
Fusion Welder	83					2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Heavy Haul / 600 tn Crane	9																		1	1	1	1	1	1	1	1	1																							
Heavy Haul / 1,000 tn Crane	6																				1	1	1	1	1	1																								
Light Plants	433	1	1	2	4	8	8	8	8	4	4	6	6	8	8	10	10	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	10	10	10	10	10	10	10	10	10	5	5	5	5	5	4	4	2	2
Man lifts - telescoping	506									5	5	5	10	10	10	10	10	10	10	10	15	15	15	15	20	20	20	20	20	20	20	20	20	20	20	20	15	15	15	10	10	10	10	5	5	5	5	2	2	2
Man lift - scissor	540								5	5	5	5	10	10	10	10	10	10	10	10	15	15	15	15	20	20	20	20	20	20	20	20	20	20	20	20	15	15	15	10	10	10	10	10	10	10	10	5	5	5
Portable Compaction Roller	82			5	5	5	5	5	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2					2	2	2	2	2	2				2	2	2	1	1							
Portable Compaction - Vibratory Plate	126								6	6	6	6	6	6	6	6	6	6	6	6	6	6	6						3	3	3	3					4	4	4	4	4	2	2							
Portable Compaction - Ram	0																																																	
Pumps	182	3	3	3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2
Portable Power Generators	608	4	4	4	4	6	6	6	6	6	10	10	10	10	10	10	15	15	15	15	15	15	15	20	20	20	20	20	20	20	20	20	20	20	20	20	15	15	15	15	10	10	10	10	10	10	5	5	5	2
Truck Crane - Greater than 200 ton	68												1	1	1	1	1	2	2	3	3	4	4	4	4	4	4	4	4	4	3	3	2	2	2	1	1	1	1	1										
Truck Crane - Greater than 300 ton	34															1	1	1	1	1	2	2	2	3	3	3	3	3	3	3	2																			
Vibratory Roller Ingersol-Rand 20 ton	53	3	3	3	3	3	3	3	3	3	2	2	2	2	2	1	1	1	1										2	2	2	2							1	1	1	1								
Onsite Total	**7534**	**60**	**62**	**80**	**96**	**119**	**129**	**124**	**136**	**133**	**142**	**149**	**160**	**168**	**176**	**180**	**190**	**202**	**196**	**198**	**215**	**214**	**212**	**212**	**234**	**230**	**228**	**225**	**234**	**230**	**224**	**220**	**206**	**193**	**190**	**180**	**163**	**165**	**164**	**149**	**136**	**120**	**119**	**72**	**72**	**66**	**55**	**41**	**37**	**28**
Schedule																																																		
Site Mobilization																																																		
Site Prep/Piling																																																		
Construction																																																		
Commissioning & Start-up																																																		

Notes: Preliminary and Confidential
1 These are approximate values

Hydrogen Energy California, Kern County Power Project
Emission Factors for Offsite Linears Equipment
10/26/2012

Equipment Description	EMFAC designation	Horsepower	Source	Capacity Factor[1]	Emission Factors (lbs/hr) CO	CO_2	CH_4	N_2O	NO_x	PM_{10}	$PM_{2.5}$	SO_x	ROG[2]	CO_2e
On-Road Vehicles					EMFAC									
Dump Truck	HHD-DSL		EMFAC	41.0%	0.320	69.786	0.0018	0.001	0.694	0.043	0.039	0.001	0.151	70.165
Service Truck	HHD-DSL		EMFAC	41.0%	0.320	69.786	0.0018	0.001	0.694	0.043	0.039	0.001	0.151	70.165
Pipe Haul Truck and Trailer (HHDT-DSL)	HHD-DSL		EMFAC	41.0%	0.320	69.786	0.0018	0.001	0.694	0.043	0.039	0.001	0.151	70.165
Trucks - Pickup 3/4 ton	MHD-DSL		EMFAC	41.0%	0.155	33.180	0.0018	0.001	0.279	0.017	0.015	0.000	0.014	33.558
Truck - Water	HHD-DSL		EMFAC	41.0%	0.320	69.786	0.0018	0.001	0.694	0.043	0.039	0.001	0.151	70.165
Off Road Vehicles	**Fuel Type**													
Air Compressor	D	50	OFFROAD - Air Compressors	48.0%	0.269	22.251	0.009	0.001	0.227	0.024	0.022	0.000	0.102	22.619
Bore Machine (Hydraulic)	D	50	OFFROAD - Bore/Drill Rigs	75.0%	0.228	31.009	0.003	0.001	0.257	0.012	0.011	0.000	0.029	31.238
Crane	D	250	OFFROAD - Cranes	43.0%	0.295	112.058	0.009	0.003	0.993	0.035	0.032	0.001	0.104	113.128
Backhoe	D	120	OFFROAD - Tractors/Loaders/Backhoes	46.5%	0.352	51.682	0.006	0.001	0.455	0.038	0.035	0.001	0.069	52.232
Excavator	D	120	OFFROAD - Excavators	58.0%	0.517	73.557	0.010	0.001	0.678	0.058	0.054	0.001	0.108	74.181
Forklift	D	50	OFFROAD - Forklifts	30.0%	0.167	14.659	0.004	0.001	0.145	0.013	0.012	0.000	0.048	14.925
Generator (Welding)	D	50	OFFROAD - Generator Sets	74.0%	0.276	30.595	0.009	0.001	0.291	0.025	0.023	0.000	0.097	30.953
Roller	D	50	OFFROAD - Rollers	57.5%	0.291	25.960	0.009	0.001	0.258	0.024	0.022	0.000	0.102	26.328
Pipe Bending Machine	D	50	OFFROAD - Other Construction Equipment	62.0%	0.265	27.964	0.007	0.001	0.258	0.020	0.019	0.000	0.075	28.281
RAIL														
AIR COMPRESSOR 185	D	49	OFFROAD - Air Compressors	48.0%	0.269	22.251	0.009	0.001	0.227	0.024	0.022	0.000	0.102	22.616
BOOM TRUCK 12 TON	D	300	EMFAC	41.0%	0.320	69.786	0.002	0.001	0.694	0.043	0.039	0.001	0.151	70.165
CAT 325 BACKHOE	D	168	OFFROAD - Tractors/Loaders/Backhoes	46.5%	0.585	101.296	0.009	0.000	0.768	0.043	0.039	0.001	0.098	101.482
CAT 330 BACKHOE	D	222	OFFROAD - Tractors/Loaders/Backhoes	46.5%	0.366	171.583	0.011	0.000	1.163	0.037	0.034	0.002	0.120	171.811
CAT DOZER D-6	D	185	OFFROAD - Crawler Tractors	59.0%	0.744	121.079	0.015	0.000	1.250	0.071	0.065	0.001	0.167	121.395
CAT MODEL 12 MOTOR GRADER	D	140	OFFROAD - Graders	57.5%	0.530	74.898	0.011	0.000	0.771	0.067	0.062	0.001	0.125	75.134
CAT ROLLER-COMPACTOR 563	D	145	OFFROAD - Rollers	57.5%	0.406	58.936	0.009	0.000	0.624	0.053	0.049	0.001	0.098	59.122
CAT RUBBER TIRE LOADER 966	D	253	OFFROAD - Rubber Tired Loaders	54.0%	0.368	148.843	0.011	0.000	1.210	0.042	0.038	0.002	0.126	149.081
CAT SCRAPER 615	D	265	OFFROAD - Scrapers	66.0%	0.641	209.282	0.020	0.000	2.044	0.079	0.073	0.002	0.225	209.709
CRANE-ROUGH TERRAIN 45T	D	173	OFFROAD - Cranes	43.0%	0.482	80.272	0.009	0.000	0.775	0.044	0.041	0.001	0.103	80.467
GENSET 5KW	D	5	OFFROAD - Generator Sets	74.0%	0.069	10.198	0.001	0.000	0.105	0.006	0.006	0.000	0.015	10.228
JOHN DEERE TRACTOR 9400	D	410	OFFROAD - Tractors/Loaders/Backhoes	46.5%	0.744	344.544	0.021	0.000	2.062	0.070	0.064	0.004	0.229	344.977
PICK-UP CRAFT	D	385	OFFROAD - Other Construction Equipment	62.0%	0.523	254.010	0.013	0.000	1.516	0.049	0.045	0.002	0.145	254.285
PICK-UP OVERHEAD	D	260	OFFROAD - Other Construction Equipment	62.0%	0.587	106.420	0.008	0.000	0.799	0.042	0.038	0.001	0.093	106.597
RAIL BALLAST REGULATOR	D	240	OFFROAD - Other Construction Equipment	62.0%	0.587	106.420	0.008	0.000	0.799	0.042	0.038	0.001	0.093	106.597
RAIL CLIP MACHINE	D	80	OFFROAD - Other Construction Equipment	62.0%	0.265	27.964	0.007	0.000	0.258	0.020	0.019	0.000	0.075	28.107
RAIL MOVER-SHUTTLE WAGON	D	250	OFFROAD - Other Construction Equipment	62.0%	0.587	106.420	0.008	0.000	0.799	0.042	0.038	0.001	0.093	106.597
RAIL TAMPER	D	260	OFFROAD - Other Construction Equipment	62.0%	0.587	106.420	0.008	0.000	0.799	0.042	0.038	0.001	0.093	106.597
RAIL WELDER	D	58	OFFROAD - Welders	45.0%	0.060	11.276	0.002	0.000	0.104	0.007	0.006	0.000	0.022	11.317
RAMEX WALK BEHIND COMPACTOR	D	10	OFFROAD - Plate Compactors	43.0%	0.026	4.310	0.000	0.000	0.031	0.001	0.001	0.000	0.005	4.319
TRI-AXLE DUMP TRUCK	D	450	EMFAC	41.0%	0.320	69.786	0.002	0.001	0.694	0.043	0.039	0.001	0.151	70.165
TRUCK FLATBED 14 FOOT	D	362	EMFAC	41.0%	0.320	69.786	0.002	0.001	0.694	0.043	0.039	0.001	0.151	70.165
TRUCK TRACTOR	D	450	OFFROAD - Off-Highway Trucks	41.0%	0.636	272.089	0.020	0.000	1.783	0.063	0.058	0.003	0.217	272.500
WATER TRUCK, 4M ON-ROAD	D	300	EMFAC	41.0%	0.320	69.786	0.002	0.001	0.694	0.043	0.039	0.001	0.151	70.165
WELDING MACHINE 350 AMP	D	25	OFFROAD - Welders	45.0%	0.060	11.276	0.002	0.000	0.104	0.007	0.006	0.000	0.022	11.317

Notes:

[1] Capacity factors from SCAQMD Table A9-8-D

[2] Assuming ROGs are equivalent to VOCs

- Emission factors for on-road vehicles are based on results from Emfac Emissions Model 2010 Version 2.3 (LDT-DSL=light duty class II trucks-diesel; HHDT-DSL=heavy heavy-duty trucks-diesel; MHD-DSL=medium heavy duty-diesel). EMFAC scenario year was 2010.

- Emission factors for off-road vehicles are based on output from Offroad 2007, calendar year 2013 for Kern County.
  On-Road Vehicles:
  - $PM_{2.5}$ Fraction of PM_{10}, Diesel: 0.920
  Off-Road Vehicles:
  - PM2.5 Fraction of PM10, Diesel: 0.920

- CH_4 and N_2O factors are derived from California Climate Action Registry General Reporting Protocol Version 3.0 (April 2008), Table C.5 for LDT, MHD, and HHD diesel fueled trucks in the San Joaquin Valley Air Basin (MHD =HHD). These emissions are in g/mile. On-road vehicles are limited to 10 mph, which is used to convert to lb/hr. (See GHG Reference Info tab)

- N_2O factors for off-road vehicles are derived from California Climate Action Registry General Reporting Protocol Version 3.0 (April 2008), Table C.5 (distillate fuel factors for the industrial sector) using the following to convert from kg/gallon to lb/hp-hour, and then multiplying by the rated horsepower rating: 1 gallon/137,000 Btu, 7,000 Btu/hp-hour, and 2.2046 lb/kg. CH_4 factors are from the SCAQMD data.

CO_2 GWP (SAR, 1996) =	1
CH_4 GWP (SAR, 1996) =	21
N_2O GWP (SAR, 1996) =	310

Hydrogen Energy California, Kern County Power Project
Construction Equipment Usage Schedule (off site linears)
10/26/2012

EQUIPMENT	Month / # of units	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
ON ROAD																																																		
Dump Truck	64											4	4	6	6	6	6	6	6	6	6	4	4																												
Service Truck (MHD-DSL)												2	2	2	2	2	2	3	3	3	3	3	3																												
Pipe Haul Truck and Trailer (HHDT-DSL	30											3	3	3	3	3	3	2	2	2	2	2	2																												
Truck (Pickup 3/4 Ton) - MHD-DSL	150											10	10	10	10	10	10	15	15	15	15	15	15																												
Truck - water	40											2	2	4	4	4	4	4	4	4	4	2	2																												
OFF ROAD																																																		
Air Compressor	48											2	2	4	4	6	6	6	6	4	4	2	2																												
Bore Machine (Hydraulic)	5															1	1	1	1	1																													
Crane	60											2	4	4	6	6	6	6	6	6	6	4	4																												
Backhoe	104											6	6	10	10	10	10	10	10	10	10	6	6																												
Excavator	11												1	1	1	1	1	1	1	1	1	1	1																												
Forklift	42											2	2	4	4	4	4	4	4	4	4	4	2																												
Welding Generator	96											8	8	8	8	8	8	8	8	8	8	8	8																												
Roller	22												2	2	2	2	2	2	2	2	2	2	2																												
Pipe Bending Machine	36											2	2	4	4	4	4	4	4	4	2	2																												
RAIL																																																		
AIR COMPRESSOR 185	8													0	2	2	2	2																																	
BOOM TRUCK 12 TON	3													0	0	1	1	1																																	
CAT 325 BACKHOE	2													1	1	0	0	0																																	
CAT 330 BACKHOE	1													0	0	1	0	0																																	
CAT DOZER D-6	5													2	2	0	0	1																																	
CAT MODEL 12 MOTOR GRADER	7													2	2	1	1	1																																	
CAT ROLLER-COMPACTOR 563	5													2	2	1	0	0																																	
CAT RUBBER TIRE LOADER 966	6													0	0	2	2	2																																	
CAT SCRAPER 615	3													2	1	0	0	0																																	
CRANE-ROUGH TERRAIN 45T	2													0	1	1	0	0																																	
GENSET 5KW	6													0	4	2	0	0																																	
JOHN DEERE TRACTOR 9400	1													1	0	0	0	0																																	
PICK-UP CRAFT	15													3	3	3	3	3																																	
PICK-UP OVERHEAD	24													2	6	6	5	5																																	
RAIL BALLAST REGULATOR	2													0	0	0	1	1																																	
RAIL CLIP MACHINE	2													0	0	0	1	1																																	
RAIL MOVER-SHUTTLE WAGON	3													0	0	1	1	1																																	
RAIL TAMPER	2													0	0	0	1	1																																	
RAIL WELDER	3													0	0	0	2	1																																	
RAMEX WALK BEHIND COMPACTOR	1													0	1	0	0	0																																	
TRI-AXLE DUMP TRUCK	12													4	6	2	0	0																																	
TRUCK FLATBED 14 FOOT	11													1	1	3	3	3																																	
TRUCK TRACTOR	2													0	0	1	1	0																																	
WATER TRUCK, 4M ON-ROAD	5													1	1	1	1	1																																	
WELDING MACHINE 350 AMP	5													1	1	1	1	1																																	
TOTAL	**874**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**43**	**48**	**84**	**98**	**96**	**93**	**97**	**72**	**70**	**67**	**55**	**51**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Notes: Preliminary and Confidential
1 These are approximate values
2 Construction Equipment Assumptions - Natural Gas line work begins in month 11 and ends in month 20. Process water line work begins in month 11 and ends in month 17 Potable Water line work begins in month 17 and ends in month 20. CO2 line work begins in month 17 and ends in month 22. Transmission line work begins in month 17 and ends in month 22. Rail spur line work begins in month 13 and ends in month 17

COMBUSTION - Short-term (Month 3)

equipment / vehicles	TOTAL EMISSION RATE (lb/day)				
	$PM_{2.5}$	PM_{10}	CO	NO_2	SO_2
Worker vehicles	0.0	0.0	0.2	0.0	0.0
Delivery trucks	0.3	0.3	2.2	5.1	0.0
Soil import	1.4	1.5	10.4	24.2	0.0
Construction equip	16.2	17.7	166.8	326.4	0.4

equipment / vehicles	number of sources in the model	operating hours per day in the model	MODEL EMISSION RATE per source (lb/hr/source)				
			$PM_{2.5}$ 24hr	PM_{10} 24hr	CO 1 & 8 hr	NO_2 1-hr	SO_2 1,3 & 24 hr
Worker vehicles	36	10	5.41E-06	6.96E-06	5.67E-04	4.54E-05	8.96E-07
Delivery trucks	26	10	1.10E-03	1.22E-03	8.48E-03	1.98E-02	1.59E-05
Soil import	59	10	2.32E-03	2.56E-03	1.76E-02	4.11E-02	3.32E-05
Construction equip	51	10	3.18E-02	3.48E-02	3.27E-01	6.40E-01	7.06E-04

SOURCE PARAMETERS

Source ID	Source Description	Easting (m)	Northing (m)	Base elevation (m)	Stack Height (m)	Temperature K	Exit Velocity (m/s)	Stack diameter (m)	Emissions per source: $PM_{2.5}$ 24hr lb/hr	PM_{10} 24hr lb/hr	CO 1hr & 8hr lb/hr	NO_2 1hr lb/hr	SO_2 1, 3 and 24hr lb/hr
Worker vehicles[1]	Worker vehicles for commuting to/from site			87.9348	0.3	622	0.001	0.051	5.41E-06	6.96E-06	5.67E-04	4.54E-05	8.96E-07
Delivery trucks[2]	Light and heavy duty delivery trucks			87.9348	3	622	57.5	0.127	1.10E-03	1.22E-03	8.48E-03	1.98E-02	1.59E-05
Soil import[2]	Importing soil for fill			87.9348	3	622	57.5	0.127	2.32E-03	2.56E-03	1.76E-02	4.11E-02	3.32E-05
Construction equipment[2]	All construction equipment			87.9348	3	622	59.9	0.102	3.18E-02	3.48E-02	3.27E-01	6.40E-01	7.06E-04

Notes:

1. Stack parameters for worker vehicles modified to reflect realistic stack height and stack diameter for a typical passenger vehicle. Exit velocity was set at 0.001 m/s, per guidance from SJVAPCD for horizontal stacks.
2. Reference for truck stack parameters and worker vehicle temperature: Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines, California EPA-Air Resources Board, October 2000.

	Average horsepower:	HP used for stack params
Worker vehicles	195.5	200
Delivery trucks	275	300
Construction equipment	170	200

COMBUSTION - Long-term (Months 1-12)

equipment / vehicles	TOTAL EMISSION RATE (tons/year)				
	$PM_{2.5}$	PM_{10}	CO	NO_2	SO_2
Worker vehicles	0.00	0.00	0.08	0.01	0.00
Delivery trucks	0.14	0.16	1.09	2.54	0.00
Soil import	0.11	0.12	0.80	1.87	0.00
Construction equip	2.07	2.26	20.60	37.22	0.04

equipment / vehicles	number of sources in the model	Annual Hours of Operation	MODEL EMISSION RATE per source (lb/hr/source)				
			$PM_{2.5}$ annual	PM_{10} annual	CO annual	NO_2 annual	SO_2 annual
Worker vehicles	36	2640	1.68E-05	2.17E-05	1.76E-03	1.41E-04	2.79E-06
Delivery trucks	26	2640	4.17E-03	4.60E-03	3.18E-02	7.41E-02	5.98E-05
Soil import	67	2640	1.19E-03	1.31E-03	9.06E-03	2.11E-02	1.70E-05
Construction equip	142	2640	1.10E-02	1.21E-02	1.10E-01	1.99E-01	2.21E-04

SOURCE PARAMETERS

Source ID	Source Description	Easting (m)	Northing (m)	Base elevation (m)	Stack Height (m)	Temperature K	Exit Velocity (m/s)	Stack diameter (m)	Emissions per source: $PM_{2.5}$ annual lb/hr	PM_{10} annual lb/hr	CO annual lb/hr	NO_2 annual lb/hr	SO_2 annual lb/hr
Worker vehicles[1]	Worker vehicles for commuting to/from site			87.9348	0.3	622	0.001	0.051	1.68E-05	2.17E-05	1.76E-03	1.41E-04	2.79E-06
Delivery trucks[2]	Light and heavy duty delivery trucks			87.9348	3	622	57.5	0.127	4.17E-03	4.60E-03	3.18E-02	7.41E-02	5.98E-05
Soil import[2]	Importing soil for fill			87.9348	3	622	57.5	0.127	1.19E-03	1.31E-03	9.06E-03	2.11E-02	1.70E-05
Construction equipment[2]	All construction equipment			87.9348	3	622	59.9	0.102	1.10E-02	1.21E-02	1.10E-01	1.99E-01	2.21E-04

Notes:

1. Stack parameters for worker vehicles modified to reflect realistic stack height and diameter for a typical passenger vehicle. Exit velocity was set at 0.001 m/s, per guidance from SJVAPCD for horizontal stacks.
2. Reference for truck stack parameters: Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines, California EPA-Air Resources Board, October 2000.

	Average horsepower:	HP used for stack params
Construction equipment	170	200
Worker vehicles	195.5	200
Delivery trucks	275	300

COMBUSTION - Short-term (Month 24)

equipment / vehicles	TOTAL EMISSION RATE (lb/day)				
	$PM_{2.5}$	PM_{10}	CO	NO_2	SO_2
Worker vehicles	0.0	0.1	4.8	0.4	0.0
Delivery trucks	0.3	0.3	2.2	5.1	0.0
Soil import	-	-	-	-	-
Construction equip	22.6	24.8	231.6	384.9	0.5

equipment / vehicles	number of sources in the model	operating hours per day in the model	MODEL EMISSION RATE per source (lb/hr/source)				
			$PM_{2.5}$ 24hr	PM_{10} 24hr	CO 1 & 8 hr	NO_2 1-hr	SO_2 1,3 & 24 hr
Worker vehicles	36	10	1.28E-04	1.64E-04	1.34E-02	1.07E-03	2.11E-05
Delivery trucks	26	10	1.10E-03	1.22E-03	8.48E-03	1.98E-02	1.59E-05
Soil import	-	-	-	-	-	-	-
Construction equip	58	10	3.90E-02	4.27E-02	3.99E-01	6.64E-01	7.81E-04

SOURCE PARAMETERS

Source ID	Source Description	Easting (m)	Northing (m)	Base elevation (m)	Stack Height (m)	Temperature K	Exit Velocity (m/s)	Stack diameter (m)	Emissions per source: $PM_{2.5}$ 24hr lb/hr	PM_{10} 24hr lb/hr	CO 1hr & 8hr lb/hr	NO_2 1hr lb/hr	SO_2 1, 3 and 24hr lb/hr
Worker vehicles[1]	Worker vehicles for commuting to/from site			87.9348	0.3	622	0.001	0.051	1.28E-04	1.64E-04	1.34E-02	1.07E-03	2.11E-05
Delivery trucks[2]	Light and heavy duty delivery trucks			87.9348	3	622	57.5	0.127	1.10E-03	1.22E-03	8.48E-03	1.98E-02	1.59E-05
Soil import[2]	Importing soil for fill			-	-	-	-	-	-	-	-	-	-
Construction equipment[2]	All construction equipment			87.9348	3	622	59.9	0.102	3.90E-02	4.27E-02	3.99E-01	6.64E-01	7.81E-04

Notes:

1. Stack parameters for worker vehicles modified to reflect realistic stack height and diameter for a typical passenger vehicle. Exit velocity was set at 0.001 m/s, per guidance from SJVAPCD for horizontal stacks.
2. Reference for truck stack parameters: Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines, California EPA-Air Resources Board, October 2000.

	Average horsepower:	HP used for stack params
Worker vehicles	195.5	200
Delivery trucks	275	300
Construction equipment	170	200

COMBUSTION - Long-term (Months 20-31)

equipment / vehicles	TOTAL EMISSION RATE (tons/year)				
	$PM_{2.5}$	PM_{10}	CO	NO_2	SO_2
Worker vehicles	0.01	0.01	0.68	0.05	0.00
Delivery trucks	0.04	0.04	0.29	0.68	0.00
Soil import	-	-	-	-	-
Construction equip	2.81	3.07	28.62	47.37	0.06

equipment / vehicles	number of sources in the model	Annual Hours of Operation	MODEL EMISSION RATE per source (lb/hr/source)				
			$PM_{2.5}$ annual	PM_{10} annual	CO annual	NO_2 annual	SO_2 annual
Worker vehicles	36	2640	1.37E-04	1.76E-04	1.43E-02	1.15E-03	2.26E-05
Delivery trucks	26	2640	1.10E-03	1.22E-03	8.48E-03	1.98E-02	1.59E-05
Soil import	-	2640	-	-	-	-	-
Construction equip	142	2640	1.50E-02	1.64E-02	1.53E-01	2.53E-01	2.96E-04

SOURCE PARAMETERS

Source ID	Source Description	Easting (m)	Northing (m)	Base elevation (m)	Stack Height (m)	Temperature K	Exit Velocity (m/s)	Stack diameter (m)	Emissions per source: $PM_{2.5}$ annual lb/hr	PM_{10} annual lb/hr	CO annual lb/hr	NO_2 annual lb/hr	SO_2 annual lb/hr
Worker vehicles[1]	Worker vehicles for commuting to/from site			87.9348	0.3	622	0.001	0.051	1.37E-04	1.76E-04	1.43E-02	1.15E-03	2.26E-05
Delivery trucks[2]	Light and heavy duty delivery trucks			87.9348	3	622	57.5	0.127	1.10E-03	1.22E-03	8.48E-03	1.98E-02	1.59E-05
Soil import[2]	Importing soil for fill			-	-	-	-	-	-	-	-	-	-
Construction equipment[2]	All construction equipment			87.9348	3	622	59.9	0.102	1.50E-02	1.64E-02	1.53E-01	2.53E-01	2.96E-04

Notes:

1. Stack parameters for worker vehicles modified to reflect realistic stack height and diameter for a typical passenger vehicle. Exit velocity was set at 0.001 m/s, per guidance from SJVAPCD for horizontal stacks.
2. Reference for truck stack parameters: Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines, California EPA-Air Resources Board, October 2000.

	Average horsepower:	HP used for stack params
Construction equipment	170	200
Worker vehicles	195.5	200
Delivery trucks	275	300

Hydrogen Energy California, Kern County Power Project
Model Inputs - Fugitive Sources
10/4/2012

FUGITIVES - Short-term (Month 3)

Location	X (m)	Y (m)	AREA (m2)
Parking1	215	100	21500
Parking2	215	100	21500
Parking3	215	100	21500
Parking4	215	100	21500
Parking5	215	100	21500
Parking6	215	100	21500
Delivery / Construction Laydown	1075	290	311750
Construction Area 1 (fmr Soil import)	600	600	360000
Construction Area 2 (fmr Constructio	677	677	458,306

	PM10 lb/day	PM2.5 lb/day
Worker vehicles	1.1	0.1
Delivery trucks	2.1	0.3
Soil import	87.1	8.8
Construction activity	198.3	58.1

Project Site	453 acres	(from Project Description section 2.1.8)
% disturbed in one month	25%	
Acreage disturbed in one month	113.25 acres	

Fugitive Source	Operating Hours per day	TOTAL EMISSION RATE (lb/day)		MODEL EMISSION RATE (g/s-m2)	
		$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}
Parking1	10	0.0	0.2	1.06E-08	1.06E-07
Parking2	10	0.0	0.2	1.06E-08	1.06E-07
Parking3	10	0.0	0.2	1.06E-08	1.06E-07
Parking4	10	0.0	0.2	1.06E-08	1.06E-07
Parking5	10	0.0	0.2	1.06E-08	1.06E-07
Parking6	10	0.0	0.2	1.06E-08	1.06E-07
Delivery Trucks	10	0.3	2.1	1.01E-08	8.30E-08
Construction Area 1 (fmr Soil import)	10	33.4	142.7	1.17E-06	5.00E-06
Construction Area 2 (fmr Constructio	10	33.4	142.7	9.20E-07	3.92E-06

Construction Activity — Fugitives from these activities are included above with "Construction equipment"
- Dirt Piling / Material Handling
- Grading
- Bulldozing / Earth clearing
- Covered Storage Piles

FUGITIVES - Long-term (Months 1-12)

Location	X (m)	Y (m)	AREA (m2)
Parking1	215	100	21500
Parking2	215	100	21500
Parking3	215	100	21500
Parking4	215	100	21500
Parking5	215	100	21500
Parking6	215	100	21500
Delivery / Construction Laydown	1075	290	311750
Construction Area 1 (fmr Soil import)	600	600	360000
Construction Area 2 (fmr Constructio	1250	1100	1,374,919

	PM10 lb/day	PM2.5 lb/day
Worker vehicles	27.7	2.8
Delivery trucks	19.9	2.3
Soil import	588.5	59.6
Construction activity	1632.1	472.6

Project Site	453 acres	(from Project Description section 2.1.8)
% disturbed in one year	75%	
Acreage disturbed in one year	339.75 acres	

Fugitive Source	Annual hours of operation	TOTAL EMISSION RATE (tons/yr)		MODEL EMISSION RATE (g/s-m2)	
		$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}
Parking1	2640	0.0	0.1	2.25E-08	2.25E-07
Parking2	2640	0.0	0.1	2.25E-08	2.25E-07
Parking3	2640	0.0	0.1	2.25E-08	2.25E-07
Parking4	2640	0.0	0.1	2.25E-08	2.25E-07
Parking5	2640	0.0	0.1	2.25E-08	2.25E-07
Parking6	2640	0.0	0.1	2.25E-08	2.25E-07
Delivery Trucks	2640	0.0	0.2	7.91E-09	6.69E-08
Construction Area 1 (fmr Soil import)	2640	2.9	12.2	7.76E-07	3.24E-06
Construction Area 2 (fmr Constructio	2640	2.9	12.2	2.03E-07	8.48E-07

Construction Activity — Fugitives from these activities are included above with "Construction equipment"
- Dirt Piling / Material Handling
- Grading
- Bulldozing / Earth clearing
- Covered Storage Piles

Hydrogen Energy California, Kern County Power Project
Model Inputs - Fugitive Sources
10/5/2012

FUGITIVES - Short-term (Month 24)

Location	X (m)	Y (m)	AREA (m2)
Parking1	215	100	21500
Parking2	215	100	21500
Parking3	215	100	21500
Parking4	215	100	21500
Parking5	215	100	21500
Parking6	215	100	21500
Delivery / Construction Laydown	1075	290	311750
Construction Area 1 (fmr Soil import)	-	-	-
Construction Area 2 (fmr Construction	677	677	458,306

	PM10 lb/day	PM2.5 lb/day
Worker vehicles	12.3	1.2
Delivery trucks	1.0	0.1
Soil import	0.0	0.0
Construction activity	8.4	0.9

Project Site	453	acres
% disturbed in one month	25%	
Acreage disturbed in one month	113.25	acres

(from Project Description section 2.1.8)

Fugitive Source	Operating Hours per day	TOTAL EMISSION RATE (lb/day)		MODEL EMISSION RATE (g/s-m2)	
		$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}
Parking1	10	0.2	2.1	1.20E-07	1.20E-06
Parking2	10	0.2	2.1	1.20E-07	1.20E-06
Parking3	10	0.2	2.1	1.20E-07	1.20E-06
Parking4	10	0.2	2.1	1.20E-07	1.20E-06
Parking5	10	0.2	2.1	1.20E-07	1.20E-06
Parking6	10	0.2	2.1	1.20E-07	1.20E-06
Delivery Trucks	10	0.1	1.0	4.33E-09	3.98E-08
Construction Area 1 (fmr Soil import)	-	-	-	-	-
Construction Area 2 (fmr Construction	10	0.9	8.4	2.37E-08	2.30E-07

Construction Activity — Fugitives from these activities are included above with "Construction equipment"
- Dirt Piling / Material Handling
- Grading
- Bulldozing / Earth clearing
- Covered Storage Piles

FUGITIVES - Long-term (Months 20-31)

Location	X (m)	Y (m)	AREA (m2)
Parking1	215	100	21500
Parking2	215	100	21500
Parking3	215	100	21500
Parking4	215	100	21500
Parking5	215	100	21500
Parking6	215	100	21500
Delivery / Construction Laydown	1075	290	311750
Construction Area 1 (fmr Soil import)	-	-	-
Construction Area 2 (fmr Construction	1250	1100	1,374,919

	PM10 lb/day	PM2.5 lb/day
Worker vehicles	154.1	15.4
Delivery trucks	11.6	1.3
Soil import	0.0	0.0
Construction activity	241.7	48.0

Project Site	453	acres
% disturbed in one year	75%	
Acreage disturbed in one year	339.75	acres

(from Project Description section 2.1.8)

Fugitive Source	Annual hours of operation	TOTAL EMISSION RATE (tons/yr)		MODEL EMISSION RATE (g/s-m2)	
		$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}
Parking1	2640	0.0	0.3	1.25E-07	1.25E-06
Parking2	2640	0.0	0.3	1.25E-07	1.25E-06
Parking3	2640	0.0	0.3	1.25E-07	1.25E-06
Parking4	2640	0.0	0.3	1.25E-07	1.25E-06
Parking5	2640	0.0	0.3	1.25E-07	1.25E-06
Parking6	2640	0.0	0.3	1.25E-07	1.25E-06
Delivery Trucks	2640	0.0	0.1	4.24E-09	3.91E-08
Soil import	-	-	-	-	-
Construction Equipment	2640	0.5	2.7	3.67E-08	1.85E-07

Construction Activity — Fugitives from these activities are included above with "Construction equipment"
- Dirt Piling / Material Handling
- Grading
- Bulldozing / Earth clearing
- Covered Storage Piles

APPENDIX B
OEHI RESPONSES TO WORKSHOP REQUESTS

APPENDIX B
OEHI RESPONSES TO WORKSHOP REQUESTS

AIR QUALITY

Follow-up Responses to questions asked at 09-27-2012 Workshop in Sacramento – Data Requests A26, A28, A29, A30, A33c, A38, A39, and A40.

A26. Please correct the off-road equipment emissions factors and associated emissions estimates for project construction.

A26. Follow-up issues 09-27-2012. There are still issues with the revised emissions calculations, specifically; 1) the fugitive dust numbers do not match our calculations, there appear to be spreadsheet errors in these calculations, 2) We cannot tell how the off-road emission factors were derived we need more information in regards to the specific equipment model years, adjustment for actual size, etc. assumed to check the OFFROAD model derivation of the revised emission factors.

Response A26 Follow-up:

1) OEHI has reviewed the CEC fugitive dust calculation spread sheet provided by CEC and concurs with the assumptions used and estimated values. The values are approximately a 25% increase in fugitive dust PM2.5 and PM10 emissions compared to the estimates included in the Supplemental Environmental Information for CO2 EOR Project. The estimated increase in fugitive dust PM10 emissions when combined with PM10 emissions from exhaust emissions sources are still estimated to be below the PM10 thresholds of significance adopted by the San Joaquin Valley Air Pollution Control District (SJVAPCD). In addition, compliance with SJVAPCD Regulation VIII and control measures identified in Mitigation Measure AQ-2 constitute sufficient mitigation to reduce fugitive dust impacts to a level considered less than significant (SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts).
2) The off-road emission factors were derived from OFFROAD 2011 using the San Joaquin Valley Fleet inventory assuming a 2011 operating scenario year. Emissions factors were derived for each specific type of offroad equipment using all engine model years reported by OFFROAD 2011 for the equipment-specific San Joaquin Valley Fleet inventory. The offroad emissions factors generated for the project are a composite of engine model years available in the San Joaquin Valley Fleet inventory rather than any single engine model year. Emission factors expressed in pounds per brake horsepower hour were applied to the assumed brake horsepower for each piece of equipment to calculate emissions for the actual equipment size.

A28. Please explain proposed emissions controls or mitigation measures, if any, for the operation off-road and on-road equipment.

A28. Response is inadequate 09-27-2012. The mitigation measures noted are construction measures not operation measures, so what are the mitigation measures assumed for operation?…and ongoing “construction” activities such as drilling emissions; for example, it is unclear what was assumed in the drill rig emission factor development.

Response A28 Follow-up:
Mitigation measures assumed for operation are as follows:

a. All permitted equipment with any emissions will include BACT and will comply with all current and future applicable SJVAPCD rules and regulations;
b. Fugitive ROG emissions will be mitigated by complying with leak detection and repair (LDAR) requirements contained in SJVAPCD Rule 4409;
c. Emissions from operational activities will be mitigated by providing emission reduction credits (ERC) to offset emission increases from permitted equipment, as required by District Rule 2201. The required amount of ERC will be determined at the time of permit review.
d. All off-road and on-road emissions sources during project operation will comply with existing and future CARB and EPA rules and regulations.

A29. Please confirm that all of the on-site roads that will be used during project construction and operation are paved, and please identify if any street sweeping activities are proposed.

A29. Follow-up question 09-27-2012. What is meant by all of the "primary" on-site roads? Is there a large amount of travel on other roads?

Response A29 Follow-up: Primary roads at Elk Hills are roads that link major facilities and form the main route through the field. We do not anticipate that the project will result in a significant increase in the use of unpaved roads because the project development areas are already highly developed and existing roads will be utilized to the extent possible.

A30. Please provide the source or assumption used for the emergency engine emissions factors.

A30. Staff disagrees with this response 09-27-2012. Using a CO2 emission factor for natural gas use to estimate emissions from a diesel fueled engine isn't correct. Perhaps the response was mistyped?

Response A30 Follow-up: . The factors used for assessing GHG emissions from the emergency use diesel engines were obtained from Table-4 of "Appendix-A to the Regulation for the Mandatory reporting of Greenhouse Gas Emissions". The factors used in the calculations are listed below.

Table-1
Emission Factors for 175 BHP Diesel Fueled Engines

GHG	Factor Kg/MMBtu	GHG Emissions Factor Reference GHG Factors for Diesel Fuel Combustion in Stationary Sources
CO2	73.10	CARB- Mandatory Reporting Regulation Appendix-A, Table 4
CH4	3.0	CARB- Mandatory Reporting Regulation Appendix-A, Table 6
N2O	0.6	CARB- Mandatory Reporting Regulation Appendix-A, Table 6

A33. Please provide the following information regarding the proposed flare.
c. The flared gas is shown to have an assumed heat content of 250 Btu/SCF. Please provide references for this assumption and references for the assumed carbon and sulfur contents.

A33c. Response is incomplete 09-27-2012. The response didn't address the sulfur content assumption part of the request.

1. Response A33c Follow-up:
The sulfur dioxide (SOx) emissions from the flare were conservatively calculated using an emission factor of 0.0028 SOx Lb/MMBtu. The emission factor is equivalent to combusting gas having a total sulfur content of 1.0 grain of total sulfur per 100 Scf of gas (Hhv 1020 Btu/Scf). The sulfur concentration in the gas would be about 17 ppmv (60°F, 1 Atm).

A38. Please provide the maximum daily and annual criteria pollutant and GHG emissions rates associated with the maximum CO2 injection rate, including the secondary GHG emissions from electricity consumption.

A38. Follow-up question 09-27-2012. It is still unclear if the maximum daily emissions are based on the maximum total CO2 recirculation rates noted in A36 response, please confirm or provide a way to correct emissions to reflect the maximum recirculation rates (both stationary source emissions and electricity use estimates).

Response A38 Follow-up: OEHI has updated its environmental impact analyses to reflect the higher delivered volumes of CO2 anticipated from the redesigned HECA Project.

The emissions from the project were calculated based on a preliminary design rate of 552 MMScfd. The preliminary rate includes 422 MMScfd of recycle gas plus 130 MMScfd of gas received from Hydrogen Energy of California (HECA).

With respect to the emissions resulting from processing of gas at a rate up to 635 MMScfd, the increase in emissions was assumed to be directly proportional to the increase in gas volume

Table-2
Factor for Prorating
Emission from CO2 Enhanced Oil Recovery Project

CO2 EOR Design Case	Recycle Volume (MMScfd)	HECA Volume (MMScfd)	Total Gas Volume MMScfd	Emission Prorata Factor
Revised Case	550	135	685	1.2409
Original Case	422	130	522	

The maximum daily emissions from the original design case of 522 MMScfd are summarized in Attachment-I, Table-1.A through Table-4.A

The maximum daily and annual emissions corresponding to the design case of 635 MMScfd are summarized in Attachment-II, Table 2.A through 2.D. The tables are included in PDF file A38, Attachment I & II.

A39. Please provide a current best estimate for the anticipated oil and gas recovery rates for the EOR/CCS project, and the baseline "business as usual" production without this EOR/CCS project.

A39. Follow-up question 09-27-2012. CEC desires to use oil volumes to evaluate GHG total impact. Please provide general estimates sooner instead of modeling results that will not be available for some time.

Response A39 Follow-up: Oil production with current "business as usual" primary, secondary, and EOR projects in the Phase 1 CO2 Project areas is approximately 3,300 bopd. Industry standard CO2 utilization levels are between 6 mscf/bbl and 30 mscf/bbl. OEHI's utilization is expected to fall within this range. Assuming HECA delivers 135 mmscfd, the Phase 1 CO2 EOR project will recover an average incremental 4,500 to 22,500 bopd over the 20-year project life. Hydrocarbon gas incremental production is not targeted by CO2 EOR.

A40. Please describe the rationale for the offset exempt status for the stationary emissions sources for which exemption is claimed.

A40. Follow-up question 09-27-2012. Does Part 2 of the response regarding exemptions includes all flare emissions, including the pilot gas emissions.

Response A40 Follow-up: The SJVAPCD has handled the emissions resulting from the use of pilot gas and purge gas differently over the years. In the past, the Air District included the pilot/purge gas emissions in the calculations. In more recent years, the District has excluded the emissions from pilot gas/purge gas. The calculations used for determining the flare emissions are based on the more conservative approach. The emissions from the flare pilot/purge gas are included in the emission calculations.

BIOLOGICAL RESOURCES

Workshop Request A8: For the carbon dioxide pipeline route, habitat impact acreages were calculated as 0.11 acres of permanent impact and 28.89 acres of temporary impact. Of this acreage, what is the impact acreage of the CO2 pipeline route that would occur on Elk Hills Oil Field (EHOF)? What is the acreage of the carbon dioxide route that would occur outside of the EHOF?
The CO2 Supply Pipeline Route has been estimated to be 3.36 miles in length. We estimate that 63% or 18.2 acres of the 28.89 acres of estimated temporary disturbance and 50% of the .11 acres of estimated permanent disturbance will occur on OEHI property which is located on the south side of the aqueduct. The remaining 37% or 10.7 acres of the 28.89 acres of estimated temporary disturbance and 50% of the .11 acres of estimated permanent disturbance will occur on north of the aqueduct on non-OEHI property.

Workshop Request A9: Since Occidental Petroleum will construct, own, operate and perform maintenance (O&M) activities along the pipeline, what is the expected level of O&M vehicle travel (number of vehicles, times per year, pipeline replacement needs etc)? Does this impact

calculation include impacts for a maintenance road and if so, temporary or permanent impacts? Please discuss whether the maintenance road would be gravel or paved and whether the road would be open for public access.

O&M activity and vehicle traffic is not expected to significantly increase along the pipeline route on either side of the aqueduct following project construction. Continuous monitoring will occur on both ends, and bi-monthly vehicle trips are expected along the route for pipeline visual inspection and O&M. The pipeline route on OEHI property will be accessible from existing service roads on the south end and the north end can be accessed using established trails currently used for infrequent access to other unit property. EHOF Roads are not available for use by the general public.

No agreements are in place regarding a pipeline ROW or service road agreements for the proposed pipeline route north of the aqueduct. OEHI will require access to the pipeline route for O&M activity when an agreement is obtained.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
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AMENDED APPLICATION FOR CERTIFICATION FOR THE HYDROGEN ENERGY CALIFORNIA PROJECT

Docket No. 08-AFC-08A
(Revised 10/8/12)

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DECLARATION OF SERVICE

I, Dale Shileikis, declare that on November 5, 2012, I served and filed a copy of the attached Responses to CEC Workshop Requests: Nos. A1 through A32, dated November, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at:
http://www.energy.ca.gov/sitingcases/hydrogen_energy/index.html

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:
(*Check all that Apply*)

For service to all other parties:

__X__ Served electronically to all e-mail addresses on the Proof of Service list;

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AND

For filing with the Docket Unit at the Energy Commission:

__X__ by sending one electronic copy to the e-mail address below (preferred method); OR

____ by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

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OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

____ Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

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I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.