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February 3, 2012

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BELL BEND NUCLEAR POWER PLANT REVISED GENERAL AIR CONFORMITY ANALYSIS REPORT, REVISION 2 Docket No. 52-039 BNP-2012-041

References: 1) Letter from T.L. Harpster (PPL) to Chris Trostle (DEP), "Bell Bend Nuclear Power Plant General Air Conformity Analysis Report," dated October 7, 2011. 2) Letter from G. Petrewski (PPL) to Chris Trostle (DEP), "Bell Bend Nuclear Power Plant Revised General Air Conformity Analysis Report", dated January 13, 2012.

This letter transmits revision 2 of the Bell Bend General Air Conformity Report (Enclosure 1). Per your suggestion, revision 2 was prepared to include estimates of the annual contribution of small engines of less than 50 Hp to the construction emission totals for NOx and VOCs.

Should you have guestions or need additional information, please contact Brad Wise of my staff at 610.774.6508 or via e-mail at bawise@pplweb.com.

Respectfully,

Youry Retremple

Gary Petrewski

GP/kw

Enclosure: General Air Conformity Analysis NOx and VOC Emissions from Construction Activities Bell Bend Nuclear Power Plant, Revision 2, February 2012

cc: (w/ Enclosure)

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General Air Conformity Analysis NOx and VOC Emissions from Construction Activities Bell Bend Nuclear Power Plant, Revision 2, February 2012



Environment

Submitted to: PPL Bell Bend, LLC Submitted by: AECOM Chelmsford, MA Project No. 60136677 Rev.2 February 2012

General Air Conformity Analysis NO_X and VOC Emissions from Construction Activities Bell Bend Nuclear Power Plant



Environment

Submitted to: PPL Bell Bend, LLC Submitted by: AECOM Chelmsford, MA Project No. 60136677 Rev.2 February 2012

General Air Conformity Analysis NO_X and VOC Emissions from Construction Activities Bell Bend Nuclear Power Plant

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Report

1.0 Introduction

PPL Bell Bend, LLC is proposing to construct and operate a new nuclear power unit, the Bell Bend Nuclear Power Plant ("BBNPP") adjacent to the existing Susquehanna Steam Electric Station in Luzerne County, Salem Township, Pennsylvania. The new unit will have a net electric generation capacity of about 1,600 megawatts.

Pursuant to the General Conformity Requirements under 40 CFR 93.150 et seq, the Nuclear Regulatory Commission (NRC) as the lead federal agency is required to make a conformity determination with regard to the proposed construction and operation of BBNPP. The General Conformity Rule applies only in locations designated in 40 CFR Part 81 as maintenance or nonattainment areas for any criteria air pollutant. As shown in Figure 1-1, the BBNPP project site in Luzerne County, Pennsylvania is located within the Scranton-Wilkes Barre maintenance area for the 8-hour ambient ozone standard. As such, construction-related emissions of ozone precursors, i.e., oxides of nitrogen (NO_X) and volatile organic compounds (VOC) from both direct and indirect project-related emissions have been evaluated to determine if annual emissions of these pollutants during the years of construction are above the applicable tonnage thresholds for applicability of General Conformity requirements. The applicable de minimis thresholds are 100 tons per year of NO_X and 50 tons per year of VOC emissions per 40 CFR 93.153.

In accordance with the definition of indirect emissions in §93.153, only emissions "that are caused or initiated by the Federal action and originate in the same nonattainment or maintenance area but occur at a different time or place as the action" are included in the estimate of emissions for General Conformity purposes. As such, motor vehicle emissions outside of the Scranton-Wilkes Barre ozone maintenance area are not included in this study.

Note that <u>operation</u> of BBNPP will not result in significant generation of NO_X emissions, or significant releases of VOCs. Typical sources of NO_X during operation of BBNPP will include vehicle operations (mobile sources) and periodic operation of diesel generators that are used to provide backup power (stationary sources). Emissions of NO_X and VOCs from BBNPP stationary source operations will be subject to restrictions imposed under the Plan Approval process for minor source permitting in Pennsylvania. Potential NO_X and VOC emissions from operations are projected to be below de minimis threshold values listed in 40 CFR 93.153(b). Mobile source emissions from operations were estimated by modeling the on-road emissions from commuting operational employees. Permitted emissions from the BBNPP stationary sources are expected to be less than 25 tpy of NO_X and VOC. Regardless of the quantity, operational emissions are specifically excluded from the requirements for a conformity determination per the exclusion found in 40 CFR 93.153(d) for major or minor new or modified stationary sources that require a permit under the new source review (NSR) program (Section 110(a)(2)(c) and Section 173 of the Clean Air Act) or the prevention of significant deterioration permitting program (Title I, part C of the Act). Stationary sources associated with the operation of BBNPP are expected to require permitting under the PADEP's minor source permitting program.

This report documents the NO_X and VOC emissions associated with the construction of BBNPP for purposes of determining applicability to the federal Clean Air Act General Conformity Rule. Direct emissions included vehicle emissions from non-road construction equipment and engine-driven construction support equipment. Indirect activities considered in this analysis included commercial vehicles used to deliver material, equipment and commodities and worker vehicles used for commuting to and from the plant construction site.

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Revision 2 of this report contains information requested by PADEP in regards to estimation of NO_x and VOC emissions from small combustion units which are less than 50 hp in size. These small sources were specifically not included in the list of sources generated by the prospective construction firm which developed the initial construction equipment list. However, estimates for these emissions have been made based on the construction plans for a similar nuclear power plant in Maryland. This revision also includes updates to the emissions calculations which affects non-road diesel emissions in Tables 3-1 and 3-2 and Appendix B Tables B-1a and B1b. As explained in Section 4.1, the emission calculation methodology has been modified to not double count load factor, which had led to underestimated emissions. Also, emission factors for pumps had been incorrectly referenced in the calculation workbook.

1.1 Content of the Report

This report consists of four sections and two appendices.

Section 1 serves as an introduction to the need to provide a General Conformity Applicability Analysis.

Section 2 describes the methodology taken to provide the NRC with a breakout of safety-related emissions as defined under 10 CFR 50.

Section 3 presents the estimated direct and indirect NO_X and VOC emissions from construction of the project. This is presented for both total construction and as safety-related construction per 10 CFR 50.

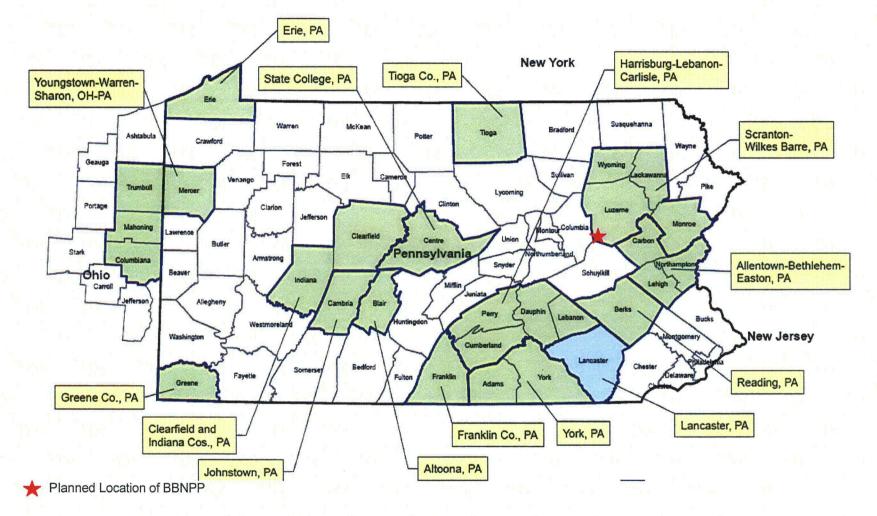
Section 4 describes the emission estimation methodology for the non-road and the direct and indirect on-road mobile vehicles and small equipment less than 50 Hp.

Technical references are provided in Section 5.

Appendix A contains a study prepared by Sargent & Lundy of estimated fuel consumption during construction of BBNPP. Appendix B contains emissions calculations which support Tables 3-1 and 3-2 of this analysis. It is broken up into five tables which show the calculation of emissions for non-road construction equipment (denoted as B-1a and B-1b), construction commuting (Table B-2), deliveries (Table B-3), and on-road on-site vehicles (Table B-4).







Report

2.0 Emissions Evaluation Approach

2.1 Nuclear Regulatory Commission

Per Nuclear Regulatory Commission (NRC) regulations in 10 CFR Part 50, only certain portions of construction are considered to be under the NRC's jurisdiction. Sargent & Lundy ("S&L") PPL Bell Bend's current project/construction engineering firm prepared a study of estimated fuel usage during construction of BBNPP (Appendix A). Equipment in the fuel study includes an estimate of the fuel used to support the construction of safety-related systems, structures and components. The fuel study "was developed using preliminary site information and assumptions based on recent participation in new fossil construction, current planning for new nuclear construction and past nuclear construction experience".

The definition of construction under 10 CFR 50.2 reads as follows:

Construction or *constructing* means, for the purposes of §50.55(e), the analysis, design, manufacture, fabrication, quality assurance, placement, erection, installation, modification, inspection, or testing of a facility or activity which is subject to the regulations in this part and consulting services related to the facility or activity that are safety-related.

Additional delineation of construction versus "pre-construction" activities is found under 10 CFR 50.10(a)(1) and (2) under limited work authorization. These are paraphrased below.

(1) Activities constituting construction are the driving of piles, subsurface preparation, placement of backfill, concrete, or permanent retaining walls within an excavation, installation of foundations, or in-place assembly, erection, fabrication, or testing, which are for: safety-related structures, systems, or components (SSCs)

(2) Construction does not include: Site exploration, preparation of a site for construction of a facility, including clearing of the site, grading, installation of drainage, erosion and other environmental mitigation measures, and construction of temporary roads and borrow areas; excavation; erection of support buildings building of service facilities

S&L has determined the portions of construction operations which would qualify as safety-related. In determining the construction emissions as defined in 10 CFR Part 50.2 and Part 50.10, certain groups of activities were lumped together as safety-related whereas other cases only have specific safety-related equipment/activities. Portions of construction activities (as indicated in Appendix A) which are indicated as safety-related include:

- Structural Concrete (50% safety-related)
- Switchyard (25%)
- Superstructure & Structural Steel (40%)
- Mechanical and Electrical Installation (50%)
- Soil Compaction (10%) for Powerblock

Total estimated fuel use for an activity was multiplied by the percentage of work estimated to be safetyrelated to determine the quantity of fuel used to construct the safety-related portions of that activity. Emissions from equipment associated with safety-related activities are estimated separately from the overall emissions estimate. The safety-related construction emissions are found in Tables B-1b and Table B-4 in Appendix B. Report

3.0 Emissions Estimates

The evaluation of the emissions associated with construction of the plant is the aggregate of non-road and on-road direct and indirect emissions. Non-road emissions were estimated using NONROAD2008a model methodology and on-road emissions were estimated using EPA's MOVES2010a model. AECOM incorporated these two models and applied them to determine the emissions.

3.1 Construction/Pre-Construction Emissions

Table 3-1 presents the total estimated NO_x and VOC emissions calculated for each year of construction within the Scranton-Wilkes Barre ozone maintenance area. As seen in Figure 1-1, BBNPP is located in the Scranton-Wilkes Barre 8-hour ozone maintenance area, but is also close to the Reading and Allentown-Bethlehem-Easton maintenance areas. Vehicle emissions from these other ozone maintenance areas are not included in the calculations as they fall outside of the definition of indirect emissions as noted in Section 1.0.

From Table 3-1, annual NO_x emissions are estimated to be greater than the 100 ton conformity threshold in each of the first four construction years. Annual VOC emissions are estimated to be less than the 50 ton conformity threshold in each of the seven construction years.

Table 3-2 presents a breakout of safety-related construction emissions as defined under 10 CFR Part 50 – Domestic Licensing for Production and Utilization Facilities. Emissions reported in Table 3-2 are based on equipment types expected to perform safety-related construction activities as defined in 10 CFR 50. For example activities excluded are direct and indirect emissions from on-road motor vehicles (except concrete trucks) and site preparation equipment (except some soil compaction and concrete placement). The S&L Fuels Report provided the percentage of fuel utilization for each individual piece of equipment and the percentage utilization for safety-related activities.

As stated previously, the emissions in Table 3-2 represent the best estimate of construction emissions as defined by 10 CFR Part 50 and an estimate of associated fuel utilization. Based on the NRC definition of construction and estimated fuel utilization by S&L, Table 3-2 shows no exceedances of the conformity threshold for NO_x or VOC.

3.2 Operational Emissions

As noted in Section 1, the operational emissions from BBNPP stationary sources will require permitting under the PADEP's Plan Approval permitting process. As such, these emissions are specifically excluded from the requirements for a conformity determination per the exclusion found in 40 CFR 93.153(d).

The only other emissions of NO_X and VOC from BBNPP operations are indirect emissions associated with vehicular emissions from employee traffic. As stated in the preliminary traffic impact study prepared in September 2011 (Reference 1), 363 permanent employees are expected once BBNPP begins operations resulting in at most 363 additional round trips. This is similar to the round trips estimated for the construction workforce in Years 2 (423 round trips) and 7 (308 round trips) but well below the estimated 3,039 peak daily round trips during years 4 and 5 of construction.

Using similar assumptions as with the construction workforce, emissions from indirect operational employee commuting are expected to be only 3.5 tons/yr of NO_X and 1.1 tons/yr of VOC in the Scranton Wilkes-Barre maintenance area. These levels are well below the respective applicability thresholds of 100 tons/yr NO_X and 50 tons/yr VOC.

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Environment

				NOx							VOC			
	All non-			Comm. &	On-site on-road		Exceeds conformity	All non-			Comm 9	On-site		Exceeds
Total	road	Small	Workforce	const.	mobile	Total NOx	threshold?	road	Small	Workforce	Comm. & const.	on-road mobile	Total VOC	conformity threshold?
Const.	diesel		commuting	deliveries	engines	(Tons)	(Yes/No)	diesel		commuting		engines	(Tons)	(Yes/No)
Year 1	123.1	6.4	1.0	1.4	1.6	133.5	Yes	9.4	1.5	0.3	0.1	0.2	11.5	No
Year 2	121.8	7.7	3.7	25.5	3.8	162.6	Yes	8.9	1.8	1.1	1.4	0.6	13.8	No
Year 3	81.7	6.3	11.4	27.2	5.7	132.2	Yes	5.6	1.7	3.1	1.5	0.9	12.8	No
Year 4	80.5	5.8	22.3	7.9	5.2	121.6	Yes	5.5	1.7	4.8	0.4	0.8	13.2	No
Year 5	38.0	3.4	22.3	4.3	3.7	71.7	No	2.6	1.2	4.8	0.2	0.6	9.4	No
Year 6	14.3	1.5	11.7	2.4	1.4	31.2	No	1.1	0.7	3.2	0.1	0.2	5.3	No
Year 7	17.5	1.2	2.3	2.3	1.2	24.5	No	1.5	0.4	0.6	0.1	0.2	2.8	No

Table 3-1 BBNPP Total Construction Emissions within the Scranton-Wilkes Barre Ozone Maintenance Area

Includes activities not defined as construction under 10 CFR 50.

Table 3-2 BBNPP 10 CFR 50 Construction Emissions within the Scranton-Wilkes Barre Ozone Maintenance Area

		• • •		NOx							VOC			
					On-site		Exceeds					On-site	Safety	Exceeds
Safety	All non-			Comm. &	on-road	Safety	conformity	All non-			Comm. &	on-road	Related	conformity
Related	road	Small	Workforce	const.	mobile	Related	threshold?	road	Small	Workforce	const.	mobile	VOC	threshold?
Const.	diesel	Combustion	commuting	deliveries	engines	NOx (Tons)	(Yes/No)	diesel	Combustion	commuting	deliveries	engines	(Tons)	(Yes/No)
Year 1	0.1	0.0	0	0	0	0.1	No	0.0	0.0	0	0	0	0.0	No
Year 2	4.1	0.2	0	0	0.8	5.1	No	0.3	0.1	0	0	0.1	0.5	No
Year 3	15.8	0.8	0	0	0.9	17.6	No	1.1	0.2	0	Ō	0.1	1.4	No
Year 4	29.3	1.5	0	0	0.7	31.5	No	2.0	0.3	0	Ó	0.1	2.4	No
Year 5	13.2	0.7	0	0	0.5	14.4	No	0.9	0.1	0	0	0.1	1.1	No
Year 6	4.6	0.2	0	0	0.2	5.0	No	0.3	0.1	0	0	0.0	0.4	No
Year 7	3.4	0.2	0	0	0.2	3.8	No	0.3	0.0	0	0	0.0	0.3	No

In both tables, the small combustion is added per the discussion in Section 4.1.1. This estimate is performed by taking 5% of the total NO_X and 15% of the total VOC emissions of non-road diesel, commuting, construction deliveries, and on-site on-road mobile engines.

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4.0 Emission Estimation Methodology

Sargent and Lundy ("S&L"), PPL Bell Bend's current project/construction engineering firm, was responsible for developing an estimate of fuel-burning equipment (non-road and on-road) needed to construct the proposed BBNPP. S&L provided an equipment schedule with equipment sizes, estimated annual hours of operation by equipment type, and estimated quantities of materials delivered. As previously mentioned in Section 2, this list was then used to develop a safety- related construction list of equipment. Emissions calculations based on this equipment along with indirect NO_X and VOC emissions are presented in Appendix B.

4.1 Emissions from Non-Road Equipment

Emissions from non-road equipment (mobile, portable, and stationary fuel-burning equipment) were estimated using EPA's NONROAD2008a model and methodology (References 2-5). S&L provided a study of fuel consumption from construction equipment engines with horsepower and annual hours of operation by equipment type. AECOM developed a spreadsheet -based approach to estimate non-road engine emissions based on the NONROAD model guidance and NONROAD model data files. This allows the emissions estimates to be thoroughly checked and allows transparency to how emissions are developed.

Applicable engine tiers for this analysis were based on the estimated tiers as indicated in the S&L fuel study. No gasoline engines greater than 50 hp were assumed as part of the S&L study. The applicable SCC codes for equipment were chosen (based on engine duty and fuel type) from the list in Appendix A of Reference 4. This cross reference allowed AECOM to match equipment from S&L's list to the NONROAD data files which contain the steady-state pollutant emission factors and load factors.

The equation involved in determining the non-road construction emissions is as follows (from Page 1 of Reference 4):

EFadi = EFSS * UF

Equation 1

 EF_{adj} = Final emission factor used in model after adjustments to account for deterioration (g/hp-hr) EFss = NONROAD2008a steady-state emission factor (g/hp-hr)

DF = Deterioration factor

The deterioration factor (DF) is a function of the technology type and age of the engine.

The NONROAD methodology addresses the effects of deterioration in the engines by multiplying the steady-state emission factor for each category of engine by deterioration factor (DF). The following equation (from p 19 of Reference 3) is used to calculate DF as a function of engine age

$DF = 1 + A * (Age factor)^{\circ}$ for Age Factor ≤ 1

DF = 1 + A for Age Factor > 1

Where Age factor = fraction of median life expended = (cumulative hours * load factor) / median life at full load, in hours.

A = constants for a given pollutant / technology type

 $b \le 1$, for most engines or 0.5 for 2-stroke engines less than 25 Hp

Equation 3

Equation 2

Deterioration is capped at the end of an engine's median life (age factor = 1), under the assumption that an engine deteriorated to a point where any increased deterioration is offset by maintenance. For this analysis, all age factors were set to 1 ("fully deteriorated") in order to simplify the calculations.

Annual non-road emissions were estimated using the following equation from Page 1 of Reference 4

$$E_{Sta} = EF_{adj} * HP * Hours * Load Factor * \frac{Ton}{2000 \, lb} * \frac{lb}{453.6 \, g}$$
Equation 4

E_{Sta} = Annual stationary source emissions in tons
EF_{adj} = Final adjusted emission factor (g/hp-hr)
HP = Rated horsepower hp
Hours = Annual operating hours of the equipment
Load Factor = fraction of available rated power (set equal to 1.0 for all equipment for this analysis)

This equation was used for each non-road engine. The Caterpillar 627G scraper is the only piece of construction equipment which uses a dual engine setup. It contains an additional engine in the rear of the body. For this piece of equipment, the calculation was carried out once for each separate engine.

The load factor is an adjustment included in the model to avoid grossly over counting emissions. It is the average fraction of the rated power of an engine that is expected to be actually used in annual operation. This factor takes into account idling, partial load operation, and transient operation. For instance, a 100 hp diesel powered crane has a load factor of 0.43 from the NONROAD data table based on the SCC code. This means that in normal operation, the crane is expected to use an average of 43 hp for every available 100 hp capacity. These factors are based on surveys of equipment users. S&L has included load factors which account for partial load operation and idling. The operating hours in Appendix A reflect this "effective operating time". For this reason, the load factor in Equation 4 was set to equal 1, so as to not underestimate emissions by double counting the load factors.

One final adjustment that is special to VOC is the conversion from total hydrocarbons (HC). The NONROAD model steady-state emission factors are all in terms of HC. This is so the model has a common basis to output emissions in terms of VOC, total organic gasses (TOG), or non-methane hydrocarbons (NMHC). Reference 5 gives the conversion from HC to VOC as 1.053 for diesel engines.

4.1.1 Small Equipment <50 HP

Small construction equipment less than 50 HP is typically brought on-site on an as-needed basis to perform discrete tasks where larger equipment may be too large or too powerful. Classes of small equipment which would be needed at the site are portable welders, plate compactors, cable winches/pullers, chainsaws, pumps, air compressors, and small generators to power portable lighting rigs.

Although an estimate for small combustion equipment cannot be calculated with certainty because of many unknowns, the small equipment is expected to contribute in the neighborhood of 5% of the overall NO_x and 15% of the overall VOC emissions¹ during peak construction. This estimate is based on construction plans of a similar nuclear power plant in Maryland. Since small equipment is less capital intensive to purchase, this class of equipment is more likely to be of more recent vintage with a higher EPA Tier rating. The expected contribution of these emissions are included in Tables 3-1 and 3-2.

¹ The difference between the NO_X and VOC estimates is mainly due to gasoline combustion which has higher VOC emission factors. The VOC percentage is also larger since the total VOC emissions are smaller than NO_X.

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4.2 On-Road Vehicles

Estimation of construction related motor vehicle emissions was calculated with EPA's MOVES2010a Vehicle Emission Modeling Software (Reference 6). The MOVES model was made available by EPA in the Federal Register on March 2, 2010, and is considered to be the most accurate and up to date emission estimation model available for on-road vehicles. This model was chosen in accordance with §93.159(b)(1) which requires that the motor vehicle emissions estimate use the most current version of the motor vehicle emissions model specified by EPA.

The activities modeled included the construction workforce commute to and from the project site, commercial and construction deliveries to the project site during the construction period, and non-road mobile sources onsite over the construction years. Both running and startup emissions were evaluated using the MOVES model. The MOVES model analysis was conducted using year specific data files for Luzerne County as made available through the PADEP. These data files included county specific meteorological data, fuel supply and formulation data, inspection & maintenance program information, and vehicle age distributions. Vehicle trip numbers and hours of operation were developed from the project's fuel consumption study, located in Appendix A. Years 1 and 2 of the construction period were calculated using 2013 as a representative year for commuting and delivery mobile source emissions purposes. Year 3 and later use 2014 as a representative year for commuting and delivery mobile source emissions purposes. Estimation of on-site on-road vehicles used 2013 as a representative year for commuting and delivery mobile source emissions purposes.

In evaluating the construction workforce commute, vehicle miles traveled ("VMT") were calculated for the roadway links leading into the project site based on the roadway trip generation split provided in the traffic analysis conducted by KLD Engineering (Reference 1) and the maximum number of workforce vehicles, per year, accessing the project site. VMT for each roadway link was calculated by multiplying the number of vehicles on the link times the length of the link, resulting in vehicle-miles traveled. Based on the speed of each roadway link, the MOVES model was then executed using the representative year correspondent to the construction year to calculate an annual average VOC and NO_x emission factor for each roadway link (in grams/vehicle-mile traveled). This annual emission factor was then multiplied by the VMT for the link to determine VOC and NO_x emissions as follows:

$$E_{R} = \frac{EF_{R} * VMT}{453.6\frac{g}{1b} * 2000\frac{lb}{ton}}$$

Equation 5

 $\begin{array}{lll} \mbox{Where:} & E_R \mbox{ is the annual VOC or NO_X emissions at a roadway link (tons/year) } \\ & EF_R \mbox{ is the VOC or NO_X emission factor from MOVES (grams/mile-vehicle) } \\ & VMT \mbox{ is the annual vehicle miles traveled on the roadway link (vehicle-miles/year) } \\ & 1/453.6 \mbox{ is the conversion for grams to pounds } \\ & 1/2000 \mbox{ is the conversion from pounds to tons } \end{array}$

Summing over all roadway links in the ozone maintenance area provided total emissions of VOC and NO_X from the commute of construction workers. In addition to the emission estimates from running vehicles, emissions from vehicle start-ups were also calculated using MOVES as follows:

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Equation 6

Where:Es is the annual VOC or NOx emissions from vehicle startups (tons/year)EFs is the VOC or NOx emission factor from MOVES (grams/start-vehicle)SU is the annual number of construction workforce startups (vehicle-starts/year)1/453.6 is the conversion for grams to pounds1/2000 is the conversion from pounds to tons

Thus, both running emissions and start-up emissions from the construction workforce were considered. Emissions associated with the construction workforce are included in Table 3-1. In executing the MOVES model, annual average emission factors were based on running the MOVES model for twelve hours of the year and averaging these twelve values. (The MOVES model when run at the project level only allows for individual hours to be modeled. Further, the model does not allow the user to specify a specific day of the month, the model uses an average day of the month). The hours run were for the months of January, April, July and October using time periods from 7 to 8 AM, 4 to 5 PM, and Midnight to 1 AM. These hours coincide with the project's construction period shift times. Further the MOVES model results, for each of these hours, were weighted based on the fact that approximately 60% of the construction force will work the day shift, 35% will work the evening shift, and 5% will work the overnight shift.

Truck trips from commercial and construction deliveries were also analyzed for each of the seven years of the construction period. The construction fuel consumption study (see Appendix A), provides the total number of deliveries to the project site for the construction period. The number of deliveries for each individual year, by material delivered, was calculated by scaling total deliveries (over seven years) by the individual year's fuel use divided by the total fuel use over seven years. Vehicle miles traveled were then calculated for each year by multiplying the number of deliveries, for a specific year, times the average travel distance. (The fuel consumption study provides the average round trip by material delivery type.) Further, the fuel consumption study indicates that approximately 45% of the vehicle miles traveled (VMT) associated with deliveries will occur in the Scranton Wilkes-Barre Maintenance Area, 10% will occur in the Reading Maintenance Area, and 45% of the VMT will occur in non-Maintenance Areas. Based on this trip scheme, a VMT was calculated for the commercial and construction delivery truck traffic in the Scranton Wilkes-Barre Maintenance Area for each year of the construction period. Similar to the construction workforce, annual emissions of VOC and NOx were calculated for both run times and startups based on MOVES emission factors, VMT, and number of startups per year. MOVES emission factors were developed assuming half the deliveries were by short haul, single unit trucks and half the deliveries were by short haul, combination unit trucks. Annual VOC and NO_x emissions from delivery truck activity are shown in Table 3-1.

Also for the construction period, on-site on-road motor vehicles used onsite were evaluated with the MOVES model. These vehicles consist of Ford F-250 and F-650 trucks, and Mack MP6 trucks. These motor vehicles were included in the construction equipment fuel study with non-road construction equipment, but emissions are calculated separately using the MOVES model instead of the NONROAD model. Annual VOC and NO_x emissions from the operation and startup of these trucks were calculated. It was assumed that each vehicle will have 15 startups per day, and that 10% of the operating hours will be in idle mode and 90% of the operating hours will be in travel mode. Annual operating hours were determined from the construction fuel consumption study by scaling the total operating hours, over the construction years, by the fraction of fuel used in each year. Based on the annual hours of operation and the number of trucks, total annual VOC and NO_x emissions were calculated as follows:

AECOM

 $E_{T} = (EP_{TR} * OPH * SP * 0.9) + (EF_{I} * OPH * 0.1) + \frac{EF_{S} * SU}{453.6 \frac{g}{ton} * 2000 \frac{lb}{ton}}$

Equation 7

Where: E_T is the annual VOC or NOx emissions from a non-road vehicle (tons/year) EF_{TR} is the VOC or NOx emission factor for travel mode (grams/mile-vehicle)OPH is the annual operating hours (total operating hours/year)SP is the operating speed (miles/hour)0.9 is based on 90% of operating hours in travel modeEF_I is the VOC or NOx emission factor for idle mode (grams/hour-vehicle)0.1 is based on 10% of operating hours in idle modeEF_S is the VOC or NOx emission factor for startups (grams/start-vehicle)SU is the annual number of non-road vehicle startups (vehicle-starts/year)

This equation was used to calculate VOC and NO_X emissions for the F-250, F-650 and Mack MP6 trucks separately. These emissions were then summed for the vehicle types to calculate the total emissions reflected in Table 3-1. Total emission results from the onsite concrete trucks in safety-related construction are included in Table 3-2.

Table 3-1 also provides the total annual VOC and NO_x emissions from all of the motor vehicle sources for the construction period for the Scranton Wilkes-Barre Maintenance Area.

5.0 References

- Traffic Impact Study Related to the Proposed Construction and Operation of the Bell Bend Nuclear Power Plant *Preliminary Findings Report*, KLD Engineering, September 14, 2011 Rev. 5A
- 2. EPA's "NONROAD08 Model (non-road engines, equipment, and vehicles)" http://www.epa.gov/otaq/nonrdmdl.htm
- 3. EPA's "Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling----Compression-Ignition" NR-009c April 2004, EPA420-P-04-009.
- EPA's "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling" NR-005c April 2004, EPA420-P-04-005
- EPA's "Conversion Factors for Hydrocarbon Emission Components" NR-002c December 2005, EPA420-R-05-015
- 6. EPA's "MOVES Vehicle Emission Modeling Software" MOVES2010a http://www.epa.gov/otaq/models/moves/index.htm

Appendix A

Sargent & Lundy Fuel Study



Construction Vehicle Fuel Consumption Study Bell Bend Nuclear Power Plant UniStar Nuclear Energy

Non-Safety-Related

Report No. SL-010055 Revision 2 Project No. 12198-434

August 30, 2011

Sargent & Lundy

UniStar Nuclear Bell Bend Nuclear Power Plant Construction Vehicle Fuel Consumption Study Report No: SL-010055, Rev. 2 Project No. 12198-434 Page 2 of 23

Approval Page

BBNPP Construction Vehicle Fuel Consumption Study

Non-Safety-Related

Revision Summary

Rev. 0	Initial Issue
Rev. 1	Revised Earthwork Quantities (Report #SL-009450, Revision 8)
Rev 2	Revised earthwork quantities and
	updated installation detail per Joint Permit Application
	Issued for Use

Prepared By: Wendorf Reviewed By:]1] M. R. Dougherty Approved B

Date: 8/30/2011

Date: 8/30/2011

Date: _8/30/2011

D. L. Shamblin

UniStar Nuclear Bell Bend Nuclear Power Plant Construction Vehicle Fuel Consumption Study Report No: SL-010055, Rev. 2 Project No. 12198-434 Page 3 of 23

Purpose/Objective

Direct and indirect vehicle emissions are to be included in the air quality applicability analysis for the Bell Bend Nuclear Power Plant (BBNPP) construction period. Construction period vehicle emissions include engine exhaust from non-road construction equipment, commercial vehicles used to deliver material, equipment and commodities, engine driven construction support equipment, and worker vehicles used for their commute to and from the plant construction site.

This report provides fuel consumption estimates for non-road (construction) equipment, worker commuting, and commercial deliveries and services deemed necessary to prepare the site and construct the BBNPP. The associated information and fuel use data (Attachment 1) includes equipment types and model numbers, horsepower ratings, and estimated and quantities of gasoline and diesel fuel usage. The fuel usage estimate is based on information in the Combined Operating License application (COLA), available preliminary design information and also from assumed nuclear project non-road equipment usage based on experience, construction sequencing, forecast construction durations, estimated site construction support, and projected material and equipment deliveries based on current preliminary plant construction quantities and information.

Background

BBNPP is a proposed 1600 MWe Evolutionary Power reactor (EPR) plant to be built near the Susquehanna Steam Electric Station site, close to the Susquehanna River. The proposed new Bell Bend plant site is located in the Scranton Wilkes-Barre ozone maintenance area which consists of the following counties:

- Luzerne
- Wyoming
- Lackawanna
- Monroe

The site is approximately 12 mi (19 km) northwest of Hazelton, Pennsylvania, 19 mi (31 km) southwest of Wilkes-Barre, Pennsylvania, 35 mi (56 km) southwest of Scranton, Pennsylvania, 47 mi (76 km) east, southeast of Williamsport, Pennsylvania; 50 mi (80 km) north of Reading, Pennsylvania, 70 mi (112 km) northeast of Harrisburg, Pennsylvania, and approximately 85 mi (137km) northwest of Philadelphia, Pennsylvania.

Inputs/Assumptions

- 1. Sargent & Lundy DIT-12198-11-002
- 2. RFI-EPR-11-039 RFI input and Revision 1 KLD Traffic Study Assumptions and clarifications
- 3. RFI SL-BBNPP-161 Construction duration and working shift information.
- 4. RFI SL-BBNPP-169 Bulking factor values
- 5. RFI SL-BBNPP-170 Power Block excavation quantities.
- 6. RFI SL-BBNPP-173 Cooling pond and towers over excavation quantities
- 7. RFI SL-BBNPP-189 Grading, drainage and earthwork imported quantities.
- 8. RFI SL-BBNPP-190 Lean fill concrete 200,000 cy
- 9. RFI SL-BBNPP-209 Validation of Quantities
- Temporary electrical power is assumed available early in the project as the site is developed and the support infrastructure is built out to minimize temporary engine driven service and utility requirements. This eliminates the use of large (>50hp) temporary diesel generators.
- 11. To the maximum extent possible, work on the 4 equipment trains, their buildings and the Reactor Containment building are assumed to be performed in parallel.
- 12. Concrete is assumed to be produced at an on site batch plant or plants. The batch plant equipment is motor driven from temporary power electrical sources.

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- 13. Detailed design information is not yet available for BBNPP, therefore fuel usage quantities are developed from information provided in the RFIs noted above, preliminary construction sequence estimates, typical construction equipment applications, and historical power plant construction experience. The selection of non-road equipment size, type and quantity is based on what a contractor would typically use for a power plant project the size and duration of BBNPP.
- 14. Assumed equipment availability and deployment in the estimated construction time frame will generally allow use of non-road equipment which meets the US EPA Tier III engine emission requirements. New equipment purchased after January 2011 with diesel powered engines from 175 to 750 hp is required to meet the interim Tier IV air quality standards. In 2012 engines from 75 to 175 hp will be required to meet the same Tier IV standard. However, new heavy construction equipment has a service life of 12-15 years and is very expensive. Therefore, new Tier III or IV equipment will be slow to enter into the contractor's fleet as existing equipment is replaced so Tier III equipment is assumed for the purpose of this study.
- 15. Non-road vehicles and equipment driven by engines less than 50 hp are not included.
- 16. Based on procurement and receiving experience at power plant sites (fossil plants) recently constructed, much of the current generation of power plant material and equipment is manufactured and shipped from outside the United States. The port of entry for this equipment is assumed to be the Baltimore Philadelphia area.
- 17. The BBNPP site is located about four miles from the western edge of Luzerne County, bordering Columbia County.
- 18. Based on the plant's location relative to major highways and population centers, it is estimated that approximately 45% of the commercial delivery vehicle miles will be traveled in the counties of Wyoming, Lackawanna, Luzerne, and Monroe. (The Scranton Wilkes-Barre ozone maintenance area). It is estimated that 45 % of the commercial delivery and workforce commuter vehicle miles will be traveled on routes within Columbia County, which is not a designated ozone maintenance area. The remaining 10% are assumed to originate or travel through the Reading ozone maintenance area (Berks County) and the Allentown-Bethlehem-Easton ozone maintenance area (Lehigh, Carbon, and Northampton, counties). These percentages are judgments based on geographical location of BBNPP, the relative distribution of hotels and housing for a temporary workforce, and area population centers as well as interpretation of the demography data and information found in RFI EPR-11-39 revision 1 and the COLA, revision 2,Part 3, section 4.4.2.3 (See Attachment 3).
- 19. The KLD Traffic Study as part of RFI EPR-11-39 was used to determine the construction workforce distribution for determining workforce commute quantities. Workforce data from the report was averaged over an entire year. From the KLD traffic study, a baseline of 1.3 workers per car was used to determine the number of commuter vehicles. It is estimated that approximately 8% will drive diesel vehicles.
- 20. The Fuel Usage table (Attachment 1 Tab 2) contains an estimate of the fuel used to support the construction of the Safety Related systems, structures and components. The first column in the Safety Related Fuel Use Data worksheet indicates the percentage of work estimated to be safety-related for that sub-section or activity. The total estimated fuel use for an activity is then multiplied by that percentage to determine the quantity of fuel used to construct the safety related portions of that activity which is then summed up for the Project.
- 21. Pick-up trucks and vehicles that may at times be used for off site, on the road purposes, such as running errands, picking up parts and local material, and making service runs are included in the Fuel Usage worksheets and noted as "licensed for off-site use." We expect the percent of time that they would be off-site to be less than 30% of the total usage. Most of these vehicles will be gasoline driven as indicated in the Fuel Usage worksheets.

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Methodology and Criteria

- Detailed design and planning information regarding the construction of the BBNPP was unavailable at this time, therefore the equipment use and fuel consumption information were determined using the following process:
 - 1. Where commodity quantities are available, unit production rates and contractor experience were used to determine equipment needs, durations, and usage.
 - 2. Where commodity quantities are unavailable, typical construction units, rates and durations are used based on past nuclear construction experience, current fossil plant construction experience, and commercially available estimating tools.

The fuel consumption totals were developed from the estimated equipment needs and usage using consumption rates provided by the equipment manufacturer, or from published equipment specifications and information available for the specific type and make of equipment using the engine size (horsepower) and published fuel usage factors. The typical information provided is the horsepower rating of the engine driving the equipment which is converted into consumption rates using standard gallons per hour per horsepower (gal/hr/hp) ratings for the types of equipment being used (References 12 through 22).

Total non-road consumption was estimated from the consumption rate multiplied by the anticipated duration (hours used) for the equipment multiplied by the net effective operating time or efficiency. Construction equipment does not run continuously at 100% power. Column J on the Fuel Usage worksheets represents the effective percentage of time the equipment will be operating during a normal shift which reduces the overall rate of fuel consumption.

Total commuter fuel consumption was determined based on an estimated 50 miles/day round trip commute in a vehicle that averages 20 miles/gallon of gasoline and 18 miles/gallon of diesel fuel. 8% of the commuter vehicles are assumed to be diesel trucks based on national averages and construction experienced.

Evaluation

Attachment 1 includes a detailed table which identifies and quantifies estimated fuel consumption sources, totals and usage by construction year.

The decision to retain and redistribute all cut and excavated soil on site reduced the consumption of fuel for site preparation by almost one-half, about two million gallons, thereby greatly reducing the volume of fuel emissions and significantly lowering the impact of semi-truck traffic through the neighboring communities.

Conclusions and Recommendations

Non-road Equipment

Attachment 1, Section 1, identifies by equipment type and model number, the estimated quantity and type of fuel used during the construction phase from early site preparation through plant startup. The information presented includes:

- Type, brand, and model number of non-road construction equipment typically used for the anticipated construction quantities and type of construction.
- Engine size Horsepower.
- Expected activity duration.
- Total and yearly fuel consumption.
- Fuel type Diesel or Gasoline.

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- EPA engine emissions type (Tier) for the type and model of diesel equipment to be used.
- Quantification of Project use of construction highway vehicles pickup trucks, service vehicles, delivery trucks.

Site Deliveries & Service Calls

Attachment 1, Section 2 estimates the quantity, distance, total consumption and anticipated year of consumption for commercial deliveries of commodities, material and equipment, service calls, vendor deliveries and visits, delivery distance, and estimated consumption from origin. Pickup trucks and other on site vehicles licensed for highway use are included in Section 1.

Construction Workforce Commuters

Attachment 1, Section 3 estimates the fuel consumed by construction workforce commuters. Based on experience an estimated 8% of the construction workforce drives diesel driven trucks to and from work. That percentage is captured in the estimates for worker commute fuel usage.

Summary of Estimate by Counties

See the attached Excel spreadsheet (Attachment 1) for the consumption of fuel by the categories described above.

Estimate of Permanent Fuel Storage Tanks

Equipment refueling needs could be handled by permanent a 10,000 gallon storage tank for diesel fuel and a 5,000 gallon tank for gasoline.

It's possible that the contractor performing the site preparation and dirt work will use a fueling service thereby reducing the diesel storage tank size needed to 5,000 gallons.

Limitations

This study was developed using preliminary site information and assumptions based on recent participation in new fossil construction, current planning for new nuclear construction, and past nuclear plant construction experience. However, the quantities of construction equipment needed, the durations that the equipment is needed, and the size of equipment may vary from the material presented here based on final design, design quantities, site configuration, and on the techniques and process chosen by the construction contractor who will be performing the work.

References

- 1. E-mail dated Friday, August 7, 2009 5:58 PM from Robert Iwanchuk to Frederico R Perdomo (Attachment 4)
- 2. Sargent & Lundy DIT-12198-11-002
- 3. RFI-EPR-11-039 Revision 1 KLD Traffic Study Assumptions
- 4. RFI SL-BBNPP-161 Construction duration and working shift information.
- 5. RFI SL-BBNPP-169 Bulking factor values
- 6. RFI SL-BBNPP-170 Power Block excavation quantities.
- 7. RFI SL-BBNPP-173 Cooling pond and towers over excavation quantities
- 8. RFI SL-BBNPP-189 Grading, drainage and earthwork imported quantities.
- 9. RFI SL-BBNPP-190 Lean fill concrete 200,000 cy
- 10. RFI SL-BBNPP-209 Validation of Quantities
- Bell Bend Nuclear Power Plant, Combined License Application (COLA), Revision 2, Part 3, Section 4.4, Socioeconomic Impacts Table 4.4.3,
- 12. RSMeans Heavy Construction Cost Data, Senior Editor Eugene Spencer, 23rd Annual Edition (2009), R. S. Means Company, Inc., 2008

- 13. Gransberg, D.L. (et.al), Construction Equipment Management for Engineers, Estimators, and Owners, CRC Press, Boca Raton, FL, 2006
- 14. Manitowoc fuel consumption Excel spreadsheet from Amy J. Crouse, Business Systems Analyst - Web Sites, Manitowoc Cranes in response S&L request by E. E. Falb.
- 15. Manotowoc Crane Product information (Internet resource), available at http://www.manitowoccranes.com/MCG_MC/PRODUCTS/EN/BRANDRANGE.ASP
- 16. Caterpillar Product Specifications (Internet resources) available at http://www.cat.com/equipment
- 17. Caterpillar Performance Handbook Edition 29, A Cat publication by Caterpillar, Inc., Peoria, Illinois, October 1998
- 18. Grove Cranes Product Specifications (Internet Resource) available at http://www.manitowoccranes.com/MCG_GRO/Products/EN/BrandRange.asp
- 19. Ford construction and commercial vehicles (Internet Resource), Available at http://www.commtruck.ford.com/
- 20. JLG Lifts, Product information (Internet resource) http://www.jlg.com/en-US/Products.html
- Mack Truck product information (Internet resource) http://www.macktrucks.com/assets/MackMarketing/Brochures/BulDgLnBro/4601_BulDgLnB ro.pdf
- 22. Putzmeister Concrete pumps, Product information (Internet resource) http://www.putzmeister.com/products/boompumps/index.cfm

Attachments

- Attachment 1 Construction Fuel Consumption Information Tables Worksheet 1 – Total Fuel Usage (Safety and Non-safety related work) Worksheet 2 – Safety-related Fuel Usage
- Attachment 2 RFI EPR 11-039 Revision 1 Origins of the Construction Workforce (numbers by direction – North, South, etc.) table from RFI input (KLD Traffic Study).
- 3. Attachment 3 Pennsylvania map of 8 hour ozone maintenance areas
- 4. Attachment 4 E-mail sent Friday, August 7, 2009 5:58 PM from Robert Iwanchuk to Frederico R Perdomo requesting information for BBNPP Air Quality applicability analysis

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Attachment 1

BBNPP Construction Fuel Consumption Data - Excel Spreadsheet

Worksheet 1 of 2 – Total Fuel Usage (Safety and Non-safety related work) Worksheet 2 of 2 – Safety-related Fuel Usage

cluded	Section 1 Non-Road Construction Equipment	Equipment	Class/Model #	HP Tier	Qnty Or	Site Wk%	stance g/h	g/h/hp	Average Fuel Rate	Total Fuel (Gal)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7
1/	A. Early Site Preparation					and the second second	stance		T del Nate	(Gal)		-				a de la companya de l	Constant Parties
00%	Clearing, Deforesting, Grubbing & Grading	and the second	Content of the state of the second		and the second		en e			General Advances	and the second	Materia n			- Service and the service of the ser		Color of Sorte S
	Including:	Tracked Dozer	Cat D10	700 Hp III		5 Mo 75%			20.0 gal/hr Diesel	66,000	66,000	0	0	0	0	0	0
	Access Roads	Tracked Loader	CAT 973C	263 Hp III		5 Mo 75%		0	10.0 gal/hr Diesel	24,750	24,750	0	0	0	0	0	0
	Topsoil cut & stockpile	Excavator - Medium	Cat 321D	148 Hp III	3		1980 hr	5	5.0 gal/hr Diesel	9,900	9,900	0	0	0	0	0	0
	Topsoil Removal- 503414 cy	Excavator - With tree attachment	Cat 345D L	380 Hp III	1		660 hr 1		10.0 gal/hr Diesel	6,600	6,600	0	0	0	0	0	0
	Used for final grading - 128,000 cy Topsoil Stockpiled - 376257cy	Crane - Picker	Grove RT530E-2 30t	160 Hp III			880 hr	0.028	4.5 gal/hr Diesel	3,942	3,942	0	0	0	0	0	0
	Topsoil Stockpiled - 376257cy	Semi-Trailer Dump	Mack MP8	450 Hp III	10	5 Mo 50%			11.7 gal/hr Diesel	64,350	64,350	0	0	0	0	0	0
	in the second	Motor Grader	Cat 14M	259 Hp III			990 hr 1		11.0 gal/hr Diesel	10,890	10,890	0	0	0	0	0	0
	and the second	Scraper	Cat 631G	462 Hp III	8	5 Mo 60%			16.0 gal/hr Diesel	84,480	84,480	0	0	0	0	0	0
	and the second	Scraper	Cat 631G	462 Hp III	3	5 Mo 60%			16.0 gal/hr Diesel	31,680	31,680	0	0	0	0	0	0
	and the second	Vibratory Soil Compactor	Cat CS74	156 Hp III	1		660 hr 440 hr 3.		6.0 gal/hr Diesel	3,960	3,960	0	0	0	0	0	0
		Water Trucks Pickup Truck 3/4 ton	Mack MP6 F-250	150 Hp II 300 Hp	1	5 Mo 40% 5 Mo 50%		2	3.5 gal/hr Diesel	1,540 3,300	1,540 3,300	0	0	0	0	0	0
		Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp	2	5 Mo 50%		6	3.0 gal/hr Diesel 3.5 gal/hr Gas	3,850	3,850	0	0	0	0	0	0
		Fuel Truck	Mack MP6	150 Hp II			440 hr 3.		3.5 gal/hr Diesel	1,540	1,540	0		0	0	0	0
		Mechanic's Truck 2-1/2 ton	F-650						4.0 gal/hr Diesel	1,040	1,200	0	0	0	0	0	ő
1	IB. Site Development & Excavation		and the second			at mail as well		il citere		ile of					the second second		and the second second
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	Estimated Quantities:	Tracked Dozer/Ripper	Cat D10	700 Hp III		4 Mo 75%			20.0 gal/hr Diesel	84,000	25,200	58,800	0	0	0	0	0
	Removal - 870,471cy	Scraper	Cat 637G (dual engine)	962 Hp III		4 Mo 50%		2	32.0 gal/hr Diesel	76,800	23,040	53,760	0	0	0	·	0
	Placement - 881,664cy	Excavator - Medium	Cat 321D CAT 973C	148 Hp III	1	4 Mo 60% 4 Mo 70%	480 hr	5	5.0 gal/hr Diesel	2,400 33.600	720	1,680	0	0	0		0
	and the second	Tracked Loader Motor Grader	Cat 14M	263 Hp III 259 Hp III	0	4 Mo 70% 4 Mo 50%	400 hr 1		10.0 gal/hr Diesel	4,400	1,320	3,080	0	0	0	0	
		Pickup Truck 3/4 ton	F-250	300 Hp			280 hr		11.0 gal/hr Diesel 3.0 gal/hr Diesel	840	252	588	0	0	0	0	0
	and the second	Water Trucks	Mack MP6	150 Hp II		4 Mo 50%		~	3.5 gal/hr Diesel	1.400	420	980	0	0	0	0	0
		Pickup Truck 3/4 ton (Licensed for offsite use)		300 Hp	2	4 Mo 40%	640 hr 3.	.5	3.5 gal/hr Gas	2,240	672	1,568	0	0	0	0	0
	Excavating/Backfilling/Earth/Soil/Rock Remove & Disposa				-				ore gained and	ale ist		10000			and second second		States a file of a lot
100%	- Powerblock (Includes GIS, Switchyard, Cooling towers and North central laydown area)																
	Estimated Quantities:	Tracked Dozer/Ripper	Cat D10			3 Mo 60%	6240 hr 2	20	20.0 gal/hr Diesel	124,800	62,400	62,400	0	0	0	0	0
	Removal - 10,837,579 cy	Tracked Dozer/Disk	Cat D9	410 Hp III		3 Mo 60%			15.0 gal/hr Diesel	23,400	9,360	9,360	4,680	0	0	0	0
	Placement - 2,681,000 cy	Tracked Loader	CAT 973C Cat 637G (dual engine)	263 Hp III	2	3 Mo 60%			10.0 gal/hr Diesel	31,200	12,480	12,480	6,240	0	0	0	0
		Scraper	Cat CS74	962 Hp III 156 Hp III	15	3 Mo 50% *	9500 hr 3	6	32.0 gal/hr Diesel	624,000	312,000 2.808	312,000	5,616	0	0	0	
		Vibratory Soil Compactor Soil Compactor	Cat 825H	400 Hp III		3 Mo 45%		0	6.0 gal/hr Diesel 18.0 gal/hr Diesel	42,120	8,424	16,848	16,848	0	0	0	0
		Excavator - Medium	Cat 321D	148 Hp III	2 .	3 Mo 60%	3120 br	5	5.0 gal/hr Diesel	15,600	6,240	6,240	3,120	0	0	0	0
	and the second	Tracked Loader	CAT 973C	263 Hp III		3 Mo 70%		10	10.0 gal/hr Diesel	109.200	43,680	43.680	21.840	0	0	0	0
		Motor Grader	Cat 14M	259 Hp III	2	3 Mo 50%		1	11.0 gal/hr Diesel	28,600	8,580	11,440	8,580	0	0	0	0
		Excavator - Large	Cat 375L	428 Hp III	5	13 Mo 60%			16.0 gal/hr Diesel	124,800	62,400	62,400	0	0	0	0	0
		Off Road Truck (80 ton payload)	Cat 773	650 Hp III	30	13 Mo 45% 3	5100 hr 1	16	16.0 gal/hr Diesel	561,600	224,640	224,640	112,320	0	0	0	0
		Pickup Truck 3/4 ton	F-250	300 Hp	3	13 Mo 35%	2730 hr	3	3.0 gal/hr Diesel	8,190	3,276	3,276	1,638	0	0	0	0
		Water Trucks	Mack MP6		2	13 Mo 50%	2600 hr 3.		3.5 gal/hr Diesel	9,100	2,730	3,640	2,730	0	0	0	0
		Water Wagon 8000 gal	Cat 631G	462 Hp II		13 Mo 50%	1300 hr 1		16.0 gal/hr Diesel	20,800	6,240	8,320	6,240	0	0	0	0
		Mechanic's Truck 2-1/2 ton	F-650	270 Hp III		13 Mo 30%		4 0.026		6,240	2,496	2,496	1,248	0	0	0	0
		End Loader (Batch Plant)	Cat 966H	262 Hp III	2	4 Mo 50%		5	5.0 gal/hr Diesel	3,520	0	2,640	880	0	0	0	0
		Concrete Truck Pickup Truck 3/4 ton	Mack MP6 F-250	150 Hp III 300 Hp		4 Mo 33% 13 Mo 50%		.5	3.5 gal/hr Diesel 3.0 gal/hr Diesel	12,197 3,900	1,560	9,148	3,049 780	0	0	0	0
		Pickup Truck 3/4 ton (Licensed for offsite use)		300 Hp		13 Mo 40%	2080 br 3	5	3.5 gal/hr Gas	7,280	2,912	2,912	1,456	0	0	0	0
		Fuel Truck	Mack MP6	150 Hp II	4	13 Mo 20%	2080 hr 3	.5	3.5 gal/hr Diesel	7,280	2,912	2,912	1,456	0	0	0	ő
10001	Excavating/Backfilling/Earth/Soil/Rock Remove & Disposa		o construction and and a second			and the second second				.,==0[-10.10	1.20		A PROPERTY AND		
100%	- Parking	and the second states of the second	and the second second				Service and the		Sector Contraction					Rept: Part			
	Estimated Quantities:	Tracked Dozer	Cat D7E	235 Hp III		5 Mo 75%		9	9.0 gal/hr Diesel	13, 50 0	0	8,100	5,400	0	C	0	0
	Removal 287,820cy	Scraper	Cat 631G	462 Hp III	1	5 Mo 50%	500 hr 1		16.0 gal/hr Diesel	8,000	0	4,800	3,200	0	0	0	0
	Placement 1,413,639 cy	Vibratory Soil Compactor	Cat CS74	156 Hp III	2	5 Mo 45%	000111	6	6.0 gal/hr Diesel	5,400	0	3,240	2,160	0	0	0	0
		Soil Compactor	Cat 825H	400 Hp III	2	5 Mo 45%		18	18.0 gal/hr Diesel	16,200	0	9,720	6,480	0	0	0	9
		Excavator - Medium	Cat 321D CAT 973C	148 Hp III	1	5 Mo 60%		5	5.0 gal/hr Diesel	3,000	0	4,200	1,200	0	0	0	0
		Tracked Loader Motor Grader	Cat 14M	263 Hp III 259 Hp III	1	5 Mo 70% 5 Mo 50%	500 hr 1		10.0 gal/hr Diesel 11.0 gal/hr Diesel	5,500	0	3,300	2,800	0	0	0	
		Asphalt Paver	Barber GreeneAP-1000	174 Hp III	1	5 Mo 50%		6	6.0 gal/hr Diesel	3,000	0	1,800	1,200	0		0	0
	And the second	Asphalt Compactor	Cat CB434C	107 Hp III	1	5 Mo 50%		4	4.0 gal/hr Diesel	2,000	0	1,200	800	0	0	0	0
		Water Trucks	Mack MP6	150 Hp II	1	5 Mo 50%	500 hr 3		3.5 gal/hr Diesel	1,750	0	1,050	700	0	C	0	0
		Pickup Truck 3/4 ton	F-250	300 Hp	1	5 Mo 35%	350 hr	3	3.0 gal/hr Diesel	1,050	0	630	420	0	C	0	0
		Fuel Truck	Mack MP6	150 Hp II	1	5 Mo 20%	200 hr 3	.5	3.5 gal/hr Diesel	700	0	420	280	0	C	0	0
				150 Hp	1	5 Mo 20%	200 hr 3		3.5 gal/hr Diesel	700	0		280	0	C	0	0

UniStar Nuclear Bell Bend Nuclear Power Plant Construction Vehicle Fuel Consumption Study			Worksh Total Fuel Usage (S		- Page 2 of 6									Repor	t No: SL-0100 Project No.	
Excavating/Backfilling/Earth/Soil/Rock Remove & Disposal - Support road (Includes Quarry, Batch plant, Central laydown)																
Estimated Quantities:	Tracked Dozer	Cat D7E	235 Hp III	4 1	5 Mo 75%	9000 hr	9	9.0 gal/hr Diesel	81,000	24,300	40,500	16,200	0	0	0	(
Removal - 364,572 cy	Scraper	Cat 637G (dual engine)	962 Hp III		5 Mo 50%	4500 hr	32	32.0 gal/hr Diesel	144,000	72,000	64,800	7,200	0	Q	0	100 Par
Placement - 2,819,652 cy	Vibratory Soil Compactor	Cat CS74	156 Hp III		5 Mo 45%	1350 hr	6	6.0 gal/hr Diesel	8,100	2,430	4,050	1,620	0	0	0	
	Soil Compactor	Cat 825H	400 Hp III		5 Mo 45%	2700 hr	18	18.0 gal/hr Diesel	48,600	14,580	24,300	9,720	0	0	0	
	Excavator - Medium	Cat 321D	148 Hp III		5 Mo 60%	3600 hr	5	5.0 gal/hr Diesel	18,000	5,400	9,000	3,600	0	0	0	
	Tracked Loader	CAT 973C	263 Hp III		5 Mo 70%	4200 hr	10	10.0 gal/hr Diesel	42,000	12,600	21,000	8,400	0	0	0	
	Motor Grader	Cat 14M	259 Hp III		8 Mo 50%	1600 hr	11	11.0 gal/hr Diesel	17,600	5,280	8,800	3,520	0	0	0	
	Asphalt Paver	Barber GreeneAP-1000	174 Hp III		5 Mo 50%	500 hr	6	6.0 gal/hr Diesel	3,000	0	1,800	1,200	0	0	0	
	Asphalt Compactor	Cat CB434C	107 Hp III		5 Mo 50%	500 hr	4	4.0 gal/hr Diesel	2,000	0	1,200	800	0	0	0	
	Pickup Truck 3/4 ton	F-250	300 Hp		5 Mo 35%	1050 hr	3	3.0 gal/hr Diesel	3,150	945	1,575	630	0	0	0	
	Water Trucks	Mack MP6	150 Hp II		5 Mo 40%	2400 hr	3.5	3.5 gal/hr Diesel	8,400	2,520	4,200	1,680	0	0	0	
	Water Wagon 8000 gal	Cat 631G	462 Hp II		5 Mo 40%	1200 hr	18	18.0 gal/hr Diesel	21,600	6,480	10,800	4,320	0	0	0	
	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp	2 1	5 Mo 50%	3000 hr	3.5	3.5 gal/hr Gas	10,500	3,150	5,250	2,100	0	0	0	
 Excavating/Backfilling/Earth/Soil/Rock Remove & Disposal South Laydown 									Sector 1			3.3				
Estimated Quantities:	Tracked Dozer	Cat D10	700 Hp III		4 Mo 75%	2400 hr	20	20.0 gal/hr Diesel	48,000	14,400	24,000	9,600	0	0	0	
Removal - 142,188cy	Soil Compactor	Cat 825H	400 Hp III		4 Mo 45%	360 hr	18	18.0 gal/hr Diesel	6,480	1,944	3,240	1,296	0	0	0	
Placement - 3,815,583cy	Excavator - Medium	Cat 321D	148 Hp III	3	4 Mo 60%	1440 hr	5	5.0 gal/hr Diesel	7,200	2,160	3,600	1,440	0	0	0	
	Motor Grader	Cat 14M	259 Hp III	1	4 Mo 50%	400 hr	11	11.0 gal/hr Diesel	4,400	1,320	2,200	880	0	0	0	
	Water Trucks	Mack MP6	150 Hp II		4 Mo 50%		3.5	3.5 gal/hr Diesel	1,400	420	700	280	0	0	0	
	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp	1	4 Mo 50%	400 hr	3.5	3.5 gal/hr Gas	1,400	420	700	280	0	0	0	
Boring/Soils investigation		C. C. Standard and Articles	A second s			and the second states		and the second second second	dent some som såd	and the second	ndesampy set of		ACC YOR NO.			
Includes Wells & Dewatering	Schramm T64 Well Drilling Rig	Cat 3406 diesel	420 Hp 11		4 Mo 35%	246 hr	0.0	026 10.9 gal/hr Diesel	2,691	2,691	0	0	0	0	0	
	Pickup Truck 3/4 ton	F-250	300 Hp	1	4 Mo 50%	352 hr	3	3.0 gal/hr Diesel	1,056	1,056	0	0	0	0	0	_
6 Underground utilities, piping, duct runs, grounding	A PLA		1 (2011) 1 11	the courses		11001			1 000	-	0.040	0.040	o	ol	0	
	Crane - Picker	Grove RT530E-2 30t	160 Hp III		8 Mo 40%	1126 hr	0.0	026 4.2 gal/hr Diesel	4,686	0	2,343	2,343	0	0	0	
	Tracked Dozer	Cat D7E	235 Hp III	2	8 Mo 60%	1690 hr	9	9.0 gal/hr Diesel	15,206	0	7,603	7,603		0		<u>Charles and an </u>
	Backhoe	Cat 430E	102 Hp III	6	8 Mo 60%	5069 hr	0.0	2.9 gal/hr Diesel	14,476	0	5,791	4,343	4,343	0	0	
ter free and the second se	Pickup Truck 3/4 ton Excavator - Medium	F-250 Cat 321D	300 Hp 148 Hp III	8	8 Mo 40% 8 Mo 60%	4506 hr 1690 hr	3	3.0 gal/hr Diesel	13,517	0	5,407	3,379	2,703	0	0	
	Semi-Trailer Dump	Mack E8	400 Hp III		8 Mo 60%	845 hr	5	5.0 gal/hr Diesel	8,786	0	4,393	3,514	879	0	0	
Warehouse & Storage	Semi-Trailer Dump	INIACK EO			0 100 00%	045 [11]	0.0	026 10.4 gaimi Diesei	0,700	<u> </u>	4,393	3,314	0/3			-
Warehouse & Storage Construction & Operation	Fork Lift - 15,000 Lb capacity	Cat DP70E	94 Hp III	2 6	8 Mo 35%	8378 hr	1.01	3.1 gal/hr Diesel	25,987	ol	2,599	5,197	7,796	6,497	2,599	1.2
Construction & Operation	Crane - Picker	Grove RT530E-2 30t	160 Hp III		8 Mo 40%	9574 hr		026 4.2 gal/hr Diesel	39,830		3,983	7,966	11,949	9,957	3,983	1.9
	Pickup Truck 3/4 ton	F-250	300 Hp		8 Mo 50%		2 0.0	3.0 gal/hr Diesel	35,904	0	3,590	7,900	10,771	8,976	3,590	1,3
	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp		8 Mo 30%	3590 hr	2.5	3.5 gal/hr Gas	12,566	0	1,257	2,513	3,770	3,142	1,257	6
	Material truck 2-1/2 ton	F-650	270 Hp III		8 Mo 25%			026 7.0 gal/hr Diesel	21,004	0	2,100	4,201	6,301	5,251	2,100	1,0
	Rough Terrain Extended Forklift	Lull 1044C-54	115 Hp III		8 Mo 45%			026 3.0 gal/hr Diesel	16,103	0	1,610	3,221	4.831	4,026	1,610	1,0
PART 1 PRE-CONSTRUCTION GAS	Rough Ferfain Extended Forkint	Lui 10440-54		1 0	00 WO 43%	5366 m	0.0	520 3.0 gaini Diesei	37,836	11,004	11,687	6,349	3,770	3,142	1,257	6
PART 1 PRE-CONSTRUCTION DIESEL				of stated a	Sel Contractor				3,027,883	1,317,916	1,254,017	350,846	49,573	34,707	13,883	6,94
% Bridge Construction (7 Bridges)	Contraction and the second	No she to serve with the second the	Constraint Sectors	Service Training		Sectore and	ASSA NOT	Ningely and a chain of skilled		CONSTRUCTION OF	Sa Sulface and sa	A TAL PARTY A	Color States	A DERIGE SERVICES	SHOW THE STATE	dia tanàna
	Tracked Dozer	Cat D10	700 Hp III	3 1	2 Mo 50%	3600 hr	20	20.0 gal/hr Diesel	72,000	0	14,400	21,600	21,600	14,400	0	-
	Tracked Dozer	Cat D8	305 Hp III	2 1	2 Mo 50%	2400 hr	11.5	11.5 gal/hr Diesel	27,600	0	5,520	8,280	8,280	5,520	0	-
	Soil Compactor	Cat 825H	400 Hp III		12 Mo 45%	2160 hr	18	18.0 gal/hr Diesel	38,880	0	7,776	11,664	11,664	7,776	0	
	Excavator - Medium	Cat 321D	148 Hp III		12 Mo 50%	4800 hr	5	5.0 gal/hr Diesel	24,000	0	4,800	7,200	7,200	2,400	2,400	
	Motor Grader	Cat 14M	259 Hp III	1 1	12 Mo 40%	960 hr	11	11.0 gal/hr Diesel	10,560	0	2,112	3,168	3,168	2,112	0	
	Water Trucks	Mack MP6	150 Hp	1 1	12 Mo 50%	1200 hr	3.5	3.5 gal/hr Diesel	4,200	0	840	1,260	1,260	840	0	
	Concrete Truck	Mack MP6	150 Hp III		12 Mo 45%	4752 hr	3.5	3.5 gal/hr Diesel	16,632	0	3,326	4,990	4,990	3,326	0	
	Tractor Loader/Backhoe	Case 580	80 Hp III	3 1	12 Mo. 60%	3802 hr	0.	028 2.2 gal/hr Diesel	8,516	0	1,703	2,555	2,555	852	852	
	Crane - Picker	Grove RT530E-2 30t	160 Hp	4 1	12 Mo 50%	4224 hr	0.1	026 4.2 gal/hr Diesel	17,572	0	3,514	5,272	5,272	1,757	1,757	
	Crane - Lattice Boom	Manitowoc 555 - 150t	355 Hp II		12 Mo 50%	2112 hr	6.3	6.3 gal/hr Diesel	13,306	0	2,661	3,992	3,992	2,661	0	
	Truck Mtd Boom 200 yds/hr Concrete Pump	Putzmeister 47Z-Meter	300 Hp		12 Mo 25%	528 hr	0.	028 8.4 gal/hr Diesel	4,435	0	444	1,331	1,331	887	444	
	Pickup Truck 3/4 ton	F-250	300 Hp		12 Mo 25%	1056 hr	3	3.0 gal/hr Diesel	3,168	0	317	950	950	634	317	
	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp	1 1	12 Mo 25%	528 hr	3.5	3.5 gal/hr Gas	1,848	0	185	554	554	370	185	
	Rough Terrain Extended Forklift	Lull 1044C-54	115 Hp III		12 Mo 45%	1901 hr	0.	026 3.0 gal/hr Diesel	5,683	0	568	1,705	1,705	1,137	568	
	End Loader (Batch Plant)	Cat 966H	262 Hp III	1 1	12 Mo 50%	1056 hr	5	5.0 gal/hr Diesel	5,280	0	528	1,584	1,584	1,056	528	
																And the second second
% Sheet Piling	A second statement of the second statement of t	Separate Section Section 19	CONTRACTOR OF THE	ingle task	and a second	ers) Historia	Centerior Cent	terrain and a start for the st	The second second					AND CONTRACTOR	States and the states	Contraction of the local
% Sheet Piling	Crane - Lattice Boom+Hammer	Manitowoc 111 - 80t Grove RT530E-2 30t	205 Hp III 160 Hp III		4 Mo 50% 4 Mo 35%	352 hr 493 hr	5.3	5.3 gal/hr Diesel	1,866	0	933	933	0	0	0	

UniStar Nuclear Bell Bend Nuclear Power Plant				Attachment 1 et 1 of 2 - Page 3 of 6								Report	No: SL-0100 Project No.	
Construction Vehicle Fuel Consumption Study				fety and Non-safety related work)									1 10,000 140.	1210
00% Structural concrete					antie Geleykes		and a state of the second s	and the second	disection and service	and the state of the	Augustania and		daren bir den en	-
	Truck Mtd Boom 200 yds/hr Concrete Pump	Putzmeister 47Z-Meter	300 Hp III	5 2000 Hr 75% 7500 hr	0.028	8.4 gal/hr Diesel	63,000	0	6,300	18,900	18,900	12,600	3,150	3
	Crane - Lattice Boom	Manitowoc 555 - 150t		5 36 Mo 25% 7920 hr 6.3	3	6.3 gal/hr Diesel	49,896	0	4,990	14,969	14,969	9,979	2,495	1
	Crane - Picker	Grove RT530E-2 30t		5 36 Mo 30% 9504 hr	0.026	4.2 gal/hr Diesel	39,537	0	3,954	11,861	11,861	7,907	1,977	
	Pickup Truck 3/4 ton	F-250		2 36 Mo 25% 19008 hr 3	1	3.0 gal/hr Diesel	57,024	0	5,702	17,107	17,107	11,405	2,851	
	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250		4 36 Mo 25% 6336 hr 3.5		3.5 gal/hr Gas	22,176	0	2,218	6,653	6,653	4,435	1,109	
and the second	Rough Terrain Extended Forklift End Loader (Batch Plant)	Lull 1044C-54 Cat 966H		6 36 Mo 45% 17107 hr	0.026	3.0 gal/hr Diesel	51,151	0	5,115	15,345	15,345	10,230	2,558	
	Concrete Truck	Mack MP6		2 36 Mo 50% 6336 hr 50\% 63\% 63\% 63\% 63\% 63\% 63\% 63\% 63\% 63\% 63		5.0 gal/hr Diesel 3.5 gal/hr Diesel	31,680 73,181	0	3,168	9,504	9,504	6,336	1,584	
	Tractor Loader/Backhoe	Case 580		4 36 Mo. 50% 12672 hr	0.028	2.2 gal/hr Diesel	28,385	0	7,318	21,954 8,516	8,516	14,636 5,677	3,659	
Non Power Block - Pump House, Switchyard, Cooling		Cace eee		4 00 110. 00 10 12012 11	0.020	Z.Z gaini Diesei	20,000		2,000	0,010	0,310	5,017	1,413	-
00% Towers, Pump House														
	Crane - Picker	Grove RT530E-2 30t	160 Hp III	2 36 Mo 67% 8490 hr	0.026	4.2 gal/hr Diesel	35,319	0		24,724	10,596	0	ol	No. of the loss
	Pickup Truck 3/4 ton	F-250		2 36 Mo 40% 5069 hr	3	3.0 gal/hr Diesel	15,206	0	0	10,644	4,562	0	0	
	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp	1 36 Mo 40% 2534 hr 3.5	5	3.5 gal/hr Gas	8,870	0	0	6,209	2,661	0	0	-
	Material truck 2-1/2 ton (Licensed for off site use			1 36 Mo 25% 1584 hr		4.0 gal/hr Diesel	6,336	0	0	4,435	1,901	0	0	_
	Truck Mounted Boom Concrete Pump	Putzmeister 47Z-Meter		3 12 Mo 30% 1901 hr	0.028	8.4 gal/hr Diesel	15,967	0	0	11,177	4,790	0	0	
	Crane - Lattice Boom Rough Terrain Extended Forklift	Manitowoc 555 - 150t Lull 1044C-54	355 Hp 11	2 36 Mo 50% 6336 hr 6.3 1 24 Mo 45% 1901 hr		6.3 gal/hr Diesel	39,917	0	0	27,942	11,975	0	0	_
00% Switchyard	Rough Terrain Extended Forklift	Luii 1044C-54	115 Hp III	1 24 Mo 45% 1901 hr	0.026	3.0 gal/hr Diesel	5,683	0	0	3,978	1,705	0	0	-
omonyaru	Crane - Picker	Grove RT530E-2 30t	160 Hp III	2 18 Mo 50% 3168 hr	0.026	4.2 gal/hr Diesel	13,179	o	0	6,589	5,272	1,318	ol	
	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250		2 18 Mo 50% 3168 hr 2 18 Mo 40% 2534 hr 3.5		4.2 gai/hr Diesei	8,870	0	0	4,435	3,548	1,318	0	
	Material truck 2-1/2 ton	F-650		1 18 Mo 25% 792 hr	0.026	7.0 gal/hr Diesel	5,560	0	0	2,780	2,224	556	0	
	Truck Mounted Boom Concrete Pump	Putzmeister 47Z-Meter		3 18 Mo 10% 950 hr	0.028	8.4 gal/hr Diesel	7,983	0	0	5,988	1,996	0	0	
	Crane - Lattice Boom	Manitowoc 555 - 150t		1 18 Mo 25% 792 hr 6.		6.3 gal/hr Diesel	4,990	0		3,742	1,247	0	0	
	Rough Terrain Extended Forklift	Lull 1044C-54	115 Hp III	1 18 Mo 45% 1426 hr	0.026	3.0 gal/hr Diesel	4,263	0		3,197	1,066	0	0	_
00% Cooling Tower	a service and the service allowed and a department of			energy and the second	Carl Stations	and the state of the other	Contract Contract and	and the second second	A CENTRAL PROPERTY.	(Rolling to the barter)	a la far a star a star a st	and the second second	Chine production	Contra la
	Crane - Picker	Grove RT530E-2 30t		4 18 Mo 67% 8490 hr	0.026	4.2 gal/hr Diesel	35,319	0	0	0	10,596	24,724	0	
and the second	Pickup Truck 3/4 ton	F-250		3 18 Mo 40% 3802 hr	3	3.0 gal/hr Diesel	11,405	0	0	0	3,421	7,983	0	
and the second	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250		1 18 Mo 40% 1267 hr 3.5		3.5 gal/hr Gas	4,435	0	0	0	1,331	3,105	0	
	Material truck 2-1/2 ton Crane - Lattice Boom	F-650		1 18 Mo 25% 792 hr	0.026	7.0 gal/hr Diesel	5,560	0	0	0	1,668	3,892	0	
ter al anticipation de la construcción de la construcción de la construcción de la construcción de la construcc	Truck Mounted Boom Concrete Pump	Manitowoc 555 - 150t Putzmeister 47Z-Meter	355 Hp II 300 Hp III	2 18 Mo 25% 1584 hr 6.3 3 12 Mo 30% 1901 hr	0.028	6.3 gal/hr Diesel	9,979	0	0	0	2,994	6,985	0	
	Rough Terrain Extended Forklift	Lull 1044C-54		3 12 Mo 30% 1901 hr 1 36 Mo 45% 2851 hr		8.4 gal/hr Diesel 3.0 gal/hr Diesel	8.525	0		0	2,558	5,968	0	
PART IIA GAS	Koogi renain Extended Forkin	1541 10440-04		1 30 10 4376 203111	0.020	3.0 gaini Diesei	45,200	0	2,402	17.852	14,747	3,908	185	-
PART IIA DIESEL	The state of the second s						890,758	0	89.853	300.859	75 549	45 358	6.865	
0% IIB. Superstructure & Structural Steel					a service as	and the second		The Cost of Land						
Structural and building steel		A LE THE HEAR STREET, SALES	and the second	in the second	Sector States	and the second second second	Children to say a second			and the second second	and the second second	A SHARE AND A SHARE	a shirt was a second	-
	Crane - Lattice Boom	Manitowoc 555 - 150t		5 12 Mo 50% 5280 hr 6.	3	6.3 gal/hr Diesel	33,264	0	0	6,653	24,948	1,663	0	-
	Crane - Lattice Boom	Manitowoc 999 - 275t	400 Hp III	4 12 Mo 50% 4224 hr 8.1	2	8.2 gal/hr Diesel	34,637	0	0	6,927	25,978	1,732	0	
	Crane - Picker	Grove RT530E-2 30t		7 12 Mo 67% 9905 hr	0.026	4.2 gal/hr Diesel	41,206	0	0	8,241	30,904	2,060	0	
	Crane - Picker	Grove RT600E - 50t		7 12 Mo 60% 8870 hr	0.026	4.5 gal/hr Diesel	39,899	0	0	7,980	29,924	1,995	0	
	Boom Lift	JLG 800AJ		8 12 Mo 60% 10138 hr	0.026	1.7 gal/hr Diesel	17,133	0	0	3,427	12,849	857	0	
and and a second s	Boom Lift - 80 ft Rough Terrain Extended Forklift	Genie S-80 Lull 1044C-54		8 12 Mo 60% 10138 hr 8 12 Mo 60% 10138 hr	0.026	1.9 gal/hr Diesel 3.0 gal/hr Diesel	19,505	0	0	3,901	14,629	975	0	
Building Modules & Heavy Lifts	Rough Terrain Extended Forklitt	Luii 1044C-54	115 Hp III	8 12 Mo 60% 10138 hr	0.026	3.0 gal/hr Diesel	30,311	0	0	6,062	22,734	1,516	0	_
Building Modules & Heavy Lins	Crane - Manitowoc	21000 - 1000t	600 Ha III	1 24 Mo 20% 845 hr 12.	3	12.6 gal/hr Diesel	10.644	o	0	0	5,322	5,322	0	
and the second se	Crane - Manitowoc	31000 - 2300t		1 12 Mo 20% 422 hr 2		24.0 gal/hr Diesel	10,044	0	0	5,069	5,322	5,322	0	
Building Siding/Insulated Panels	orane - mannowoe	151000 - 25001	1,200 mp m		1	24.0 gainin Diesen	10,130		0	3,003	3,003		0	-
	Crane - Picker	Grove RT530E-2 30t	160 Hp III	2 6 Mo 50% 1056 hr	0.026	4.2 gal/hr Diesel	4,393	0	0	0	1,318	3,075	ol	
	Boom Lift - 80 ft	Genie S-80		3 6 Mo 70% 2218 hr	0.026	1.9 gal/hr Diesel	4,267	0	0	0	1,280	2,987	0	
	Pickup Truck 3/4 ton	F-250	300 Hp	2 6 Mo 40% 845 hr	3	3.0 gal/hr Diesel	2,534	0	0	0	760	1,774	0.	
	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp	1 6 Mo 40% 422 hr 3.	5	3.5 gal/hr Gas	1,478	0	0	0	444	1,035	0	
	Material truck 2-1/2 ton	F-650		1 6 Mo 50% 528 hr	0.026	7.0 gal/hr Diesel	3,707	0	0	0	1,112	2,595	0	_
	Rough Terrain Extended Forklift	Luli 1044C-54	115 Hp III	2 6 Mo 50% 1056 hr	0.026	3.0 gal/hr Diesel	3,157	0	0	0	947	2,210	0	
Rooling		and the second second second	and the state of the state		100000000000000000000000000000000000000			-Harrison and	and the state of the		Statistics (4:12-5)	and so the true	(Mersenal States	
	Crane - Picker	Grove RT530E-2 30t		2 6 Mo 45% 950 hr	0.026	4.2 gal/hr Diesel	3,954	0	0	0	0	3,954	0	
	Boom Lift - 80 ft	Genie S-80		3 6 Mo 45% 1426 hr	0.026	1.9 gal/hr Diesel	2,743	0	0	0	0	2,743	0	
	Pickup Truck 3/4 ton Pickup Truck 3/4 ton (Licensed for offsite use)	F-250 F-250	300 Hp	1 6 Mo 40% 422 hr	5	3.0 gal/hr Diesel	1,267	0	0	0	0	1,267	0	<u></u>
			300 Hp	1 6 Mo 40% 422 hr 3. 1 6 Mo 50% 528 hr	0.026	3.5 gal/hr Gas 7.0 gal/hr Diesel	1,478		0	0	0	1,478	0	
	Material truck 2-1/2 ton Rough Terrain Extended Forklift	F-650	270 Hp III 115 Hp III					0		0	0			
PART IIB GAS	Material truck 2-1/2 ton Rough Terrain Extended Forklift	F-650 Lull 1044C-54		2 6 Mo 45% 950 hr	0.026	3.0 gal/hr Diesel	2,842	0	0	0	0	2,842	0	-

	Bend Nuclear Power Plant struction Vehicle Fuel Consumption Study			Worksheet 1 of 2 - Page 4 of 6 I Fuel Usage (Safety and Non-safety related work)	Project No. 12198-
	IIIA. Mechanical Installation				
100%	Mechanical Installation	And a second second second second second second second second			a sana kana perioda ang kana ang kana ang kana kana kana ang kana ang kana ang kana ang kana ang kana ang kana
	Including:	Crane - Picker	Grove RT530E-2 30t	60 Hp III 5 42 Mo 40% 14784 hr 0.026 4.2 gal/hr Diesel 61,501	0 0 12,300 30,751 12,300 6,150
	Piping, Hangers & Pipe Specialties	Crane - Picker	Grove RT600E - 50t	73 Hp III 3 12 Mo 40% 2534 hr 0.026 4.5 gal/hr Diesel 11,400	0 0 2,280 5,700 2,280 1,140
	Valves and Actuators	Crane - Lattice Boom	Manitowoc 555 - 150t	55 Hp II 5 12 Mo 40% 4224 hr 6.3 6.3 gal/hr Diesel 26,611	0 0 5,322 13,306 5,322 2,661
	HVAC Ductwork, Dampers, Actuators, Fans	Crane - Lattice Boom	Manitowoc 999 - 275t	00 Hp III 2 12 Mo 40% 1690 hr 8.2 8.2 gal/hr Diesel 13,855	0 0 2,771 6,927 2,771 1,385
	Pump, chillers, coolers, Hx, Equipment	Crane - Lattice Boom	Manitowoc16000 - 440t	00 Hp III 1 12 Mo 40% 845 hr 10.4 10.4 gal/hr Diesel 8,786	0 0 1,757 4,393 1,757 879
	Air compressors	Boom Lift	JLG 800AJ	65 Hp III 5 12 Mo 50% 5280 hr 0.026 1.7 gal/hr Diesel 8,923	0 0 1,785 4,462 1,785 892
	Examination, Testing & Start-up	Boom Lift - 80 ft	Genie S-80	74 Hp III 5 12 Mo 50% 5280 hr 0.026 1.9 gal/hr Diesel 10,159	0 0 2,032 5,079 2,032 1,016
		Pickup Truck 3/4 ton Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	00 Hp 4 24 Mo 30% 5069 hr 3 3.0 gal/hr Diesel 15,206	0 0 3,041 7,603 3,041 1,521
		Material truck 2-1/2 ton	F-250 F-650	00 Hp 1 42 Mo 30% 2218 hr 3.5 3.5 gal/hr Gas 7,762 70 Hp III 2 42 Mo 30% 4435 hr 0.026 7.0 gal/hr Diesel 31 135	0 0 1,552 3,881 1,552 776
		Rough Terrain Extended Forklift	Lull 1044C-54		0 0 6,227 15,568 6,227 3,114 0 0 5,304 7,073 2,652 2,652
	PART IIIA GAS	Rough Terrain Extended Forkill	Luii 1044C-54		
	PART IIIA DIESEL			7.762	0 0 1,552 3,881 1,552 776 0 0 37,515 93,788 37,515 18,758
	IIIB. Electrical Installation			167,575	0 0 37,515 93,788 37,515 18,758
100%	Electrical Installation	The second se	the second s		
10078	Including:	Crane - Picker	Grove RT530E-2 30t	60 Hp III 5 42 Mo 60% 4435.2 0.026 4.2 gal/hr Diesel 18,450	0 0 2,768 7,380 3,690 2,768 1,8
	Conduit, Cable Tray Raceway & Supports	Crane - Picker	Grove RT600E - 50t	Total Total <th< td=""><td></td></th<>	
	Instrumentation (Racks, mounting, transmitters)	Crane - Lattice Boom	Manitowoc 555 - 150t	73 Hp III 3 12 M0 50% 3168 hr 0.026 4.5 gal/hr Diesel 14,250 55 Hp II 5 12 Mo 50% 5280 hr 6.3 6.3 gal/hr Diesel 33,264	0 0 2,137 5,700 2,850 2,137 1, 0 0 4,990 13,306 6,653 4,990 3,3
	Power & Control Cable & Terminations	Crane - Lattice Boom	Manitowoc 555 - 150t Manitowoc 999 - 275t	00 Hp III 2 12 Mo 50% 5280 Hr 6.3 6.3 gai/hr Diesel 33,254 00 Hp III 2 12 Mo 50% 2112 hr 8.2 8.2 gai/hr Diesel 17,318	0 0 4,990 13,306 6,653 4,990 3, 0 0 2,598 6,927 3,464 2,598 1,7
	Isophase and nonsegregated bus duct	Crane - Lattice Boom	Manitowoc16000 - 440t	00 Hp III 2 12 M0 50% 2112 hr 6.2 6.2 gal/hr Diesel 17,316 00 Hp III 1 12 Mo 50% 1056 hr 10.4 10.4 gal/hr Diesel 10,982	0 0 1,647 4,393 2,196 1,647 1,0
	Control room panels, wiring and termination	Boom Lift	JLG 800AJ	65 Hp III 5 12 Mo 50% 5280 hr 0.026 1.7 gal/hr Diesel 8,923	0 0 1,647 4,393 2,196 1,647 1, 0 0 1,338 3,569 1,785 1,338 8
	Local Instrument and control equipment	Boom Lift - 80 ft	Genie S-80	74 Hp III 5 12 Mo 50% 5280 hr 0.026 1.9 gal/hr Diesel 6,925	0 0 1,524 4,063 2,032 1,524 1,0
	Switchyard Breakers & Equipment	Crane - Lattice Boom	Manitowoc 555 - 150t	155 Hp III 1 12 Mo 40% 845 hr 6.3 6.3 gal/hr Diesel 5,322	0 0 798 2,129 1,064 798
	Equipment and site grounding	Pickup Truck 3/4 ton	F-250	00 Hp 3 24 Mo 40% 5069 hr 3 3.0 gal/hr Diesel 5,322	0 0 2,281 6,083 3,041 2,281 1,5
	Communications and data systems	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	00 Hp 1 42 Mo 30% 2218 hr 3.5 3.5 gal/hr Gas 7,762	0 0 1.164 3.105 1.552 1.164 7
	Examination, Testing & Start-ur	Rough Terrain Extended Forklift	Lull 1044C-54	15 Hp III 2 42 Mo. 40% 5914 hr 0.026 3.0 gal/hr Diesel 17,682	0 0 2,652 7,073 3,536 2,652 1,7
	PART IIB GAS			7,762	0 0 1,164 3,105 1,552 1,164 7
	PART IIIB DIESEL	A PARTY OF THE OWNER OF THE PARTY OF THE		151.557	0 0 22,734 60,623 30,311 22,734 15,1
100%	IV. Major equipment (heavy) lift and movement				
	Including:				
	Transformers and switchgear	Crane - Lattice Boom	Manitowoc16000 - 440t	00 Hp III 1 12 Mo 25% 528 hr 10.4 10.4 gal/hr Diesel 5.491	0 0 549 1,647 2,746 275 2
	Large Motor installations	Crane - Lattice Boom	Manitowoc21000 - 1000t	00 Hp III 1 12 Mo 25% 528 hr 12.6 12.6 gal/hr Diesel 6,653	0 0 665 1,996 3,326 333
	Reactor vessel, S/G, Containment Liner assemblies	Heavy Transporter	Goldhoffer	00 Hp III 2 300 Hr 75% 300 hr 0.025 15.0 gal/hr Diesel 4,500	0 0 0 1,800 2,700 0
	Turbine and generator parts and pieces	Heavy Transporter	Goldhoffer	00 Hp III 1 300 Hr 75% 300 hr 0.025 15.0 gal/hr Diesel 4,500	0 0 0 1,800 2,700 0
	Moisture separators, FW Heaters,	Heavy Transporter	Goldhoffer	00 Hp III 1 300 Hr 75% 300 hr 0.025 15.0 gal/hr Diesel 4.500	0 0 0 1,800 2,700 0
	PART IV GAS		and the second second second	0	0 0 0 0 0
	PART IV DIESEL			25.644	0 0 1,214 9,043 14,172 607 6
100%	V. Construction & Site Support	and the second	and the state of the state of the second		
	Including:	Crane - Picker	Grove RT530E-2 30t	60 Hp III 2 68 Mo 50% 11968 hr 0.026 4.2 gal/hr Diesel 49,787	0 2,489 7,468 9,957 9,957 9,957 9,957 9,957
	Service vehicles	Boom Lift - 80 ft	Genie S-80	74 Hp III 3 68 Mo 25% 8976 hr 0.026 1.9 gal/hr Diesel 17,270	0 863 2,590 3,454 3,454 3,454 3,454 3,4
	Janitorial / Garbage collection	Pickup Truck 3/4 ton	F-250	00 Hp 3 68 Mo 25% 8976 hr 3 3.0 gal/hr Diesel 26,928	0 1,346 4,039 5,386 5,386 5,386 5,386 5,3
	Snow plowing and road maintenance	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	00 Hp 1 68 Mo 10% 1197 hr 3.5 3.5 gal/hr Gas 4,189	0 209 628 1,047 838 838 6
	Portable lighting	Material truck 2-1/2 ton	F-650	270 Hp III 1 68 Mo 25% 2992 hr 0.026 7.0 gal/hr Diesel 21,004	0 1,050 3,151 5,251 4,201 4,201 3,1
	Portable generators	RR switch engine	Estimated 600 Hp	500 Hp II 1 68 Mo 10% 1197 hr 0.026 15.6 gal/hr Diesel 18,670	0 934 2,801 4,668 3,734 3,734 2,8
	Welders	Welders		0Hp 0	
	Air compressors	Air Compressors)Hp 0	
	Portable lighting	Portable Lighting)Hp 0	
		2		0	
	PART V GAS			4,189	
	PART V DIESEL			4,189 133,659	0 209 628 1,047 838 838 0 0 6,683 20,049 28,715 26,732 26,732 24,7
100%					
100%	PART V DIESEL	Tracked Dozer	Cat D9		0 6,683 20,049 28,715 26,732 26,732 24,
100%	PART V DIESEL VI. Final site work/Grading	Tracked Dozer Tracked Dozer	Cat D9 Cat D7	133,659	0 6,683 20,049 28,715 26,732 26,732 24, 0 0 0 0 0 0 7,603 30,
100%	PART V DIESEL VI. Final site work/Grading			139,659 110 Hp III 3 8 Mo 60% 2534 hr 15 15.0 gal/hr/Diesel 38,016	0 6,683 20,049 28,715 26,732 26,732 24, 0 0 0 0 0 0 7,603 30, 0 0 0 0 0 0 4,552 18,
100%	PART V DIESEL VI. Final site work/Grading	Tracked Dozer Excavator - Medium Semi-Trailer Dump	Cat D7 Cat 321D Mack E8	110 Hp 11 3 8 Mo 60% 2534 hr 15 15.0 gal/hr Diesel 38,016 135 Hp 11 3 8 Mo 60% 2534 hr 9 9.0 gal/hr Diesel 22,810 148 Hp 11 1 8 Mo 50% 704 hr 5 5.0 gal/hr Diesel 3,520 00 Hp 1 6 8 Mo 50% 704 hr 0.026 10.4 gal/hr Diesel 3,520	0 6,683 20,049 28,715 26,732 26,732 24, 0 0 0 0 0 7,603 30, 0 0 0 0 0 4,662 18, 0 0 0 0 0 7,603 30, 0 0 0 0 0 7,603 18, 0 0 0 0 7,604 2,6732 3,07
100%	PART V DIESEL VI. Final site work/Grading	Tracked Dozer Excavator - Medium	Cat D7 Cat 321D	110 Hp 11 3 8 Mo 60% 2534 hr 15 15.0 gal/hr Diesel 38,016 33 Hp 11 3 8 Mo 60% 2534 hr 15 0 gal/hr Diesel 38,016 34 Hp 11 3 8 Mo 60% 2534 hr 15 0 gal/hr Diesel 22,810 40 Hp 1 8 Mo 60% 704 hr 5 0 gal/hr Diesel 3,520 00 Hp 11 8 Mo 60% 4224 hr 0.026 10.4 gal/hr Diesel 43,930 50 Hp 11 2 8 Mo 60% hr 11.0 gal/hr Diesel 43,930	0 6,683 20,049 28,715 26,732 25,732 24, 0 0 0 0 0 7,603 30, 0 0 0 0 0 4,562 18, 0 0 0 0 0 74 2, 0 0 0 0 8,786 35, 0 0 0 0 8,786 35, 0 0 0 0 37,17 14,
100%	PART V DIESEL VI. Final site work/Grading	Tracked Dozer Excavator - Medium Semi-Trailer Dump	Cat D7 Cat 321D Mack E8 Cat 14M Cat CS74	110 Hp 3 8 Mo 60% 2534 hr 15 15.0 gal/hr Diesel 38,016 325 Hp 11 3 8 Mo 60% 2534 hr 9 9.0 gal/hr Diesel 22,810 48 Hp 11 8 Mo 60% 2534 hr 9 9.0 gal/hr Diesel 3,520 00 Hp 18 Mo 60% 704 hr 5 5.0 gal/hr Diesel 3,520 00 Hp 6 8 Mo 50% 4224 hr 0.026 10.4 gal/hr Diesel 43,930 59 Hp 11 2 8 Mo 60% 1690 hr 11 11.0 gal/hr Diesel 18,806 50 Hp 11 8 Mo 60% 2534 hr 6 6.0 gal/hr Diesel 15,206	0 6,683 20,049 28,715 26,732 26,732 24 0 0 0 0 0 7,603 30 0 0 0 0 0 4,562 18 0 0 0 0 0 4,562 148 0 0 0 0 0 7,44 2 0 0 0 0 8,766 35 0 0 0 0 3,717 14 0 0 0 0 3,717 144
100%	PART V DIESEL VI. Final site work/Grading	Tracked Dozer Excavator - Medium Semi-Trailer Dump Motor Grader	Cat D7 Cat 321D Mack E8 Cat 14M	110 Hp 11 3 8 Mo 60% 2534 hr 15 15.0 gal/hr Diesel 38,016 33 Hp 11 3 8 Mo 60% 2534 hr 15 0 gal/hr Diesel 38,016 34 Hp 11 3 8 Mo 60% 2534 hr 15 0 gal/hr Diesel 22,810 40 Hp 1 8 Mo 60% 704 hr 5 0 gal/hr Diesel 3,520 00 Hp 11 8 Mo 60% 4224 hr 0.026 10.4 gal/hr Diesel 43,930 50 Hp 11 2 8 Mo 60% hr 11.0 gal/hr Diesel 43,930	0 6,683 20,049 28,715 26,732 26,732 24, 0 0 0 0 0 7,603 30, 0 0 0 0 0 4,562 18, 0 0 0 0 7,603 30, 7,603 30, 0 0 0 0 0 4,562 18, 7,603 30, 0 0 0 0 0 7,603 30, 7,603 30, 0 0 0 0 7,603 30, 7,603 30, 7,603 30, 7,603 30, 7,603 30, 7,603 30, 7,603 30, 7,603 30, 7,603 30, 7,74 2, 6,768 35, 6,768 35, 6,768 35, 6,768 35, 7,717 14, 0 0 0 0 0 3,041 12, 14, 14, 14, 14,
100%	PART V DIESEL VI. Final site work/Grading	Tracked Dozer Excavator - Medium Semi-Trailer Dump Motor Grader Vibratory Soil Compactor	Cat D7 Cat 321D Mack E8 Cat 14M Cat CS74	109,659 10 Hp 11 3 8 Mo 60% 2534 hr 15 15.0 gal/hr Diesel 38,016 335 Hp 11 3 8 Mo 60% 2534 hr 9 9.0 gal/hr Diesel 32,221 48 Hp 11 1 8 Mo 50% 704 hr 5 5.0 gal/hr Diesel 3,520 00 Hp 1 6 8 Mo 60% 4224 hr 0.026 10.4 gal/hr Diesel 43,930 59 Hp 11 2 8 Mo 60% 1690 hr 11 11.0 gal/hr Diesel 18,586 56 Hp 11 2 8 Mo 60% 2534 hr 6 6.0 gal/hr Diesel 15,206 00 Hp 2 8 Mo 30% 845 hr 3 3.0 gal/hr Diesel 15,206	0 6,683 20,049 28,715 26,732 26,732 24, 0 0 0 0 0 7,603 30, 0 0 0 0 0 4,562 18, 0 0 0 0 0 704 2, 0 0 0 0 0 8,786 35, 0 0 0 0 0 3,717 14, 0 0 0 0 0 3,041 12, 0 0 0 0 0 507 2,
100%	PART V DIESEL VI. Final site work/Grading	Tracked Dozer Excavator - Medium Semi-Trailer Dump Motor Grader Vibratory Soil Compactor Pickup Truck 3/4 ton	Cat D7 Cat 321D Mack E8 Cat 14M Cat CS74 F-250	110 Hp 11 3 8 Mo 60% 2534 hr 15 15.0 gal/hr Diesel 38,016 135 Hp 11 3 8 Mo 60% 2534 hr 9 9.0 gal/hr Diesel 22,810 146 Hp 11 1 8 Mo 60% 2534 hr 9 9.0 gal/hr Diesel 3,520 00 Hp 1 8 Mo 50% 704 hr 5 0.0 gal/hr Diesel 3,520 00 Hp 1 8 Mo 60% 4224 hr 0.026 10.4 gal/hr Diesel 13,930 259 Hp 11 2 8 Mo 60% 1590 hr 11 11.0 gal/hr Diesel 18,586 56 Hp 11 2 8 Mo 60% 2534 hr 6 6.0 gal/hr Diesel 15,206 00 Hp 2 8 Mo 30% 8.45 hr 3 3.0 gal/hr Diesel 1.5,244 <td>0 6,683 20,049 28,715 26,732 26,732 24 0 0 0 0 0 7,603 30, 0 0 0 0 0 4,562 18, 0 0 0 0 0 4,562 18, 0 0 0 0 0 744 2, 0 0 0 0 0 8,786 355 0 0 0 0 3,017 14, 0 0 0 0 3,041 12, 0 0 0 0 5607 2, 0 0 0 0 493 1,</td>	0 6,683 20,049 28,715 26,732 26,732 24 0 0 0 0 0 7,603 30, 0 0 0 0 0 4,562 18, 0 0 0 0 0 4,562 18, 0 0 0 0 0 744 2, 0 0 0 0 0 8,786 355 0 0 0 0 3,017 14, 0 0 0 0 3,041 12, 0 0 0 0 5607 2, 0 0 0 0 493 1,
100%	PART V DIESEL VI. Final site work/Grading	Tracked Dozer Excavator - Medium Semi-Trailer Dump Motor Grader Vibratory Soil Compactor Pickup Truck 3/4 ton Pickup Truck 3/4 ton (Licensed for offsite use) Fuel Truck Rough Terrain Extended Forklift	Cat D7 Cat 321D Mack E8 Cat 14M Cat CS74 F-250 F-250 F-250 Mack MP6 Luil 1044C-54	1139659 110 Hp 113 Mo 60% 2534 hr 15.0 gal/hr Diesel 38,016 335 Hp 11 3 8 Mo 60% 2534 hr 9 9.0 gal/hr Diesel 38,016 335 Hp 11 8 Mo 60% 764 hr 5 0.0 gal/hr Diesel 3,520 000 Hp 11 8 Mo 60% 764 hr 0.026 10.4 gal/hr Diesel 43,930 59 Hp 11 2 8 Mo 60% 4224 hr 0.026 10.4 gal/hr Diesel 43,930 59 Hp 11 2 8 Mo 60% 4234 hr 6 6.0 gal/hr Diesel 15,206 59 Hp 11 3 8 Mo 60% 2534 hr 6 6.0 gal/hr Diesel 2,534 50 Hp 11 3 8 Mo 60% 704 hr 3.5 3.5 gal/hr Diesel 2,534 50 Hp	0 6,683 20.049 28,715 26,732 25,732 24,733 0 0 0 0 0 7,603 30,0 0 0 0 0 0 4,562 18,756 0 0 0 0 0 7,603 30,0 0 0 0 0 0 4,562 18,766 0 0 0 0 0 8,786 35,732 0 0 0 0 3,041 12,733 14,433 0 0 0 0 507 2,433 14,133 0 0 0 0 0 507 2,433 0 0 0 0 0 99 30,41 12,133 0 0 0 0 0 99 30,41 12,133 0 0 0 0 0 99 30,14 13,14,133 13,14,133
100%	PART V DIESEL VI. Final site work/Grading	Tracked Dozer Excavator - Medium Semi-Trailer Dump Motor Grader Vibratory Soil Compactor Pickup Truck 3/4 ton Pickup Truck 3/4 ton Clonesed for offsite use) Fuel Truck	Cat D7 Cat 321D Mack E8 Cat 14M Cat CS74 F-250 F-250 Mack MP6	1139,659 110 Hp 11 3 8 Mo 60% 2534 hr 15 15.0 gal/hr Diesel 38,016 123 Hp 11 3 8 Mo 60% 2534 hr 9 9.0 gal/hr Diesel 22,810 148 Hp 11 1 8 Mo 50% 704 hr 5 5.0 gal/hr Diesel 3,520 00 Hp 1 6 8 Mo 50% 704 hr 5 0.026 10.4 gal/hr Diesel 3,520 00 Hp 1 6 8 Mo 60% 1500 hr 11 11.0 gal/hr Diesel 18,586 56 Hp 11 8 Mo 60% 1520 hr 6 0.0 gal/hr Diesel 15,206 100 Hp 2 8 Mo 30% 845 hr 3 3.0 gal/hr Diesel 2,534 100 Hp 1 8 Mo 50% 704 hr 3.5 3.5 gal/hr	0 6,683 20,049 28,715 26,732 25,732 24, 0 0 0 0 0 7,603 30, 0 0 0 0 0 4,562 18, 0 0 0 0 0 7,603 30, 0 0 0 0 0 4,562 18, 0 0 0 0 0 7,603 30, 0 0 0 0 4,562 18, 3,748 35, 0 0 0 0 0 3,717 14, 0 0 0 0 3,041 12, 0 0 0 0 6,507 2, 0 0 0 0 439 1,
100%	PART V DIESEL VI. Final site work/Grading	Tracked Dozer Excavator - Medium Semi-Trailer Dump Motor Grader Vibratory Soil Compactor Pickup Truck 3/4 ton Pickup Truck 3/4 ton (Licensed for offsite use) Fuel Truck Rough Terrain Extended Forklift	Cat D7 Cat 321D Mack E8 Cat 14M Cat CS74 F-250 F-250 F-250 Mack MP6 Luil 1044C-54	1139659 110 Hp 113 Mo 60% 2534 hr 15.0 gal/hr Diesel 38,016 335 Hp 11 3 8 Mo 60% 2534 hr 9 9.0 gal/hr Diesel 38,016 335 Hp 11 8 Mo 60% 764 hr 5 0.0 gal/hr Diesel 3,520 000 Hp 11 8 Mo 60% 744 hr 0.026 10.4 gal/hr Diesel 43,930 558 Hp 11 2 8 Mo 60% 150 hr 11.0 gal/hr Diesel 15,206 568 Hp 11 2 8 Mo 60% 2534 hr 6 6.0 gal/hr Diesel 15,206 00 Hp 2 8 Mo 60% 704 hr 3.5 3.5 gal/hr Gas 2,464 50 Hp 11 8 Mo 10% 141 hr 3.5 3.5 gal/hr Diesel 493 00 Hp 1 8 Mo 10%	0 6,683 20,049 28,715 26,732 26,732 24, 0 0 0 0 0 7,603 30, 0 0 0 0 0 4,562 18, 0 0 0 0 0 7,603 30, 0 0 0 0 0 4,562 18, 0 0 0 0 0 7,64 2, 0 0 0 0 3,774 14, 0 0 0 0 3,041 12, 0 0 0 0 507 2, 0 0 0 0 507 2, 0 0 0 0 99 1 0 0 0 0 99 1

UniStar Nuclear

Attachment 1

Report No: SL-010055, Rev. 2

Bell I	tar Nuclear Bend Nuclear Power Plant struction Vehicle Fuel Consumption Study	na ^a kana ^a ng i	Tota	Attachme Worksheet 1 of 2 - I Fuel Usage (Safety and	Page 5 of 6							Re	port No: SL-0 Project N	10055, Rev. No. 12198-43
	Section 2 Commercial/Construction Deliveries	Deliveries	Quantity	Unit	Distance	Fuel rate mi/gal Fue	Total Fuel	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7
	Construction deliveries and related traffic	15 Tons per Shipment	and the second state of the	a second s	in a state of the second state	j ilivgai j	A CARACTER AND A CARACTER AND A	Charles and the second	-	des representations	and the second	a de la compañía de l	and the second	and a state of the
1000/	Civil Material													
100%	Construction Equipment Mobilization/Removal	500 moves on + 500 off	1,000	shipments	50 mi	6.5 mi/gal Diese					385	385		
100%	Concrete Material (Sand, stone, cement, admixtures) Lean Concrete Materials	848,362 tons 200,000 cy	56,557	shipments	50 mi	6.5 mi/gal Diese				130,517	108,764	43,506		
100%	Engineered fill	500,000 cy	33,333	shipments	50 mi	6.5 mi/gal Diese 6.5 mi/gal Diese				51,282 128,205	0	0		
100%	Cohesive fill	800,000 cy	53,333	shipments	50 mi	6.5 mi/gal Dies					0	0		
100%	Formwork	2,393 tons	160	shipments	50 mi	6.5 mi/gal Dies				430	307	61		
100%	Rebar	55,331 tons	3,689	shipments	50 mi	6.5 mi/gal Dies					7,094			
100%	Structural Steel	6,261 tons	417	shipments	75 mi	6.5 mi/gal Diese					1,926			
100%	Misc. Steel	1,016 tons	68	shipments	75 mi	6.5 mi/gal Dies		0		234			117	
100%	Mod Steel	225 tons	15	shipments	75 mi	6.5 mi/gal Diese	el 173 gal	0				52	17	17
100%	Steel Liner	1,412 tons	94	shipments	75 mi	6.5 mi/gal Dies						217	0	
100%	Embedded Steel	1,903 tons	127	shipments	75 mi	6.5 mi/gal Dies			220					1
100%	Siding & Roofing	2,056 tons	137	shipments	50 mi	6.5 mi/gal Dies				53				
100%	Asphalt	21,850 tons	1,457	shipments	50 mi	6.5 mi/gal Dies								2,80
100%	Pre engineered building	60 tons	4	shipments	50 mi	6.5 mi/gal Diese					0			
100%	Construction Debris	12,000 tons	800	shipments	50 mi	6.5 mi/gal Dies	el 6,154 gal	615	615	923	1,231	923	923	923
4000/	Piping and Mechanical Material	7,500 tons	500											L
100%	Large and Small bore pipe	7,500 tons	500	shipments	75 mi	6.5 mi/gal Dies		0	0	1,154	2,019			
100%	Large bore hangers Nuclear Island EM package equipment	2,788 tons 15,377 tons	186	shipments	75 mi	6.5 mi/gal Dies		0						
100%	Turbine Island and BOP Mechanical Equipment	Estimated	1,025	shipments	150 mi	6.5 mi/gal Dies			0		8,280			
100%		Estimated	1000	shipments	50 mi	6.5 mi/gal Dies 8.0 mi/gal Gas			0	1,010	8,077			
10070	Electrical Equipment	Countated	1000	shiphents	50 mi	o.u milgar Gas	6,250 gal	0	0	1,250	2,100	1,875	620	31.
100%	Conduit	1.356 tons	90	shipments	50 mi	6.5 mi/gal Dies	el 692 gal	0	0	104	242	208	69	69
100%	Cable Tray	75 tons	49	shipments	50 mi	6.5 mi/gal Dies			0		132			
100%	Power & Control wire	4,406 tons	294	shipments	75 mi	6.5 mi/gal Dies			0	508		1,186		
100%	NI Electrical Equipment	5,000 tons	333	shipments	150 mi	8.0 mi/gal Gas			0	938				
100%	TI Electrical Equipment	5.000 tons	333	shipments	150 mi	8.0 mi/gal Gas			0	938	1,875			
	Site Support Services						0,200 90					2,100		
100%	Fuel deliveries	Based on fuel usage from Section 1	827	shipments	50 mi	6.5 mi/gal Dies	el 6,364 gal	1,273	1.591	955	636	636	636	630
100%	Vendor deliveries	4 /day	5984	trips	50 mi	15.0 mi/gal Gas		0	997	4,987	4,987	4,987	1,995	1,99
100%	Equipment service calls	3 /day	4488	trips	50 mi	18.0 mi/gal Gas	12,467 gai	0	623	623	1,870	1,870	3,740	3,740
	COMMERCIAL/DELIVERIES GAS						51,163	0		8,735	12,794			
	COMMERCIAL/DELIVERIES DIESEL	and have been a second s	فترا ويستعلقوا فاعتر بقيدة			And Southern and States	1,333,817	26,660	486,155	546,615	142,539	66,187	33,602	32,06
	D				Average	Average		100	Sector 11	1. ALC: 1. ALC: 1.	1.11.11.11		1.	
100%	Section 3 Workforce Commute	Average Workforce KLD Traffic Study Const Staffing Profile RFI EPR-11-039	Commuters = 1.3		Round	Fuel rate Fue	Total Fuel	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7
	workforce commute	Const Starting Profile RFI EPR-11-039	person/car		trip Distance	(mi/gal)								
	Year 1	150	115		50 mi	20.0 mi/gal Gas	82,800	82,800	1					
	Total L	130	115		50 mi	18.0 mi/gal Dies	el 8,000							
	Year 2	550	423		50 mi	20.0 mi/gal Gas			303,600					
					50 mi	18.0 mi/gal Dies			29,333					
	Year 3	1950	1,500		50 mi	20.0 mi/gal Gas			20,000	1,076,400				
					50 mi	18.0 mi/gal Dies				104,000				
	Year 4	3800	2,923		50 mi	20.0 mi/gal Gas					2,097,600			
					50 mi	18.0 mi/gal Dies					202,667			
	Year 5	3800	2,923		50 mi	20.0 mi/gal Gas						2,097,600	1	
					50 mi	18.0 mi/gal Dies						202,667		
	Year 6	2000	1,538		50 mi	20.0 mi/gal Gas	1,104,000						1,104,000	
					50 mi	18.0 mi/gal Dies							106,667	
	Year 7	400	308		50 mi	20.0 mi/gal Gas								220,80
					50 mi	18.0 mi/gal Dies								21,33
	WORK FORCE COMMUTE GAS						6,762,000	82.800	303,600	1,076,400	2,097,600	2.097.600	1.104.000	South States of

ar Nuclear end Nuclear Power Plant ruction Vehicle Fuel <mark>C</mark> onsumption Study		Attachment 1 Worksheet 1 of 2 - Page 6 of 6 Total Fuel Usage (Safety and Non-safety related work)												Repo	ort No: SL-010 Project No	
Fuel Consumption Summary	A Martin Change Change and Street Street															
Non-Road Equipment Summary	100%							Fuel Diesel	Total Fuel 4,854,651	Year 1 1,317,916	Year 2 1,350,552	Year 3 786,782	Year 4 693,655	Year 5 376,093	Year 6 142,040	Year7 187,61
Luzen county	100%	and the property of the second se		-				Gas	109,169	11.004	14.298	27,546	26,993	18,394	5.821	5,11
Construction Deliveries Summary	the second s	and the second		-law-ada				Fuel	Total Fuel	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7
Wyoming, Lackawanna, Luzern, and Monroe	45%							Diesel	600,218	11,997	218,770	245,977	64,143	29,784	15,121	14.42
A second s								Gas	23,024	0	729	3,931	5,757	5,898	3,424	3,28
ehigh, Carbon, Northampton, and Lancaster	10%							Diesel	133,382	2,666	48,615	54,662	14,254	6,619	3,360	3,20
								Gas	5,116	0	162	874	1,279	1,311	761	73
Columbia, Schuykill	45%							Diesel	600,218	11,997	218,770	245,977	64,143	29,784	15,121	14,42
								Gas	23,024	0	729	3,931	5,757	5,898	3,424	3,28
Total								Diesel	1,333,817	26,660	486,155	546,615	142,539	66,187	33,602	32,06
Workforce Commute		the second secon						Gas	51,163 Total Fuel	0	1,621	8,735	12,794 Year 4	13,107 Year 5	7,610 Year 6	7,29 Year7
Carbon	16%		1 1	_				Fuel Diesel	107,947	Year 1 1,280	Year 2 4,693	16,640	32,427	32,427	17,067	3,41
Calbon	1070							Gas	1,117,248	13,248	48,576	172,224	335,616	335.616	176.640	35,32
Columbia	15%							Diesel	101,200	1,200	48,370	15,600	30,400	30,400	16,000	3,20
Solumbia	10 10							Gas	1,047,420	12,420	45,540	161,460	314,640	314,640	165,600	33,12
ackawanna	8%							Diesel	53,973	640	2,347	8,320	16,213	16,213	8,533	1,70
	And a second							Gas	558,624	6,624	24,288	86,112	167,808	167,808	88,320	17,66
uzerne	44%							Diesel	296,853	3,520	12,907	45,760	89,173	89,173	46,933	9,38
								Gas	3,072,432	36,432	133,584	473,616	922,944	922,944	485,760	97,15
Montour	4%							Diesel	26,987	320	1,173	4,160	8,107	8,107	4,267	85
							and the second second	Gas	279,312	3,312	12,144	43,056	83,904	83,904	44,160	8,83
Northumberland	3%	4						Diesel	20,240	240	880	3,120	6,080	6,080	3,200	64
								Gas	209,484	2,484	9,108	32,292	62,928	62,928	33,120	6,62
Schuykill	10%			_				Diesel	67,467	800	2,933	10,400	20,267	20,267	10,667	2,13
••				_				Gas	698,280	8,280	30,360	107,640	209,760	209,760	110,400	22,08
Nyoming	1%							Diesel	6,747 69.828	828	293	1,040	20,976	20.976	1,067	2,20
Total				-				Diesel	674,667	8,000	29.333	10,764	20,976	20,976	106.667	21,33
rotar								Gas	6.982.800	82,800	303.600	1.076.400				220.80
Project Fuel Usage Summary	and the second	and the second						Fuel	Total Fuel	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7
. rejeer, eer eerige ourinnuij				1				Diesel	6,863,136	1,352,576	1,866,040		1,038,861	644,946	282,309	241,00
									7,143,133							233.21

Bell E	ar Nuclear Send Nuclear Power Plant truction Vehicle Fuel Consumption Study			Attachment 1 Worksheet 2 of 2 - Page 1 of 6 Safety-related Fuel Usage				Report No: SL Projec
Safety- Related	Section 1 Non-Road Construction Equipment	Equipment	Class/Model #	HP Tier Qnty On Site Wk%	Hours or g/h g/h/hp A	verage Fuel Rate Fuel Total Fuel	l (Gal) Year 1 Year 2	Year 3 Year 4 Year 5 Yea
0%	IA. Early Site Preparation Clearing, Deforesting, Grubbing & Grading Including:	Tracked Dozer	Cat D10	700 Hp III 4 5 Mo 75%	3300 hr 20	20.0 gal/hr Diesel	0 0 0	0 0 0
	Access Roads Topsoil cut & stockpile	Tracked Loader Excavator - Medium	CAT 973C Cat 321D	263 Hp III 3 5 Mo 75% 148 Hp III 3 5 Mo 60%	2475 hr 10 1980 hr 5	10.0 gal/hr Diesel 5.0 gal/hr Diesel	0 0 0	0 0 0
	Topsoil Removal- 503414 cy Used for final grading - 128,000 cy Topsoil Stockpiled - 376257cy	Excavator - With tree attachment Crane - Picker	Cat 345D L Grove RT530E-2 30t	380 Hp III 1 5 Mo 60% 160 Hp III 2 5 Mo 40%	660 hr 10 880 hr 0.028	10.0 gal/hr Diesel 4.5 gal/hr Diesel	0 0 0	0 0 0
	i opson stockpiled - 3/625/69	Semi-Trailer Dump Motor Grader	Mack MP8 Cat 14M	450 Hp III 10 5 Mo 50% 259 Hp III 2 5 Mo 45%	5500 hr 0.026 990 hr 11	11.7 gal/hr Diesel 11.0 gal/hr Diesel	0 0 0	0 0 0
		Scraper Scraper	Cat 631G Cat 631G Cat CS74	462 Hp III 8 5 Mo 60% 462 Hp III 3 5 Mo 60% 156 Hp III 1 5 Mo 60%	5280 hr 16 1980 hr 16 660 hr 6	16.0 gal/hr Diesel 16.0 gal/hr Diesel		
		Vibratory Soil Compactor Water Trucks	Mack MP6 F-250	156 Hp III 1 5 Mo 60% 150 Hp II 1 5 Mo 40% 300 Hp 2 5 Mo 50%	440 hr 3.5 1100 hr 3	6.0 gal/hr Diesel 3.5 gal/hr Diesel	0 0 0	0 0 0
		Pickup Truck 3/4 ton Pickup Truck 3/4 ton (Licensed for offsite use Fuel Truck		300 Hp 2 5 Mid 50% 300 Hp 2 5 Mo 50% 150 Hp II 2 5 Mo 20%	1100 hr 3.5 440 hr 3.5	3.0 gal/hr Diesel 3.5 gal/hr Gas 3.5 gal/hr Diesel		0 0 0
	IB. Site Development & Excavation	Mechanic's Truck 2-1/2 ton	F-650	270 Hp III 1 5 Mo 30%	300 hr 4 0.026	4.0 gal/hr Diesel	0 0 0	0 0 0
0%	Excavating/Backfilling/Earth/Soil/Rock Remove & Dispos - Intake Area, Switchyard, Northeast Laydown, West	al and a second se						
	Laydown Estimated Quantities:	Tracked Dozer/Ripper	Cat D10	700 Hp III 7 4 Mo 75%	4200 hr 20	20.0 gal/hr Diesel	0 0 0	0 0 0
	Removal - 870,471cy Placement - 881,664cy	Scraper Excavator - Medium	Cat 637G (dual engine) Cat 321D	148 Hp III 1 4 Mo 60%	2400 hr 32 480 hr 5	32.0 gal/hr Diesel 5.0 gal/hr Diesel	0 0 0	0 0 0
		Tracked Loader Motor Grader	CAT 973C Cat 14M	263 Hp III 6 4 Mo 70% 259 Hp III 1 4 Mo 50%	3360 hr 10 400 hr 11	10.0 gal/hr Diesel 11.0 gal/hr Diesel	0 0 0	0 0 0
		Pickup Truck 3/4 ton Water Trucks	F-250 Mack MP6	300 Hp 1 4 Mo 35% 150 Hp II 1 4 Mo 50%	280 hr 3 400 hr 3.5	3.0 gal/hr Diesel 3.5 gal/hr Diesel	0 0 0	0 0 0
	Excavating/Backfilling/Earth/Soil/Rock Remove & Dispos	Pickup Truck 3/4 ton (Licensed for offsite use) F-250	300 Hp 2 4 Mo 40%	640 hr 3.5	3.5 gal/hr Gas	0 0 0	0 0 0
0%	- Powerblock (Includes GIS, Switchyard, Cooling towers and North central laydown area)	Transland Descar Olegos	Col DIA		6949 bill 99	20.0 collect Direct	al al al	
	Estimated Quantities: Removal - 10,837,579 cy	Tracked Dozer/Ripper Tracked Dozer/Disk	Cat D10 Cat D9	700 Hp III 4 13 Mo 60% 410 Hp III 1 13 Mo 60%	6240 hr 20 1560 hr 15	20.0 gal/hr Diesel 15.0 gal/hr Diesel	0 0 0	0 0 0
1004	Placement - 2,681,000 cy	Tracked Loader Scraper	CAT 973C Cat 637G (dual engine)			10.0 gal/hr Diesel 32.0 gal/hr Diesel	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0
10% 10%		Vibratory Soil Compactor Soil Compactor	Cat CS74 Cat 825H Cat 321D	156 Hp III 2 13 Mo 45% 400 Hp III 2 13 Mo 45%		6.0 gal/hr Diesel 18.0 gal/hr Diesel	1,404 281 562 4,212 842 1,685 0 0 0	562 0 0 1,685 0 0 0 0 0
		Excavator - Medium Tracked Loader	CAT 973C	148 Hp III 2 13 Mo 60% 263 Hp III 6 13 Mo 70%	10920 hr 10	5.0 gal/hr Diesel 10.0 gal/hr Diesel	0 0 0 0 0 0 0 0 0	
		Motor Grader Excavator - Large	Cat 14M Cat 375L Cat 773	259 Hp III 2 13 Mo 50% 428 Hp III 5 13 Mo 60% 650 Hp III 30 13 Mo 45%	7800 hr 16	11.0 gal/hr Diesel 16.0 gal/hr Diesel		
		Off Road Truck (80 ton payload) Pickup Truck 3/4 ton Water Trucks	F-250 Mack MP6	650 Hp III 30 13 Mo 45% 300 Hp 3 13 Mo 35% 150 Hp II 2 13 Mo 50%		16.0 gal/hr Diesel 3.0 gal/hr Diesel 3.5 gal/hr Diesel		
		Water Wagon 8000 gal Mechanic's Truck 2-1/2 ton	Cat 631G F-650	462 Hp II 1 13 Mo 50% 270 Hp III 2 13 Mo 30%	1300 hr 16	16.0 gal/hr Diesel 4.0 gal/hr Diesel		
80% 80%		End Loader (Batch Plant) Concrete Truck	Cat 966H Mack MP6	262 Hp III 2 4 Mo 50% 150 Hp III 15 4 Mo 33%	704 hr 5	5.0 gal/hr Diesel 3.5 gal/hr Diesel	2,816 0 2,112 9,757 0 7,318	704 0 0 2,439 0 0
		Pickup Truck 3/4 ton Pickup Truck 3/4 ton (Licensed for offsite use	F-250	300 Hp 1 13 Mo 50% 300 Hp 2 13 Mo 40%	1300 hr 3	3.0 gal/hr Diesel 3.5 gal/hr Gas	0 0 0	0 0 0
0%	Excavating/Backfilling/Earth/Soil/Rock Remove & Dispos	Fuel Truck	Mack MP6	150 Hp II 4 13 Mo 20%	2080 hr 3.5	3.5 gal/hr Diesel	0 0 0	0 0 0
- /1	- Parking Estimated Quantities:	Tracked Dozer	Cat D7E	235 Hp III 2 5 Mo 75%	1500 hr 9	9.0 gal/hr Diesel	0 0 0	0 0 0
	Removal 287,820cy Placement 1,413,639 cy	Scraper Vibratory Soil Compactor	Cat 631G Cat CS74	462 Hp III 1 5 Mo 50% 156 Hp III 2 5 Mo 45% 400 Hp III 2 5 Mo 45%	500 hr 16 900 hr 6 900 hr 18	16.0 gal/hr Diesel 6.0 gal/hr Diesel 18.0 gal/hr Diesel	0 0 0	
		Soil Compactor Excavator - Medium	Cat 825H Cat 321D CAT 973C	148 Hp III 1 5 Mo 60%	600 hr 5	5.0 gal/hr Diesel 10.0 gal/hr Diesel		
		Tracked Loader Motor Grader	Cat 14M	259 Hp III 1 5 Mo 50%	500 hr 11	11.0 gal/hr Diesel		
		Asphalt Paver Asphalt Compactor Water Trucks	Barber GreeneAP-1000 Cat CB434C Mack MP6	107 Hp III 1 5 Mo 50%	500 hr 4	6.0 gal/hr Diesel 4.0 gal/hr Diesel		
		Pickup Truck 3/4 ton Fuel Truck	F-250 Mack MP6	150 Hp II 1 5 Mo 50% 300 Hp 1 5 Mo 35% 150 Hp II 1 5 Mo 20%	350 hr 3	3.5 gal/hr Diesel 3.0 gal/hr Diesel 3.5 gal/hr Diesel		
	te de la construcción de la constru		IMack MPO		200111 3.01	0.0 gavin Dieser	<u> </u>	

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	ar lear Power Plant /ehicle Fuel Consumption Study			Worksheet 2 of	hment 1 of 2 - Page 2 of 6 red Fuel Usage										o: SL-010055, roject No. 121	
	ating/Backlilling/Earth/Soil/Rock Remove & Disposal sort road (Includes Quarry, Batch plant, Central wn)															
Estima	ited Quantities:	Tracked Dozer	Cat D7E	235 Hp III 4	15 Mo 75%	9000 hr	9	9.0 gal/hr Diesel	0	0	o	o	0	0	0	
	oval - 364,572 cy	Scraper	Cat 637G (dual engine)	962 Hp III 3	15 Mo 50%	4500 hr 3	2	32.0 gal/hr Diesel	0	0	0	0	0	0	0	
Place	ement - 2,819,652 cy	Vibratory Soil Compactor	Cat CS74	156 Hp III 1	15 Mo 45%		6	6.0 gal/hr Diesel	0	0	0	0	0	0	0	
		Soil Compactor	Cat 825H	400 Hp III 2	15 Mo 45%	2700 hr 1	8	18.0 gal/hr Diesel	0	0	0	0	0	0	0	
		Excavator - Medium	Cat 321D	148 Hp III 2		3600 hr	5	5.0 gal/hr Diesel	0	0	0	0	0	0	0	
		Tracked Loader	CAT 973C	263 Hp III 2	15 Mo 70%	4200 hr 1	0	10.0 gal/hr Diesel	0	0	0	0	0	0	0	
		Motor Grader	Cat 14M	259 Hp III 2		1600 hr 1	1	11.0 gal/hr Diesel	0	0	0	0	0	0	0	
		Asphalt Paver	Barber GreeneAP-1000	174 Hp III 1			6	6.0 gal/hr Diesel	0	0	0	0	0	0	0	
		Asphalt Compactor	Cat CB434C	107 Hp III 1	5 Mo 50%	00011	4	4.0 gal/hr Diesel	0	0	0	0	0	0	0	
_		Pickup Truck 3/4 ton	F-250	300 Hp 1	15 Mo 35%	1000 11	3	3.0 gal/hr Diesel	0	0	0	0	0	0	0	-
		Water Trucks	Mack MP6	150 Hp II 2		2400 hr 3.		3.5 gal/hr Diesel	0	0	0	0	0	0	0	-
		Water Wagon 8000 gal	Cat 631G	462 Hp II 1	15 Mo 40%	1200 hr 1		18.0 gal/hr Diesel	0	0	0	0	0	0	0	
		Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp 2	15 Mo 50%	3000 hr 3.	5	3.5 gal/hr Gas	0	0	0	0	0	0	0	
- Sout	ating/Backfilling/Earth/Soil/Rock Remove & Disposal h Laydown															
	ated Quantities:	Tracked Dozer	Cat D10	700 Hp III 4	4 Mo 75%	2400 hr 2		20.0 gal/hr Diesel	0	0	0	0	0	0	0	
	ioval - 142,188cy	Soll Compactor	Cat 825H	400 Hp III 1	4 Mo 45%		8	18.0 gal/hr Diesel	0	0	0	0	0	0	0	
Plac	ement - 3,815,583cy	Excavator - Medium	Cat 321D	148 Hp III 3	4 Mo 60%		5	5.0 gal/hr Diesel	0	0	0	0	0	0	0	
		Motor Grader Water Trucks	Cat 14M Mack MP6	259 Hp III 1	4 Mo 50%		1	11.0 gal/hr Diesel	0	0	0	0	0	0	0	
-			Mack MP6 F-250	150 Hp II 1	4 Mo 50%	400 hr 3.		3.5 gal/hr Diesel	0	0	0	0	0	0	0	
Boring	/Sails investigation	Pickup Truck 3/4 ton (Licensed for offsite use)	F-20U	300 Hp 1	4 Mo 50%	400 hr 3.	5	3.5 gal/hr Gas	0	0	0	0	0	0	0	-
	/Soils investigation ides Wells & Dewatering	Schramm T64 Well Drilling Rig	Cat 3406 diesel	420 Hp II 1	A HE LOPERT	040	1 0 0001		-10-2	-		-				
ITICIU	ues wens a Dewatering	Pickup Truck 3/4 ton	F-250	420 Hp II 1 300 Hp 1	4 Mo 35% 4 Mo 50%	246 hr 352 hr	0.026	10.9 gal/hr Diesel 3.0 gal/hr Diesel	0	0	0	0	0	0	0	
Under	ground utilities, piping, duct runs, grounding	PICKUP ITUCK 3/4 IOI	F-200		4 100 50%	352 nr	3	3.0 gai/nr_Diesei	0	0	0	U	0	U	0	
- Onder	ground dimines, piping, additions, grounding	Crane - Picker	Grove RT530E-2 30t	160 Hp III 2	8 Mo 40%	1126 hr	0.026	4.2 gal/hr Diesel	2.343	0	1,171	1,171	0	ol	o	
		Tracked Dozer	Cat D7E	235 Hp III 2	8 Mo 60%	1690 hr	0.020	9.0 gal/hr Diesel	7,603	0	3,802	3.802	0	0	0	<u></u>
	and the second	Backhoe	Cat 430E	102 Hp III 6	8 Mo 60%	5069 hr	0.028	2.9 gal/hr Diesel	7,238	0	2.895	2,171	2,171	0	0	_
	The second s	Pickup Truck 3/4 ton	F-250	300 Hp 8	8 Mo 40%	4506 hr	3 0.020	3.0 gal/hr Diesel	6,758	0	2,703	2,703	1,352	0	0	
	77 - 178 - 188 - 188 - 188 - 188 - 188 - 188 - 188 - 188 - 188 - 188 - 188 - 188 - 188 - 188 - 188 - 188 - 188	Excavator - Medium	Cat 321D	148 Hp III 2		1690 hr	5	5.0 gal/hr Diesel	4,224	0	2,703	1.690	0	0	0	
	The second s	Semi-Trailer Dump	Mack F8	400 Hp III 1	8 Mo 60%	845 hr	0.026	10.4 gal/hr Diesel	4,393	0	2,196	1,757	439	0	0	
Wareh	ouse & Storage	and the second se			of me cover	0.10.111	0.020	Terriganin Dieser	1,000		2,100	1,701	100			-
	struction & Operation	Fork Lift - 15,000 Lb capacity	Cat DP70E	94 Hp III 2	68 Mo 35%	8378 hr	0.033	3.1 gal/hr Diesel	12,994	0	1,299	2,599	3,898	3,248	1,299	-
		Crane - Picker	Grove RT530E-2 30t	160 Hp III 2		9574 hr	0.026	4.2 gal/hr Diesel	19,915	0	1,991	3.983	5.974	4,979	1,991	
-		Pickup Truck 3/4 ton	F-250	300 Hp 2		11968 hr	3	3.0 gal/hr Diesel	17,952	0	1,795	3,590	5,386	4,488	1,795	
		Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp 1	68 Mo 30%	3590 hr 3.	5	3.5 gal/hr Gas	6,283	0	628	1,257	1,885	1,571	628	
-		Material truck 2-1/2 ton	F-650	270 Hp III 1	68 Mo 25%	2992 hr	0.026	7.0 gal/hr Diesel	10,502	0	1,050	2,100	3,151	2,625	1,050	
		Rough Terrain Extended Forklift	Lull 1044C-54		68 Mo 45%	5386 hr	0.026	3.0 gal/hr Diesel	8,051	0	805	1,610	2,415	2,013	805	
PART	1 PRE-CONSTRUCTION GAS 1 PRE-CONSTRUCTION DIESEL								6,283 120,163	0 1,123	628 33,920	1,257 32,567	1,885 24,787	1,571 17,353	628 6,941	
	il/Concrete structure Work		and the construction over the second	a the same of the second states of the second states of the	Countration Contraction	NE COMPLETE STATE	and the state	an part for the second providence	and the stand by a loss	and and a street of	Aller Alle Des	Control Content	Section States	CONC. OUR	and a second second	1.30
Bridge	Construction (7 Bridges)					e la contra de la c			and the second states of			and other the states		Property and	Constant of	
-		Tracked Dozer	Cat D10	700 Hp III 3		3600 hr 2		20.0 gal/hr Diesel	0	0	0	0	0	0	0	
		Tracked Dozer	Cat D8	305 Hp III 2		2400 hr 11.		11.5 gal/hr Diesel	0	0	0	0	0	0	0	
-		Soil Compactor	Cat 825H	400 Hp III 2			8	18.0 gal/hr Diesel	0	0	0	0	0	0	0	
-	the second s	Excavator - Medium Motor Grader	Cat 321D Cat 14M	148 Hp III 4 259 Hp III 1			5	5.0 gal/hr Diesel	0	0	0	0	0	0	0	
	Contraction of the second s	Water Trucks	Mack MP6		12 Mo 40%	960 hr 1 1200 hr 3.	1	11.0 gal/hr Diesel 3.5 gal/hr Diesel	0	0	0	0	0	0	0	
-		Concrete Trucks	Mack MP6	150 Hp III 5		4752 hr 3.		3.5 gal/hr Diesel	0	0	0	0	0		0	
-	and the second	Tractor Loader/Backhoe	Case 580	80 Hp III 3		3802 hr	0.028	2.2 gal/hr Diesel	0	0	0	0	0	0		
-		Crane - Picker	Grove RT530E-2 30t	160 Hp III 4		4224 hr	0.028	4.2 gal/hr Diesel	0	0	0	0	0	0	0	
-	Televise Constraint and the second	Crane - Lattice Boom	Manitowoc 555 - 150t	355 Hp II 2		2112 hr 6.		6.3 gal/hr Diesel	0	0	0	0	0			
-		Truck Mtd Boom 200 yds/hr Concrete Pump	Putzmeister 47Z-Meter	300 Hp III 1		528 hr	0.028	8.4 gal/hr Diesel	0	0	0	0	0	0	0	
-	and the second	Pickup Truck 3/4 ton	F-250		12 Mo 25%	1056 hr	3 0.020	3.0 gal/hr Diesel	0	0	0	0	0	0	0	
-	and the second	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp 1		528 hr 3	5	3.5 gal/hr Gas	0	0	0	0	0	0		
		Rough Terrain Extended Forklift	Lull 1044C-54		12 Mo 45%	1901 hr	0.026	3.0 gal/hr Diesel	0	0	0	0	0			
	and the state of the second	End Loader (Batch Plant)	Cat 966H	262 Hp III 1	12 Mo 50%	1056 hr	5	5.0 gal/hr Diesel	0	0	0	0	0	0	0	
		A STATE OF			5070			ganning encouring					And the owner of the owner			-
Sheet	Pilina	An entry international statements of the second statement and the second statements and the second statements a														
Sheet	Piling	Crane - Lattice Boom+Hammer	Manitowoc 111 - 80t	205 Hp 111 1	4 Mo 50%	352 hr 5	3	5.3 gal/hr Diesel	ol	0	0	o	o	ol	ol	4

niStar Nuclear all Bend Nuclear Power Plant anstruction Vehicle Fuel Consumption Study				Attachment 1 eet 2 of 2 - Page 3 y-related Fuel Usa											o: SL-0100 roject No. 1
Structural concrete				Second Streep Streep Care	COLUMN STATE				entre and an and a second second	Contract Local A	Andrew States and				
	Truck Mtd Boom 200 yds/hr Concrete Pump	Putzmeister 47Z-Meter	300 Hp III	5 2000 Hr	75%	7500 hr	0.028	8.4 gal/hr Diesel	31,500	0	3,150	9,450	9,450	6,300	1,575
	Crane - Lattice Boom	Manitowoc 555 - 150t	355 Hp II	5 36 Mo		7920 hr 6.3		6.3 gal/hr Diesel	24,948	0	2,495	7,484	7,484	4,990	1,247
	Crane - Picker	Grove RT530E-2 30t	160 Hp III	5 36 Mo		9504 hr	0.026	4.2 gal/hr Diesel	19,768	0	1,977	5,930	5,930	3,954	988
	Pickup Truck 3/4 ton	F-250	300 Hp	12 36 Mo	25% 19	9008 hr 3	3	3.0 gal/hr Diesel	28,512	0	2,851	8,554	8,554	5,702	1,426
	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp	4 36 Mo		6336 hr 3.5	5	3.5 gal/hr Gas	11.088	0	1,109	3,326	3,326	2,218	554
	Rough Terrain Extended Forklift	Lull 1044C-54	115 Hp III	6 36 Mo	45% 17	7107 hr	0.026	3.0 gal/hr Diesel	25,575	0	2,558	7,673	7,673	5,115	1,279
	End Loader (Batch Plant)	Cat 966H	262 Hp III	2 36 Mo	50% 6	6336 hr 5	5	5.0 gal/hr Diesel	15,840	0	1,584	4,752	4,752	3,168	792
	Concrete Truck	Mack MP6	150 Hp III			0909 hr 3.5	5	3.5 gal/hr Diesel	36,590	0	3,659	10,977	10,977	7,318	1,830
	Tractor Loader/Backhoe	Case 580	80 Hp III	4 36 Mo.	50% 12	2672 hr	0.028	2.2 gal/hr Diesel	14,193	0	1,419	4,258	4,258	2,839	710
Non Power Block - Pump House, Switchyard, Cooling			COLUMN COLUMN STREET	Service States						- TRANSPORT		All second	NT NO 1993	AD THE SY	100
Towers, Pump House			-	Contraction of the											
	Crane - Picker	Grove RT530E-2 30t	160 Hp III	2 36 Mo		8490 hr	0.026	4.2 gal/hr Diesel	0	0		0	0	0	0
	Pickup Truck 3/4 ton	F-250	300 Hp	2 36 Mo		5069 hr 3	3	3.0 gal/hr Diesel	0	0	0	0	0	0	0
		F-250	300 Hp	1 36 Mo		2534 hr 3.5		3.5 gal/hr Gas	0	0	0	0	0	0	0
	Material truck 2-1/2 ton (Licensed for off site use		270 Hp III	1 36 Mo		1584 hr 4	1	4.0 gal/hr Diesel	0	0	0	0	0	0	0
	Truck Mounted Boom Concrete Pump	Putzmeister 47Z-Meter	300 Hp III	3 12 Mo		1901 hr	0.028	8.4 gal/hr Diesel	0	0	0	0	0	0	0
-	Crane - Lattice Boom	Manitowoc 555 - 150t	355 Hp II	2 36 Mo		6336 hr 6.3		6.3 gal/hr Diesel	0	0	0	0	0	0	0
	Rough Terrain Extended Forklift	Lull 1044C-54	115 Hp III	1 24 Mo	45%	1901 hr	0.026	3.0 gal/hr Diesel	0	0	0	0	0	0	0
Switchyard			PROVIDENCE STATES		the second second		1	General Automatics and the second	a set a set of set of the	ALC: NO.				State State State	Sec. 1
	Crane - Picker	Grove RT530E-2 30t	160 Hp III	2 18 Mo		3168 hr	0.026	4.2 gal/hr Diesel	3,295	0	0	1,647	1,318	329	C
- The second	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp	2 18 Mo		2534 hr 3.5		3.5 gal/hr Gas	2,218	0	0	1,109	887	222	0
	Material truck 2-1/2 ton	F-650	270 Hp	1 18 Mo		792 hr	0.026	7.0 gal/hr Diesel	1,390	0	0	695	556	139	C
	Truck Mounted Boom Concrete Pump	Putzmeister 47Z-Meter	300 Hp	3 18 Mo		950 hr	0.028	8.4 gal/hr Diesel	1,996	0	0	1,497	499	0	0
	Crane - Lattice Boom	Manitowoc 555 - 150t	355 Hp II	1 18 Mo		792 hr 6.3		6.3 gal/hr Diesel	1,247	0		936	312	0	(
Cooling Tower	Rough Terrain Extended Forklift	Lull 1044C-54	115 Hp III	1 18 Mo	45%	1426 hr	0.026	3.0 gal/hr Diesel	1,066	0		799	266	0	(
Cooling Tower	Oracia Distant			1 10 11	070/		1	den en e				a da an an an an an an			New York Con
	Crane - Picker	Grove RT530E-2 30t	160 Hp III	4 18 Mo		8490 hr	0.026	4.2 gal/hr Diesel	3,532	0	0	0	1,060	2,472	(
	Pickup Truck 3/4 ton	F-250	300 Hp	3 18 Mo		3802 hr 3	3	3.0 gal/hr Diesel	1,140	0	0	0	342	798	(
	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp	1 18 Mo		1267 hr 3.5		3.5 gal/hr Gas	444	0	0	0	133	310	(
	Material truck 2-1/2 ton	F-650	270 Hp III	1 18 Mo		792 hr	0.026	7.0 gal/hr Diesel	556	0	0	0	167	389	C
	Crane - Lattice Boom	Manitowoc 555 - 150t	355 Hp II	2 18 Mo		1584 hr 6.3		6.3 gal/hr Diesel	998	0	0	0	299	699	(
	Truck Mounted Boom Concrete Pump Rough Terrain Extended Forklift	Putzmeister 47Z-Meter Lull 1044C-54	300 Hp III	3 12 Mo		1901 hr	0.028	8.4 gal/hr Diesel	1,597	0	0	0	479	1,118	(
DIDT IN OLO	Rough Terrain Extended Forklin	[Luii 1044C-54	115 Hp III	1 36 Mo	45%	2851 hr	0.026	3.0 gal/hr Diesel	853	0	0	U	256	597	C
PART IIA GAS PART IIA DIESEL									13,749	0	1.109	4,435	4,346	0	C
IIB. Superstructure & Structural Steel						and any designments		a a se angle a she angle a she an	214,596	0	19,693	64,652	0	0	0
Structural and building steel		and the second second second second													
Structural and building steel	Crane - Lattice Boom	Manitowoc 555 - 150t	355 Hp 11	5 12 Mo	FOR	5280 hr 6.3	a 1	6.3 gal/hr Diesel	13,306	ol	al	2,661	9,979	665	(
	Crane - Lattice Boom	Manitowoc 999 - 275t	400 Hp III	4 12 Mo		4224 hr 8.2		8.2 gal/hr Diesel	13,855	0	0	2,001	10,391	693	
	Crane - Picker	Grove RT530E-2 30t	160 Hp III			9905 hr	0.026		16,482	0	0		12,362	824	
	Crane - Picker	Grove RT600E - 50t	173 Hp III			8870 hr	0.026	4.2 gal/hr Diesel	15,960	0	0	3,296	12,362	798	0
	Boom Lift	JLG 800AJ	65 Hp III	7 12 Mo 8 12 Mo		0138 hr	0.026	4.5 gal/hr Diesel 1.7 gal/hr Diesel	6,853	0	0	1,371	5,140	343	
	Boom Lift - 80 ft	Genie S-80	74 Hp III	8 12 Mo		0138 hr	0.026	1.9 gal/hr Diesel	7,802		0	1,571	5,851	343	
	Rough Terrain Extended Forklift	Lull 1044C-54	115 Hp III	8 12 Mo		0138 hr	0.026	3.0 gal/hr Diesel	12,125	0	0	2,425	9.093	606	
Building Modules & Heavy Lifts	Rough Ferrain Extended Forkint	1241 1044C-04		0 12 100	00 /0]	0130111	0.020	5.0 gaini Diesei	12,125	0	0	2,423	3,033	000	
Dending modeles a ricery cite	Crane - Manitowoc	21000 - 1000t	600 Hp III	1 24 Mo	20%	845 hr 12.6	al T	12.6 gal/hr Diesel	4,258	0	0	0	2,129	2,129	C
	Crane - Manitowoc	31000 - 2300t	1,200 Hp III			422 hr 24		24.0 gal/hr Diesel	4,055	0	0	2.028	2.028	0	
Building Siding/Insulated Panels			HESS HE M	1 12 110	Lore			E lie ganni Diecor	1,000			2,020	E,OLO	~	and and set of a
	Crane - Picker	Grove RT530E-2 30t	160 Hp III	2 6 Mo	50%	1056 hr	0.026	4.2 gal/hr Diesel	1,757	0	0	0	527	1,230	(
and an entry of the second	Boom Lift - 80 ft	Genie S-80	74 Hp III	3 6 Mo		2218 hr	0.026	1.9 gal/hr Diesel	1,707	0	0	0	512	1,195	
	Pickup Truck 3/4 ton	F-250	300 Hp	2 6 Mo			3	3.0 gal/hr Diesel	1,014	0	0	0	304	710	
	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp	1 6 Mo		422 hr 3.5		3.5 gal/hr Gas	591	0	0	0	177	414	
n <mark>ha sugaran an an an air air air air air air air air air air</mark>	Material truck 2-1/2 ton	F-650	270 Hp III	1 6 Mo		528 hr	0.026	7.0 gal/hr Diesel	1,483	0	0	0	445	1.038	
	Rough Terrain Extended Forklift	Lull 1044C-54	115 Hp III	2 6 Mo		1056 hr	0.026	3.0 gal/hr Diesel	1,403	0	0	0	379	884	
Roofing		And a second second second second	, to the m	*I 01 mo 1			0.020		1200				0.0	1004	
A REAL PROPERTY AND A REAL	Crane - Picker	Grove RT530E-2 30t	160 Hp III	2 6 Mo	45%	950 hr	0.026	4.2 gal/hr Diesel	1,581	ol	0	0	o	1,581	(
n <mark>na haile an </mark>	Boom Lift - 80 ft	Genie S-80	74 Hp III	3 6 Mo		1426 hr	0.026	1.9 gal/hr Diesel	1,007	0	0	0	0	1,097	0
The second s	Pickup Truck 3/4 ton	F-250	300 Hp	1 6 Mo		422 hr 3		3.0 gal/hr Diesel	507	0	0	0	0	507	
	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp	1 6 Mo		422 hr 3.5		3.5 gal/hr Gas	591	0	0	0	0	591	0
						528 hr	0.026	7.0 gal/hr Diesel	1.483	0	0	0	0	1,483	0
															an an an an an Araba 🖡
	Material truck 2-1/2 ton Rough Terrain Extended Forklift	F-650	270 Hp III							0			0	1 137	0
PART IIB GAS	Rough Terrain Extended Forklift	Lull 1044C-54	115 Hp III			950 hr	0.026	3.0 gal/hr Diesel	1,137	0	0	0	0	1,137	0

	r Nuclear end Nuclear Power Plant uction Vehicle Fuel Consumption Study			Attachment 1 Worksheet 2 of 2 - Page 4 of 6 Safety-related Fuel Usage	i i i i							SL-010055, Re ject No. 12198
	IA. Mechanical Installation	and the first state of the second state of the		indiana di tana di sala ina di sala ina di sala di sa	and the second			Contraction (March	and the second	101900000		
	Mechanical Installation	in the second rank of the second s	and a second			and the Local Contracts of the			and an operation in some of the	a description and the	Station Altern	Contract, Charles
	Including:	Crane - Picker	Grove RT530E-2 30t	160 Hp 111 5 42 Mo 409		4.2 gal/hr Diesel	30,751	0	0 6,150	15,375	6,150	3,075
	Piping, Hangers & Pipe Specialties	Crane - Picker	Grove RT600E - 50t	173 Hp III 3 12 Mo 409		4.5 gal/hr Diesel	5,700	0	0 1,140	2,850	1,140	570
_	Valves and Actuators	Crane - Lattice Boom	Manitowoc 555 - 150t	355 Hp II 5 12 Mo 409		6.3 gal/hr Diesel	13,306	0	0 2,661	6,653	2,661	1,331
	HVAC Ductwork, Dampers, Actuators, Fans	Crane - Lattice Boom	Manitowoc 999 - 275t	400 Hp III 2 12 Mo 409		8.2 gal/hr Diesel	6,927	0	0 1,385	3,464	1,385	693
	Pump, chillers, coolers, Hx, Equipment Air compressors	Crane - Lattice Boom Boom Lift	Manitowoc16000 - 440t JLG 800AJ	500 Hp III 1 12 Mo 409 65 Hp III 5 12 Mo 509		10.4 gal/hr Diesel	4,393	•	0 879	2,196	879	439
-	Examination, Testing & Start-up	Boom Lift - 80 ft	Genie S-80	65 Hp III 5 12 Mo 509 74 Hp III 5 12 Mo 509	5280 hr 0.026 5280 hr 0.026	1.7 gal/hr Diesel 1.9 gal/hr Diesel	4,462 5,079		0 892	2,231 2,540	892 1,016	446 508
	Examination, resting & Start-up	Pickup Truck 3/4 ton	F-250	300 Hp 4 24 Mo 309		3.0 gal/hr Diesel	7,603		0 1,521	3,802	1,016	760
-		Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp 1 42 Mo 309		3.5 gal/hr Gas	3,881		0 776	1,940	776	388
		Material truck 2-1/2 ton	F-650	270 Hp III 2 42 Mo 309	4435 hr 0.026	7.0 gal/hr Diesel	15,568	0	0 3,114	7,784	3,114	1,557
		Rough Terrain Extended Forklift	Lull 1044C-54	270 Hp III 2 42 Mo 309 115 Hp III 2 42 Mo 409	5914 hr 0.026	3.0 gal/hr Diesel	8.841	0	0 2.652	3.536	1.326	1.326
	PART IIIA GAS	a contract of the state of the second state of the second state of the second state of the second state of the	A REAL PROPERTY OF	AND ADDRESS OF A DESCRIPTION OF A DESCRI	And the second se		3 881	0	0 776	1,940	776	388
	PART IIIA DIESEL		A CALLMAN STAR				93,788	0	0 18 758	46,894	18 758	9.379
III	IIB. Electrical Installation		STREET, DOWNERS AND A DESCRIPTION OF THE PARTY OF THE PAR	Charles and a little of the second second	Strains and the second strains of	interview or where a state of the later have	and the second states	the loss of the loss of the	and the second second		and the second second	and the second second
	Electrical Installation	A REAL PROPERTY OF THE PROPERTY OF			one of the second second second second			and the second started	and the second second			
	Including:	Crane - Picker	Grove RT530E-2 30t	160 Hp III 5 42 Mo 609		4.2 gal/hr Diesel	9,225	0	0 1,384	3,690	1,845	1,384
	Conduit, Cable Tray Raceway & Supports	Crane - Picker	Grove RT600E - 50t	173 Hp III 3 12 Mo 509		4.5 gal/hr Diesel	7,125	0	0 1,069	2,850	1,425	1,069
	Instrumentation (Racks, mounting, transmitters)	Crane - Lattice Boom	Manitowoc 555 - 150t	355 Hp II 5 12 Mo 509		6.3 gal/hr Diesel	16,632	0	0 2,495	6,653	3,326	2,495
_	Power & Control Cable & Terminations	Crane - Lattice Boom	Manitowoc 999 - 275t	400 Hp III 2 12 Mo 509		8.2 gal/hr Diesel	8,659	0	0 1,299	3,464	1,732	1,299
	Isophase and nonsegregated bus duct	Crane - Lattice Boom	Manitowoc16000 - 440t	500 Hp III 1 12 Mo 509		10.4 gal/hr Diesel	5,491	0	0 824	2,196	1,098	824
_	Control room panels, wiring and termination	Boom Lift	JLG 800AJ	65 Hp III 5 12 Mo 509		1.7 gal/hr Diesel	4,462	0	0 669	1,785	892	669
	Local Instrument and control equipment Switchyard Breakers & Equipment	Boom Lift - 80 ft Crane - Lattice Boom	Genie S-80 Manitowoc 555 - 150t	74 Hp III 5 12 Mo 509 355 Hp III 1 12 Mo 409		1.9 gal/hr Diesel 6.3 gal/hr Diesel	5,079	0	0 762	2,032	1,016	762 399
	Equipment and site grounding	Pickup Truck 3/4 ton	F-250	300 Hp 3 24 Mo 409		3.0 gal/hr Diesel	7,603	0	0 1.140	3.041	1.521	1,140
-	Communications and data systems	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp 1 42 Mo 309		3.5 gal/hr Gas	3.881	0	0 582	1,552	776	582
-	Examination, Testing & Start-up	Rough Terrain Extended Forklift	Lull 1044C-54	115 Hp III 2 42 Mo. 409		3.0 gal/hr Diesel	8,841	0	0 1,326	3,536	1,768	1,326
100	PART IIB GAS	Rough Ferrein Extended Forkin	Eur 10440-04	11011p m 2 42 Mo. 40	0.020	0.0 ganta Dieser	3,881	0	0 582	1,552	776	582
IV	PART IIIB DIESEL V, Major equipment (heavy) lift and movement						75,779		0 11,367	30,311	15,156	11,367
	Including:											
	Transformers and switchgear	Crane - Lattice Boom	Manitowoc16000 - 440t	500 Hp III 1 12 Mo 259		10.4 gal/hr Diesel	4,118	0	0 412	1,236	2,059	206
	Large Motor installations	Crane - Lattice Boom	Manitowoc21000 - 1000t			12.6 gal/hr Diesel	4,990	0	0 499	1,497	2,495	249
	Reactor vessel, S/G, Containment Liner assemblies	Heavy Transporter	Goldhoffer	600 Hp III 2 300 Hr 759		15.0 gal/hr Diesel	3,375	0	0 0	1,350	2,025	0
	Turbine and generator parts and pieces	Heavy Transporter	Goldhoffer Goldhoffer	600 Hp III 1 300 Hr 759		15.0 gal/hr Diesel	3,375	0	0 0	1,350	2,025	0
-	Moisture separators, FW Heaters, PART IV GAS	Heavy Transporter	Goldnotter	600 Hp III 1 300 Hr 759	6 300 hr 0.025	15.0 gal/hr Diesel	3,375	0	0	1,350	2,025	0
	PART IV GAS						0 19,233	0	0 0 911	6,782	0	0 455
v	V. Construction & Site Support						E BIXOD	U	CI MARKEN CI MA	0,702	10,020	HOOT
	Includina:	Crane - Picker	Grove RT530E-2 30t	160 Hp III 2 68 Mo 509	6 11968 hr 0.026	4.2 gal/hr Diesel	0	0	0 0	0	0	01
-	Service vehicles	Boom Lift - 80 ft	Genie S-80	74 Hp III 3 68 Mo 259			0	0	0 0	0	0	0
-	Janitorial / Garbage collection	Pickup Truck 3/4 ton	F-250	300 Hp 3 68 Mo 25		3.0 gal/hr Diesel	0	0	0 0	0	0	0
	Snow plowing and road maintenance	Pickup Truck 3/4 ton (Licensed for offsite use)	F-250	300 Hp 1 68 Mo 109		3.5 gal/hr Gas	0	0	0 0	0	0	0
	Portable lighting	Material truck 2-1/2 ton	F-650	270 Hp III 1 68 Mo 259			0	0	0 0	0	0	0
	Portable generators	RR switch engine	Estimated 600 Hp	600 Hp II 1 68 Mo 104	6 1197 hr 0.026		0	0	0 0	0	0	0
	Welders	Welders		<50 Hp			0					
	Air compressors	Air Compressors	and a supervision of the second se	<50 Hp			0					
	Air compressors Portable lighting	Air Compressors Portable Lighting		<50 Hp			Ō					
								o	0 0	O	G	G
	Portable lighting PART V.GAS PART V DIESEL						0	0 0	0 0 0 0	0 0	0 0	0
V	Portable lighting PART V GAS PART V DIESEL /I. Final site work/Grading	Portable Lighting	Cat D9	<50 Hp	6 2534 bri 15	15.0 gal/bri Dissal	0 0 0 0				and the second se	Ø
V	Portable lighting PART V.GAS PART V DIESEL	Portable Lighting Tracked Dozer	Cat D9 Cat D7	<50 Hp 410 Hp III 3] 8[Mo] 60'	6 2534 hr 15 6 2534 hr 9	15.0 gal/hr Diesel	0 0 0 0 3,802				and the second se	760
V	Portable lighting PART V GAS PART V DIESEL /I. Final site work/Grading	Portable Lighting	Cat D9 Cat D7 Cat 321D	<50 Hp 410 Hp III 3 8 Mo 60' 235 Hp III 3 8 Mo 60'	6 2534 hr 9	9.0 gal/hr Diesel	0 0 0 3,802 2,281	0	0 0	0	and the second se	0 760 456
V	Portable lighting PART V GAS PART V DIESEL /I. Final site work/Grading	Portable Lighting Tracked Dozer Tracked Dozer	Cat D7	<50 Hp 410 Hp III 3 8 Mo 60' 235 Hp III 3 8 Mo 60' 148 Hp III 1 8 Mo 50'	6 2534 hr 9 6 704 hr 5	9.0 gal/hr Diesel 5.0 gal/hr Diesel	0 0 0 0 3,802	0	0 0 0 0 0 0	0	and the second se	760
V	Portable lighting PART V GAS PART V DIESEL /I. Final site work/Grading	Portable Lighting Tracked Dozer Tracked Dozer Excavator - Medium	Cat D7 Cat 321D	<50 Hp 410 Hp III 3 8 Mo 60' 235 Hp III 3 8 Mo 60' 148 Hp III 3 8 Mo 60' 400 Hp III 6 Mo 50'	6 2534 hr 9 6 704 hr 5 6 4224 hr 0.026	9.0 gal/hr Diesel 5.0 gal/hr Diesel 10.4 gal/hr Diesel	0 0 0 3,802 2,281 352	0 0 0 0	0 0 0 0 0 0 0 0	0	and the second se	0 760 456 70
V	Portable lighting PART V GAS PART V DIESEL /I. Final site work/Grading	Portable Lighting Tracked Dozer Tracked Dozer Excavator - Medium Semi-Trailer Dump	Cat D7 Cat 321D Mack E8	<50 Hp	6 2534 hr 9 6 704 hr 5 6 4224 hr 0.026 6 1690 hr 11	9.0 gal/hr Diesel 5.0 gal/hr Diesel 10.4 gal/hr Diesel 11.0 gal/hr Diesel	0 0 0 3,802 2,281 352 4,393 1,859	0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0	and the second se	760 456 70 879
V	Portable lighting PART V GAS PART V DIESEL /I. Final site work/Grading	Portable Lighting Tracked Dozer Tracked Dozer Excavator - Medium Semi-Trailer Dump Motor Grader	Cat D7 Cat 321D Mack E8 Cat 14M	<50 Hp	6 2534 hr 9 6 704 hr 5 6 4224 hr 0.026 6 1690 hr 11 6 2534 hr 6	9.0 gal/hr Diesel 5.0 gal/hr Diesel 10.4 gal/hr Diesel	0 0 3,802 2,281 352 4,393	0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	and the second se	0 760 456 70 879 372
V	Portable lighting PART V GAS PART V DIESEL /I. Final site work/Grading	Portable Lighting Tracked Dozer Tracked Dozer Excavator - Medium Semi-Trailer Dump Motor Grader Vibratory Soil Compactor	Cat D7 Cat 321D Mack E8 Cat 14M Cat CS74	<50 Hp 410 Hp< III 3 8 Mo 60 60 235 Hp III 3 8 Mo 60 60 148 Hp III 8 Mo 60 60 400 Hp III 6 8 Mo 50 50 Hp III 2 8 Mo 60 60 156 Hp III 2 8 Mo 60 60 50 Hp III 50 Hp III 51 Hp III 51 Hp 10 Hp 51 H	6 2534 hr 9 6 704 hr 5 6 4224 hr 0.026 6 1690 hr 11 6 2534 hr 6 6 845 hr 3	9.0 gal/hr Diesel 5.0 gal/hr Diesel 10.4 gal/hr Diesel 11.0 gal/hr Diesel 6.0 gal/hr Diesel	0 0 0 2,281 352 4,393 1,859 1,521	0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	and the second se	0 760 456 70 879 372 304
V	Portable lighting PART V GAS PART V DIESEL /I. Final site work/Grading	Portable Lighting Tracked Dozer Tracked Dozer Excavator - Medium Semi-Trailer Dump Motor Grader Vibratory Soil Compactor Pickup Truck 3/4 ton	Cat D7 Cat 321D Mack E8 Cat 14M Cat CS74 F-250	<50 Hp	6 2534 hr 9 6 704 hr 5 6 4224 hr 0.026 6 1690 hr 11 6 2534 hr 6 6 845 hr 3 6 704 hr 3.5	9.0 gal/hr Diesel 5.0 gal/hr Diesel 10.4 gal/hr Diesel 11.0 gal/hr Diesel 6.0 gal/hr Diesel 3.0 gal/hr Diesel	0 0 0 2,281 3,802 2,281 352 4,393 1,859 1,521 253	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	and the second se	760 456 70 879 372 304 51
V	Portable lighting PART V GAS PART V DIESEL /I. Final site work/Grading	Portable Lighting Tracked Dozer Tracked Dozer Excavator - Medium Semi-Traller Dump Motor Grader Vibratory Soil Compactor Pickup Truck 3/4 ton Licensed for offsite use)	Cat D7 Cat 321D Mack E8 Cat 14M Cat CS74 F-250 F-250	<50 Hp	6 2534 hr 9 6 704 hr 5 6 4224 hr 0.026 6 1690 hr 11 6 2534 hr 6 6 845 hr 3 6 704 hr 3.5 6 141 hr 3.5	9.0 gal/hr Diesel 5.0 gal/hr Diesel 10.4 gal/hr Diesel 11.0 gal/hr Diesel 3.0 gal/hr Diesel 3.5 gal/hr Diesel 3.5 gal/hr Diesel 3.6 gal/hr Diesel	0 0 3,802 2,281 352 4,393 1,859 1,521 253 246	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	and the second se	0 760 456 70 879 372 304 51 49

Bell E	tar Nuclear Bend Nuclear Power Plant struction Vehicle Fuel Consumption Study			Attachment 1 Worksheet 2 of 2 - Page Safety-related Fuel U										No: SL-01005 Project No. 1	
	Section 2 Commercial/Construction Deliveries	Deliveries	Quantity	Units	Distance	Fuel rate mi/gal	Fuel	Total Fuel	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7
%	Construction deliveries and related traffic	15 Tons per Shipment	Supplying the second second	and the second	and the second secon	Charles and the second second second	1. Sec. 1.			a state of the second	- Alexandrea	una and a second	ALCHARD B	CONTRACTOR STATE	Service State
	Civil Material														
%	Construction Equipment Mobilization/Removal	500 moves on + 500 off	1,000	shipments	50 mi	6.5 mi/gal		7,692 gal	1,538	2,308	1,154	385			1,1
%	Concrete Material (Sand, stone, cement, admixtures)	848,362 tons	56,557	shipments	50 mi	6.5 mi/gal		435,057 gal	21,753	87,011	130,517	108,764		21,753	21,7
%	Lean Concrete Materials	200,000 cy	13,333	shipments	50 mi	6.5 mi/gal		102,564 gal	0	51,282		0		0	
6	Engineered fill	500,000 cy	33,333	shipments	50 mi	6.5 mi/gal		128,205 gal	0	64,103		0		0	
2	Cohesive fill	800,000 cy	53,333	shipments	50 mi	6.5 mi/gal		246,154 gal	0	123,077	123,077	0		0	
6	Formwork	2,393 tons	160	shipments	50 mi	6.5 mi/gal		614 gal	31	123		153			
6	Rebar	55,331 tons	3,689	shipments	50 mi	6.5 mi/gal		14,187 gal	709	2,837	4,966	3,547			
6	Structural Steel	6,261 tons	417	shipments	75 mi	6.5 mi/gal		2,408 gal	0	241	963	963			
%	Misc. Steel	1,016 tons	68	shipments	75 mi	6.5 mi/gal		782 gal	0	0	234	234			
6	Mod Steel	225 tons	15	shipments	75 mi	6.5 mi/gal		87 gal		0		22			
	Steel Liner	1,412 tons	94	shipments	75 mi	6.5 mi/gal		326 gal	0	0		130			
	Embedded Steel	1,903 tons	127	shipments	75 mi	6.5 mi/gal		0 gal	0	0		0			
	Siding & Roofing	2,056 tons	137	shipments	50 mi	6.5 mi/gal		0 gal	0	0					
	Asphalt	21,850 tons	1,457	shipments	50 mi	6.5 mi/gal		0 gal	0	0				0	
	Pre engineered building	60 tons	4	shipments	50 mi	6.5 mi/gal		0 gal	0	0		0		0	
6	Construction Debris	12,000 tons	800	shipments	50 mi	6.5 mi/gal	Diesel	3,077 gal	308	308	462	615	462	462	
	Piping and Mechanical Material	7,500 tons	500												
%	Large and Small bore pipe	7,500 tons	500	shipments	75 mi	6.5 mi/gal		5,769 gal	0	0		2,019			
6	Large bore hangers	2,788 tons	186	shipments	75 mi	6.5 mi/gal		322 gal	0	0		113			
6	Nuclear Island EM package equipment	15,377 tons	1,025	shipments	150 mi	6.5 mi/gal		11,828 gal	0			4,140	3,549	1,183	
1.10	Turbine Island and BOP Mechanical Equipment	Estimated	1000	shipments	150 mi	6.5 mi/gal		0 gal	0	0		0	0	0	
%	Consumables	Estimated	1000	shipments	50 mi	8.0 mi/gal	Gas	3,125 gal	0	0	625	1,094	938	313	
	Electrical Equipment														
6	Conduit	1,356 tons	90	shipments	50 mi	6.5 mi/gal		346 gal	0	0		121			
%	Cable Tray	75 tons	49	shipments	50 mi	6.5 mi/gal		377 gal	0			132			
6	Power & Control wire	4,406 tons	294	shipments	75 mi	6.5 mi/gal		339 gal	0			102			
	NI Electrical Equipment	5,000 tons	333	shipments	150 mi	8.0 mi/gal		0 gal	0			0		0	į
6	TI Electrical Equipment	5,000 tons	333	shipments	150 mi	8.0 mi/gal	Gas	1,563 gal	0	0	234	469	547	156	
6	Site Support Services		an a										[]		
	Fuel deliveries	Based on fuel usage from Section 1	114	shipments	50 mi	6.5 mi/gal		0 gal	0			0	0	0	
	Vendor deliveries	4 /day	5984	trips	50 mi	15.0 mi/gal		0 gal	0			0	0	0	
	Equipment service calls	3 /day	4488	trips	50 mi	18.0 mi/gal	Gas	0 gal	0	Contract of the Owner		0	01		
-	COMMERCIAL/DELIVERIES GAS							4,688 960,134	0 24,339	0 331,289		1,563			
		need Treate and the second and and and and an a behavior of the second second second second second second second			Average			360,104	E-1,000		000,001	Concernance of the second s	011000		
%	Section 3 Workforce Commute	Average Workforce KLD Traffic Study Const Staffing Profile RFI EPR-11-039	Commuters = 1.3 person/car		Round trip Distance	Average Fuel rate (mi/gal)	Fuel	Total Fuel	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year
,	Year 1	150	115		50 mi	20.0 mi/gal	Gas	4,140	4,140						
					50 mi	18.0 mi/gal	Diesel	400	400						
,	Year 2	550	423		50 mi	20.0 mi/gal	Gas	60,720		60,720		1			(
5					50 mi	18.0 mi/gal	Diesel	5,867		5,867					
	Year 3	1950	1,500		50 mi	20.0 mi/gal	Gas	484,380			484,380				
					50 mi	18.0 mi/gal	Diesel	46,800			46,800				
1	Year 4	3800	2,923	and the second	50 mi	20.0 mi/gal	Gas	943,920			100 C	943,920			(
					50 mi	18.0 mi/gal	Diesel	91,200				91,200			
	Year 5	3800	2,923		50 mi	20.0 mi/gal	Gas	943,920					943,920		
					50 mi	18.0 mi/gal	Diesel	91,200					91,200		
	Year 6	2000	1,538		50 mi	20.0 mi/gal	Gas	496,800						496,800	
					50 mi	18.0 mi/gal	Diesel	48,000						48,000	
	Year 7	400	308		50 mi	20.0 mi/gal		99,360							99
					50 mi	18.0 mi/gal	Diesel	9,600							1
-	WORK FORCE COMMUTE GAS		Contraction of the second s		A DESCRIPTION OF A DESCRIPTION	A DESCRIPTION OF THE OWNER	The second second second	2,933,880	4,140	60,720	484,380	943,920	943,920	496,800	
	WORK FORCE COMMUTE DIESEL							283,467	400	5.867	46.800	91 200	91 200	48.000	

Star Nuclear Bend Nuclear Power Plant ıstruction Vehicle Fuel Consumption Study			Attach Worksheet 2 of Safety-relate	2 - Page											lo: SL-01005 Project No. 12	
Fuel Consumption Summary																
Non-Road Equipment Summary						 		Fuel	Total Fuel	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7
Luzern County	100%			_		 		Diesel	655,180	1,123	53,613		248,052	126,458	42,327	33,39
						_		Gas	29,223	0	1,737	7,050	9,902	6,878	2,202	1,45
Construction Deliveries Summary Wyoming, Lackawanna, Luzern, and Monroe	45%					 		Fuel	Total Fuel	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7
vvyoming, Lackawanna, Luzern, and Monroe	45%					 _		Diesel	432,060	10,953	149,080		54,648 703	22,992	11,641	11,3
Lehigh, Carbon, Northampton, and Lancaster	10%					 -		Gas	2,109	2,434	33,129	387 38,087	12,144	668	211 2,587	14
Lenigh, Carbon, Northampton, and Lancaster	10%					 _		Diesel Gas	96,013 469	2,434	33,129	38,087	12,144	5,109 148	2,587	2,5
Columbia, Schuykill	45%					 -		Diesel	432,060	10,953	149,080		54,648	22,992	11,641	11.3
Columbia, Schuykin	43%					 		Gas	2,109	10,955	149,000	387	703	668	211	11,3
Total						 		Diesel	960,134	24.339	331,289		121,441	51.093	25,868	25,2
Total						 -		Gas	4,688	24,333	001,209	859	1.563	1,484	469	23,2
Workforce Commute	and the second	and the state of a second second second	and the second		-tt-	 -		Fuel	Total Fuel	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7
Carbon	16%				1			Diesel	46,891	64	939	7,488	14,592	14,592	7,680	1.5
	1070	the second s				 		Gas	485,318		9,715		151,027	151.027	79,488	15,8
Columbia	15%							Diesel	43,960	60	880		13,680	13,680	7,200	1,4
						 -		Gas	454,986	621	9,108		141,588	141,588	74,520	14,9
Lackawanna	8%							Diesel	23,445		469	3,744	7,296	7,296	3,840	7
								Gas	242,659	331	4,858	38,750	75,514	75,514	39,744	7,9
Luzerne	44%							Diesel	128,949	176	2,581		40,128	40,128	21,120	4,2
								Gas	1,334,626	1,822	26,717	213,127	415,325	415,325	218,592	43,7
Montour	4%							Diesel	11,723	16	235	1,872	3,648	3,648	1,920	3 3,9
								Gas	121,330	166	2,429		37,757	37,757	19,872	3,9
Northumberland	3%							Diesel	8,792	12	176	1,404	2,736	2,736	1,440	2
							1 A A A A A A A A A A A A A A A A A A A	Gas	90,997	124	1,822	14,531	28,318	28,318	14,904	2,9
Schuykill	10%							Diesel	29,307	40	587	4,680	9,120	9,120	4,800	9
								Gas	303,324	414	6,072		94,392	94,392	49,680	9,9
Wyoming	1%							Diesel	2,931	4	59	468	912	912	480	
								Gas	30,332	41	607	4,844	9,439	9,439	4,968	9 9,6
Total								Diesel	293,067	400	5,867	46,800	91,200	91,200	48,000	9,6
								Gas	3,033,240	4,140	60,720	and the second second	943,920	943,920		99,3
Project Fuel Usage Summary					_			Fuel	Total Fuel	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7
								Diesel	1,908,381	25,862	390,769	577,878	460,693	268,751		68,2
								Gas	3,067,151	4,140	62,457	492,289	955,384	952,283	499,471	101,13

UniStar Nuclear Bell Bend Nuclear Power Plant Construction Vehicle Fuel Consumption Study Report No: SL-010055, Rev. 2 Project No. 12198-434 Page 21 of 23

Attachment 2

.

From RFI	EPR 11-039 re	equest
Origin of w	orkforce table	
Direction	Population	Census Distribution (%)
N	38,458	3.77%
NW	19,451	1.91%
W	117,235	11.50%
SW	87,884	8.62%
S	121,621	11.92%
SE	158,518	15.54%
E	96,586	9.47%
NE	380,169	37.27%
Total	1,019,922	100.00%

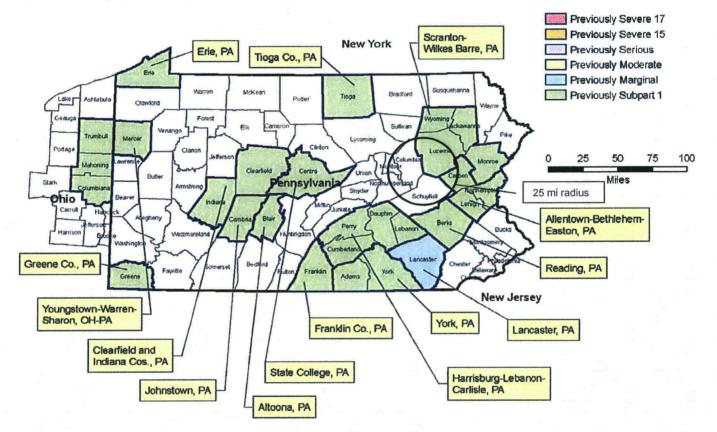
R2

UniStar Nuclear Bell Bend Nuclear Power Plant Construction Vehicle Fuel Consumption Study Report No: SL-010055, Rev. 2 Project No. 12198-434 Page 22 of 23

Attachment 3 – Pennsylvania map of 8 hour ozone maintenance areas

Pennsylvania

8-hour Ozone Maintenance Areas in Blue Border



UniStar Nuclear Bell Bend Nuclear Power Plant Construction Vehicle Fuel Consumption Study

Report No: SL-010055, Rev. 2 Project No. 12198-434 Page 23 of 23

Attachment 4 – E-mail requesting information for BBNPP Air Quality applicability analysis

From: Iwanchuk, Robert [mailto:Robert.Iwanchuk@aecom.com] Sent: Friday, August 07, 2009 5:28 PM To: Perdomo, Federico R Cc: Sullvan, David; Miller, Ian Subject: RE: Unistar Bell Bend

Fred -

Here are the data needs for the Bell Bend applicability analysis specific to NOx and VOC emissions:

- Identification of and quantity of each non-road (non-highway vehicle) engine associated with
 construction work (including site preparation) including the following information. This is the
 - construction work (including site preparation) including the following information. This is the information contained in CCNPP file 25237-000-G65-HPYA-00001)

- fuel type (diesel or gasoline)

engine motor size (Hp) (CCNPP did not consider small equipment less than 50 Hp)
 combined engine hours of use and fuel consumption (broken down by projected

construction year)

- If known or estimated, model year or EPA engine emissions tier, (i.e. Tier 1, Tier 2)

Examples:

2 Caterpillar D6 bulldozers; diesel; 185 Hp (each); Tier 3-Model year 2009; combined 5200 hrs/51,110 gallons in 2011, 2600 hrs/25,555 gallons in 2012

10 Kenworth t-800 dump trucks; diesel; 250 Hp (each); Tier 2-Model year 2003; combined 6500 hrs/38,995 gallons in 2011, 13000 hrs/77,911 gallons in 2012

· Identification (numbers and sizes) of on-site gasoline & diesel storage tanks

Identification of expected highway vehicles for on-site use (expected to be mostly pickup trucks).
 Please also provide a gross estimate of either annual miles traveled or fuel consumption.

 Plot plan showing layout of major construction areas, parking areas, and roadways (including internal to the site).

These next three have certain data elements which may only be best guesses. They are requested since Bell Bend in located at the edge of the Scranton-Wilkes Barre ozone maintenance area. We may be able to exclude emissions generated outside of that area.

• Estimate of commercial deliveries (deliveries/day), delivery distance (from origin to site), and approximate origin by county.

Estimate of commuter vehicles (vehicles/day), commuting distance (from home to site), and approximate origin by county.

 Estimate of concrete deliveries, delivery distance (from origin to site), and approximate origin by county. (if no batch plant on-site)

Let me know if you need more information or have any questions.

Bob

Appendix B

Emissions Calculations

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Equipment	SCC1	Engine Technology	No.of Equipment	Equipment Horsepower	Fuel	Total	Year	1203	Year	24/1-1-1-	Year 3	And	Year	4 . (1)	Year	5	Year	6	Year	7
Туре '	1202	Туре	#	hp	Туре	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours
A. Early Site Prepatration						an a	NO PAR DE LA MARKE	e la señere	1994 - LE - L		au an in the A	14.00			Sector A	10				
Crawler Tractors	2270002069	T3	4	700 Hp	Diesel	3,300	100%	3,300	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
	2270002066	T3	3	263 Hp	Diesel	2,475	100%	2,475	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
	2270002036	T3	3	148 Hp	Diesel	1,980	100%	1,980	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
	2270002036	T3	1	380 Hp	Diesel	660	100%	660	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
	2270002045	T3	2	160 Hp	Diesel	880	100%	880	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
	2270002078	T3	10	450 Hp	Diesel	5,500	100%	5,500	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
	2270002048	T3	2	259 Hp	Diesel	990	100%	990	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
	2270002018	T3	8	462 Hp	Diesel	5,280	100%	5,280	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
	2270002018	T3	3	462 Hp	Diesel	1,980	100%	1,980	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
	2270002024	T3	1	156 Hp	Diesel	660	100%	660	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
A. Site Development and		n an dian an t	14.12	1	AT THE PROPERTY OF	services and a service	Sec. Contraction of the	e references	Maria Carlos de Carlos	$\{i_1,\ldots,i_N\}_{i\in M}$	1.4.7	9. 1. S. 1. 199	12. 140 - 140	1	a the second second	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1. S	n (1997) 1 - Maria (1997) 2 - Maria (1997)	مير ال اريكي الريادية ا	1211 2
Intake area, Switchya		and the second se		On the second second second	1. A. C. S. 1. 2. 1	61 - C. S.	a data in the second of	1	a la transferrar de	$a = (e_1, e_2) P_1^{-1} a$	$F_{\rm pli}(x,\theta,\theta_{\rm c},\theta_{\rm c}) = 0 (1,1)$	1. 1. 2. 14	1. A. 18		and the second		Sector Production and the	$(e^{i\theta_{1}},e^{i\theta_{2}})$	1997 - 1999 - 1997 - 1977 - 1977 - 1977 - 1977 - 19	1
	2270002069	T3	7	700 Hp	Diesel	4,200	30%	1,260	70%	2,940	0%	0	0%	0	0%	0	0%	0	0%	0
	2270002018	T3	6	500 Hp	Diesel	2,400	30%	720	70%	1,680	0%	0	0%	0	0%	0	0%	0	0%	0
Scraper (dual engine 2/2)		T3	6	462 Hp	Diesel	2,400	30%	720	70%	1,680	0%	0	0%	0	0%	0	0%	0	0%	0
Excavator	2270002036	T3	1	148 Hp	Diesel	480	30%	144	70%	336	0%	0	0%	0	0%	0	0%	0	0%	0
	2270002066	T3	6	263 Hp	Diesel	3,360	30%	1,008	70%	2,352	0%	0	0%	0	0%	0	0%	0	0%	0
Grader	2270002048	T3	1	259 Hp	Diesel	400	30%	120	70%	280	0%	0	0%	0	0%	0	0%	0	0%	0
Powerblock (inc. cool	ling towers 8	NC laydown)		ana sining a		and the second			the Carlos and		1									
Crawler Tractors	2270002069	T3	4	700 Hp	Diesel	6,240	50%	3,120	50%	3,120	0%	0	0%	0	0%	0	0%	0	0%	0
Crawler Tractors	2270002069	T3	1	410 Hp	Diesel	1,560	40%	624	40%	624	20%	312	0%	0	0%	0	0%	0	0%	0
Tractor/Loader/Backhoe	2270002066	T3	2	263 Hp	Diesel	3,120	40%	1,248	40%	1,248	20%	624	0%	0	0%	0	0%	0	0%	0
Scraper (dual engine 1/2)	2270002018	T3	15	500 Hp	Diesel	19,500	50%	9,750	50%	9,750	0%	0	0%	0	0%	0	0%	0	0%	0
Scraper (dual engine 2/2)	2270002018	T3	15	462 Hp	Diesel	19,500	50%	9,750	50%	9,750	0%	0	0%	0	0%	0	0%	0	0%	0
Surfacing	2270002024	T3	2	156 Hp	Diesel	2,340	20%	468	40%	936	40%	936	0%	0	0%	0	0%	0	0%	0
Surfacing	2270002024	T3	2	400 Hp	Diesel	2,340	20%	468	40%	936	40%	936	0%	0	0%	0	0%	0	0%	0
Excavator	2270002036	T3	2	148 Hp	Diesel	3,120	40%	1,248	40%	1.248	20%	624	0%	0	0%	0	0%	0	0%	0
Tractor/Loader/Backhoe	2270002066	T3	6	263 Hp	Diesel	10,920	40%	4,368	40%	4,368	20%	2,184	0%	0	0%	0	0%	0	0%	0
Grader	2270002048	Т3	2	259 Hp	Diesel	2,600	30%	780	40%	1,040	30%	780	0%	0	0%	0	0%	0	0%	0
Excavator	2270002036	T3	5	428 Hp	Diesel	7,800	50%	3,900	50%	3,900	0%	0	0%	0	0%	0	0%	0	0%	0
Off-Highway Truck	2270002051	T3	30	650 Hp	Diesel	35,100	40%	14.040	40%	14,040	20%	7,020	0%	0	0%	0	0%	0	0%	0
Off-Highway Truck	2270002051	T2	1	462 Hp	Diesel	1,300	30%	390	40%	520	30%	390	0%	0	0%	0	0%	0	0%	0
Rubber tire loader	2270002060	T3	2	262 Hp	Diesel	704	0%	0	75%	528	25%	176	0%	0	0%	0	0%	0	0%	0
Parking	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 A		and the second	Concernance and	40	1995 - 1996 - 1997 - 1997	a generation of	Carlor States	10.49	210 - 14 J C. 49 43	Carrie Cast	1		and the second second	the server	1. Carl	Charles An	in an er er	and the second
Crawler Tractors	2270002069	T3	2	235 Hp	Diesel	1,500	0%	0	60%	900	40%	600	0%	0	0%	0	0%	0	0%	0
Scraper	2270002018	T3	1	462 Hp	Diesel	500	0%	0	60%	300	40%	200	0%	0	0%	0	0%	0	0%	0
Surfacing	2270002024	T3	2	156 Hp	Diesel	900	0%	0	60%	540	40%	360	0%	0	0%	0	0%	0	0%	0
Surfacing	2270002024	T3	2	400 Hp	Diesel	900	0%	0	60%	540	40%	360	0%	0	0%	0	0%	0	0%	0
Excavator	2270002036	T3	1	148 Hp	Diesel	600	0%	0	60%	360	40%	240	0%	0	0%	0	0%	0	0%	0
Tractor/Loader/Backhoe	2270002066	T3	1	263 Hp	Diesel	700	0%	0	60%	420	40%	280	0%	0	0%	0	0%	0	0%	0
Grader	2270002048	T3	1	259 Hp	Diesel	500	0%	0	60%	300	40%	200	0%	0	0%	0	0%	Ö	0%	0
Paving Equipment	2270002021	T3	1	174 Hp	Diesel	500	0%	0	60%	300	40%	200	0%	l o	0%	0	0%	0	0%	0
Paving Equipment	2270002021	T3	1	107 Hp	Diesel	500	0%	0	60%	300	40%	200	0%	0	0%	0	0%	0	0%	0
Support Road (inc. Q			avdown)				570		A la set to a ra				5/0	+	570	+			0.0	+
Crawler Tractors	2270002069	T3	4	235 Hp	Diesel	9.000	30%	2,700	50%	4,500	20%	1.800	0%	0	0%	0	0%	0	0%	0
Scraper (dual engine 1/2)		T3	3	500 Hp	Diesel	4,500	50%	2,250	45%	2.025	5%	225	0%	0	0%	0	0%	0	0%	0
Scraper (dual engine 1/2)		T3	3	462 Hp	Diesel	4,500	50%	2,250	45%	2.025	5%	225	0%	0	0%	0	0%	0	0%	0
Surfacing	2270002024	T3	Ĭ	156 Hp	Diesel	1,350	30%	405	50%	675	20%	270	0%	0	0%	1 0	0%	0	0%	0
Surfacing	2270002024	T3	2	400 Hp	Diesel	2,700	30%	810	50%	1,350	20%	540	0%	0	0%	0	0%	0	0%	0
Excavator	2270002024	T3	2	148 Hp	Diesel	3,600	30%	1,080	50%	1,800	20%	720	0%	0	0%	0	0%	0	0%	0
Tractor/Loader/Backhoe	2270002056	T3	2	263 Hp	Diesel	4,200	30%	1,080	50%	2,100	20%	840	0%	0	0%	0	0%	0	0%	0
Grader	2270002008	T3	2	259 Hp	Diesel	4,200	30%	480	50%	800	20%	320	0%	0	0%	0	0%	0	0%	0
the state and state of the stat	2270002048	T3	4	174 Hp	Diesel	1,600	0%	480	60%		40%	200	0%	0	0%	0	0%	0	0%	0
Paving Equipment Paving Equipment	2270002021	T3		174 Hp 107 Hp	Diesel	500	0%	0	60%	300	40%	200	0%	0	0%	0	0%	0	0%	0
		10			LUIESE	500	U 70	1 11	00/70	1 .500					1 1/20	1 U	1 170	1 U	1 070	1 U

BBNPP General Conformity Applicability Analysis Rev. 2 Appendix B

Total Construction NOx and VOC Emissions from Non-road Engines Table B-1a

· · · · · · · · · · · · · · · · · · ·	Criteria P	ollutants	. 21993	Median			(s. 1977)	Deteriorat	ion factor	2 Adjus	ted EF	24. ⁵ 1 ⁴³	Har grad in				Em	lissions	(tons) 7.		الغريك ب	·	· · · ·	1-~2	e
Equipment	- EFss (o)	hp-hr) ²	Load	Life	Age	"A	n 5, 🦿			- (a/hr	-hr) ⁶	1. izer (HC			TT: : ¥				'⊋NOx`∵	. 5 . 6 . 7	ni si i	
Type	HC * =2	··· NOx · ··	- Factor ³	-Hours*	Factor 5	· HC ·	NOx	HC	NOx ⁶⁴	TT HC	NOx	-Year 1	'Year 2'	•Year 3*	·Year 4	Year 5	Year 6	Year 7	Year 1	-Year 2'	Year 3'	Year 4	Year 5	Year 6	-Year 7
IA. Early Site Prepatratio		1.5.544		1 · · · · >	*****	5.5.20	****** ; *	e	\$ 7	برسف مايتها ود	المربع المشارعة	7-11		4.47 3.2		· • • • •	t in the	2 +* ; =** · •1	10.240	1.	-2+ 7× X	ger · • •	• • • * •	• • • • •	e za da
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.44	0.00	0.00	0.00	0.00	0.00	0.00	6.70	0.00	0.00	0.00	0.00	0.00	0.00
Tractor/Loader/Backhoe	0.42	3.03	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.054	0.31	0.00	0.00	0.00	0.00	0.00	0.00	2.19	0.00	0.00	0.00	0.00	0.00	0.00
Excavator	0.19	2,61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.00
Excavator	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0,00	0.00	0.00	0.00
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.00
Dumper/Tener	0.38	3.03	1	7000	>1	0.027	0.008	1.027	1.008	0.390	3.054	1.06	0.00	0.00	0.00	0.00	0.00	0.00	8.33	0.00	0.00	0.00	0.00	0.00	0.00
Grader	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.06	0.00	0.00	0.00	0.00	0.00	_0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00
Scraper	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.47	0.00	0.00	0.00	0.00	0.00	0.00	7.07	0.00	0.00	0.00	0.00	0.00	0.00
Scraper	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0,175	2.631	0.18	0.00	0.00	0.00	0.00	0.00	0.00	2.65	0.00	0.00	0.00	0.00	0.00	0.00
Surfacing	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0,195	2.631	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00
IA. Site Development and	umi 1074 i ; #	the distance of the	ាកតា ខណ្ឌ អូមី	* 17.75.00% *****	纪 12 m mm	U ::	1. A. 4. 1.	<u>й лагий а</u>	***** 1,3t	机输出运行的	2		5 - S S.	2		Y		AT		A		Print and	5° 200 - 12	بقيروس والرابة	
Intake area, Switchya	in the grade of a	J.m. 1925 m. tape	A	• • • • • • • • • • • • • • • • • • •	\$* 1+3,4*, * *******	1.9	ale que terre de la compañía de la c	paid2	fr - Stafferer	We want		જુરીત્ત્વનું કે દેવકે કે કુ	· · · · · · ·	24 + 1.74 (23) r	5. p. + + + + + + + + + + + + + + + + + +	اليوب والقرر	\$1.~* 17.8 ¹ 9**	************		1970 - F. S. 249	égy i	69 <u>7</u> - 627 - 64	ا بالغانية معلم الأمر	\$***\$*\$\$**\$	*** ?1 - ¥?
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.17	0.40	0.00	0,00	0.00	0.00	0.00	2.56	5.97	0.00	0.00	0.00	0.00	0.00
Scraper (dual engine 1/2)	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.07	0.16	0.00	0.00	0.00	0.00	0.00	1.04	2.44	0.00	0.00	0.00	0.00	0.00
Scraper (dual engine 2/2)	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.06	0.15	0.00	0.00	0.00	0.00	0.00	0.96	2.25	0.00	0.00	0.00	0.00	0.00
Excavator	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.06	0.14	0.00	0.00	0.00	0.00	0.00
Tractor/Loader/Backhoe	0.42	3.03	1	4667 4667	>1	0.027	0.008	1.027	1.008	0.431	3.054	0.13	0.29	0.00	0.00	0.00	0.00	0.00	0.89	2.08	0.00	0.00_	0.00	0.00	0.00
Grader	0.19	2.61	1	4007	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.09		0.00	0.00	0.00	0.00	0.00
Powerblock (inc. coo	0.17		1	7000	> 1	0.027	0.008	1.027	1.008	0.175	2.631	0.42	0.42	0.00	0.00	0.00	0.00	0.00	6.33	6.33	0.00	0.00	0.00	0.00	0.00
Crawler Tractors	0.17	2.61	1	7000		0.027	0.008	1.027	1.008	0.175	2.631	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.00	0.00	0.00	0.00	0.00
Crawler Tractors	0.17	3.03		4667	>1	0.027	0.008	1.027	1.008	0.175	3.054	0.05	0.05	0.02	0.00	0.00	0.00	0.00	1.11	1.11	0.57	0.00	0.00	0.00	0.00
Scraper (dual engine 1/2)	0.42	2.61		7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.94	0.10	0.08	0.00	0.00	0.00	0.00	14.14	14.14	0.00	0.00	0.00	0.00	0.00
Scraper (dual engine 1/2)	0.17	2.61	1	7000	51	0.027	0.008	1.027	1.008	0.175	2.631	0.94	0.87	0.00	0.00	0.00	0.00	0.00	13.06	13.06	0.00	0.00	0.00	0.00	0.00
Surfacing	0.17	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.02	0.07	0.03	0.00	0.00	0.00	0.00	0.21	0.42	0.42	0.00	0.00	0.00	0.00
Surfacing	0.15	2.61		7000	>1	0.027	0.008	1.027	1.008	0.135	2.631	0.02	0.05	0.00	0.00	0.00	0.00	0.00	0.54	1.09	1.09	0.00	0.00	0.00	0.00
Excavator	0.17	2.61	<u> </u>	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.04	0.04	0.02	0.00	0.00	0.00	0.00	0.54	0.54	0.27	0.00	0.00	0.00	0.00
Tractor/Loader/Backhoe	0.13	3.03	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.054	0.55	0.55	0.02	0.00	0.00	0.00	0.00	3.87	3.87	1.93	0.00	0.00	0.00	0.00
Grader	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.04	0.06	0.04	0.00	0.00	0.00	0.00	0.59	0.78	0.59	0.00	0.00	0.00	0.00
Excavator	0.13	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.32	0.32	0.00	0.00	0.00	0.00	0.00	4.84	4.84	0.00	0.00	0.00	0.00	0.00
Off-Highway Truck	0.17	2.61	1	7000	>1	0.027	0,008	1.027	1.008	0.175	2.631	1.76	1.76	0.88	0.00	0.00	0.00	0.00	26.47	26.47	13.23	0.00	0.00	0.00	0.00
Off-Highway Truck	0.17	4.11	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.147	0.03	0.05	0.03	0.00	0.00	0.00	0.00	0.82	1.10	0.82	0.00	0.00	0.00	0.00
Rubber tire loader	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0,195	2.631	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.13	0.00	0,00	0.00	0.00
- Parking	معادية والم	2.01 5. mar 34. 1	and a state of the	4001	بغدموهن بكهوده		4.000	6		1	2.001	190.00	1		يتريب ، ^{المو} قع (44	الم ميدي د.	44					وله الارد سير	1	نېږ به در	(a.) and (3
Crawler Tractors	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0,195	2.631	0.00	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.61	0.41	0.00	0.00	0.00	0.00
Scraper	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.40	0.27	0.00	0.00	0.00	0.00
Surfacing	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.24	0.16	0.00	0.00	0.00	0.00
Surfacing	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.63	0.42	0.00	0.00	0.00	0.00
Excavator	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.15	0.10	0.00	0.00	0.00	0.00
Tractor/Loader/Backhoe	0.42	3.03	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.054	0.00	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.37	0.25	0.00	0.00	0.00	0.00
Grader	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.23	0.15	0.00	0.00	0.00	0.00
Paving Equipment	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.15	0.10	0.00	0.00	0.00	0.00
Paving Equipment	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06	0.00	0.00	0.00	0.00
- Support Road (inc. Q	1.254° 4. j. j. j.	5-2-536-54	/Н. ¥И.\$	la de l'Annandere de	· [2]:+1 * +5	inari ne la	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	9 M 1 1 1 1 1	17 m 14 . 18	e trage i speciel se	1	11,12 all 13	F-127.4 77	1. an 1. an 1.	£.c.c?nu42	50.0° ±1° 54	«	32.255	هيكال خطنا	S	("پېروزىدراكار كارىم	- 2° 2° 2° 2° 2° 2° 2° 2° 2° 2° 2° 2° 2°	ग्रा १ मध्	ڹ <i>ڡڹ</i> ۊؠ ^ي ارير.	. يە - يەبىرەن
Crawler Tractors	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.14	0.23	0.09	0.00	0.00	0.00	0.00	1.84	3.07	1.23	0.00	0.00	0.00	0.00
Scraper (dual engine 1/2)	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.22	0.19	0.02	0.00	0.00	0.00	0.00	3.26	2.94	0.33	0.00	0.00	0.00	0.00
Scraper (dual engine 2/2)	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.20	0.18	0.02	0.00	0.00	0.00	0.00	3.01	2.71	0.30	0.00	0.00	0.00	0.00
Surfacing	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.18	0.31	0.12	0.00	0,00	0.00	0.00
Surfacing	0.17	2.61	1	7000	>1	_0.027	0.008	1.027	1.008	0.175	2.631	0.06	0.10	0.04	0.00	0,00	0.00	0.00	0.94	1,57	0.63	0.00	0.00	0.00	0.00
Excavator	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.03	0.06	0.02	0.00	0.00	0.00	0.00	0.46	0.77	0.31	0.00	0.00	0.00	0.00
Tractor/Loader/Backhoe	0.42	3.03	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.054	0.16	0.26	0.11	0.00	0.00	0.00	0.00	1.12	1.86	0.74	0.00	0.00	0.00	0.00
Grader	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.03	0.04	0.02	0.00	0.00	0.00	0.00	0.36	0.60	0.24	0.00	0.00	0.00	0.00
Paving Equipment	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0,195	2.631	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.15	0.10	0.00	0.00	0.00	0.00
the second se																									
Paving Equipment Off-Highway Truck	0.19	2.61 4.11	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06	0.00	0.00	0.00	0.00

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Equipment	• scc1+1	Engine Technology	No.of Equipment	Equipment	Fuel	Total	Year	1	Year	2	Year,		Year 4	le - q	Year	5.	Year t		Year	7
Type		* Type?	#	hp	Type	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours -	Operation %	Hours	Operation %	Hours	Operation %	Hours?	Operation %	Hours
South Laydown		a and rate to be	هليغور به مدرات	يقدينا است بالإفراج والتركي	e part di alta		HIL MARKED	÷ intraina	the state of the second		1997 1 992 10 2 10	1	System of the second	à hours.	البعلين بب كليه بلد فلخ	وتشبير ،	Call	រដ្ឋមក ។ ដ	a , an stringer	41477 Start
Crawler Tractors	2270002069	T3	4	700 Hp	Diesel	2,400	30%	720_	50%	_1,200	20%	480	0%	0	0%	0	0%	0	0%	0
	2270002024	T3	1	400 Hp	Diesel	360	30%	108	50%	180	20%	72	0%	0	0%	0	0%	0	0%	0
	2270002036	T3	3	148 Hp	Diesel	1,440	30%	432	50%	720	20%	288	0%	0	0%	0	0%	0	0%	0
	2270002048	T3	1	259 Hp	Diesel	400		120	50%	200	20%	80	0%	0	0%	0	0%	0	0%	0
-Boring/Solis Investiga		an a	a an a an a	(15-11-11-15-17-5e	The Same	n gaaa baha sa ahada	~ .x	q məmul	1400 C 14	1 mint 7	Managar Paris	معمومتك المرثة	3*************************************	as 11 - 15	·	1. a. a. a.	7.14 11 - # - 107 28	2-27-24	en sou es d a mata	
	2270002033	T2	1	420 Hp	Diesel	246	100%	246	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Underground utilities		truns, groundir		C Westerners	e e e est	an a	4	ne gyere i rije	化制造 化过去分词		te te en en ségure seus	9470 ÷	1.3 · 1.2 · 44 · 319 · -9	• • • • • •	· ··· *··· ··· ··· ···	• • • • •	gadan ara ara ara	174.00 Stee	····	
	2270002045	T3	2	160 Hp	Diesel	1,126	0%	0	50%	563	50%	563	0%	0	0%	0.	0%	0	0%	0
	2270002069	T3	2	235 Hp	Diesel	1,690	0%	0	50%	845	50%	845	0%	0	0%	0	0%	0	0%	0
	2270002066	Т3	6	102 Hp	Diesel	5,069	0%	0	40%	2,028	30%	1,521	30%	1,521	0%	0	0%	0	0%	0
	2270002036	T3	2	148 Hp	Diesel	1,690	0%	0	60%	1,014	40%	676	0%	0	0%	0	0%	0	0%	0
	2270002078	T3	1	400 Hp	Diesel	845	0%	0	50%	422	40%	338	10%	84	0%	0	0%	0	0%	0
Warehouse & Storage		•••• ; · · · · ·		ويعتر والمعالم المراجع	· · ·	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.		월 3일 7 <u>1</u> 999 - 199	r ar di	2. ² * ***,* *: 2 ⁻ *	54** ?*	49-19-12 (F. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	fart		· · ·	entra con sulfa e els	· · · · · · · · · · · · · · · · · ·		1
	2270003020	T3	2	94 Hp	Diesel	8,378	0%	0	10%	838	20%	1,676	30%	2,513	25%	2,094	10%	838	5%	419
	2270002045	Т3	2	160 Hp	Diesel	9,574	0%	0	10%	957	20%	1,915	30%	2,872	25%	2,394	10%	957	5%	479
	2270002057	T3	1	115 Hp	Diesel	5,386	0%	0	10%	539	20%	1,077		1,616	25%	1,346	10%	539	5%	269
IIA. Civil / Concrete Struc			1.5	al-something in th	а л Мал	p		149931	1 × 1		a sa karangang		d'un salation and		r:	1	ڴڟ؞ؽۮڮ؞؞؞؞؞؞ؽؽ؞ڲڲ	8 ⁴⁴⁴ * * * * * * *	and the second	* 12.12
Bridge Construction		- 1	24975 *** 4 C / M	ې د سن د مده م پو	1.11 1.1	ATT Salara is ;	1. · · · · · · · · · · · · · · · · · · ·		47 1. 21 Y # 4 1.		\$1. \$1.000 (100. 900 u 100	AL TANK	Burren Car Stading	•••	and the second		्रेन सम्प्रे सम्प्रकृतः	94 - XXI	2	
	2270002069	<u>T3 ·</u>	3	700 Hp	Diesel	3,600	0%	0	20%	720	30%	1,080	30%	1,080	20%	720	0%	0	0%	0
	2270002069	<u>T3</u>	2	305 Hp	Diesel	2,400		0	20%	480	30%	720	30%	720	20%	480	0%	0	0%	0
	2270002024	T3	2	400 Hp	Diesel	2,160		0	20%	432	30%	648	30%	648	20%	432	0%	0	0%	0
	2270002036	T3	4	148 Hp	Diesel	4,800		0	20%	960	30%	1,440	30%	1,440	10%	480	10%	480	0%	0
	2270002048	T3	1	259 Hp	Diesel	960		0	20%	192	30%	288	30%	288	20%	192	0%	0	0%	0
	2270002066	<u>T3</u>	3	80 Hp	Diesel	3,802			20%	760	30%	1,140	30%	1,140	10%	380	10%		0%	0
	2270002045	T3	4	160 Hp	Diesel	4,224		0	20%	845	30%	1,267	30%	1,267	10%	422	10%	422	0%	0
	2270002045	T2	2	355 Hp	Diesel	2,112		0	20%	422	30%	634	30%	634	20%	422	0%	0	0%	
	2270006010		1	300 Hp	Diesel	528		0	10%	53	30%	158	30%	158	20%	106	10%	53	0%	0
	2270002057	T3 T3	2	115 Hp	Diesel	1,901		0	10%	190	30%	570	30% 30%	570	20%	380	10%	190	0%	
Rubber tire loader	2270002060	13	ا پېچې چې چې د	262 Hp	Diesel	1,056		0	10%	106	30%	317	30%	317	20%	211	10% مەمۇر ئىرد	106	0%	
	2270002045	T3	د میر میروند. مراجع	205 Hp	Diesel	352		^{x2}	50%	176	50%	176	0%	0	0%	0	0%	0	0%	0
Crane	2270002045	T3				493		-	50%	246	50%	246		0	0%	6	0%		0%	
Crane Structural Concrete	2270002045	13	4	160 Hp	Diesel	493	0%	0	50%	240	50%	240	0%	0	0%	U	U%	31.00	070	
Pump	2270006010	T3	5	300 Hp	Diesel	7.500	0%	0	10%	750	30%	2,250	30%	2.250	20%	1 500	5%	375	5%	375
Crane	2270000010	T2	5	355 Hp	Diesel	7,500	0%		10%	792	30%	2,250	30%	2,250	20%	1,584	5%	396	5%	396
Crane	2270002045	T3	5	160 Hp	Diesel	9,504	0%		10%	950	30%	2.851	30%	2,851	20%	1.901	5%	475	5%	475
Forklift (rough)	2270002045	T3	6	115 Hp	Diesel	17,107			10%	1.711	30%	5.132	30%	5.132	20%	3,421	5%	855	5%	855
Rubber tire loader	2270002057	T3	2	262 Hp	Diesel	6.336			10%	634	30%	1,901	30%	1,901	20%	1.267	5%	317	5%	317
Tractor/Loader/Backhoe	2270002066		4	80 Hp	Diesel	12.672	0%		10%	1.267	30%	3,802	30%	3,802	20%	2.534	5%	634	5%	634
Non-Power Block (Ou				1	Dicaci	12,012		18	1070		1 1 1 2 2 2 2 2 2 2 2 2	125402		0,002	1.	2,004	tert at sector	4.1 1 1 11	27	1.1.1
Crane	2270002045	T3	2	160 Hp	Diesel	8.490	0%		0%	0	70%	5.943	30%	2.547	0%	0	0%	0	0%	0
Pump	2270006010		3	300 Hp	Diesel	1,901		1 ŏ	0%	ŏ	70%	1,331	30%	570	0%	Ő	0%	1 0	0%	ŏ
Crane	2270002045		2	355 Hp	Diesel	6.336		1 ŏ	0%	ŏ	70%	4,435	30%	1.901	0%	۱ ŏ	0%	1 <u>0</u>	0%	1 0
Forklift (rough)	2270002040	T3	1	115 Hp	Diesel	1,901		- 1 - 0	0%	ŏ	70%	1,331	30%	570	0%	0	0%	1 õ	0%	
Switchvard	2270002007		- The Land at Legisland and the	· I I O FIP	Line to esti	1,00 1,50 - 1,00			View or prup was	7	1078	1,001		3.4.11	0 /6	8 C' \ 12.7	Children and a	1100 72. 21		125-2-
Crane	2270002045		2	160 Hp	Diesel	3,168		0	0%	0	50%	1.584	40%	1,267	10%	317	0%	0	0%	6
Pump	2270002045	T3	2	300 Hp	Diesel	950		0	0%	0	75%	713	25%	238	0%	0	0%	6	0%	
					Diesel			0		0		594	25%	198	0%		0%	0	0%	
Crane	2270002045		1	355 Hp		792			0%	_	75%									
Forklift (rough)	2270002057	T3	1	115 Hp	Diesel	1,426		0	0%	0	75%	1,069	25%	356	0%		0%	0	0%	0 1. *
A Cooling Tower that a	1979 M. 18 19 19 19			i Maria Sata Sata Sata	(*** 4 7. * **	1. [1,713,6 493, 143	મ સામજા	a tasimin ny kanana				, -ini dan me≢;annaga 2000	x	1477 Ten 14 14 14 14 14 14 14 14 14 14 14 14 14		1.4.247 A.1.194-14-2			
Crane	2270002045	T3	4	160 Hp	Diesel	8,490	the second se	0	0%	0	0%	<u> </u>	30%	2,547	70%	5,943	0%	0	0%	0
Crane	2270002045	T2	. 2	355 Hp	Diesel	1,584		0	0%	0	0%	0	30%	475	70%	1,109	0%	0	0%	0
Pump	2270006010	T3	3	300 Hp	Diesel	1,901		0	0%	0	0%	0	30%	570	70%	1,331	0%	0	0%	0
Forklift (rough)	2270002057	T3	1	115 Hp	Diesel	2,851	0%	0	0%	0	0%	0		855	70%	1,996	0%	0_	0%	0

BBNPP General Conformity Applicability Analysis Rev. 2 Appendix B

	Criteria	Pollutants;	. 19 - 1	Median		1	S. Constant	Deteriorat	ion factor	Adjus	ted EF			ۇسى خەت قىدە	ورود وبوافعه والم	• • •	En	nissions	(tons) ^{7,}	51, * •		ng al si si	. T. A. S. 4	1. S.	
Equipment	EFss (c	/hp-hr) ²	Load	Life	Age	5	H 5	() *	$\sim 10^{-1}$	a/hr	o-hr) ^e	ر م الله الله الله الله الله الله الله ال		1. N. 17	r ∢HC.⊃C	· · · · · · · · ·			18. 7. 5 . July !			"NOx a	79855	対象・	• 2 · · 1
Туре	HC.	- NOx **	Factor 3	Hours	Factor 5	HC	NOx ∄	* HC: *	S NOx	- HC	NOx	/Year 1	्Year 2	Year 3*	Year 4	Year 5	•Year 64	Year.7	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	'Year 7
South Laydown				1.942.0	بقيد بر ا	*** * X · N	·* 240 - 4 . 14 ' mp'	For _ 44.04		Corned are ta	·····	r 1.: *	11 10-20-20		10. 14	er . 44.00.				ود مر احداد		nie – enjempisj	16- 5-4	*	
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.10	0.16	0.06	0.00	0.00	0.00	0.00	1.46	2.44	0.97	0.00	0.00	0.00	0.00
Surfacing	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.13	0.21	0.08	0.00	0.00	0.00	0.00
Excavator	0,19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.19	0.31	0.12	0.00	0.00	0.00	0.00
Grader	0,19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0,195	2.631	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.09	0.15	0.06	0.00	0.00	0.00	0.00
Boring/Solls investig	- 19 19 19 19 10		**** \$. 200°. ;9		21	2 ⁴⁰ , 240 , 7 3	5 - 6	1 ···· · · · · · · · · · · · · · · · ·		17 دو. به شه سرته			1 . Same .	1	He 1 1	· • • • • •		1. 1000	19 2 C		13 PC -				
Bore/Drill Rig	0.17	4.34	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.379	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0,00	0.00	0.00
• Underground utilities		1 42PE 1 1 1 1 1999 7	355. ¹ 9.95.41. 5	- <u>18</u>	13 Jan - 1966	··· ··· ···	\$\$#]3~~%		و کې بغو سېدې	ي و الم معلي معلي معلي الم	المعدية والمحافظ والمحافظ			1	er - 171	4)	÷	30.1 5"T. B	1. San - 1	1. · · · · · · · · · · · · · · · · · · ·	100	4	2	C-714 M	2000
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0,185	2.520	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.00	0.00	0.00	0.00
Crawler Tractors	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.00	0.00	0.00	0.00
Tractor/Loader/Backhoe	0.42	3.03	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.054	0.00	0.10	0.07	0.07	0.00	0.00	0.00	0.00	0.70	0.52	0.52	0.00	0.00	0.00
Excavator	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.44	0.29	0.00	0.00	0.00	0.00
Dumper/Tener	0.38	3.03	1	7000	> 1	0.027	0.008	1.027	1.008	0.390	3.054	0.00	0.07	0.06	0.01	0.00	0.00	0.00	0.00	0.57	0.46	0.11	0.00	0.00	0.00
Warehouse & Storage	1912 10 10	· · · · · · · · · · · · · · · · · · ·	75 276.2	S. 12.57	11. · · · Mitt	127	1974 - Level 1	- as - 1- 1	-15,274 5.5%	15277 - 79 585	Rectard 1 adv	4 . 2	1.1.1.1.1	وساوقته أبيد	0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	84,947 + 6 × 61	21. 112 - 112	er the case	5m # 1888	alitere aliterezi	• • • • •	· ****C 144	1777 (M106	4., e 194	S. 1. 11
Forklift	0.19	3.13	1	4667	>1	0.027	0.008	1.027	1.008	0.195	3.155	0.00	0.02	0.03	0.05	0.04	0.02	0.01	0.00	0.27	0.55	0.82	0.68	0.27	0.14
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.03	0.06	0.09	0.08	0.03	0.02	0.00	0.43	0.85	1.28	1.06	0.43	0.21
Forklift (rough)	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.01	0.03	0.04	0.03	0.01	0.01	0.00	0.18	0.36	0.54	0.45	0.18	0.09
IIA. Civil / Concrete Struc		1. 1. 1. 1		a an			5 * *	17 6 J (1. S. S. S. S. S. S.	8 . .	ايد ا مهد و	1. Jan 1. 1		1 frat ~** 1992		1974 - La A	*****	. 'ar - **	S. 214		1 1 2	清	- 744	J	-
Bridge Construction	19 A. S. S. C. C.	W. T. Cymr	ಜ್. ಇಫಿ ರಿ. ಕರ್ಮ	* 34.44 44.44	L : VA.	1.6 1	States of the	4 - 1 ^{- 1}	រខ <i>្លាះ ទ</i> ុក ភា	1. 1. 1. 1. 1. 1. 1.	in sur and	P 1 7 . 3	aite	27977 A G	5 t. ' T. I	na wat	+ : :	<u>م</u> ر بينية. (ا	· 14-1-14-14	17 24 872/158		المنظر الا م	1.1. C.S.	· • • ·	
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.10	0.15	0.15	0.10	0.00	0.00	0.00	1.46	2.19	2.19	1.46	0.00	0.00
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.03	0.04	0.04	0.03	0.00	0.00	0.00	0.42	0.64	0.64	0.42	0.00	0.00
Surfacing	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.03	0.05	0.05	0.03	0.00	0.00	0.00	_0.50	0.75	0.75	0.50	0.00	0.00
Excavator	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.03	0.05	0.05	0.02	0.02	0.00	0.00	0.41	0.62	0.62	0.21	0.21	0.00
Grader	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0,195	2.631	0.00	0.01	0.02	0.02	0.01	0.00	0.00	0.00	0.14	0.22	0.22	0.14	0.00	0.00
Tractor/Loader/Backhoe	0.42	3.64	1	4667	>1	0.027	800.0	1.027	1.008	0.431	3.669	0.00	0.03	0.04	0.04	0.01	0.01	0.00	0.00	0.25	0.37	0.37	0.12	0.12	0.00
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1,008	0.185	2.520	0.00	0.03	0.04	0.04	0.01	0.01	0,00	0.00	0.38	0.56	0.56	0.19	0.19	0.00
Crane	0.17	4.34	1	7000	>1	0.034	0,009	1.034	1.009	0.176	4.379	0.00	0.03	0.04	0.04	0.03	0.00	0.00	0.00	0.72	1.09	1.09	0.72	0.00	0.00
Pump	0,18	2.5	1	4667	>1	0.027	0.008	1.027	1,008	0.189	2.520	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.13	0.13	0.09	0,04	0.00
Forklift (rough)	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.06	0.19	0.19	0.13	0.06	0.00
Rubber tire loader	0,19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.01	0.02	0.02	0.01	0.01	0.00	0.00	0.08	0.24	0.24	0.16	0.08	0.00
· · Sheet Piling · · · ·	47				. Is			1977 - 1 6 6	موا ^ر به معور او	وميدا توجعتك			1977 - Sandage 1977 - Sandage		41. 1. 10 4. 19			,		,	1	· . · · · · ·	1.00 E 411		
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0,01	0.01	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.00	0.00
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.00	0.00	0.00	0.00
Structural Concrete		4-4-4		4007	·· · ·			** ** ***		1. 1. X	2452. 10 10	44 N 46 N 2	1. · · · · · ·							7	4 5 25		1. A. C. T.	2 · . · . · ·	0.01
Pump	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.189	2.520	0.00	0.05	0.14	0.14	_0.09_	0.02	0.02	0.00	0.63	1.88	1.88	1.25	0.31	0.31
Crane	0.17	4.34	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.379	0.00	0.05	0.16	0.16	0.11	0.03	0.03	0.00	1.36	4.07	4.07	2.71	0.68	0.68
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1,008	0.185	2.520	0.00	0.03	0.09	0.09	0.06	0.02	0.02	0.00	0,42	1.27	1.27	0.84	0.21	0.21
Forklift (rough)	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.04	0.13	0.13	0.08	0.02	0.02	0.00	0.57	1.71	1.71	1.14	0.29	0.29
Rubber tire loader	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.04	0.11	0.11	0.07	0.02	0.02	0.00	0.48	1.44	1.44	0.96	0.24	0.24
Tractor/Loader/Backhoe		3,04	ا المورط المراجع المورط (>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.05	0.14	0.14	0.10	0.02	0.02	0.00	0.41	1.23	1.23	0.82	0.21	0.21
Non-Power Block (Ou	0.18	2.5	1	4667	1-21-	0.027	0.008	1.027	1.008		2.520	0.00	0.00	* %~~;<;i.#	0.08	0.00	0.00	0.00	0.00	0.00	2.64	1.13	0.00	0.00	0.00
Crane	0.18	2.5		4667	>1	0.027	0.008	1.027	1.008	0.185		0.00	0.00	0.19		0.00		0.00	0.00	0.00	1.11	0.48	0.00	0.00	0.00
Pump	<u> </u>		<u> </u>								2.520		<u> </u>		0.04		0.00								0.00
Crane	0.17	4.34	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.379	0.00	0.00	0.31	0.13	0.00	0.00	0,00	0.00	0.00	7.60	3.26	0.00	0.00	-
Forklift (rough)	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.44	0.19	0.00	0.00	0.00
Switchyard	14 ¹		a the second second	4007	• • • • •		15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		20 1 4 1	1874 <u>- 198</u> 4 - 1985 - 19	27 · · · ·			, <u>, , , , , , , , , , , , , , , , , , </u>	11			1	1	1	1 . 1 . 1	177 (F) M	6-1-1	<u>ب</u> ت : ۲۰	
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.05	0.04	0.01	0.00	0.00	0.00	0.00	0.70	0.56	0.14	0.00	0.00
Pump	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.189	2.520	0.00	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.59	0.20	0.00	0.00	0.00
Crane	0.17	4.34	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.379	0.00	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	1.02	0.34	0.00	0.00	0.00
Forklift (rough)	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.36	0.12	0.00	0.00	0.00
Cooling Tower	1992 - Franking	1922 - C. M. 193	a,	R Kitalan na Sui	i stania (strat	51 A. 162 Y	122452.72	No	್ರಾ ೧ ನಿಲ್ಲೇಣಕ	A.H. M. Markell	₩: % (<u>)</u>	WG	200.00) isointare	32575.12.277	A 1.000 100		1	in with	eartachta		- sires-sheet	14 E	149.07 473 1	t e jirte i ely
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.00	0.08	0.19	0.00	0.00	0.00	0.00	0.00	1.13	2.64	0.00	0.00
Crane	0.17	4.34	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.379	0.00	0.00	0.00	0.03	0.08	0.00	0.00	0.00	0.00	0.00	0.81	1.90	0.00	0.00
Pump	0.18	2.5	1	4667	> 1	0.027	0.008	1.027	1.008	0,189	2.520	0.00	0.00	0.00	0.04	0.08	0.00	0.00	0.00	0.00	0.00	0.48	1.11	0.00	0.00

BBNPP General Conformity Applicability Analysis Rev. 2 Appendix B

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Equipment	·scc ¹	Engine	No.of Equipment	Equipment Horsepower	Fuel	Total	. Year		Year 2		Year.3	i	Year 4		Year 5		Year_6		Year 7	5
Туре		"⊷, Туре⊷."		hp	҈Туре	Hours	Operation %	Hours	Operation %	Hours?	Operation %	Hours*	Operation %	Hours	Operation %	Hours#	Operation %	Hours;	Operation %	Hours
IIB. Superstructure & St	ructual Steel	وماد فارتقاده والمعادية المحقولة المادة	an tain at t	. enteret, esta	r	a	5 - 25 - 15 A		st March Street	st det ing	41-11 ¹ 6 1 1 1 4		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	1 :- *****	ودافاتها المبغداني	1.7.17 8.9	ditaria et unit	8 C. I	计分子 医子宫	1.10 37
** Structural & Building	Steel TOWER	o risianina i, in r	يعدمني والرامية العو	التعقيبية بالمعالم	: * *	17	فتارجوا جرع ميمينية	f	212 M 1 1 1 2 2 2	1912 - 18	بهار المالك بالمراجب الر	1-10 L	ىر سىلى مىكتىد.	و ب منتقد و ا	فليناد سا محم	1.127 2.145	He determine	. -	499 2 TL 4999 (The P	· . · · ·
Crane	2270002045	T2	5	355 Hp	Diesel	5,280	0%	0	0%	0	20%	1,056	75%	3,960	5%	264	0%	0	0%	0
Crane	2270002045	T3	4	400 Hp	Diesel	4,224	0%	0	0%	0	20%	845	75%	3,168	5%	211	0%	0	0%	0
Crane	2270002045	T3	7	160 Hp	Diesel	9,905	0%	0	0%	0	20%	1,981	75%	7,429	5%	495	0%	0	0%	0
Crane	2270002045	T3	7	173 Hp	Diesel	8,870	0%	0	0%	0	20%	1,774	75%	6,653	5%	444	0%	0	0%	0
Aerial Lift	2270003010	T3	8	65 Hp	Diesel	10,138	0%	0	0%	0	20%	2,028	75%	7,603	5%	507	0%	0	0%	0
Aerial Lift	2270003010	T3	8	74 Hp	Diesel	10,138	0%	0	0%	0	20%	2,028	75%	7,603	5%	507	0%	0	0%	0
Forklift (rough)	2270002057	T3	8	115 Hp	Diesel	10,138	0%	0	0%	0	20%	2,028	75%	7,603	5%	507	0%	0	0%	0
Building Modules & F	leavy Lifts	ac	Na toto et 👘 🗧	te i i i i i i i i i i i i i i i i i i i	రాజుకా భ	68 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	122° - 1 - 1 - 1412 * Au	*.red . 1	alles an the spec	1787 S. IL	e da metro a c			: ". · · ·	T. • 15,700 mg	*** 77 1.34	5	· . •	ಿ. ಸ್ನಾರ್ಯಾಗ್ ಕ್ರಾಗ್	·····
Crane	2270002045	T3	1	600 Hp	Diesel	845	0%	0	0%	0	0%	0	50%	422	50%	422	0%	0	0%	0
Crane	2270002045	T3	1	1,200 Hp	Diesel	422	0%	0	0%	0	50%	211	50%	211	0%	0	0%	0	0%	0
Building Siding / Insu	lated Panels	The tractilities	· · · · · · · · · · · · · · · · · · ·	a static care		n 4 - 14 n L	112.0429-115-1	10 ¹⁴ - 44	it to be charge	4.1.1		• • • • •		· ·		· ; * 4	6	ាត់អំង	• .• · · · • • · · · · • • • • • •	2412-22
Crane	2270002045	T3	2	160 Hp	Diesel	1,056	0%	0	0%	0	0%	0	30%	317	70%	739	0%	0	0%	0
Aerial Lift	2270003010	T3	3	74 Hp	Diesel	2,218	0%	0	0%	0	0%	0	30%	665	70%	1,552	0%	0	0%	0
Forklift (rough)	2270002057	T3	2	115 Hp	Diesel	1,056	0%	0	0%	0	0%	0	30%	317	70%	739	0%	0	0%	0
Roofing	معار الما معراد	nation in an ei		ىر يە بىيەترىغان يېل	ie an eidea	***** * MD	k marketer i h	a 1 - 1	1	44 · 314	n. –	1			1 . · · · · · · ·		ter in the t	•• • •••, ~;	د بېزېږ ، دمونونو مو	ښه .
Crane	2270002045	T3	2	160 Hp	Diesel	950	0%	0	0%	0	0%	0	0%	0	100%	950	0%	0	0%	0
Aerial Lift	2270003010	T3	3	74 Hp	Diesel	1,426	0%	0	0%	0	0%	0	0%	0	100%	1,426	0%	0	0%	0
Forklift (rough)	2270002057	T3	2	115 Hp	Diesel	950	0%	0	0%	0	0%	0	0%	0	100%	950	0%	0	0%	0
IIIA. Nechanical Installati	on. 🍲 🖅 🖓	ant received the se	El-Brier - A	2 mil - Cake 47	5. N.	والاستعاد المتعادية	ACTION AREA (10	10 ¹⁰ 1 ¹⁰	8-2 Y	the state	1. S.	· · · ·	2.526.549.744	10001 - 1	igne in saig	62- (C - 14	675 Y 11 1	11.11	15, 34, 5,	
Mechanical Installation	on	ಸಾರ್ಷ-ಚಿದ್ರಾರ್ಥ್ರ ಪ್	-4447-747 C 44-74 TV	એપન એ દિવસોટ		antes par com	التعور المعجر بعالية فيعار الخ	5. 5. Lat	11. A P 1995	19, 3, ⁶ , 2,	See 1995	a) + 2 😤	. itera ii meni ik		**************************************	a the first state of the	579 May 70.000 (Tayah 1 -	S. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	Adapters in Adaptive	Aspla Tape II
Crane	2270002045	T3	5	160 Hp	Diesel	14,784	0%	0	0%	0	20%	2,957	50%	7,392	20%	2,957	10%	1,478	0%	0
Crane	2270002045	T3	3	173 Hp	Diesel	2,534	0%	0	0%	0	20%	507	50%	1,267	20%	507	10%	253	0%	0
Crane	2270002045	T2	5	355 Hp	Diesel	4,224	0%	0	0%	0	20%	845	50%	2,112	20%	845	10%	422	0%	0
Crane	2270002045	T3	2	400 Hp	Diesel	1,690	0%	0	0%	0	20%	338	50%	845	20%	338	10%	169	0%	0
Crane	2270002045	T3	1	500 Hp	Diesel	845	0%	0	0%	0	20%	169	50%	422	20%	169	10%	84	0%	0
Aerial Lift	2270003010	T3	5	65 Hp	Diesel	5,280	0%	0	0%	0	20%	1,056	50%	2,640	20%	1,056	10%	528	0%	0
Aerial Lift	2270003010	T3	5	74 Hp	Diesel	5,280	0%	0	0%	0	20%	1,056	50%	2,640	20%	1,056	10%	528	0%	0
Forklift (rough)	2270002057	T3	2	115 Hp	Diesel	5,914	0%	0	0%	0	30%	1,774	40%	2,365	15%	887	15%	887	0%	0
IIIB. Electrical Installatio		1. m. d & Datter	معرجا الالتقام وال		، يادر المريد .	The second second	e 1401 - 140 - 14				an a	14.2.1			يحاج الأعلامة محاجد	1-2-20		1997 - HA - B	and the second s	#3 7 1
Electrical Installation		فرياتهم فأوة فتيرية العفيت فبتوغ	કન્સાર અન્યત	3	£	izh artiset (ser)	R. 1499	1. 烟子"一元		99 - A	and a starting of	2.44			· · · · · · · · · · · · · · · · · · ·		844 (C) 465		Standard Exception of the	
Crane	2270002045		5	160 Hp	Diesel	4,435		0	0%	0	15%	665	40%	1,774	20%	887	15%	665	10%	444
Crane	2270002045		3	173 Hp	Diesel	3,168		0	0%	0	15%	475	40%	1,267	20%	634	15%	475	10%	317
Crane	2270002045		5	355 Hp	Diesel	5,280		0	0%	0	15%	792	40%	2,112	20%	1,056	15%	792	10%	528
Crane	2270002045		2	400 Hp	Diesel	2,112		0	0%	0	15%	317	40%	845	20%	422	15%	317	10%	211
Crane	2270002045		1	500 Hp	Diesel	1,056		0	0%	0	15%	158	40%	422	20%	211	15%	158	10%	106
Aerial Lift	2270003010	Т3	5	65 Hp	Diese	5,280		0	0%	0	15%	792	40%	2,112	20%	1,056	15%	792	10%	528
Aerial Lift	2270003010	T3	5	74 Hp	Diesel	5,280		0	0%	0	15%	792	40%	2,112	20%	1,056	15%	792	10%	528
Crane	2270002045	T3	1	355 Hp	Diesel	845		0	0%	0	15%	127	40%	338	20%	169	15%	127	10%	84
Forklift (rough)	2270002057		2	115 Hp	Diesel	5,914		0	0%	0	15%	887	40%	2,365	20%	1,183	15%	887	10%	591
IV: Major Equipment (he			the state of	ter my sident o	ಜಾಗ್ಯವರ್ಷ.	····		1	eur ** 1, * ,**#u	- 7 - 1 0	- 287 24. 4. 1 184.	ي المعو		ا برد میرد و	* .* **.<*	. ed	1	1.17 Year 92		
Crane	2270002045	i Т3	11	500 Hp	Diesel	528		0	0%	0	10%	53	30%	158	50%	264	5%	26	5%	26
Crane	2270002045		1	600 Hp	Diesel	528		0	0%	0	10%	53	30%	158	50%	264	5%	26	5%	26
Roller	2270002015	і ТЗ	2	600 Hp	Diesel	300	0%	0	0%	0	0%	0	40%	120	60%	180	0%	0	0%	0
Roller	2270002015		11	600 Hp	Diesel	300		0	0%	0	0%	0	40%	120	60%	180	0%	0	0%	0
Roller	2270002015	5 T3	1	600 Hp	Diesel	300	0%	0	0%	0	0%	0	40%	120	60%	180	0%	0	0%	0

· · ·	Criteria I	ollutants	ر بين مر م	Median				Deteriora	tion factor	Adius	ted EF			4 1 1 1		11.41.5	i . i i cEm	locione	(tons) 7,	·, ~	Vienic -	4		· ··.	A
Equipment	FFee (n	/hp-hr) 2	Load	Life	Age			1		(a/ho					S HC I T			ilaaiona							··· ·
Туре		NOx-1	Factor 3	Hours	Factor 5	- HCF 3	NOx	r. ≇HCrash	-NOx:		NOx	Year 1	Year 2		Year 4		'Year 6	Year 7	Year 1			Year 4		Year 6	Year 7
IIB. Superstructure & St	5.74./. · · · · ·	فقراب بالمتقادين	141 - 141 - 1	و درمه دی	1	27. T K	· · · · · · · · · · · · · · · · · · ·	1 -9	12	1. A.	1444 Tere 1809 19	51+++ · · ·T.4		e 19-19-19				<u>م</u>			1 P. 12			الدينية المارية	
Structural & Building	مربعة من المربعة المربعة المربعة المربعة		arafan i serin arr			····· ····	8.7 (* 1	- 1	~~~	in marce to a	** 12-*** -***			والمحادثة والمحا	ويوسر مرقوب ب		***********				-4112-2124			31,344-54	Ling of the second
Crane	0.17	4.34	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.379	0.00	0.00	0.07	0.27	0.02	0.00	0.00	0.00	0.00	1.81	6.79	0.45	0.00	0.00
Crane	0.17	2.5	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.07	0.24	0.02	0.00	0.00	0.00	0.00	0.94	3.52	0.23	0.00	0.00
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.06	0.24	0.02	0.00	0.00	0.00	0.00	0.88	3.30	0.22	0.00	0.00
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.06	0.23	0.02	0.00	0.00	0.00	0.00	0.85	3.20	0.22	0.00	0.00
Aerial Lift	0.42	3.64	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.00	0.06	0.23	0.02	0.00	0.00	0.00	0.00	0.53	2.00	0.13	0.00	0.00
Aerial Lift	0.42	3.64	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3,669	0.00	0.00	0.07	0.20	0.02	0.00	0.00	0.00	0.00	0.61	2.28	0.15	0.00	0.00
Forklift (rough)	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0,195	2,631	0.00	0.00	0.05	0.19	0.01	0.00	0.00	0.00	0,00	0.68	2.54	0.17	0.00	0.00
Building Modules & H				1. 1		1.02.1 1.02.1	\$-974	1.02) 21	** 1	3475 - 24	3 2777 - 27	1.00 1.00	1. T 1714	0.00		12.11.155	en en angla	0.00		7. 17.73	3 ,774 17	2.04		9.00 90,00	0.00
Crane	0.17	2.5	1	7000	> 1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0,70	0.70	0.00	0.00
Crane	0.17	4.1	1	7000	>1	0.027	0.008	1.027	1.008	0.175	4.133	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	1.15	1,15	0.00	0.00	0.00
Building Siding / Insu				1000	at the sector	15	1.000 m	**********		A. 1. 1. 1. 1.	1. 100	0.00	* • • •	2 :12-41	0.00		11	0.00 N 1		-4 .49824	(2) L. (2)	1.10	140.00	0.00	0.00
Crane	0.18	2.5		4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.14	0.33	0.00	0.00
Aerial Lift	0.42	3.64	1 1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.14	0.35	0.00	0.00
Forklift (rough)	0.19	2.61	1 1	4667	>1	0.027	0.008	1.027	1.008	0,195	2.631	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.25	0.00	0.00
Roofing					а. а.	cort	2- 1- 2-	1.021	1.000		2.001 244 gr 2149	11.00	0.00	0.00	0.01		-: -:	He 184. 5	M ³		0.00		1 anima 17	2.00	5
Crane	0.18	2.5	1 1	4667	>1	0.027	0.008	1.027	1.008	0,185	2.520	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00
Aerial Lift	0.42	3.64	1 1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00
Forklift (rough)	0.19	2.61	1 1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00
IIIA. Nechanical Installati	N'		1 25 2 4			*		Te	1.000		2.001	0.00	0.00	1 C 7 C #	0.00		t.00	0.00	1 a	0.00	0.00	0.00	0.02	0.00	
Mechanical Installatio			المعلمات المواجع والموا	i near	يوليد الدار	(10×= 1		5521	(1)	17			اس با اس ا				1. 	Te	1		5-5-5 B 3		· · · · ·	ىرىيە ئەسىدە ئېرىر	. سر عين
Crane	0.18	2.5	1 1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.10	0.24	0.10	0.05	0.00	0.00	0.00	1.31	3.29	1.31	0.66	0.00
Crane	0.18	2.5		4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.02	0.04	0.02	0.00	0.00	0.00	0.00	0.24	0.61	0.24	0.12	0.00
Crane	0.17	4.34	1 1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.379	0.00	0.00	0.06	0.15	0.06	0.03	0.00	0.00	0.00	1.45	3.62	1.45	0.72	0.00
Crane	0.17	2.5	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.03	0.07	0.03	0.01	0.00	0.00	0.00	0.38	0.94	0.38	0.19	0.00
Crane	0.17	2.5		7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.02	0.04	0.02	0.01	0.00	0.00	0.00	0.23	0.59	0.23	0.12	0.00
Aerial Lift	0.42	3,64	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.00	0.03	0.08	0.03	0.02	0.00	0.00	0.00	0.28	0.69	0.28	0.14	0.00
Aerial Lift	0.42	3.64	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.00	0.04	0.09	0.04	0.02	0.00	0.00	0.00	0.32	0.79	0.32	0.16	0.00
Forklift (rough)	0.19	2.61	1 1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.04	0.06	0.02	0.02	0.00	0.00	0.00	0.59	0.79	0.30	0.30	0.00
IIIB. Electrical Installation			224-1-1					• • • •	57.2 1		1.00	6.00	1.00	11.4 (温和) #	0.00	0.02	0.02	0.00 ***	0.00		5.00 m		0.00	8.a.10	0.00
Electrical Installation			بالحرو المسيسة ال		<u>مرد معتمر ا</u>	20 C - C			3-1+ 4-5 3		「おうち」	100-242 2 1		·	4 2		21.4 - 2				x			1-27	
Crane	0.18	2,5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.02	0.06	0.03	0.02	0.01	0.00	0.00	0.30	0.79	0,39	0.30	0.20
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.02	0.04	0.02	0.02	0.01	0.00	0.00	0.23	0.61	0.30	0.23	0.15
Crane	0.17	4,34	1 1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.379	0.00	0.00	0.05	0.15	0.02	0.02	0.04	0.00	0.00	1.36	3.62	1.81	1.36	0.90
Crane	0.17	2.5	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.02	0.07	0.03	0.02	0.02	0.00	0.00	0.35	0.94	0.47	0.35	0.23
Crane	0.17	2.5	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.02	0.04	0.02	0.02	0.01	0.00	0.00	0.22	0.59	0.29	0.22	0.15
Aerial Lift	0.42	3.64	1 <u>i</u>	4667	>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.00	0.02	0.07	0.02	0.02	0.02	0.00	0.00	0.21	0.56	0.28	0.22	0.14
Aerial Lift	0.42	3.64	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3,669	0.00	0.00	0.02	0.07	0.00	0.02	0.02	0.00	0.00	0.24	0.63	0.32	0.24	0.16
Crane	0.17	2.5	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.00	0.02	0.04	0.00	0.01	0.00	0.00	0.12	0.33	0.02	0.12	0.08
Forklift (rough)	0.19	2.61	1 1	4667	>1	0.027	0.008	1.027	1.008	0,195	2.631	0.00	0.00	0.02	0.02	0.03	0.02	0.01	0.00	0.00	0.30	0.79	0.39	0.30	0.20
IV: Major Equipment (hea			2.937.0		2 (1) W. 77,	5 +		5	10000	0.100 0145.9% T 12	14 24 - 1 273	1.00	6-47 TT	C.02	0.00	0.00	2		0.00	0.00 R	95 mar 1	(****, /	1.7		0.20
Crane	0.17	2.5	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.01	0.02	0.03	0.00	0.00	0.00	0.00	0.07	0.22	0.37	0.04	0.04
Crane	0.17	2.5	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.01	0.02	0.03	0.00	0.00	0.00	0.00	0.09	0.26	0.44	0.04	0.04
Roller	0.17	2.61	<u>i</u>	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.21	0.31	0.04	0.00
Roller	0.17	2.61	1 1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.21	0.31	0.00	0.00
Roller	0.17	2.61	1 1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.21	0.31	0.00	0.00
	0.17	2.01	<u> </u>	1000		0.021	0.000	1.021	1.000	0.175	2.001	0.00	0.00	0.00		0.02	0.00	0.00	0.00	0.00	0.00		0.01	0.00	1 0.00

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Total Construction NOx and VOC Emissions from Non-road Engines Table B-1a

Equipment	SCC1		No.of Equipment	Equipment Horsepower	Fuel Type	Total Hours	Year 1		Year 2		Year,3		Year 4		Year 5		Year 6		Year	7
iyhe 🤤	C. Transford and the	 Type 	÷#≶	hp		110413	'Operation'%'	Hours	Operation %	Hours	Operation %					Hours 1	Operation %	Hours [*]	Operation %	6 Hours∹
V. Construction & Site Si	upport 🗠 🛪	fanzi stapi ()	s			C	· · · · · · · · · · · · · · · · · · ·	(* 1 × 1	والمراجلين الجارة والرا	An en reste	بدر قيتانيد المسامك	1	بالمراجع والمتعار والتر		,		10. 20 10. 1		and in such	- Y . 10207
Crane	2270002045	T3	2	160 Hp	Diesel	11,968	0%	0	5%	598	15%	1,795	20%	2,394	20%	2,394	20%	2,394	20%	2,394
Aerial Lift	2270003010	T3	3	74 Hp	Diesel	8,976	0%	0	5%	. 449	15%	1,346	20%	1,795	20%	1,795	20%	1,795	20%	1,795
Generator Set	2270006005	T2	1	600 Hp	Diesel	1,197	0%	0	5%	60	15%	180	25%	299	20%	239	20%	239	15%	180
Welder	2270006025			<50 Hp	Diesel			0		0		0		0		0		0		0
Air Compressor	2270006015			<50 Hp	Diesel			0		0		0		0		0		0		0
Portable Lighting				<50 Hp	Diesel			0		0		0		0		0		0		0
VI. Final Restoration		بوريسو ودناقور تواندون		م دو به ۲ منسخ			مومركز مدرمه و	24 1 1 1	· ····	al su com	a wijertijaan teknologie a	لوبة المحدثين	بعاجط فآرا فركمه بالأكم	ي. ديندر پند	g . yanai in ka kayyy	с т, т	• · · • • • • • • • · · · · · · · · · ·	ېږد وټسيب .		•5 •2.0-2.
Crawler Tractors	2270002069	Т3	3	410 Hp	Diesel	2,534	0%	0	0%	0	0%	0	0%	0	0%	0	20%	507	80%	2,028
Crawler Tractors	2270002069	T3	3	235 Hp	Diesel	2,534	0%	0	0%	0	0%	0	0%	0	0%	0	20%	507	80%	2,028
Excavator	2270002036	T3	1	148 Hp	Diesel	704	0%	0	0%	0	0%	0	0%	0	0%	0	20%	141	80%	563
Dumper/Tener	2270002078	T3	6	400 Hp	Diesel	4,224	0%	0	0%	0	0%	0	0%	0	0%	0	20%	845	80%	3,379
Grader	2270002048	Т3	2	259 Hp	Diesel	1,690	0%	0	0%	0	0%	0	0%	0	0%	0	20%	338	80%	1,352
Surfacing	2270002024	T3	3	156 Hp	Diesel	2,534	0%	0	0%	0	0%	0	0%	0	0%	0	20%	507	80%	2,028
Forklift (rough)	2270002057	T3	2	115 Hp	Diesel	845	0%	0	0%	0	0%	0	0%	0	0%	0	20%	169	80%	676

NOTES:

Note 1: Equipment type and SCC code based on Appendix A of "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling", April 2004, EPA-420-P-04-005.

Note 2: Zero hour steady state emission factors (EFss; g/hp-hr) are from NMIM/NONROAD08a model factors dated April 5, 2009.

Note 3: Load factor is set to one since the S&L estimates of operating hours includes the estimated "effective operating time" which takes into account idling and partial load operation.

Note 4: Median life is taken from Table 1 of "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling", April 2004, EPA-420-P-04-005.

EFss from NMIM/NONROAD08 have transient adjustment factors (TAF) built in.

Note 5: Age factor and Deterioration factors calculated using Equation 4 from "Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression-Ignition", April 2004, EPA-420-P-04-009. Age Factor = LF * cumulative hours / median life (where Age factor is capped at 1. For this calculation, age factor is assumed to be 1 for simplification purposes).

Age Fector – LP - Contractive locals interactive groups during to the control of the set Adjusted EF = Efss * TAF * DF (as stated in Note 2, EFss have TAFs built in)

Note 7: Annual VOC Emissions are calculated using the following calculation (1.053 * Adj. HC emission factor (g/hp-hr) * horsepower * hours operated * load factor) / (2000 lb/ton * 453.6 g/lb)

1.053 is the ratio of VOC to HC from "Conversion Factors for Hydrocarbon Components", December 2005, EPA-420-P-05-015.

Annual NOx Emissions are calculated using the following calculation (Adj. NOx emission factor (g/hp-hr) * horsepower * hours operated * load factor) / (2000 lb/hon * 453,6 g/lb)

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Fouinment	Criteria I	Pollutants	Sec. Co	Median				Deteriora	tion factor	Adjus	ted EF	· · · · 4	· · · ·	999 - 99 9		·· • •	······ En	nissions	(tons) 7.	40 ° .	arur.	× · · ·		د. در در ۲۰۰۰ .	··· · · · ·
	EFss (c	/hp-hr) ²	Load	Life	Age	- "A	n 5 -		5	(g/hr	o-hr) ⁶	4 /4 1V	1. A. A.		PHCAIN	la reger e	5- t	1 - c			411	NOx .	:****	241-27	あっている
Туре	HC4	-NOx .	Factor 3	Hours	Factor ⁵	shoHC ≍	NOx	HC HC	-NOx **	~~~;HC`*~?	#RNOx 🗥	∆Year.1¥	£Year 2⊧	¥Year 3)	Year 4	*Year 5-	*Year 6'	Year 7	Year 1	'Year 2	Year 3	-Year 4	Year 5	Year 6	Year 7
V: Construction & Site S	i in finns and the	press (at di	6 1. (1. (engel al e	211 A.S	ineria el	يعاد الأخراء م		·	4. A (A	57.1. q#	致了如河站	1 ~~ 第一次	in Salas	1.5	(منعد ، م	1.1.1		مدون در	<u>, 1</u>		· · · · · · · · · · · · · · · · · · ·	يائل ميد د	·*** · ·
Crane	0.18	2.5	1	4667	> 1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.02	0.06	0.08	0.08	0.08	0.08	0.00	0.27	0.80	1.06	1.06	1.06	1.06
Aerial Lift	0.42	3.64	1	4667	> 1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.02	0.05	0.06	0.06	0.06	0.06	0.00	0.13	0.40	0.54	0.54	0.54	0.54
Generator Set	0.17	4.1	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.137	0.00	0.01	0.02	0.03	0.03	0.03	0.02	0.00	0.16	0.49	0.82	0.65	0.65	0.49
Welder	0	0	1	0	>1	0	0	1.000	1.000	0.000	0.000														\square
Air Compressor	0	0	1	0	>1	0	0	1.000	1.000	0.000	0.000														
Portable Lighting	0	0	1	0	>1	0	0	1.000	1.000	0.000	0.000						[
VI. Final Restoration	, trijr mure	:r., -= +1	1	: t. t. *****	19	ar how	· · · · ·	و بربيد ومدم	1.1.2.1	the grant of	+ + + 8000+ - 5	1912-11	Maria Ma	2.54 40 4	Entra teri	さだいが	2741.218	The second	ititan di	qui consta	4.51 mm	بەر چې يې	د بلد پن	51144	5-9-72 P
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.04	0.16	0.00	0.00	0.00	0.00	0.00	0.60	2.41
Crawler Tractors	0.19	2.61	1	4667	>1	0.027	0.008	1.027	_ 1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.03	0.10	0.00	0.00	0.00	0.00	0.00	0.35	1.38
Excavator	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.06	0.24
Dumper/Tener	0.38	3.03	11	7000	>1	0.027	0.008	1.027	1.008	0.390	3.054	0.00	0.00	0.00	0.00	0.00	0.15	0.58	0.00	0.00	0.00	0.00	0.00	1.14	4.55
Grader	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.02	0.08	0.00	0.00	0.00	0.00	0.00	0.25	1.02
Surfacing	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.02	0.07	0.00	0.00	0.00	0.00	0.00	0.23	0.92
Forklift (rough)	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.06	0.23

94

8.9 5.6 5.5 2.6 1.1 1.5 123.1 121.8 81.7 80.5 38.0 14.3 17.5

NOTES:

Note 1: Equipment type and SCC code based on Appendix A of "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling", April 2004, EPA-420-P-04-005.

Note 2: Zero hour steady state emission factors (EFss; g/hp-hr) are from NMIM/NONROAD08a model factors dated April 5, 2009.

Note 3: Load factor is set to one since the S&L estimates of operating hours includes the estimated "effective operating time" which takes into account idling and partial load operation.

Note 4: Median life is taken from Table 1 of "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling", April 2004, EPA-420-P-04-005.

EFss from NMIM/NONROAD08 have transient adjustment factors (TAF) built in.

Note 5: Age factor and Deterioration factors calculated using Equation 4 from "Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression-Ignition", April 2004, EPA-420-P-04-009, Age Factor = LF * cumulative hours / median life (where Age factor is capped at 1. For this calculation, age factor is assumed to be 1 for simplification purposes).

Deterioration Factor = 1 + (A * Age Factor b), where b = 1 for diesel engines and A is taken from Table A4 from source

Note 6: Adjusted Emission Factors for HC and NOx are calculated using Equation 1 from, "Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression-Ignition", April 2004, EPA-420-P-04-009.

Adjusted EF = Efss * TAF * DF (as stated in Note 2, EFss have TAFs built in)

Note 7: Annual VOC Emissions are calculated using the following calculation (1.053 * Adj. HC emission factor (g/hp-hr) * horsepower * hours operated * load factor) / (2000 lb/hon * 453.6 g/lb)

1.053 is the ratio of VOC to HC from "Conversion Factors for Hydrocarbon Components", December 2005, EPA-420-P-05-015.

Annual NOx Emissions are calculated using the following calculation (Adj. NOx emission factor (g/hp-hr) * horsepower * hours operated * load factor) / (2000 lb/ton * 453.6 g/lb)

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Equipment	SCC1	Engine Technology	No.of Equipment	Equipment Horsepower	Fuel	Total Operating	% of Tot. Hrs Safety	Total Safety Related Hrs	Year	1	Year	2	Year 3	1 ,	Year	4	Year	5	Year	6	Year	7
Type '		Туре	#	hp	Туре	Hrs	Related	Related HIS	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	% Hours
A. Early Site Prepatratio	on							and the second second			1	1.	1 M							1. 1. 14		1
Crawler Tractors	2270002069	T3	4	700 Hp	Diesel	3,300	0%	C	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Tractor/Loader/Backhoe	2270002066	T3	3	263 Hp	Diesel	2,475	0%		0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Excavator	2270002036	T3	3	148 Hp	Diesel	1,980	0%	C	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Excavator	2270002036	T3	1	380 Hp	Diesel	660	0%	C	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Crane	2270002045	Т3	2	160 Hp	Diesel	880	0%	C	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Dumper/Tener	2270002078	T3	10	450 Hp	Diesel	5,500	0%	C	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Grader	2270002048	T3	2	259 Hp	Diesel	990			0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Scraper	2270002018	T3	8	462 Hp	Diesel	5,280	0%	C	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Scraper	2270002018	Т3	3	462 Hp	Diesel	1,980	0%	C	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Surfacing	2270002024	Т3	1	156 Hp	Diesel	660	0%	C	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
A. Site Development an	d Excavation	Constant and			1.11					S. 1. 11. 19	1 N		891 N. H. S. H.			-	e al su da	1.840.70		4	200 pc	
Intake area, Switchy	ard, NE & WI	aydown areas	5		11.11	4		94.2 12 14	1 1 2 1 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11.00 C 10		14.7	the second s	1.0	1987 - E. S. M. M.		1917 - Marine I.		a becker	a state of		14
Crawler Tractors	2270002069	Т3	7	700 Hp	Diesel	4,200	0%		0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Scraper (dual engine 1/2)	2270002018	T3	6	500 Hp	Diesel	2,400	0%	C	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Scraper (dual engine 2/2)	2270002018	Т3	6	462 Hp	Diesel	2,400	0%		0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Excavator	2270002036	Т3	1	148 Hp	Diesel	480	0%	C	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Tractor/Loader/Backhoe	2270002066	T3	6	263 Hp	Diesel	3,360	0%	C	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Grader	2270002048	T3	1	259 Hp	Diesel	400	0%	C	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Powerblock (inc. co	oling towers &	& NC laydown))		1.000					1			2 1 1 1 414		11			1	1. 1. A.			1
Crawler Tractors	2270002069	T3	4	700 Hp	Diesel	6,240	0%	. (0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Crawler Tractors	2270002069	T3	1	410 Hp	Diesel	1,560	0%		0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Fractor/Loader/Backhoe	2270002066	T3	2	263 Hp	Diesel	3,120		, (0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Scraper (dual engine 1/2)		Т3	15	500 Hp	Diesel	19,500				0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Scraper (dual engine 2/2)		T3	15	462 Hp	Diesel	19,500			0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Surfacing	2270002024	T3	2	156 Hp	Diesel	2,340			20%	47	40%	94	40%	94	0%	0	0%	0	0%	0	0%	0
Surfacing	2270002024	T3	2	400 Hp	Diesel	2.340				47	40%	94	40%	94	0%	0	0%	0	0%	0	0%	0
Excavator	2270002036	T3	2	148 Hp	Diesel	3,120			0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Tractor/Loader/Backhoe	2270002066	T3	6	263 Hp	Diesel	10,920			0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Grader	2270002048	T3	2	259 Hp	Diesel	2,600			0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Excavator	2270002036	T3	5	428 Hp	Diesel	7,800				0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Off-Highway Truck	2270002051	T3	30	650 Hp	Diesel	35,100			0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Off-Highway Truck	2270002051	T2	1	462 Hp	Diesel	1,300			0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Rubber tire loader	2270002060	T3	2	262 Hp	Diesel	704				0	75%	422	25%	141	0%	0	0%	0	0%	0	0%	0
Parking											1 7 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1											
Crawler Tractors	2270002069	Т3	2	235 Hp	Diesel	1,500	0%		0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Scraper	2270002018	T3	1	462 Hp	Diesel	500			0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Surfacing	2270002024	T3	2	156 Hp	Diesel	900			0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Surfacing	2270002024	T3	2	400 Hp	Diesel	900				0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Excavator	2270002036	T3	1	148 Hp	Diesel	600				0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Tractor/Loader/Backhoe	2270002066	T3	1	263 Hp	Diesel	700			010	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Grader	2270002048	T3	1	259 Hp	Diesel	500			0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Paving Equipment	2270002021	T3	1 1	174 Hp	Diesel	500				0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Paving Equipment	2270002021	T3	1	107 Hp	Diesel	500				0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Support Road (inc.			1	101110	Dieser		0/										1					1
Crawler Tractors	2270002069	T3		235 Hp	Diesel	9,000	0%		0%	0	0%	0	20%	0	0%	0	0%	0	0%	0	0%	0
Scraper (dual engine 1/2)		T3	3	500 Hp	Diesel	4,500				0	0%	0	5%	0	0%	0	0%	0	0%	0	0%	0
Scraper (dual engine 1/2)		T3	3	462 Hp	Diesel	4,500				0	0%	0	5%	0	0%	0	0%	0	0%	0	0%	0
	Contraction of the second second	T3		156 Hp		4,500				0	0%	0	20%	0	0%	0	0%	0	0%	0	0%	0
Surfacing	2270002024	T3	2	400 Hp	Diesel	2,700					0%	0	20%	0	0%	0	0%	0	0%	0	0%	0
Surfacing					Diesel					0				-		0		0	0%	0	0%	0
Excavator	2270002036	T3	2	148 Hp	Diesel	3,600				0	0%	0	20%	0	0%		0%			-		
Tractor/Loader/Backhoe	2270002066	T3	2	263 Hp	Diesel	4,200				0	0%	0	20%	0	0%	0	0%	0	0%	0	0%	0
Grader	2270002048	T3	2	259 Hp	Diesel	1,600			0%	0	0%	0	20%	0	0%	0	0%	0	0%	0	0%	0
Paving Equipment	2270002021	T3	1	174 Hp	Diesel	500				0	0%	0	40%	0	0%	0	0%	0	0%	-	0%	0
Paving Equipment	2270002021	T3	1	107 Hp	Diesel	500			0%	0	0%	0	40%	0	0%	0	0%	0	0%	0	0%	0
Off-Highway Truck	2270002051	T2	1	462 Hp	Diesel	1,200	0%		0%	0	0%	0	20%	0	0%	0	0%	0	0%	0	0%	0

BBNPP General Conformity Applicability Analysis Rev. 2 Appendix B

Safety Related NOx and VOC Emissions from Non-road Engines Table B-1b

Faulacent	Criteria	Pollutants	, AL	Median		<	100	Deteri	oration	Adjus	ted EF	2. 2.12	And pairs	22.2 Jan 1	17 <mark>5</mark>	1	Err	nissions	(tons) ⁷		e di na ne	N. 2005	n de la dese		
Equipment Type ¹	EFss (g	/hp-hr) ²	Load	Life ⁴	Age	"/	u" ⁵	fac	tor ⁵	(g/hp	o-hr) ⁶	Q Store	Roy Longalt	no de la	HC	* 1-90 p *	Nº AN P	la de la	a series	1. T. A. 1. T.	Q. 1	NOx	nogen (h	e 1174	OUNT.
	HC	NOx	Factor ³	Hours	Factor 5	HC	NOx	HC	NOx	HC	NOx	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
A. Early Site Prepatration					-	in the second			a na sera		A start for	A	1.4	a start service		120 · · · · · · · · · · · · · · · · · · ·		1.14			-	· · · · · ·		i i in	
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tractor/Loader/Backhoe	0.42	3.03	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.054	0.00	0.00	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	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	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	0.17	2.61	1	7000	> 1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	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	0.18	2.5	1	4667	> 1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dumper/Tener	0.38	3.03	1	7000	>1	0.027	0.008	1.027	1.008	0.390	3.054	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grader	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scraper	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scraper	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surfacing	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A. Site Development an	en de la composition de la composition La composition de la c	and the second sec	1	1	1. 1. 1. 2. 2	C. THE SALES	220 Carlos and	20.00 Car 10	a grad to detag	200 - Sa - S	An office and the second	- Paralaster	Service Section	the second	2 N. F. M. M.	1. S. S. See	5. 54 54. F	$t \in \mathbb{R}^{n}$	Charles Pa	1999 - C	A. 1997 . 187		A	() (P. 20)	and the second
Intake area, Switchy		· · · · · · · · · · · · · · · · ·		incontraction in the	1 00 - C - CP2 1	1.000 - 100 - 1 703	ages of a star	or charge on	For the strength		Parane	- Charles Start	dan series		a (1997-1997) (1997) (1	Ser	1000 (10) (100 (10) (10) (a. 1. a	and a straight	uren a pris	The last of		- 18	(1) (1)	-
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scraper (dual engine 1/2)	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scraper (dual engine 2/2)	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	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	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tractor/Loader/Backhoe	0.42	3.03	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.054	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grader	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Powerblock (inc. co	0.47	0.01		7000		0.007	0.000	1 007	1.000	0.175	0.001													0.00	0.00
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tractor/Loader/Backhoe	0.42	3.03	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.054	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scraper (dual engine 1/2)	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scraper (dual engine 2/2)	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surfacing Surfacing	0.19	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.04	0.00	0.00	0.00	0.00
Excavator	0.17	2.61		4667	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
Tractor/Loader/Backhoe	0.42	3.03		4667	>1	0.027	0.008	1.027	1.008	0.431	3.054	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grader	0.42	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	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	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.135	2.631	0.00	0.00	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-Highway Truck	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	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-Highway Truck	0.17	4.11	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.147	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rubber tire loader	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.32	0.11	0.00	0.00	0.00	0.00
Parking								11041		01100							0100			1.1		A. San	an and a state of		
Crawler Tractors	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scraper	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surfacing	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surfacing	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	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	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tractor/Loader/Backhoe	0.42	3.03	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.054	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grader	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Support Road (inc. 0							1.00		and the second of	The second	Page Cash	1.1.1.1.1.1	del no fina		· No State Contract	State of the C	Sec. 10 Mar	P. C. M. D		361	Contract 1	Start P	and the second	and the set	1
Crawler Tractors	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scraper (dual engine 1/2)	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scraper (dual engine 2/2)	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surfacing	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surfacing	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	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	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tractor/Loader/Backhoe	0.42	3.03	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.054	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grader	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	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-Highway Truck	0.17	4.11	1	7000	> 1	0.034	0.009	1.034	1.009	0.176	4.147	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

BBNPP General Conformity Applicability Analysis Rev. 2 Appendix B

Safety Related Non-road Engine Emissions Bell Bend Safety NonRd NOx-VOC

Equipment	scc1	, -, Engine Technology	No.of	Equipment Horsepower	Fuel	Total	% of Tot. Hrs Safety	् Total Safety	Year 1		Year 2		Year 3.		.Year 4		Year 5	5	Year 6		Year 7	
Type		Single Type	** # -	hp≠	Туре	Hrs	Related	Related Hrs	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation.%	Hours	Operation'%	Hours	Operation %	Hours	Operation'%	Hours
South Laydown	an is no major	ومحدمهم المرا	بديود الدرسوية			NT: CONTRACT		و معالیه به دارد. به		لغد مه مه	r .; ::::	·	والتبديه والمساحق	r i tariz		P.85.12	t many upon	-				+,*** * *
Crawler Tractors	2270002069	Т3	4	700 Hp	Diesel	2,400	0%	0	0%	0	0%	0	20%	0	0%	0	0%	0	0%	0	0%	0
Surfacing	2270002024	T3	. 1	400 Hp	Diesel	360	0%	0	0%	0	0%	0	20%	0	0%	0	0%	0	0%	0	0%	0
Excavator	2270002036	T3	3	148 Hp	Diesel	1,440	0%	0	0%	0	0%	0	20%	0	0%	0	0%	0	0%	0	0%	0
Grader	2270002048	T3	1 	259 Hp	Diesel	400	0%	0	0%	0	0%	0	20%	0	0%	0	0%	0	0%	0	0%	0
Boring/Soils investig Bore/Drill Rig	2270002033	T2		420 Hp	Diesel	246	• • • • • • • • • • • • • • • • • • •	n an those she are	0%	1,01 m	0%	· ent	· · ·	·~··*	0%		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.		a and the late of the second	r	• • • • • • • • • • • • • • • • • • •	
Underground utilitie			ina	420 mp	Diesei	240	0%		U%	0	U%	0 *** : :::::	0%	0 F 2-4-5		0	0%	0	0%	0	0%	0
Crane	2270002045	T3	2	160 Hp	Diesel	1.126	50%	563	0%	· · · ·	50%	282	50%	282	0%	0	0%	0	0%	0	0%	0
Crawler Tractors	2270002069	T3	2	235 Hp	Diesel	1,690	50%	845		0	50%	422	50%	422	0%	- <u> </u>	0%	a	0%	0	0%	0
	2270002066	T3	6	102 Hp	Diesel	5.069	50%	2.534		0	40%	1.014	30%	760	30%	760	0%	0	0%	0	0%	ů 0
Excavator	2270002036	T3	2	148 Hp	Diesel	1,690	50%	845	0%	0	60%	507	40%	338	0%	0	0%	0	0%	0	0%	
Dumper/Tener	2270002078	T3	1	400 Hp	Diesel	845	50%	422	0%	0	50%	211	40%	169	10%	42	0%	0	0%	0	0%	0
 Warehouse & Storag 		test et la p	*** **. *	a the second	5 . St.	2. c	· justa	A	Prins Park in the Superior		water states		62- 6-1- MA				· · · #· · · · · · · · · · · · · · · ·				<u>.</u>	1
Forklift	2270003020	Т3	2	94 Hp	Diesel	8,378	50%	4,189	0%	0	10%	419	20%	838	30%	1,257	25%	1,047	10%	419	5%	209
Crane	2270002045	T3	2	160 Hp	Diesel	9,574	50%	4,787	0%	0	10%	479	20%	957	30%	1,438	25%	1,197	10%	479	5%	239
Forklift (rough)	2270002057	T3	1	115 Hp	Diesel	5,386	50%	2,693	0%	0	10%	269	20%	539	30%	808	25%	673	10%	269	5%	135
IIA: Civil / Concrete Stru Bridge Construction		ατέρμα αματιδια 1979βα 2017 - 1990 - 1997 - 1997 - 1997	n de la composition d	in the standard stand		ی در شوریند که مار موریند ک	4 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	時期時日 くいみ	aller ("alas i da mista)	10 ⁻¹ 2-1 - 542	anti-transport of a fifth and a fifth	state - topic		1.386	a philippine the second as	H.#1257422	****	د میں ماتھا م	2 53 Alex & 6.74 15.	en ye i wate Gan a an 'n ja	2962326475-07225********	•*******
Crawler Tractors	2270002069	T3	3	700 Hp	Diesel	3,600	0%	,	0%	0	20%	0	30%	<u>د بيدر ميرد.</u> 0	30%	0	20%	0	0%	0	0%	
Crawler Tractors	2270002069	T3	2	305 Hp	Diesel	2,400	0%	0	0%	0	20%		30%	0	30%	0	20%	0	0%	0	0%	
Surfacing	2270002024	T3	2	400 Hp	Dieset	2,160	0%	0	0%	0	20%	0	30%		30%	0	20%	0	0%	0	0%	
	2270002036	T3	4	148 Hp	Diesel	4,800	0%	0	0%	0	20%	ō	30%	0	30%	0	10%	ō	10%	0	0%	0
Grader	2270002048	T3	1	259 Hp	Diesel	960	0%	0	0%	0	20%	0	30%	0	30%	0	20%	0	0%	0	0%	0
Tractor/Loader/Backhoe	2270002066	Т3	3	80 Hp	Diesel	3,802	0%	0	0%	0	20%	0	30%	0	30%	0	10%	0	10%	0	0%	0
Crane	2270002045	T3	4	160 Hp	Diesel	4,224	0%	. 0	0%	0	20%	0	30%	0	30%	0	10%	0	10%	0	0%	0
Crane	2270002045	T2	2	355 Hp	Diesel	2,112	0%	0	0%	0	20%	0	30%	0	30%	0	20%	0	0%	0	0%	0
Pump	2270006010	T3	1	300 Hp	Diesel	528	0%	0	0%	0	10%	0	30%	0	30%	0	20%	0	10%	0	0%	0
Forklift (rough) Rubber tire loader	2270002057	T3 T3	2	115 Hp	Diesel	1,901	0%	0	0%	0	10%	0	30%	0	30%	0	20%	0	10%	0	0%	0
Sheet Piling	2270002060	13		262 Hp	Diesel	1,056	0%	0 	0%	0	10%	0	30%	0	30%	0	20%	0	10%	0	0%	D
Crane	2270002045	T3	1	205 Hp	Diesel	352	0%		0%	0	50%	5	50%	0	0%	0	0%	0	0%	0	0%	·** · *· ··**
Crane	2270002045	T3	2	160 Hp	Diesel	493	0%	0	0%	0	50%	- ة ا	50%		0%		0%	1 0	0%	0	0%	0
Structural Concrete		1	4	·			1.4	1.7						-,		· · ·		1				··· · .
Pump	2270006010	T3	5	300 Hp	Diesel	7,500	50%	3,750	0%	0	10%	375	30%	1,125	30%	1,125	20%	750	5%	188	5%	188
Crane	2270002045	T2	5	355 Hp	Diesel	7,920	50%	3,960	0%	0	10%	396	30%	1,188	30%	1,188	20%	792	5%	198	5%	198
Crane	2270002045	T3	5	160 Hp	Diesel	9,504	50%	4,752	0%	D	10%	475	30%	1,426	30%	1,426	20%	950	5%	238	5%	238
Forklift (rough)	2270002057	T3	6	115 Hp	Diesel	17,107	50%	8,554		0	10%	855	30%	2,566	30%	2,566	20%	1,711	5%	428	5%	428
Rubber tire loader	2270002060	T3	2	262 Hp	Diesel	6,336	50%	3,168		0	10%	317	30%	950	30%	950	20%	634	5%	158	5%	158
Tractor/Loader/Backhoe	2270002066	T3	4	80 Hp	Diesel	12,672	50%	6,336		0	10%	634	30%	1,901	30%	1,901	20%	1,267	5%	317	5%	317
Non-Power Block (C					··· · ··	*.*	v∷,at v at 000/				14. m. 1			С., .: А -		, <u>, , , , , , , , , , , , , , , , , , </u>	1. 1. 3 1° 14 1				••••	أننيط
Crane	2270002045	T3	2	160 Hp	Diesel	8,490	0%	0	0%	0	0%	0	70%	0	30%	<u> </u>	0%	<u> </u>	0%	0	0%	0
Pump	2270006010	T3 T2	3	300 Hp	Diesel	1,901	0%	0	0%	<u> </u>	0%	0	70%	0	30%	0	0%	0	0%	0	0%	0
Crane Forklift (rough)	2270002045	T3	2	355 Hp 115 Ho	Diesel Diesel	6,336	0%	0	0%	0	0%	0	70%	0	30%	0	0%	<u> </u>	0%	0	0%	0
Switchvard	2270002057	13	1 Attend to the	115 Hp	Diesei	1,901	0%	U Han marken av Ma	0% (##4555-7-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	0	0%	0 ಗುಮಾ/ಸರಾ	70%	0	30%	0	0%	0	0%	0	0%	0
Crane	2270002045	T3	2	160 Hp	Diesel	3,168	25%	792		0		0	50%	<u> </u>	40%	947		· · ·		0		0
Pump	2270002045	T3	3	300 Hp	Diesei	950	25%	238		0	0%	0	75%	396 178	25%	317	10%	79	0% 0%	0	0% 0%	0
Crane	2270008010	T2	1	355 Hp	Diesel	950	25%	230		0	0%	0	75%	1/8	25%	50	0%	0	0%	0	0%	0
Forklift (rough)	2270002043	T3	1	115 Hp	Diesel	1,426	25%	356		0	0%		75%	267	25%	50	0%		0%	0	0%	0
Cooling Tower		10 1940 - 1940		and the march i	Dieser	2777 20 3344	25%	300 2.47,5, 1001, 3475		مەيبىد يە اد	0% Frain, i: _: ::/	Statut Sec.		207	20%	: 2:2:2:4: 1 Ba	0%	i i nerena	0% .a ***::::::::::::::::::::::::::::::::::	U Stanson St	0% 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Crane	2270002045	Т3	4	160 Hp	Diesel	8,490	10%	849		0	0%	0	0%	0	30%	255	70%	594	0%	0	0%	0
Crane	2270002045	T2	2	355 Hp	Diesel	1.584	10%	158		0	0%	0	0%	0	30%	48	70%	111	0%	0	0%	0
Pump	2270006010	T3	3	300 Hp	Diesel	1,901	10%	190		- <u>-</u>	0%	0	0%	0	30%	57	70%	133	0%	0	0%	0
Forklift (rough)	2270002057	T3	1	115 Hp	Diesel	2,851	10%	285			0%	0	0%	0	30%	86	70%	200	0%	0	0%	0
, chan (rough)		<u> </u>	· · · · · · · · · · · · · · · · · · ·	1. 110 tip	0,0361	2,001	10 %	203	1 U70	L	0.70	· · · · ·	<u> </u>	<u> </u>	1. 30%		1 10%	200	U 70		1	<u> </u>

BBNPP General Conformity Applicability Analysis Rev. 2 Appendix B

Page

1	Criteria I	Pollutants	a. 5. 2014	Median	. ~. •	2.4. 30	w b	Deterio	ration	Adjust	ed FE?	10 JL . A 15	2		، ۲۰۰۲ توجیر		`	iesione	(tons),7	الم ال		1.128 J. 1	1. A. M.	at :	5 . 11 *
Equipment	EFss (g	uhn-br) 2	Load	Life.4	Age	S - 5.		fact		(g/hp		1			CHC ~		T. 782		100000			NOx			φ ² μ
Type	HC S	*NOx	Factor 3	Hours		HC	NOx	HC	NOx	HC	NOx	Year 1	Year 2		· · · · · · · · · · · · · · · · · · ·	Year 5	Year 6		Year.1	Year 2	Year 3	Year 4			
South Laydown	110		- Factor	2	Factor	10		10. 10.		· • • • • • • • • • • • • • • • • • • •		rear I;	Atear 2	rear 3	eYear 4	rear 5	Tear of		rear, i	Tear 2	rear 3		Year.5	Year.6	,Tear.7
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	9-1 <u>17-</u> 7. 0.00	0.00	0.00	0.00	0.00	0.00	,***	0.00
Surfacing	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	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	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grader	0,19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boring/Soils investi	The the to make and		A	** 20-CL +X	10.11	12 44 · 16 2	e . 4	··· • • • • • • • • • • • • • • • • • •	Fr 1.1		4 . 1	1 10	0.00	0.00		1.1.2 m			0.00	1.11				inst	************
Bore/Drill Rig	0.17	4.34	1	7000	>1	0.034	0.009	1.034	1,009	0.176	4.379	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Underground utilitie	والجرافع سرور	• * m 4	# * * ·	-	1.7	1 militings			ie *** **	. محمرت الما	*****					1 . m . r	er falls insta	4 - ··· ·	~ 144	· · · · · · ·		And Address		1. محصور	
Crane	0.18	2.5	1	4667	> 1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.00	0.00	0.00	0.00
Crawler Tractors	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.29	0.29	0.00	0.00	0.00	0.00
Tractor/Loader/Backhoe	0.42	3.03	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.054	0.00	0.05	0.04	0.04	0.00	0.00	0.00	0.00	0.35	0.26	0.26	0.00	0.00	0.00
Excavator	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.22	0.15	0.00	0.00	0.00	0.00
Dumper/Tener	0.38	3,03	1	7000	>1	0.027	0.008	1.027	1.008	0.390	3.054	0.00	0.04	0.03	0.01	0.00	0.00	0.00	0.00	0.28	0.23	0.06	0.00	0.00	0.00
Warehouse & Stora		هيد 1 م در د	143 (A.P. 14 + 14			in sujaw	ا ماد	فوسعيا والمدسياة	ter e ser		gere de la	1.19.44	÷ • •		S	9. 9 . 3.	Çest miri	er 21. **	1	- A: 14a	··· · ·		. د اط و ال	· -*•• ••••	300 00
Forklift	0.19	3.13	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	3.155	0.00	0.01	0.02	0.03	0.02	0.01	0.00	0.00	0.14	0.27	0.41	0.34	0.14	0.07
Crane	0.18	2.5	1	4667	>1	_0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.02	0.03	0.05	0.04	0.02	0.01	_0.00	0.21	0.43	0.64	0.53	0.21	0.11
Forklift (rough)	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.01	0.01	0.02	0.02	0.01	0,00	0.00	0.09	0.18	0.27	0.22	0.09	0.04
IIA. Civil / Concrete Str	ne e s		·	****	** ··· #	···· · ···.	1999 - Ang		1999 A	يجيبون والاردان	A. The area		dane m		s	· · · · · · · · ·	er 4244	*	计水口	a	4241	1 H	4	Mara 1962	dst 1 - 13te
 Bridge Construction 	, men	et primerije	uch, rhanar		*	73, 60024, 54375	1	14 x, Y.	1 = + + + + + . /	ei	****	in dinthi	57. mgh	4.2. 642	40 m (* 1	ж. <u>т</u> ата	n ar ngaring da	24-1284-1	si: Yandafi	*** ***	ور مرجعها الله	and strengt	1 m	alle "Serve	± ~21
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0,00
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surfacing	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	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	0.19	2.61	1	4667 4667		0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grader Tractor/Loader/Backhoe	0.19	3.64		4667	>1	0.027	0.008	1.027	1.008	0.195	2.631 3.669	0.00	0.00	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	0.42	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2,520	0.00	0.00	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	0.10	4.34	1	7000	51	0.027	0.009	1.034	1.008	0.176	4.379	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pump	0.18	2.50	1	4667	>1	0.007	0.008	1.027	1.008	0.189	2.520	0.00	0.00	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 (rough)	0.19	2.61	i	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rubber tire loader	0,19	2.61	i	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
" Sheet Piling							• • • • •	1.	1	···· · ··· · ···	fer grint (· · · · · ·	1. e		A. 40. 10.					1	A				
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	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	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2,520	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Structural Concrete				· ···		···· / / / / / /	که کیبوستہ سآ		1 ma	بالقواحة المراج	振,4+2-1		ક બન્દ ને, ક	1	ಭ್ರಜ್ಞಾ ,	1. A. A. A.	MA 2374.1	5000	· · · · · · · · · · · · · · · · · · ·	4 44 7 7 A	4 1 6.00	·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ··			at where the
Pump	0.18	2.50	1	4667	> 1	0.027	0.008	1.027	1.008	0.189	2.520	0.00	0.02	0.07	0.07	0.05	0.01	0.01	0.00	0.31	0.94	0.94	0.63	0.16	0.16
Crane	0.17	4.34	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.379	0.00	0.03	0.08	0.08	0.05	0.01	0.01	0.00	0.68	2.04	2.04	1.36	0.34	0.34
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.02	0.05	0.05	0.03	0.01	0.01	0.00	0.21	0.63	0.63	0.42	0.11	0.11
Forklift (rough)	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.02	0.06	0.06	0.04	0.01	0.01	0.00	0.29	0.86	0.86	0.57	0.14	0.14
Rubber tire loader	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.02	0.05	0.05	0.04	0.01	0.01	0.00	0.24	0.72	_0.72	0.48	0.12	0.12
Tractor/Loader/Backhoe	0.42	3.64	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.02	0.07	0.07	0.05	0.01	0,01	0,00	0.21	0.62	0,62	0.41	0.10	0.10
Non-Power Block (1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		• : •	1994 (A. 1997)	· - ··	20.20.000	\$~ · · · •				6H 🚛 🗠		trasul smar		1. tar		•• •• •• •• ••	199 - 1947 - 199	17.3 Y 17.7 P	****	72 .0 23	· ····· · ·	1.1.1
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0,00	0.00	0.00	0.00
Pump	0.18	2.50	1	4667	>1	0.027	0.008	1.027	1.008	0.189	2.520	0.00	0.00	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	0.17	4.34	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.379	0.00	0.00	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 (rough)	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	_0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Switchyard	1		.a., "	11.10	2	-# +* **~j	** ** ***		1.4 (化化物酶	19 - 19 - 14 19 - 19 - 14	1 \$19.7 (1.7 (1. 7 (· +- 1-121-121	a 1,477.00	1 January 1. 14	3770 20	1.12.14.14	12.24	1 12°, 11294	18. 1 · · · ·	3 2	··· * #* [151	*** # ,*** (*** * * *	. " #*
Crane	0.18	2.5	1	4667	> 1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.18	0.14	0.04	0.00	0.00
Pump	0.18	2.50	1	4667	> 1	0.027	0.008	1.027	1.008	0.189	2.520	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05	0.00	0.00	0.00
Crane	0.17	4.34	1	7000	> 1	0.034	0.009	1.034	1.009	0.176	4.379	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.08	0.00	0.00	0.00
Forklift (rough)	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.03	0.00	0.00	0.00
Cooling Tower - • •	2 * 1 * * * · · ·	1	· · · · · · · · · ·	الد والمعقاد الدار	ww	£7", Sig	1.2°	1.200	t arms i i	****	38-34-5-7	· • * *?*	X12	Pre 19.3		patri en		1.4. w	10 < 0	eona e l	∞ ∞ 3	199. sr.7ffi	an ' without	- n A	nv - na
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.11	0.26	0.00	0.00
Crane	0.17	4.34	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.379	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.08	0.19	0.00	0.00
Pump	0.18	2.50	1	4667	>1	0.027	0.008	1.027	1.008	0.189	2.520	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.05	0.11	0.00	0,00
Forklift (rough)	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.07	0.00	0.00

BBNPP General Conformity Applicability Analysis Rev. 2 Appendix B

Safety Related Non-road Engine Emissions Bell Bend Safety NonRd NOx-VOC

Equipment	scc1	Engine Technology Type	Equipment	Equipment Horsepower	Fuel	Total Operating Hrs	% of Tot. Hrs Safety	Total Safety Related Hrs	Year,		Year (2	Year 3		Year,4		Year 5	5	Year 6		Year 7	7
The state of the s		1. 1997 A. 1997 A. 19	#	hp hp		M. LISS.	Related	S	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation:%	Hours
IIB. Superstructure & St	tructual Steel	the . • I wanted the	28	T Martin Tip anterreport	124.1.198.3	T	ي المحد المعدية	2-1-12-14-1-14-14	ener and an an	T TTTE	35 12 40000000000	1777 - 2014	प्रत्राह काके काल्य	the second of the	1	and a state	67975, 21 LM		The states where	والإرجود إرجو	3. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	n norther
* Structural & Building		**************************************	44411111111	מזריצ ויצויתי וידיי	e	12.11.11.11.11	town of these 25-	Harweiter. The	17-10-1452.4		a 731 8.247	·	Startings - gars ef	Sec. ale	ور الهم المدينة مسطونة	riter de riter	1	347 (AT. 41	an and the second	************		- y - in
	2270002045	T2	5	355 Hp	Diesel	5,280	40%	2,112	0%	0	0%	0	20%	422	75%	1,584	5%	106	0%	0	0%	0
	2270002045	T3	4	400 Hp	Diesel	4,224	40%	1,690	0%	0	0%	0	20%	338	75%	1,267	5%	84	0%	0	0%	10
Crane	2270002045	T3	7	160 Hp	Diesel	9,905	40%	3,962	0%	0	0%	0	20%	792	75%	2,972	5%	198	0%	0	0%	0
	2270002045	T3	7	173 Hp	Diesel	8,870	40%	3.548	0%	0	0%	0	20%	710	75%	2,661	5%	177	0%	0	0%	0
	2270003010	T3	8	65 Hp	Diesel	10,138	40%	4.055	0%	1 0	0%	0	20%	811	75%	3,041	5%	203	0%	0	0%	0
	2270003010	T3	8	74 Hp	Diesel	10,138	40%	4,055	0%	1- <u>°</u>	0%	o o	20%	811	75%	3,041	5%	203	0%	0	0%	0
	2270002057	T3	8	115 Hp	Diesel	10,138	40%	4,055	0%	6	0%	0	20%	811	75%	3,041	5%	203	0%	0	0%	0
Building Modules &		the start Barrens	કાર્ય છે. ગય		- Dicaci	- 10,100	-1070 	5.54 (0.50 a ft)		11.12.22.23				1.1.1.1		3,041	576 5	203	076 2010-01-00		0%	·
	2270002045	T3	1	600 Hp	Diesel	845	40%	338	0%	0	0%	0		0	50%	169	50%	169			0%	
	2270002045	T3	1	1,200 Hp	Diesel	422	40%	169	0%	0	0%	0	50%	84	50%	84		0	0%	0		0
Building Siding / Inst			NA 11 14 1	1,200 Hp	These	422	40%	109 101	0% #10.#14.200.0014	1.2.6.4	0%0 2012 10 10 10 10 10 10 10 10 10 10 10 10 10	0		84	50%	84	0%	ಂಗ್	0%	51	0%	0
	2270002045	T3	2	160 Hp	Diesel	1,056	40%	422	0%	0	0%	0	0%	0	30%	127		296	1	<u> </u>		0
	2270002045	T3	3	74 Hp	Diesel	2,218	40%	887	0%	1-0-	0%	0	0%	0	30%	266	70% 70%	621	0%	0	0%	0
Forklift (rough)	2270003010	T3	2	115 Hp	Diesel	1,056	40%	422	0%	0	0%	0	0%	0	30%	266	70%	296	0%	0	0%	-
Roofing	2210002031	• that we to be			Diesei	1,030	40%	422	0%		0%			÷7:		127		296	0%			0
Crane	2270002045	T3	2	160 Hp	Diesel	950	40%	380	0%						<u> </u>		1000			<u> </u>		
	2270002045	T3	3	74 Hp	Diesel					0	0%	0	0%	0	0%	0	100%	380	0%	0	0%	0
	2270003010	T3	2	115 Ho	_	1,426	40% 40%	570 380	0%	0	0%	0	0%	0	0%	0	100%	570	0%	0	0%	0
IIIA. Nechanical Installat			2	попр	Diesel		40%		0%	0	0%	0	0%	0	0%	0	100%	380	0%	0	0%	0
···· Mechanical Installati			all also all in a		· · · · ·	1		en e Prove Annae no rec	100000 0 125 0 1002 100000 0 125 0 1002		4		ann sanaisten Ann sanaisten	17° 4 - 4 4	· · ·		an	9472-648 T.		- 4462	9	,
	2270002045	T3	5	160 Hp	Diesel		5004			_	14	7717° v. + 1		5	5 26 A M 10 A	Kale and the	د (باد حدر بند ، لدنيانو 		بر میر به میرد از میرد میرون میرد از م	- n	· · · · · · · · · · · · · · · · · · ·	1 7 4 100 A
the state of the s	2270002045	T3	3	160 Hp 173 Hp	Diesel	14,784	50% 50%	7,392	0%	0	0%	0	20%	1,478	50%	3,696	20%	1,478	10%	739	0%	0
····		13 T2	5			2,534		1,267	0%	0	0%	0	20%	253	50%	634	20%	253	10%	127	0%	0
	2270002045	T3	2	355 Hp	Dieset	4,224	50%	2,112	0%	0	0%	0	20%	422	50%	1,056	20%	422	10%	211	0%	0
	2270002045			400 Hp	Diesel	1,690	50%	845	0%	0	0%	0	20%	169	50%	422	20%	169	10%	84	0%	0
	2270002045	<u>T3</u>	1	500 Hp	Diesel	845		422	0%	0	0%	0	20%	84	50%	211	20%	84	10%	42	0%	0
	2270003010	T3	5	65 Hp	Diesel	5,280	50%	2,640	0%	0	0%	0	20%	528	50%	1,320	20%	528	10%	264	0%	0
	2270003010	Т3	5	74 Hp	Diesel	5,280	50%	2,640	0%	0	0%	0	20%	528	50%	1,320	20%	528	10%	264	0%	0
	2270002057	Т3	2	115 Hp	Diesel	5,914	50%	2,957	0%	0	0%	0	30%	887	40%	1,183	15%	444	15%	444	0%	0
IIIB. Electrical Installatio		an in the Carl		• •	• • • •	in street is	1 4 M		يەر مەممىيە يە 		索 :		+114-2018-13		94, 4-5,23	# / / S ⁴ #	the second s		i			ې، مېنې ک
Electrical Installation			gris and that is	د و سرو د در او	190	. <u>9</u> 17 (141)	1	8970-36. TT - 1, TA	<u>y a sign a s</u>	844-953 844-953	ងូមូម ការសូវវះ	1	1 in.; _ "H.P." SH		· · · · · · · · · · · · · · · · · · ·	11 21 24	Service and the service of		2 Million (1997)	d'	÷	u att cons
Crane	2270002045	T3	5	160 Hp	Diesel	4,435	50%	2,218	0%	0	0%	0	15%	333	40%	887	20%	444	15%	333	10%	222
Crane	2270002045	T3	3	173 Hp	Diesel	3,168		1,584	0%	0	0%	0	15%	238	40%	634	20%	317	15%	238	10%	158
	2270002045	<u>T2</u>	5	355 Hp	Diesel	5,280	50%	2,640	0%	0	0%	0	15%	396	40%	1,056	20%	528	15%	396	10%	264
	2270002045	T3	2	400 Hp	Diesel	2,112	50%	1,056	0%	0	0%	0	15%	156	40%	422	20%	211	15%	158	10%	106
	2270002045	T3	1	500 Hp	Diesel	1,056	50%	528	0%	0	0%	0	15%	79	40%	211	20%	106	15%	79	10%	53
Aerial Lift	2270003010	T3	5	65 Hp	Diesel	5,280	50%	2,640	0%	0	0%	0	15%	396	40%	1,056	20%	528	15%	396	10%	264
Aerial Lift	2270003010	T3	5	74 Hp	Diesel			2,640	0%	0	0%	0	15%	396	40%	1,056	20%	528	15%	396	10%	264
Crane	2270002045	T3	1	355 Hp	Diesel	845		422	0%	0	0%	0	15%	63	40%	169	20%	84	15%	63	10%	42
Forklift (rough)	2270002057	Т3	2	115 Hp	Diesel	5,914	50%	2,957	0%	0	0%	0	15%	444	40%	1,183	20%	591	15%	444	10%	296
IV. Major Equipment (he				•••• 20.0m	ا در باسمه، بر		87 N. 199	11 12 12 1		ir er er er	11. H. I	i	1. "多年的"的			12	Alexand 2011年1月	1	That was der	4 - 41 +1	a a a a a a a a a a a a a a a a a a a	بردقه النتمار
	2270002045	T3	1	500 Hp	Diesel	528		396	0%	0	0%	0	10%	40	30%	_ 119	50%	198	5%	20	5%	20
Crane	2270002045	T3	1	600 Hp	Diesel	528	75%	396	0%	0	0%	0	10%	40	30%	119	50%	198	5%	20	5%	20
Roller	2270002015	T3	2	600 Hp	Diesel	300	75%	225	0%	0	0%	0	0%	0	40%	90	60%	135	0%	0	0%	0
Roller	2270002015	T3	1	600 Hp	Diesel	300	75%	225	0%	0	0%	0	0%	0	40%	90	60%	135	0%	0	0%	0

BBNPP General Conformity Applicability Analysis Rev. 2 Appendix B

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Safety Related Non-road Engine Emissions Bell Bend Safety NonRd NOx-VOC

		Pollutants .		Median		2010		CODeterio	mtion "*	S. Aditie	ted EE®		egen i	(m. 1947)		5. 55 yr.	En	inniana	(10-0)7	·	ą., '. Tr				a 65.3
Equipment				i initiation i su		2	1	7.0.1				1 A A							<u>`</u>						
Type	🔸 EFss (g		Load	Life,	- Age	25 - 6 - A		ti,_∽∦fact	or	ا شي (g/hp	ભાશ) અર્ટ	4 ²			<u>्रम</u> ट <i>्र</i>	- 4				1.25		NOx	2. ² 2 2.		V (2 %
1	Re-3HCLON	NOX:	Factor 3	Hours	Factor. ⁵	°\$HC∜,	NOx-	∛∵HC∖:	: NOx	ja 7 HC ∑™	¦.^NOx.∰	Year,1	Year 2	SYear, 3	'Year 4	Year,5	Year 6	Year 7	Year,1	Year 2	«Year 3	Year 4	Year 5 Year	ar, 6 🖸	Year 7
IIB. Superstructure & S	nen vigeriging	manen anti	with a meri	annait w	at	resentation (197 . 1.17	anger an - 140	ديمانية والتكنفين ك	امەرد مېرۇ ئەقالد ئ	ورديدهمه المراجع	Caller of the	غفادنه أدررقها	the start at	marregenat.m		;***. ····2005	mannery		Conserve the		יירויינגט גו	ministrati and	1	-
	port.gt., 171.47/ 3			17.10,	et et cardi	230. T	ಕ:ವಚಚ	witernigt.		157	Terreries;	سامين تشقون	ೆ ಜಿ.ಎಂಗ	2.57.14.13	1. 2. 2. 1. 1	the states	numia a	12 - 13 13	81. T. T.		inerita sta		**************************************	112 7420 27	`
Crane	0.17	4.34	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.379	0.00	0.00	0.03	0.11	0.01	0.00	0.00	0.00	0.00	0,72	2,71	0.18 0	.00	0.00
Crane	0.17	2.5	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.03	0.10	0.01	0.00	0.00	0.00	0.00	0.38	1.41	0.09 0	.00	0.00
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.03	0.10	0.01	0.00	0.00	0.00	0.00	0.35	1.32	0.09 0	.00	0.00
Crane	0.18	2.5	1	4667	> 1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.03	0.09	0.01	0.00	0.00	0.00	0.00	0.34	1.28	0.09 0	.00	0.00
Aerial Lift	0.42	3.64	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.00	0.03	0.09	0.01	0.00	0.00	0.00	0.00	0,21	0,80	0,05 0	.00	0.00
Aerial Lift	0.42	3.64	1	4667	> 1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0,00	0.03	0.11	0.01	0.00	0.00	0.00	0.00	0.24	0.91	0.06 0	.00	0.00
Forklift (rough)	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.02	0.08	0.01	0.00	0.00	0.00	0.00	0.27	1.01	0.07 0	.00	0.00
Building Modules &	بريجك الجا	12 * + 2 * 462 * 24	an karan di paga	·5	化代光机	с. т. т .	124 6 12	1982 111	12.4	20-941 - 3122-4	· · · · ·	'a^ Ж	4***	жъ 	A 21 (***	the a	ખુ સ્ટુ અન્ય	-34° 14.4 (\$	· · · · ·	Ст. 25 м.	1992 A.	ኑ // ፡፡	1.	· · · · · ·	*****
Crane	0.17	2.5	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.00	0.02	_0.02_	_0.00_	0.00	0.00	0.00	0.00	0.28			0.00
Crane	0,17	4.1	1	7000	>1	0.027	0.008	1.027	1.008	0.175	4.133	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.46	0.46			0.00
 Building Siding / Ins 			Refer to the second	ang ang ang	1621 1100	25°		257° 4 ° 18 18	1.25°2.4°1. Ki	feerofe + 15m3	\$*E7:6-22/76/24/24	\$40°33 *	1,748,149-144	graff na ig	8.2.S. 3.	Garage . State	5 m.5	A. 80. 4	a jajanti.	. #* \$K\$Q	a7+ (~ 4)	d territe			لأالا مياؤوهما ا
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.06			0.00
Aerial Lift	0.42	3.64	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.08			0.00
Forklift (rough)	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008 、	0.195	2.631	0.00	0,00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.04		_	0.00
Roofing			و به رمانه و			71,	0-15.274	h . 41° - 41° - 4	*** 54 * .**;	er • مغزب • • •	112231 220-31		• • • • • • •	1. 63×10×10×1	• • • • • •		20, 1 4 m i t	يويد ،جغه	1 4 d		4000 (<u>.</u>			245 A.A.A
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00			0.00
Aerial Lift	0.42	3.64	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.00
Forklift (rough)	0,19 'n/ '2 8	2.61	1 Constantes actu	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00		_	0.00
* - Mechanical Installat	1 × 4.1. 6.4	tige Statute	an a the part of the second	رور و دور در ارد. در مرکز و دور در د	ft. 1. 1. 2	14.75.454	La Contactor	RY R' + '+' h.	N-1 1 1202	and a read of the state	an a	Marina and a second	hijedi.eeste hijedit tet te	1.24 3 14 1 14 A	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2	(- 1999) 249 854 512 1-4 70	1	and These	1	14 - 14 16	مانية مريمة. الإيرانية الأربية	. "		20 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -
Crane	0.18	2.5	1	4667	> 1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.05	0.12	0.05	0.02	0.00	0.00	0.00	0.66	1.64		<u>``</u>	0.00
Crane	0.18	2.5		4667		0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.03	0.02	0.01	0.02	0.00	0.00	0.00	0.12	0.30		_	0.00
Crane	0.17	4.34	<u> </u>	7000	51	0.02/	0.000	1.027	1.000	0.176	4.379	0.00	0.00	0.01	0.02	0.03	0.01	0.00	0.00	0.00	0.72	1.81		.36	0.00
Crane	0.17	2.5		7000	>1	0.027	0.008	1.027	1.008	0,175	2.520	0.00	0.00	0.00	0.03	0.01	0.01	0.00	0.00	0.00	0.19	0.47		.09	0.00
Crane	0.17	2.5	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.12	0.29		.06	0.00
Aerial Lift	0.42	3.64	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.00	0.02	0.04	0.02	0.01	0.00	0.00	0.00	0.14	0.35		.07	0.00
Aerial Lift	0.42	3.64	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.00	0.02	0.05	0.02	0.01	0.00	0.00	0.00	0.16	0.40			0.00
Forklift (rough)	0.19	2.61	1	4667	>1	0.027	0,008	1.027	1.008	0.195	2.631	0.00	0.00	0.02	0.03	0.01	0.01	0.00	0.00	0.00	0.30	0.39	0.15 (.15	0.00
IIIB. Electrical Installation	5 9 m m h	1 The Barry of The	1	arra tis i g	ېتىر دەستۇ د شە	وهوه مبغ	in : "> +	هل مستقد اميزاد	1-12 - 12 - 14 - 14	بجعجه والمحالية	4.14Z-1733	Sector in	·	Statistical States		÷	:;; + 5t	Ser. 1.	#*#* • • •	a 4		7.04P 74	-62667 <u>5</u> 70 ->-	·*****	الاتحار وقيد
Electrical Installatio	المراجع المعارية	1. 198 Sertings	4" ·	St. 1. 18	1-942	Arteria	يو ت الر.	ignaliti ent	Se . 55250	絵合きる	Nº G . Main	يشعر الربحاي		E249	120-12-1) - 10, sec	e	17. 1. 1		, गुन्दर (संद			n an	- 18 R	والميدانه و
Crane	0.18	2.5	1	4667	> 1	0.027	0.008	1.027	1.008	0.185	2,520	0.00	0.00	0.01	0.03	0.01	0.01	0.01	0.00	0.00	0.15	0.39	0.20 0).15	0.10
Crane	0.18	2.5	1	4667	> 1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.01	0.02	0.01	0.01	0.01	0.00	0.00	0.11	0.30	0.15 0).11	0.08
Crane	0.17	4.34	1	7000	> 1	0.034	0.009	1.034	1.009	0.176	4.379	0.00	0.00	0.03	0.07	0.04	0.03	0.02	0.00	0.00	0.68	1.81	0.90 0	.68	0.45
Crane	0.17	2.5	1	7000	> 1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.01	0.03	0.02	0.01	0.01	0.00	0.00	0.18	0.47		.18	0.12
Crane	0.17	2.5	1	7000	> 1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.01	0.02	0.01	0.01	0.01	0.00	0.00	0,11	0.29).11	0.07
Aerial Lift	0.42	3.64	1	4667	> 1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.00	0.01	0.03	0.02	0.01	0.01	0.00	0.00	0.10	0,28		.10	0.07
Aerial Lift	0.42	3.64	1	4667	>1	0.027	0,008	1.027	1,008	0.431	3.669	0.00	0.00	0.01	0.04	0.02	0.01	0.01	0.00	0,00	0.12	0.32),12	0.08
Crane	0.17	2.5	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.06	0.17		0.06	0.04
Forklift (rough)	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.01	0.03	0.01	0.01	0.01	0.00	0.00	0.15	0.39		0.15	0.10
IV.: Major Equipment (he					1 · · · · · · · · · · · · · · · · · · ·	يهيد مرجدين	Esperate street	تناقصه حريد مجيز	يقوق بالارام معزد	15 Jugar 10	فهر مرضود م	بعارة بستعار	P		shirt in a	the states of	: •.4*3 ⁵ - •• • ⁵⁶ *3	ليستحاد الرمه	1.1	ايون» تلقير دود ا	filment'i T,	₩. ***\$} -₩	1	1. Juliana - 1	مۇرىيەت بەر ما
Crane	0.17	2.5	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.06	0.17		0.03	0.03
Crane	0.17	2.5	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.520	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.07	0.20		0.03	0.03
Roller	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2,631	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.16).00	0.00
Roller	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.16		0.00	0.00
Roller	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.16	0.23 (0.00	0.00

BBNPP General Conformity Applicability Analysis Rev. 2 Appendix B

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Equipment -	SCC1	Engine Technology	Equipment	Equipment. Horsepower	Fuel	Total	% of Tot. Hrsa Safety:	1. 1. N.		نيو وي تروي	Year 2		Year		Year 4	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Year	5, 23	Year	1 S	Year 7	
i ype	Same and the second	29 I - S - S - S - S - S	128° 7° # 57 7	hp+	15:00	Hrs	Related	對法规保险	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours	Operation %	Hours
V. Construction & Site S	Support 🐨 🕬	en fillen er en fillen en fillen er fille	is, ilsepropriate au	aper this a to want and	tri' dairait	in	केम्म, एम्ट्राजनः	attaarta Cittah	aller markes year as	فليعددوه فكيده	485.34442662.44544.4	200041.508°2304	Letter assister all da	مهدومو خلارك	244	13 ** 516***17	(เห็นสมหรู แนะสม เรากร	(advise)	alterne mermetter,	·****
Crane	2270002045	T3	2	160 Hp	Diesel	11,968	0%		0%	0	5%	0	15%	0	20%	0	20%	0	20%	0	20%	0
Aerial Lift	2270003010	T3	3	74 Hp	Diesel	8,976	0%		0%	0	5%	0	15%	0	20%	0	20%	0	20%	0	20%	0
Generator Set	2270006005	T2	1	600 Hp	Diesel	1,197	0%		0%	0	5%	0	15%	0	25%	0	20%	0	20%	0	15%	0
Welder	2270006025			<50 Hp	Diesel		0%			0		0		0		0		0		0		0
Air Compressor	2270006015			<50 Hp	Diesel		0%			0		0		0		0		0		0		0
Portable Lighting				<50 Hp	Diesel	1	0%			0		0		0		0		0		0		0
VI. Final Restoration	5-1-5-7-5 A	and inter the state from the set	× +		1. S. S.	171 m 121.4		Lat. Logis High State	机动弹子的	ويتواجد الجرو	1	÷, ***,	44 TEREPSPILIA	in the lat	÷_#*111778₫		A	111-5	17"	er ^{ten} () det	the of Striket.	12.44
Crawler Tractors	2270002069	T3	3	410 Hp	Diesel	2,534	10%	253	0%	0	0%	0	0%	0	0%	0	0%	0	20%	51	80%	203
Crawler Tractors	2270002069	T3	3	235 Hp	Diesel	2,534	10%	253	0%	0	0%	0	0%	0	0%	0	0%	0	20%	51	80%	203
Excavator	2270002036	T3	1	148 Hp	Diesel	704	10%	70	0%	0	0%	0	0%	0	0%	0	0%	0	20%	14	80%	56
Dumper/Tener	2270002078	T3	6	400 Hp	Diesel	4,224	10%	422	0%	0	0%	0	0%	0	0%	0	0%	0	20%	84	80%	338
Grader	2270002048	T3	2	259 Hp	Diesel	1,690	10%	169	0%	0	0%	0	0%	0	0%	0	0%	0	20%	34	80%	135
Surfacing	2270002024	T3	3	156 Hp	Diesel	2,534	10%	253	0%	0	0%	0	0%	0	0%	0	0%	0	20%	51	80%	203
Forklift (rough)	2270002057	T3	2	115 Hp	Diesel	845	10%	84	0%	0	0%	0	0%	0	0%	0	0%	0	20%	17	80%	68

NOTES:

Note 1: Equipment type and SCC code based on Appendix A of "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling", April 2004, EPA-420-P-04-005.

Note 2: Zero hour steady state emission factors (EFss; g/hp-hr) are from NMIM/NONROAD08a model factors dated April 5, 2009.

Note 3: Load factor is set to one since the S&L estimates of operating hours includes the estimated "effective operating time" which takes into account idling and partial load operation.

Note 4: Median life is taken from Table 1 of "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling", April 2004, EPA-420-P-04-005.

EFss from NMIM/NONROAD08 have transient adjustment factors (TAF) built In.

Note 5: Age factor and Deterioration factors calculated using Equation 4 from "Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression-Janilion", April 2004, EPA-420-P-04-009. Age Factor = LF * cumulative hours / median life (where Age factor is capped at 1. For this calrivation, age factor is assumed to be 1 for simplification purposes). Deterioration Factor = 1 + (A * Age Factor's), where be = 1 for diesel engines and A is taken from Table A4 from source

Note 6: Adjusted Emission Factors for HC and NOx are calculated using Equation 1 from, "Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression-Ignition", April 2004, EPA-420-P-04-009. Adjusted EF = Efss * TAF * DF (as stated in Note 2, EFss have TAFs built in)

Note 7: Annual VOC Emissions are calculated using the following calculation (1.053 * Adj. HC emission factor (g/hp-hr) * horsepower * hours operated * load factor) / (2000 lb/ton * 453.6 g/b)

1.053 is the ratio of VOC to HC from "Conversion Factors for Hydrocarbon Components", December 2005, EPA-420-P-05-015.

Annual NOx Emissions are calculated using the following calculation (Adj. NOx emission factor (g/hp-hr) * horsepower * hours operated * load factor) / (2000 lb/ton * 453.6 g/lb)

BBNPP General Conformity Applicability Analysis Rev. 2 Appendix B Safety Related Non-road Engine Emissions Bell Bend Safety NonRd NOx-VOC

Equipment	Criteria P	ollutants		Median	- 23			Deteri	oration	ः Adjust	ed EF		bel Ma	<u> </u>	<u> </u>				·			1. m. 1 m	4727) yr	14 (¥ ()	
	ੇ EFss (g	/hp-hr) ²	Load	Life.4	Age	۵ "÷	", ⁵ (→,	s fact	tor	(g/hp	-hr);*	34.7		136548	.∋HC沸	27 T		7		1.		NOx		£. 2. 9	Roya - The
Type 1	`¥∾.HC/\$*\$	्रिं {NOx े ले	Factor	Hours	Factor ⁵	ť∵HC ‰	≪NOx ື	sighe ぷ	S: NOx 🗘	≪SHC≣3;	€`∃NOx≎ `	Year 1	Year 2	Year, 3	Year 4	Year,5	Year 6	Year.7	Year 1	Year:2	Year 3	Year 4	Year 5	Year 6	Year 7
V. Construction & Site S	50°7163 -13 00-11-311	,ate : 41. 1204003965	Baban), street	a 19350 malaifed	AND AN UNA POR	وندق بهما موته	\$7. AM	\$	and the second second	X ', ' [T'''''	1,2,2,2,2,2,4,7,4,4,4,4,4,4,4,4,4,4,4,4,4	279.22	87.872.9er		भूत्रत् <i>का</i> त्रत	note they	antan da ang	*******	tin al	c	ika peride	72. 17 4dered 24	iten eretaktet	e a a a a a a a a a a a a a a a a a a a	-Thereforest
Crane	0.18	2.5	1	4667	>1	0.027	0.008	1.027	1.008	0.185	2.520	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aerial Lift	0.42	3.64	1	4667	>1	0.027	0.008	1.027	1.008	0.431	3.669	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Generator Set	0.17	4.1	1	7000	>1	0.034	0.009	1.034	1.009	0.176	4.137	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welder	0	0	1	0	>1	0	0	1.000	1.000	0.000	0.000								·						
Air Compressor	0	0	1	0	> 1	0	0	1.000	1.000	0.000	0.000				<u> </u>										
Portable Lighting	0	0	1	0	> 1	0	0	1.000	1.000	0.000	0.000			7											
VI. Final Restoration	and the state of the	وتشنع ملمع المشترة	1	19. 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2.4 1.4	4. 774		film right	1.14 - 4	经无利利益	29-13-14-	1. 2 1 24		1.1.1.1.1.1.1	4.5	S. E. J. S.	1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 -	1	ф	2 12 TM	وقا مردوقت	4	200 - 200 g	1.4	1.5244
Crawler Tractors	0.17	2.61	1	7000	>1	0.027	0.008	1.027	1.008	0.175	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.06	0.24
Crawler Tractors	0.19	2.61	1	4667	> 1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.14
Excavator	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
Dumper/Tener	0.38	3.03	. 1	_7000	>1	0.027	0.008	1.027	1.008	0.390	3.054	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.00	0.00	0.00	0.00	0.00	0.11	0.46
Grader	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.10
Surfacing	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.09
Forklift (rough)	0.19	2.61	1	4667	>1	0.027	0.008	1.027	1.008	0.195	2.631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0,00	0.00	0.00	0.01	0.02

0.0

0.3 1.1 2.0 0.9 0.3 0.3 0.1 4.1 15.8 29.3 13.2 4.6 3.4

NOTES:

Note 1: Equipment type and SCC code based on Appendix A of "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling", April 2004, EPA-420-P-04-005.

Note 2: Zero hour steady state emission factors (EFss; g/hp-hr) are from NMIM/NONROAD08a model factors dated April 5, 2009.

Note 3: Load factor is set to one since the S&L estimates of operating hours includes the estimated "effective operating time" which takes into account idling and partial load operation.

Note 4: Median life is taken from Table 1 of "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling", April 2004, EPA-420-P-04-005.

EFss from NMIM/NONROAD08 have transient adjustment factors (TAF) built in.

Note 5: Age factor and Detarioration factors calculated using Equation 4 from "Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression-Ignition", April 2004, EPA-420-P-04-009. Age Factor = LF * cumulative hourn / motian life (where Age factor is copped at 1. For this calculation, age factor is assumed to be 1 for eimplification purposes). Deterioration Factor = 1 + (A * Age Factor*b), where b = 1 for diesel engines and A is taken from Table A4 from source Note 5: Adjusted Emission Factors for HC and NOx are calculated using Equation 1 from, "Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression-Ignition", April 2004, EPA-420-P-04-009.

Note 6: Adjusted Emission Factors for HC and NOx are calculated using Equation 1 from, "Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression-Ignition", April 2004, EPA-420-P-04-009. Adjusted EF = Efss * TAF * DF (as stated in Note 2, EFss have TAFs built in)

Note 7: Annual VOC Emissions are calculated using the following calculation (1.053 * Adj. HC emission factor (g/tip-hr) * horsepower * hours operated * load factor) / (2000 lb/ton * 453.6 g/tb)

1.053 is the ratio of VOC to HC from "Conversion Factors for Hydrocarbon Components", December 2005, EPA-420-P-05-015.

Annual NOx Emissions are calculated using the following calculation (Adj. NOx emission factor (g/hp-hr) * horsepower * hours operated * load factor) / (2000 lb/ton * 453.6 g/lb)

BBNPP General Conformity Applicability Analysis Rev. 2 Appendix B Safety Related Non-road Engine Emissions Bell Bend Safety NonRd NOx-VOC

Bell Bend Construction Com	muter Emissions Ye	ar 1			
Average Workforce	150		tons/running	tons/startups	tons/Year 1
Average Vehicles	115	VOC	0.14	0.17	0.31
Average Travel (mi)	50 (Miles Round Trip)	NOX	0.92	0.08	1.00
Daily VMT=	5750				

			Average				VOC Emission	NOx Emission	Daily VOC	Daily NOx
			Speed	Distance	Percent of	VMT	Factor	Factor	Emissions	Emissions
<u>Roadway</u>	<u>From</u>	<u>To</u>	<u>(mph)</u>	(miles)	<u>Traffic</u>	(veh-miles)	(gram/veh-mi)	(gram/veh-mi)	(tons/Yr)	(tons/Yr)
Plant Entrance	Rt 11	Parking Area	15	1.4	100	322	0.1817	0.7993	0.0185	0.0814
Rt 11 N	Plant Entrance	Rt 239	50	8.4	47.7	922	0.0926	0.6339	0.0270	0.1847
Rt 11 N	Rt 239	Rt 81	50	15.2	42	1468	0.0926	0.6339	0.0430	0.2942
Rt 239	Rt 11	To the NW	30	15.2	5.7	199	0.12	0.6419	0.0076	0.0404
Rt 11 S	Plant Entrance	Rt 93	50	5.6	52.3	674	0.0926	0.6339	0.0197	0.1350
Rt 11 S**	Rt 93	Rt 80	50	7.9	30.4	552	0	0	0.0000	0.0000
Rt 93	Rt 11	Rt 80	40	12.6	21.9	635	0.1024	0.6316	0.0205	0.1267
Rt 80	Rt 93	To the East	65	5.4	21.9	272	0.0919	0.6588	0.0079	0.0566
Rt 80**	Rt 11	To the West	65	10.1	30.4	706	0	0	0.0000	0.0000
Total						5750			0.144	0.919

Emissions from startups	7-8AM EF (grams/ Vehicle-Start)	4-5PM EF (grams/ Vehicle-Start)	Mid-1AM EF (grams/ Vehicle-Start)	Avg EF (grams/ Vehicle-Start)	Vehicle Starts per Day	Startup Emissions/Day (Grams/Day)	Startup Emissions/Day (Tons/year)
VOC	3.907	2.667	3.574	3.047	115	526	0.166
NOX	1.601	1.438	1.565	1.491	115	257	0.081

Bell Bend Construction C	Commuter Emissions	Year 2		
Average Workforce	550			tons/running
Average Vehicles	423		voc	0.53
Average Travel (mi)	50 (Miles Rou	nd Trip)	NOX	3.38
Daily VMT=	21150			

			Average				VOC Emission	NOx Emission	Daily VOC	Daily NOx
			Speed	Distance	Percent of	VMT	Factor	Factor	Emissions	Emissions
<u>Roadway</u>	<u>From</u>	<u>To</u>	<u>(mph)</u>	(miles)	<u>Traffic</u>	<u>(veh-miles)</u>	(gram/veh-mi)	(gram/veh-mi)	(tons/Yr)	(tons/Yr)
Plant Entrance	Rt 11	Parking Area	15	1.4	_100	1184	0.1817	0.7993	0.0680	0.2993
Rt 11 N	Plant Entrance	Rt 239	50	8.4	47.7	3390	0.0926	0.6339	0.0992	0.6793
Rt 11 N	Rt 239	Rt 81	50	15.2	42	5401	0.0926	0.6339	0.1581	1.0823
Rt 239	Rt 11	To the NW	30	15.2	5.7	733	0.12	0.6419	0.0278	0.1487
Rt 11 S	Plant Entrance	Rt 93	50	5.6	52.3	2478	0.0926	0.6339	0.0725	0.4965
Rt 11 S**	Rt 93	Rt 80	50	7.9	30.4	2032	0	0	0.0000	0.0000
Rt 93	Rt 11	Rt 80	40	12.6	21.9	2334	0.1024	0.6316	0.0756	0.4661
Rt 80	Rt 93	To the East	65	5.4	21.9	1000	0.0919	0.6588	0.0291	0.2084
Rt 80**	Rt 11	To the West	65	10.1	30.4	2598	0	0	0.0000	0.0000
Total						21150			0.530	3.381

tons/startups

0.61

0.30

tons/Year 2

1.14

3.68

Emissions from startups	7-8AM EF (grams/ Vehicle-Start)	4-5PM EF (grams/ Vehicle-Start)	Mid-1AM EF (grams/ Vehicle-Start)	Avg EF (grams/ Vehicle-Start)	Vehicle Starts per Day	Startup Emissions/Day (Grams/Day)	Startup Emissions/Day (Tons/year)
VOC	3.907	2.667	3.574	3.047	423	1933	0.611
NOX	1.601	1.438	1.565	1.491	423	946	0.299

Bell Bend Construction Co	mmuter Emissions Yea	r3			
Average Workforce	1950		tons/running	tons/startups	tons/Year 3
Average Vehicles	1500	voc	1.65	1.44	3.10
Average Travel (mi)	50 (Miles Round Trip)	NOX	10.66	0.71	11.37
Daily VMT=	75000				

			Average				VOC Emission	NOx Emission	Daily VOC	Daily NOx
			Speed	Distance	Percent of	VMT	Factor	Factor	Emissions	Emissions
<u>Roadway</u>	<u>From</u>	<u>To</u>	<u>(mph)</u>	(miles)	<u>Traffic</u>	(veh-miles)	(gram/veh-mi)	(gram/veh-mi)	<u>(tons/Yr)</u>	(tons/Yr)
Plant Entrance	Rt 11	Parking Area	15	1.4	100	4200	0.1574	0.7122	0.2090	0.9456
Rt 11 N	Plant Entrance	Rt 239	50	8.4	47.7	12020	0.0816	0.5637	0.3101	2.1420
Rt 11 N	Rt 239	Rt 81	50	15.2	42	19152	0.0816	0.5637	0.4940	3.4128
Rt 239	Rt 11	To the NW	30	15.2	5.7	2599	0.1049	0.5708	0.0862	0.4690
Rt 11 S	Plant Entrance	Rt 93	50	5.6	52.3	8786	0.0816	0.5637	0.2266	1.5657
Rt 11 S**	Rt 93	Rt 80	50	7.9	30.4	7205	0	0	0.0000	0.0000
Rt 93	Rt 11	Rt 80	40	12.6	21.9	8278	0.0899	0.5616	0.2353	1.4697
Rt 80	Rt 93	To the East	65	5.4	21.9	3548	0.0819	0.5872	0.0919	0.6586
Rt 80**	Rt 11	To the West	65	10.1	30.4	9211	0	0	0.0000	0.0000
Total						75000			1.653	10.663

Emissions from startups	7-8AM EF (grams/ Vehicle-Start)	4-5PM EF (grams/ Vehicle-Start)	Mid-1AM EF (grams/ Vehicle-Start)	Avg EF (grams/ Vehicle-Start)	Vehicle Starts per Day	Startup Emissions/Day (Grams/Day)	Startup Emissions/Day (Tons/year)
VOC	3.907	2.667	3.574	3.047	1500	4570	1.445
NOX	1.601	1.438	1.565	1.491	1500	2236	0.707

Bell Bend Construction C	Commuter Emissions Year 4				
Average Workforce	3950		tons/running	tons/startups	ĺ
Average Vehicles	3039	VOC	3.35	1.44	
Average Travel (mi)	50 (Miles Round Trip)	NOX	21.60	0.71	
Daily VMT=	151950				

			Average				VOC Emission	NOx Emission	Daily VOC	Daily NOx
			Speed	Distance	Percent of	VMT	Factor	Factor	Emissions	Emissions
<u>Roadway</u>	<u>From</u>	<u>To</u>	<u>(mph)</u>	(miles)	<u>Traffic</u>	(veh-miles)	(gram/veh-mi)	(gram/veh-mi)	(tons/Yr)	<u>(tons/Yr)</u>
Plant Entrance	Rt 11	Parking Area	15	1.4	100	8509	0.1574	0.7122	0.4234	1.9158
Rt 11 N	Plant Entrance	Rt 239	50	8.4	47.7	24353	0.0816	0.5637	0.6282	4.3397
Rt 11 N	Rt 239	Rt 81	50	15.2	42	38802	0.0816	0.5637	1.0009	6.9144
Rt 239	Rt 11	To the NW	30	15.2	5.7	5266	0.1049	0.5708	0.1746	0.9502
Rt 11 S	Plant Entrance	Rt 93	50	5.6	52.3	17801	0.0816	0.5637	0.4592	3.1721
Rt 11 S**	Rt 93	Rt 80	50	7.9	30.4	14597	0	0	0.0000	0.0000
Rt 93	Rt 11	Rt 80	40	12.6	21.9	16772	0.0899	0.5616	0.4766	2.9775
Rt 80	Rt 93	To the East	65	5.4	21.9	7188	0.0819	0.5872	0.1861	1.3343
Rt 80**	Rt 11	To the West	65	10.1	30.4	18662	0	0	0.0000	0.0000
Total						151950			3.349	21.604

tons/Year 4 4.79 22.31

Emissions from startups	7-8AM EF (grams/ Vehicle-Start)	4-5PM EF (grams/ Vehicle-Start)	Mid-1AM EF (grams/ Vehicle-Start)	Avg EF (grams/ Vehicle-Start)	Vehicle Starts per Day	Startup Emissions/Day (Grams/Day)	Startup Emissions/Day (Tons/year)
VOC	3.907	2.667	3.574	3.047	1500	4570	1.445
NOX	1.601	1.438	1.565	1.491	1500	2236	0.707

Bell Bend Construction C	ommuter Emissions Year 5				
Average Workforce	. 3950		tons/running	tons/startups	tons/Year 5
Average Vehicles	3039	VOC	3.35	1.44	4.79
Average Travel (mi)	50 (Miles Round Trip)	NOX	21.60	0.71	22.31
Daily VMT=	151950				

			Average				VOC Emission	NOx Emission	Daily VOC	Daily NOx
			Speed	Distance	Percent of	VMT	Factor	Factor	Emissions	Emissions
<u>Roadway</u>	<u>From</u>	<u>To</u>	<u>(mph)</u>	<u>(miles)</u>	<u>Traffic</u>	(veh-miles)	(gram/veh-mi)	<u>(gram/veh-mi)</u>	<u>(tons/Yr)</u>	<u>(tons/Yr)</u>
Plant Entrance	Rt 11	Parking Area	15	1.4	100	8509	0.1574	0.7122	0.4234	1.9158
Rt 11 N	Plant Entrance	Rt 239	50	8.4	47.7	24353	0.0816	0.5637	0.6282	4.3397
Rt 11 N	. Rt 239	Rt 81	50	15.2	42	38802	0.0816	0.5637	1.0009	6.9144
Rt 239	Rt 11	To the NW	30	15.2	5.7	5266	0.1049	0.5708	0.1746	0.9502
Rt 11 S	Plant Entrance	Rt 93	50	5.6	52.3	17801	0.0816	0.5637	0.4592	3.1721
Rt 11 S**	Rt 93	Rt 80	50	7.9	30.4	14597	0	0	0.0000	0.0000
Rt 93	Rt 11	Rt 80	40	12.6	21.9	16772	0.0899	0.5616	0.4766	2.9775
Rt 80	Rt 93	To the East	65	5.4	21.9	7188	0.0819	0.5872	0.1861	1.3343
Rt 80**	Rt 11	To the West	65	10.1	30.4	18662	0	0	0.0000	0.0000
Total						151950			3.349	21.604

** Outside SWB Maintenance Area - Emissions set to zero for this analysis

Emissions from startups	7-8AM EF (grams/ Vehicle-Start)	4-5PM EF (grams/ Vehicle-Start)	Mid-1AM EF (grams/ Vehicle-Start)	Avg EF (grams/ Vehicle-Start)	Vehicle Starts per Day	Startup Emissions/Day (Grams/Day)	Startup Emissions/Day (Tons/year)
VOC	3.907	2.667	3.574	3.047	1500	4570	1.445
NOX	1.601	1.438	1.565	1.491	1500	2236	0.707

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Bell Bend Construction Co	ommuter Emissions	Year 6				
Average Workforce	2000			tons/running	tons/startups	tons/Year 6
Average Vehicles	1538		VOC	1.69	1.48	3.18
Average Travel (mi)	50 (Miles Rour	nd Trip)	NOX	10.93	0.72	11.66
Daily VMT=	76900				· · · · · · · · · · · · · · · · · · ·	

			Average				VOC Emission	NOx Emission	Daily VOC	Daily NOx
			Speed	Distance	Percent of	VMT	Factor	Factor	Emissions	Emissions
Roadway	<u>From</u>	To	<u>(mph)</u>	(miles)	<u>Traffic</u>	(veh-miles)	(gram/veh-mi)	(gram/veh-mi)	(tons/Yr)	(tons/Yr)
Plant Entrance	Rt 11	Parking Area	15	1.4	100	4306	0.1574	0.7122	0.2143	0.9696
Rt 11 N	Plant Entrance	Rt 239	50	8.4	47.7	12325	0.0816	0.5637	0.3179	2.1963
Rt 11 N	Rt 239	Rt 81	50	15.2	42	19637	0.0816	0.5637	0.5066	3.4993
Rt 239	Rt 11	To the NW	30	15.2	5.7	2665	0.1049	0.5708	0.0884	0.4809
Rt 11 S	Plant Entrance	Rt 93	50	5.6	52.3	9009	0.0816	0.5637	0.2324	1.6054
Rt 11 S**	Rt 93	Rt 80	50	7.9	30.4	7387	0	0	0.0000	0.0000
Rt 93	Rt 11	Rt 80	40	12.6	21.9	8488	0.0899	0.5616	0.2412	1.5069
Rt 80	Rt 93	To the East	65	5.4	21.9	3638	0.0819	0.5872	0.0942	0.6753
Rt 80**	Rt 11	To the West	65	10.1	30.4	9445	0	0	0.0000	0.0000
Total						76900			1.695	10.934

Emissions from startups	7-8AM EF (grams/ Vehicle-Start)	4-5PM EF (grams/ Vehicle-Start)	Mid-1AM EF (grams/ Vehicle-Start)	Avg EF (grams/ Vehicle-Start)	Vehicle Starts per Day	Startup Emissions/Day (Grams/Day)	Startup Emissions/Day (Tons/year)
VOC	3.907	2.667	3.574	3.047	1538	4686	1.481
NOX	1.601	1.438	1.565	1.491	1538	2293	0.725

Bell Bend Construction Cor	nmuter Emissions	Year 7	
Average Workforce	400		
Average Vehicles	308		
Average Travel (mi)	50 (Miles Rou	nd Trip)	
Daily VMT=	15400		

	tons/running	tons/startups	tons/Year 7		
VOC	0.34	0.30	0.64		
NOX	2.19	0.15	2.33		

			Average				VOC Emission	NOx Emission	Daily VOC	Daily NOx
			Speed	Distance	Percent of	VMT	Factor	Factor	Emissions	Emissions
<u>Roadway</u>	From	<u>To</u>	<u>(mph)</u>	<u>(miles)</u>	<u>Traffic</u>	(veh-miles)	(gram/veh-mi)	(gram/veh-mi)	(tons/Yr)	<u>(tons/Yr)</u>
Plant Entrance	Rt 11	Parking Area	15	1.4	100	862	0.1574	0.7122	0.0429	0.1942
Rt 11 N	Piant Entrance	Rt 239	50	8.4	47.7	2468	0.0816	0.5637	0.0637	0.4398
Rt 11 N	Rt 239	Rt 81	50	15.2	42	3933	0.0816	0.5637	0.1014	0.7008
Rt 239	Rt 11	To the NW	30	15.2	5.7	534	0.1049	0.5708	0.0177	0.0963
Rt 11 S	Plant Entrance	Rt 93	50	5.6	52.3	1804	0.0816	0.5637	0.0465	0.3215
Rt 11 S**	Rt 93	Rt 80	50	7.9	30.4	1479	0	0	0.0000	0.0000
Rt 93	Rt 11	Rt 80	40	12.6	21.9	1700	0.0899	0.5616	0.0483	0.3018
Rt 80	Rt 93	To the East	65	5.4	21.9	728	0.0819	0.5872	0.0189	0.1352
Rt 80**	Rt 11	To the West	65	10.1	30.4	1891	0	0	0.0000	0.0000
Total						15400			0.339	2.190

Emissions from startups	7-8AM EF (grams/ Vehicle-Start)	4-5PM EF (grams/ Vehicle-Start)	Mid-1AM EF (grams/ Vehicle-Start)	Avg EF (grams/ Vehicle-Start)	Vehicle Starts per Day	Startup Emissions/Day (Grams/Day)	Startup Emissions/Day (Tons/year)
VOC	3.907	2.667	3.574	3.047	308	938	0.297
NOX	1.601	1.438	1.565	1.491	308	459	0.145

Bell Bend Emissions From all Deliveries Year 1

	tons/running	tons/startups	tons/Year 1
VOC	0.07	0.004	0.08
NOX	1.38	0.008	1.39

									SWB Ozone MA
	Year 1	Year 1	Avg Distance	VMT from SWB	VMT from Reading	VMT from Non-MA	Total VMT in SWB	EF (grams/	Annual Emissions
	Trips	VMT	Traveled (miles)	Ozone MA	Ozone MA	Ozone MA	Ozone MA	veh-mile)*	(tons/year)
VOC	3,465.75	173,287.4	50.00	77,979.3	13,863.0	0.0	91,842.3	0.72	0.073
NOX	3,465.75	173,287.4	50.00	77,979.3	13,863.0	0.0	91,842.3	13.63	1.380

	4 AM EF (g/VehStart)	Noon EF (g/VehStart)	8 PM EF (g/VehStart)	Avg EF (g/VehStart)	Vehicle Starts per Year	Startup Emissions (Grams/Year)	Startup Emissions (Tons/year)
voc	1.252	1.027	1.038	1.042	3466	3611	0.004
NOX	2.603	1.923	1.958	1.969	3466	6826	0.008

Bell Bend Emissions From all Deliveries Year 2

	tons/running	tons/startups	tons/Year 2
VOC	1.34	0.073	1.41
NOX	25.37	0.138	25.51

									SWB Ozone MA
	Year 2	Year 2	Avg Distance	VMT from SWB	VMT from Reading	VMT from Non-MA	Total VMT in SWB	EF (grams/	Annual Emissions
	Trips	VMT	Traveled (miles)	Ozone MA	Ozone MA	Ozone MA	Ozone MA	veh-mile)*	(tons/year)
voc	63,693.34	3,186,186.4	50.02	1,433,783.9	254,773.4	0.0	1,688,557.2	0.72	1.340
NOX	63,693.34	3,186,186.4	50.02	1,433,783.9	254,773.4	0.0	1,688,557.2	13.63	25.371

	4 AM EF (g/VehStart)	Noon EF (g/VehStart)	8 PM EF (g/VehStart)	Avg EF (g/VehStart)	Vehicle Starts per Year	Startup Emissions (Grams/Year)	Startup Emissions (Tons/year)
VOC	1.252	1.027	1.038	1.042	63693	66366	0.073
NOX	2.603	1.923	1.958	1.969	63693	125443	0.138

Year 3

Bell Bend Emissions From all Deliveries

	tons/running	tons/startups	tons/Year 3
voc	1.43	0.083	1.51
NOX	27.01	0.156	27.17

									SWB Ozone MA
	Year 2	Year 2	Avg Distance	VMT from SWB	VMT from Reading	VMT from Non-MA	Total VMT in SWB	EF (grams/	Annual Emissions
	Trips	VMT	Traveled (miles)	Ozone MA	Ozone MA	Ozone MA	Ozone MA	veh-mile)*	(tons/year)
VOC	72,046.34	3,664,018.9	50.86	1,648,808.5	288,185.4	0.0	1,936,993.9	0.67	1.431
NOX	72,046.34	3,664,018.9	50.86	1,648,808.5	288,185.4	0.0	1,936,993.9	12.65	27.014

	4 AM EF (g/VehStart)	Noon EF (g/VehStart)	8 PM EF (g/VehStart)	Avg EF (g/VehStart)	Vehicle Starts per Year	Startup Emissions (Grams/Year)	Startup Emissions (Tons/ <u>y</u> ear)
voc	1.252	1.027	1.038	1.042	72046	75069	0.083
NOX	2.603	1.923	1.958	1.969	72046	141894	0.156

Year 4

Bell Bend Emissions From all Deliveries

	tons/running	tons/startups	tons/Year 4
voc	0.42	0.022	0.44
NOX	7.88	0.042	7.93

									SWB Ozone MA
	Year 2	Year 2	Avg Distance	VMT from SWB	VMT from Reading	VMT from Non-MA	Total VMT in SWB	EF (grams/	Annual Emissions
	Trips	VMT	Traveled (miles)	Ozone MA	Ozone MA	Ozone MA	Ozone MA	veh-mile)*	(tons/year)
voc	19,534.26	1,082,465.6	55.41	487,109.5	78,137.0	0.0	565,246.6	0.67	0.418
NOX	19,534.26	1,082,465.6	55.41	487,109.5	78,137.0	0.0	565,246.6	12.65	7.883

	4 AM EF (g/VehStart)	Noon EF (g/VehStart)	8 PM EF (g/VehStart)	Avg EF (g/VehStart)	Vehicle Starts per Year	Startup Emissions (Grams/Year)	Startup Emissions (Tons/year)
VOC	1.252	1.027	1.038	1.042	19534	20354	0.022
NOX	2.603	1.923	1.958	1.969	19534	38472	0.042

Bell Bend Emissions From all Deliveries Year 5

	tons/running	tons/startups	tons/Year 5		
voc	0.23	0.011	0.24		
NOX	4.25	0.021	4.27		

									SWB Ozone MA
	Year 2	Year 2	Avg Distance	VMT from SWB	VMT from Reading	VMT from Non-MA	Total VMT in SWB	EF (grams/	Annual Emissions
	Trips	VMT	Traveled (miles)	Ozone MA	Ozone MA	- Ozone MA	Ozone MA	veh-mile)*	(tons/year)
VOC	9,899.25	588,672.8	59.47	264,902.8	39,597.0	0.0	304,499.8	· 0.67	0.225
NOX	9,899.25	588,672.8	59.47	264,902.8	39,597.0	0.0	304,499.8	12.65	4.247

	4 AM EF	Noon EF	8 PM EF	Avg EF	Vehicle Starts	Startup Emissions	Startup Emissions
voc	(g/VehStart) 1.252	(g/VehStart) 1.027	(g/VehStart) 1.038	(g/VehStart) 1.042	per Year 9899	(Grams/Year) 10314	(Tons/year) 0.011
NOX	2.603	1.923	1.958	1.969	9899	19496	0.021

Bell Bend Emissions From all Deliveries Year 6

	tons/running	tons/startups	tons/Year 6
voc	0.13	0.007	0.13
NOX	2.41	0.013	2.42

									SWB Ozone MA
	Year 2	Year 2	Avg Distance	VMT from SWB	VMT from Reading	VMT from Non-MA	Total VMT in SWB	EF (grams/	Annual Emissions
	Trips	VMT	Traveled (miles)	Ozone MA	Ozone MA	Ozone MA	Ozone MA	veh-mile)*	(tons/year)
voc	6,006.23	330,650.4	55.05	148,792.7	24,024.9	0.0	172,817.6	0.67	0.128
NOX	6,006.23	330,650.4	55.05	148,792.7	24,024.9	0.0	172,817.6	12.65	2.410

	4 AM EF (g/VehStart)	Noon EF (g/VehStart)	8 PM EF (g/VehStart)	Avg EF (g/VehStart)	Vehicle Starts per Year	Startup Emissions (Grams/Year)	Startup Emissions (Tons/year)
VOC	1.252	1.027	1.038	1.042	6006	6258	0.007
NOX	2.603	1.923	1.958	1.969	6006	11829	0.013

Bell Bend Emissions From all Deliveries Year 7

	tons/running	tons/startups	tons/Year 7
VOC	0.12	0.007	0.13
NOX	2.33	0.013	2.34

	Year 2 Trips	Year 2 VMT	Avg Distance Traveled (miles)	VMT from SWB Ozone MA	VMT from Reading Ozone MA	VMT from Non-MA Ozone MA	Total VMT in SWB Ozone MA	EF (grams/ veh-mile)*	SWB Ozone MA Annual Emissions (tons/year)
voc	5,989.13	318,132.2	53.12	143,159.5	23,956.5	0.0	167,116.0	0.67	0.123
NOX	5,989.13	318,132.2	53.12	143,159.5	23,956.5	0.0	167,116.0	12.65	2.331

* Based on Avg of 40 MPH

	4 AM EF (g/VehStart)	Noon EF (g/VehStart)	8 PM EF (g/VehStart)	Avg EF (g/VehStart)	Vehicle Starts per Year	Startup Emissions (Grams/Year)	Startup Emissions (Tons/year)
voc	1.252	1.027	1.038	1.042	5989	6240	0.007
NOX	2.603	1.923	1.958	1.969	5989	11795	0.013

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Bell Bend On-Site On-road Vehicles

Year 1

		Non-safety & Safety R	elated	Safety Related			
	tons/running	tons/startups	tons/Year 1	SR tons/running	SR tons/startups	SR tons/Year 1	
VOC	0.19	0.056	0.24	0.00	0.000	0.00	
NOX	1.36	0.263	1.62	0.00	0.000	0.00	

		Annual	Annual			•			
	Annual	Idle Hours	Running Hours	Idle VOC EF	Run VOC EF	Idle NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
F250/F650	7531	753	6778	9.398	0.922	50.909	5.817	0.11	0.69
Mack MP6	3452	345	3107	10.638	1.393	71.011	12.370	0.08	0.66
Total								0.19	1.36

	No. of Vehicles	Annuai No of Starts* Per Year for Ali Veh	VOC EF (gram/Veh-Start)	NOx EF (gram/Veh-Start)	Annual VOC (Tons/Year)	Annual NOx (Tons/Year)
F250/F650	21	90338	0.346	1.629	0.034	0.162
Mack MP6	13	55923	0.346	1.629	0.021	0.100
Total					0.056	0.263

* Number of Starts Per Day Per Vehicle (All Veh Types) = 15

SAFETY RELATED CONCRETE TRUCK

		Annual	Annual						
	Annual	Idle Hours	Running Hours	Idle VOC EF	Run VOC EF	Idle NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
Mack MP6	0	0	0	10.638	1.393	71.011	12.370	0.00	0.00

		Annual				
	No. of	No of Starts*	VOC EF	NOx EF	Annual VOC	Annual NOx
	Vehicles	Per Year for All Veh	(gram/Veh-Start)	(gram/Veh-Start)	(Tons/Year)	(Tons/Year)
Mack MP6	0	0	0.346	1.629	0.000	0.000

Bell Bend On-Site On-road Vehicles

		Non-safety & Safety R	elated	Safety Related			
	tons/running	tons/startups	tons/Year 2	SR tons/running	SR tons/startups	SR tons/Year 2	
VOC	0.41	0.156	0.57	0.07	0.041	0.11	
NOX	3.11	0.734	3.84	0.60	0.193	0.80	

	1	Annual	Annual						
	Annual	Idle Hours	Running Hours	Idle VOC EF	Run VOC EF	Idle NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
F250/F650	13157	1316	11841	9.398	0.922	50.909	5.817	0.19	1.21
Mack MP6	9867	987	8880	10.638	1.393	71.011	12.370	0.22	1.89
Total								0.41	3.11

	No. of Vehicles	Annual No of Starts* Per Year for All Veh	VOC EF (gram/Veh-Start)	NOx EF (gram/Veh-Start)	Annuai VOC (Tons/Year)	Annual NOx (Tons/Year)
F250/F650	52	223693	0.346	1.629	0.085	0.402
Mack MP6	43	184977	0.346	1.629	0.071	0.332
Total			•		0.156	0.734

* Number of Starts Per Day Per Vehicle (All Veh Types) = 15

SAFETY RELATED CONCRETE TRUCK

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		Annual	Annual						
	Annual	Idle Hours	Running Hours	Idle VOC EF	Run VOC EF	Idle NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
Mack MP6	3136.7	313.67	2823.03	10.638	1.393	71,011	12.370	0.07	0.60

		Annual				
	No. of	No of Starts*	VOC EF	NOx EF	Annual VOC	Annual NOx
	Vehicles	Per Year for All Veh	(gram/Veh-Start)	(gram/Veh-Start)	(Tons/Year)	(Tons/Year)
Mack MP6	25	107545	0.346	1.629	0.041	0.193

Bell Bend On-Site On-road Vehicles

		Non-safety & Safety R	elated	Safety Related				
	tons/running	tons/startups	tons/Year 3	SR tons/running	SR tons/startups	SR tons/Year 3		
VOC	0.68	0.180	0.86	0.09	0.041	0.13		
NOX	4.84	0.850	5.69	0.75	0.193	0.94		

Year 3

		Annual	Annual			•			
	Annual	Idle Hours	Running Hours	Idle VOC EF	Run VOC EF	Idle NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
F250/F650	29660	2966	26694	9.398	0.922	50.909	5.817	0.44	2.73
Mack MP6	10966	1097	9869	10.638	1.393	71.011	12.370	0.24	2.10
Total								0.68	4.84

	No. of	Annual No of Starts*	VOC EF	NOx EF	Annual VOC	Annual NOx
	Vehicles	Per Year for All Veh	(gram/Veh-Start)	(gram/Veh-Start)	(Tons/Year)	(Tons/Year)
F250/F650	67	288220	0.346	1.629	0.110	0.518
Mack MP6	43	184977	0.346	1.629	0.071	0.332
Total					0.180	0.850

* Number of Starts Per Day Per Vehicle (All Veh Types) = 15

SAFETY RELATED CONCRETE TRUCK

		Annual	Annual						
	Annual	Idle Hours	Running Hours	Idle VOC EF	Run VOC EF	Idle NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
Mack MP6	3913.3	391.33	3521.97	10.638	1.393	71.011	12.370	0.09	0.75

		Annual				
	No. of	No of Starts*	VOC EF	NOx EF	Annual VOC	Annual NOx
	Vehicles	Per Year for All Veh	(gram/Veh-Start)	(gram/Veh-Start)	(Tons/Year)	(Tons/Year)
Mack MP6	25	107545	0.346	1.629	0.041	0.193

Bell Bend On-Site On-road Vehicles

Year 4

		Non-safety & Safety R	elated	Safety Related			
	tons/running	tons/startups	tons/Year 4	SR tons/running	SR tons/startups	SR tons/Year 4	
VOC	0.66	0.130	0.79	0.07	0.016	0.09	
NOX	4.55	0.610	5.16	0.60	0.077	0.68	

		Annual	Annual						
	Annual	Idle Hours	Running Hours	Idle VOC EF	Run VOC EF	idie NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
F250/F650	32545	3255	29291	9.398	0.922	50.909	5.817	0.48	3.00
Mack MP6	8059	806	7253	10.638	1.393	71.011	12.370	0.18	1.55
Total								0.66	4.55

	No. of Vehicles	Annual No of Starts* Per Year for All Veh	VOC EF (gram/Veh-Start)	NOx EF (gram/Veh-Start)	Annual VOC (Tons/Year)	Annual NOx (Tons/Year)
F250/F650	63	271013	0.346	1.629	0.103	0.487
Mack MP6	16	68829	0.346	1.629	0.026	0.124
Total				•	0.130	0.610

* Number of Starts Per Day Per Vehicle (All Veh Types) = 15

SAFETY RELATED CONCRETE TRUCK

		Annual	Annual						
	Annual	Idle Hours	Running Hours	Idle VOC EF	Run VOC EF	Idle NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
Mack MP6	3136.5	313.65	2822.85	10.638	1.393	71.011	12.370	0.07	0.60

		Annual				
	No. of	No of Starts*	VOC EF	NOx EF	Annual VOC	Annual NOx
	Vehicles	Per Year for All Veh	(gram/Veh-Start)	(gram/Veh-Start)	(Tons/Year)	(Tons/Year)
Mack MP6	10	43018	0.346	1.629	0.016	0.077

Bell Bend On-Site On-road Vehicles

Year 5

		Non-safety & Safety R	elated	Safety Related			
	tons/running	tons/startups	tons/Year 5	SR tons/running	SR tons/startups	SR tons/Year 5	
voc	0.46	0.115	0.58	0.05	0.016	0.06	
NOX	3.20	0.541	3.74	0.40	0.077	0.48	

		Annual	Annual						
	Annual	Idle Hours	Running Hours	Idle VOC EF	Run VOC EF	Idle NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
F250/F650	23522	2352	21170	9.398	0.922	50.909	5.817	0.35	2.17
Mack MP6	5372	537	4835	10.638	1.393	71.011	12.370	0.12	1.03
Total								0.46	3.20

	No. of Vehicles	Annual No of Starts* Per Year for All Veh	VOC EF (gram/Veh-Start)	NOx EF (gram/Veh-Start)	Annual VOC (Tons/Year)	Annual NOx (Tons/Year)
F250/F650	54	232296	0.346	1.629	0.089	0.417
Mack MP6	16	68829	0.346	1.629	0.026	0.124
Total					0.115	0.541

* Number of Starts Per Day Per Vehicle (All Veh Types) = 15

SAFETY RELATED CONCRETE TRUCK

		Annual	Annual						
	Annual	Idle Hours	Running Hours	Idle VOC EF	Run VOC EF	Idle NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
Mack MP6	2091	209.1	1881.9	10.638	1.393	71.011	12.370	0.05	0.40

		Annual				
	No. of	No of Starts*	VOC EF	NOx EF	Annual VOC	Annual NOx
	Vehicles	Per Year for All Veh	(gram/Veh-Start)	(gram/Veh-Start)	(Tons/Year)	(Tons/Year)
Mack MP6	10	43018	0.346	1.629	0.016	0.077

Bell Bend On-Site On-road Vehicles

Year 6

		Non-safety & Safety R	elated	Safety Related			
	tons/running	tons/startups	tons/Year 6	SR tons/running	SR tons/startups	SR tons/Year 6	
voc	0.15	0.087	0.24	0.01	0.016	0.03	
NOX	1.00	0.409	1.41	0.10	0.077	0.18	

	Annual	Annual Idle Hours	Annual Running Hours	Idie VOC EF	Run VOC EF	Idle NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
F250/F650	8573	857	7716	9.398	0.922	50.909	5.817	0.13	0.79
Mack MP6	1073	107	966	10.638	1.393	71.011	12.370	0.02	0.21
Total								0.15	1.00

	No. of Vehicles	Annual No of Starts* Per Year for All Veh	VOC EF (gram/Veh-Start)	NOx EF (gram/Veh-Start)	Annual VOC (Tons/Year)	Annual NOx (Tons/Year)
F250/F650	43	184977	0.346	1.629	0.071	0.332
Mack MP6	10	43018	0.346	1.629	0.016	0.077
Total			· · · · · · · · · · · · · · · · · · ·		0.087	0.409

* Number of Starts Per Day Per Vehicle (All Veh Types) = 15

SAFETY RELATED CONCRETE TRUCK

		Annual	Annual						
	Annual	Idle Hours	Running Hours	Idle VOC EF	Run VOC EF	Idie NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
Mack MP6	522.5	52.25	470.25	10.638	1.393	71.011	12.370	0.01	0.10

		Annual				
	No. of	No of Starts*	VOC EF	NOx EF	Annual VOC	Annual NOx
	Vehicles	Per Year for All Veh	(gram/Veh-Start)	(gram/Veh-Start)	(Tons/Year)	(Tons/Year)
Mack MP6	10	43018	0.346	1.629	0.016	0.077

* Number of Starts Per Day Per Vehicle (All Veh Types) = 15

Bell Bend On-Site On-road Vehicles

Year 7

		Non-safety & Safety R	elated	Safety Related			
	tons/running	tons/startups	tons/Year 7	SR tons/running	SR tons/startups	SR tons/Year 7	
VOC	0.13	0.071	0.20	0.01	0.016	0.03	
NOX	0.86	0.332	1.19	0.10	0.077	0.18	

		Annual	Annual]
	Annual	Idle Hours	Running Hours	Idle VOC EF	Run VOC EF	Idle NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
F250/F650	6925	693	6233	9.398	0.922	50.909	5.817	0.10	0.64
Mack MP6	1158	116	1042	10.638	1.393	71.011	12.370	0.03	0.22
Total								0.13	0.86

	No. of	Annual No of Starts*	VOC EF	NOx EF	Annual VOC	Annual NOx
	Vehicles	Per Year for All Veh	(gram/Veh-Start)	(gram/Veh-Start)	(Tons/Year)	(Tons/Year)
F250/F650	33	141959	0.346	1.629	0.054	0.255
Mack MP6	10	43018	0.346	1.629	0.016	0.077
Total					0.071	0.332

* Number of Starts Per Day Per Vehicle (All Veh Types) = 15

SAFETY RELATED CONCRETE TRUCK

		Annual	Annual						
	Annual	Idle Hours	Running Hours	Idle VOC EF	Run VOC EF	Idle NOx EF	Run NOx EF	Annual VOC	Annual NOx
	Operation	of Operation (10%)	of Operation (90%)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(gram/veh-hr)	(Tons/Year)	(Tons/Year)
Mack MP6	522.5	52.25	470.25	10.638	1.393	71.011	12.370	0.01	0.10

		Annual				
	No. of	No of Starts*	VOC EF	NOx EF	Annual VOC	Annual NOx
	Vehicles	Per Year for All Veh	(gram/Veh-Start)	(gram/Veh-Start)	(Tons/Year)	(Tons/Year)
Mack MP6	10	43018	0.346	1.629	0.016	0.077

* Number of Starts Per Day Per Vehicle (All Veh Types) = 15

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