

Draft Supplement to Section 4 of Environmental Reports

Introductory Text for New Table 4-X

Table 4.6-2 provides estimates of the percentage of impacts attributable to “construction” and to “preconstruction,” as well as a summary of the basis for the estimates. The estimated construction related impacts presented in the table were based primarily on two factors, namely the area associated with the construction of SSCs and the labor hours associated with the construction of SSCs. Information related to these two factors is provided as follows:

- **Construction Area** — The XYZ site consists of XXXX contiguous ac., exclusive of off-site linear facilities (heavy haul road, water pipelines, electric transmission line, and rail corridors) or other supporting facilities such as the barge dock. The total estimated area that will be developed for the XYZ is estimated to be approximately XXXXac., exclusive of electric transmission lines. Of these developed areas, approximately XX ac. will be developed for SSCs (XX ac. each for XYZ 1 and XYZ 2). The area that will be developed for the construction of SSCs therefore represents approximately X percent of the total area that will ultimately be developed (excluding electric transmission lines). Because this estimate does not include electric transmission lines, it is considered to be a very conservative estimate. For the purposes of this assessment, the impacted area associated with SSCs is considered to be less than X percent.
- **Labor Hours** — Based on preliminary construction estimates for all phases of development of the XYZ, the estimated labor hours associated with the construction of SSCs is approximately XX percent of the total labor hours associated with the development of the entire XYZ plant site. For the purpose of this assessment, the labor hours associated with SSC construction is considered to be less than XX percent.

Note that the following table provides a proposed format and framework for supplementing COL application ERs in response to an NRC RAI to separate preconstruction impacts from construction impacts. Actual percentages for preconstruction versus construction are not presented because these may be expected to vary based on site specifics. For example, the proportion of land use impacts attributable to preconstruction activities may be higher for a greenfield site than for an existing site that may have been prepared to hold additional units.

Table 4-X (Sheet 1 of 6)
Summary of Construction- and Preconstruction-Related Impacts for Safety-Related Structures, Systems, or Components

Section Reference	Potential Impacts and Significance ^(a)	Estimated Impacts (%)		Basis of Estimate
		Construction ^(b)	Preconstruction	
ER Section 4.1 Land Use Impacts				
ER Subsection 4.1.1.1 Long-Term Land Use Restrictions and Physical Changes of Site and Vicinity	S – Land Use	X	100-X (Typical)	Estimates are based on the area of land use that will be dedicated to safety-related structures, systems, or components (SSC's) and the assumption that the construction of SSC's will occur on no more than approximately XX acres (XX acres each for units XYZ 1 and XYZ 2) of the project area being developed (i.e., XXXX acres, excluding offsite electric transmission lines) (X%, restated as <X%)
ER Subsection 4.1.1.2 Short-Term Physical Changes in Land Use and Mitigation	S – Land Use	X	X	Estimates are based on the area of land use that will be dedicated to safety-related structures, systems, or components (SSC's) and the assumption that the construction of SSC's will occur on no more than approximately XX acres (XX acres each for units XYZ 1 and XYZ 2) of the project area being developed (i.e., XXXX acres, excluding offsite electric transmission lines) (X%, restated as <X%)
ER Subsection 4.1.1.3 Construction Impacts on the Geologic Environment	S – Land Use	X	X	Estimates are based on the area of land use that will be dedicated to safety-related structures, systems, or components (SSC's) and the assumption that the construction of SSC's will occur on no more than approximately XX acres (XX acres each for units XYZ 1 and XYZ 2) of the project area being developed (i.e., XXXX acres, excluding offsite electric transmission lines) (X%, restated as <X%).
ER Subsection 4.1.2.1 Transmission Corridors	S – Land Use	X	X	Transmission corridors are not included in the definition of construction of SSC's
ER Subsection 4.1.2.2 Off-Site Areas	S – Land Use	X	X	There are no offsite areas associated with the project that are included in the definition of construction of SSC's
ER Subsection 4.1.2.3 Short-Term Physical Changes in Land Use and Mitigation	S – Land Use	X	X	Estimates are based on the area of land use that will be dedicated to safety-related structures, systems, or components (SSC's) and the assumption that the construction of SSC's will occur on no more than approximately XX acres (XX acres each for units XYZ 1 and XYZ 2) of the project area being developed (i.e., XXXX acres, excluding offsite electric transmission lines) (X%, restated as <X%).
ER Subsection 4.1.3 Historic Properties	S – Land Use	X	X	The impact of historic properties will apply only to preconstruction activities since they will be identified prior to land clearing, grading, installation of drainage, erosion and other environmental mitigation measures, and construction of temporary roads and laydown areas.

DRAFT - For Information Only

Table 4.6-2 (Sheet 2 of 6)

Summary of Construction- and Preconstruction-Related Impacts for Safety-Related Structures, Systems, or Components

Section Reference	Potential Impacts and Significance ^(a)	Estimated Impacts (%)		Basis of Estimate
		Construction ^(b)	Preconstruction	
ER Section 4.2	Water-Related Impacts			
ER Subsection 4.2.1.1 Freshwater Streams	S – Erosion and Sediment S – Surface Water	X	X	Estimates are based on the area of land use that will be dedicated to safety-related structures, systems, or components (SSCs) and the assumption that the construction of SSCs will occur on no more than approximately XX ac. (XX ac. each for XYZ 1 and XYZ 2) of the project area being developed (i.e., XXXX ac., excluding off-site electric transmission lines) (X%, restated as <X%).
ER Subsection 4.2.1.2 Wetlands	S – Erosion and Sediment S – Surface Water	X	X	Estimates are based on the area of land use that will be dedicated to safety-related structures, systems, or components (SSCs) and the assumption that the construction of SSCs will occur on no more than approximately XX ac. (XX ac. each for XYZ 1 and XYZ 2) of the project area being developed (i.e., XXXX ac., excluding off-site electric transmission lines) (X%, restated as <X%).
ER Subsection 4.2.1.3 Impacts from Surface Disturbance	S – Erosion and Sediment S – Effluents and Wastes S – Surface Water S – Water Use	X	X	Estimates are based on the area of land use that will be dedicated to safety-related structures, systems, or components (SSCs) and the assumption that the construction of SSCs will occur on no more than approximately XX ac. (XX ac. each for XYZ 1 and XYZ 2) of the project area being developed (i.e., XXXX acres, excluding off-site electric transmission lines) (X%, restated as <X%).
ER Subsection 4.2.1.4 Impacts from Subsurface Disturbance	S – Erosion and Sediment S – Surface Water	X	X	Estimates are based on the area of land use that will be dedicated to safety-related structures, systems, or components (SSCs) and the assumption that the construction of SSCs will occur on no more than approximately XX ac. (XX ac. each for XYZ 1 and XYZ 2) of the project area being developed (i.e., XXXX acres, excluding off-site electric transmission lines) (X%, restated as <X%).
ER Subsection 4.2.1.5 Groundwater	S – Surface Water S – Groundwater	X	X	Estimates are based on the area of land use that will be dedicated to safety-related structures, systems, or components (SSCs) and the assumption that the construction of SSCs will occur on no more than approximately XX ac. (XX ac. each for XYZ 1 and XYZ 2) of the project area being developed (i.e., XXXX acres, excluding off-site electric transmission lines) (X%, restated as <X%).

Table 4.6-2 (Sheet 3 of 6)

Summary of Construction- and Preconstruction-Related Impacts for Safety-Related Structures, Systems, or Components

Section Reference	Potential Impacts and Significance ^(a)	Estimated Impacts (%)		Basis of Estimate
		Construction ^(b)	Preconstruction	
ER Subsection 4.2.2.1 Freshwater Surface Water	S – Surface Water S – Water Use	X	X	Estimates are based on the area of land use that will be dedicated to safety-related structures, systems, or components (SSC's) and the assumption that the construction of SSC's will occur on no more than approximately XX acres (XX acres each for units XYZ 1 and XYZ 2) of the project area being developed (i.e., XXXX acres, excluding offsite electric transmission lines) (X%, restated as <X%).
ER Subsection 4.2.2.2 Wetlands	S – Surface Water S – Water Use	X	X	Estimates are based on the area of land use that will be dedicated to safety-related structures, systems, or components (SSC's) and the assumption that the construction of SSC's will occur on no more than approximately XX acres (XX acres each for units XYZ 1 and XYZ 2) of the project area being developed (i.e., XXXX acres, excluding offsite electric transmission lines) (X%, restated as <X%).
ER Subsection 4.2.2.3 Groundwater	S – Groundwater S – Water Use	X	X	Estimates are based on the area of land use that will be dedicated to safety-related structures, systems, or components (SSC's) and the assumption that the construction of SSC's will occur on no more than approximately XX acres (XX acres each for units XYZ 1 and XYZ 2) of the project area being developed (i.e., XXXX acres, excluding offsite electric transmission lines) (X%, restated as <X%).
ER Section 4.3 Ecological Impacts				
ER Subsection 4.3.1.1 Plant Site	S to M – Terrestrial Ecosystems	X	X	Ecological impacts will occur during preconstruction activities and mobile wildlife species are expected to vacate the site until construction is complete. Native plants will not be significantly impacted since the area has already been heavily modified due to silvicultural operations and impacts will occur during land clearing and preparation.
ER Subsection 4.3.2.1 On-Site Pools	S – Surface Water S – Aquatic Ecosystem	X	X	Ecological impacts will occur during preconstruction activities and mobile wildlife species are expected to vacate the site until construction is complete. Native plants will not be significantly impacted since the area has already been heavily modified due to silvicultural operations and impacts will occur during land clearing and preparation.
ER Subsection 4.3.2.2 Cooling Water Intake Structure (CWIS)	S – Aquatic Ecosystem	X	X	The CWIS will be located off-site and is not included in the definition of construction of SSCs

Table 4.6-2 (Sheet 4 of 6)

Summary of Construction- and Preconstruction-Related Impacts for Safety-Related Structures, Systems, or Components

Section Reference	Potential Impacts and Significance ^(a)	Estimated Impacts (%)		Basis of Estimate
		Construction ^(b)	Preconstruction	
ER Subsection 4.3.2.3 Cooling System Blowdown Discharge Pipeline	S – Aquatic Ecosystem	X	X	The cooling system blowdown pipeline is not included in the definition of construction of SSCs
ER Section 4.4 Socioeconomic Impacts				
ER Subsection 4.4.1.1 Noise	S – Noise	X	X	Most perceptible noise impacts at off-site locations will occur during the most intense operations in the power block area and will include pile driving of SSCs. Estimates are based on the average of the percent of labor hours dedicated to safety-related structures, systems, or components (SSCs) (X%) and the percent of land dedicated to SSCs (<X%). (Average stated as X%.)
ER Subsection 4.4.1.2 Air Quality	S – Air Quality	X	X	Air emissions will occur in the vicinity of the SSCs (power block area) during construction. Estimates are based on the average of the percent of labor hours dedicated to constructing safety-related structures, systems, or components (SSCs) (X%) and the percent of land dedicated to SSC's (<X%). (Average stated as X%.)
ER Subsection 4.4.1.3 Visual Aesthetic Disturbances	S – Other (Site-Specific)	X	X	SSCs (power block buildings) with significant elevation will have only a very small area/footprint and will have very limited visibility from a minimum number of offsite locations. Land clearing or deforestation for SSCs will not be visible from off-site locations, nor will changes in vegetation. Large cranes may also be used during construction of the SSCs and will be operated in the small footprint/area of the SSCs. Estimates are based on the area of land use that will be dedicated to SSCs and the assumption that the construction of SSCs will occur on no more than approximately XX ac. (XX ac. each for XYZ 1 and XYZ 2) of the project area being developed (i.e., XXXX acres, excluding off-site electric transmission lines) (X%, restated as <X%).
ER Subsection 4.4.2.3 Social Structure	S - Socioeconomic	X	X	Estimates are based on the percent of total project labor hours that will be dedicated to the construction of safety-related structures, systems, or components (SSCs), all of which will be in the power block areas for XYZ 1 and XYZ 2 (X%, restated as X%)

Table 4.6-2 (Sheet 5 of 6)

Summary of Construction- and Preconstruction-Related Impacts for Safety-Related Structures, Systems, or Components

Section Reference	Potential Impacts and Significance ^(a)	Estimated Impacts (%)		Basis of Estimate
		Construction ^(b)	Preconstruction	
ER Subsection 4.4.2.4 Housing	S - Socioeconomic	X	X	Estimates are based on the percent of total project labor hours that will be dedicated to the construction of safety-related structures, systems, or components (SSCs), all of which will be in the power block areas for XYZ 1 and XYZ 2 (X%, restated as X%).
ER Subsection 4.4.2.5 Educational System	S - Socioeconomic	X	X	Estimates are based on the percent of total project labor hours that will be dedicated to the construction of safety-related structures, systems, or components (SSCs), all of which will be in the power block areas for XYZ 1 and XYZ 2 (X%, restated as X%).
ER Subsection 4.4.2.6 Recreation	S – Socioeconomic S – Other (Site-Specific)	X	X	Estimates are based on the percent of total project labor hours that will be dedicated to the construction of safety-related structures, systems, or components (SSCs), all of which will be in the power block areas for XYZ 1 and XYZ 2 (X%, restated as X%).
ER Subsection 4.4.2.7 Public Services and Facilities	S - Socioeconomic	X	X	Estimates are based on the percent of total project labor hours that will be dedicated to the construction of safety-related structures, systems, or components (SSCs), all of which will be in the power block areas for XYZ 1 and XYZ 2 (X%, restated as X%).
ER Subsection 4.4.2.8 Security Services	S – Other (Site-Specific)	X	X	Estimates are based on the percent of total project labor hours that will be dedicated to the construction of safety-related structures, systems, or components (SSCs), all of which will be in the power block areas for XYZ 1 and XYZ 2 (X%, restated as X%).
ER Subsection 4.4.2.9 Water and Wastewater Services	S - Socioeconomic	X	X	Estimates are based on the percent of total project labor hours that will be dedicated to the construction of safety-related structures, systems, or components (SSCs), all of which will be in the power block areas for XYZ 1 and XYZ 2 (X%, restated as X%).
ER Subsection 4.4.2.10 Transportation Facilities	S to M - Traffic	X	X	Estimates are based on the percent of total project labor hours that will be dedicated to the construction of safety-related structures, systems, or components (SSCs), all of which will be in the power block areas for XYZ 1 and XYZ 2 (X%, restated as X%).
ER Subsection 4.4.2.11 Distinctive Communities	S - Socioeconomic	X	X	Estimates are based on the percent of total project labor hours that will be dedicated to the construction of safety-related structures, systems, or components (SSCs), all of which will be in the power block areas for XYZ 1 and XYZ 2 (X%, restated as X%).

Table 4.6-2 (Sheet 6 of 6)

Summary of Construction- and Preconstruction-Related Impacts for Safety-Related Structures, Systems, or Components

Section Reference	Potential Impacts and Significance ^(a)	Estimated Impacts (%)		Basis of Estimate
		Construction ^(b)	Preconstruction	
ER Subsection 4.4.3 Environmental Justice	S - Socioeconomic	X	X	Estimates are based on the percent of total project labor hours that will be dedicated to the construction of safety-related structures, systems, or components (SSCs), all of which will be in the power block areas for XYZ 1 and XYZ 2 (X%, restated as X%).
ER Subsection 4.4.3.1 Minority Populations	S - Socioeconomic	X	X	Estimates are based on the percent of total project labor hours that will be dedicated to the construction of safety-related structures, systems, or components (SSCs), all of which will be in the power block areas for XYZ 1 and XYZ 2 (X%, restated as X%).
ER Subsection 4.4.3.2 Low Income Populations	S - Socioeconomic	X	X	Estimates are based on the percent of total project labor hours that will be dedicated to the construction of safety-related structures, systems, or components (SSCs), all of which will be in the power block areas for XYZ 1 and XYZ 2 (X%, restated as X%).
ER Section 4.5 Radiation Exposure to Workers				
ER Subsection 4.5.6 Radiation Protection and ALARA Program	S – Effluent and Wastes S – Rad Exp to Constr Wkrs	X	X	Estimates are based on X% of the workforce remaining during the completion of the SSCs for XYZ 2 (half of X%, restated as X%).

Notes:

a) The assigned potential impact significance levels of (S)MALL, (M)ODERATE, or (L)ARGE are based on the assumption that mitigation measures and controls would be implemented.

b) "Construction," as defined in 10 CFR 50.2 "Definitions" refers to the construction of "safety-related structures, systems, or components (SSCs) of a facility"