

**SECTION D: PROJECT EXPERIENCE**  
**WOLF POINT**

## PROJECT SUMMARY

# AES Puerto Rico

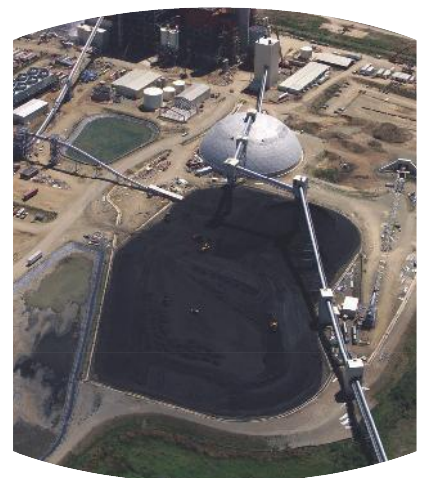
This was a turnkey contract for the material handling system at the AES-PR Total Energy Plant in Guayama, Puerto Rico.

The facility is designed to accept coal or limestone from a self unloading ship and convey the material at a rate of 3000 TPH to either coal stockpiles or a limestone storage dome. The coal is reclaimed from the stockpiles by ten 400 TPH vibratory feeders and conveyed to a crusher building where the coal is reduced by two 720 THP crushers from 2" x 0" to 3/8". The coal is then conveyed to the boiler building where a tripper fills eight coal silos.

The limestone is reclaimed by a 60 TPH vibrating feeder and conveyed to the limestone process building via 36" conveyor. The facility also accepts aggregate material via a hopper with an 1800 TPH feeder breaker and conveys the material to a shiploader through a series of conveyors.

The shiploader is equipped with a telescopic spout and a retractable boom conveyor to facilitate shiploading. All unloading, stockpiling, crushing, and shiploading operations are controlled by a series of programmable logic controllers (PLCs). Ancillary systems include wash down, sump pumps and dust collection.

<b>Owner</b>	AES Corporation
<b>Project</b>	Coal, limestone and ash handling including ship loader for ash disposal and harbor work
<b>Location</b>	Guayama, Puerto Rico
<b>Scope</b>	Engineering, procurement, construction, startup and commissioning



## PROJECT SUMMARY

# Cardon Refinery

This was a contract to provide a combination stacker/reclaimer and transfer car to Foster Wheeler for export to the Cardon Refinery project in Venezuela.

This system handles petroleum coke at 350 TPH stacking and 2,000 TPH reclaiming.

The stacker unit has a nominal 40 meter boom with convoluted counterweight. The stacker is fed by an elevated traveling tripper which inclines at 16 degrees to the discharge pivot of the stacker. The tripper and stacker units are rail mounted with individual drives and have an overall travel of 235 meters. The stacker has luffing capacity of +16 degrees to -10 degrees. The stacker unit is capable of forming two longitudinal piles. The slewing range is approximately 270 degrees.

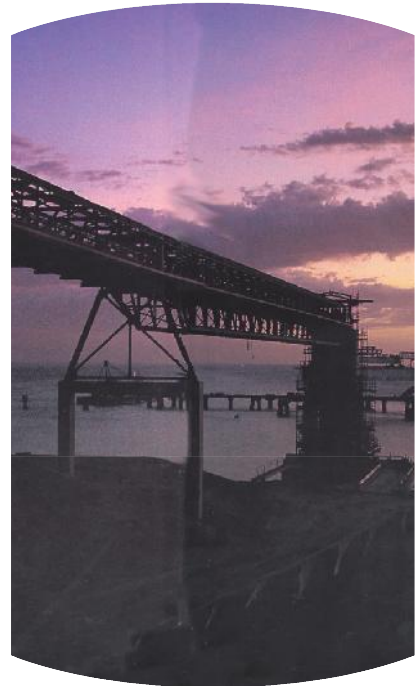
The stacking belt is a nominal 36" operating at two meters per second with a variable rate slewing speed of .06 to .18 RPM. Luffing speed is limited to 6 meters per minute. Stacker unit is capable of fully automatic operation.

Reclaimer is a bucket wheel type rail mounted unit, designed to traverse the longitudinal piles created by the stacker. The wheel centers of the reclaimer are approximately 44 meters with an active bucket reclaim range of approximately 37 meters.

Twin harrows with hoist winches are included for pile scrape down. An on-board operator's cab gives total vision to the reclaiming operation. The bridge conveyor on the reclaimer is a 60" nominal belt rated at 2,000 TPH operating at 3.6 meters per second with a bridge traverse speed of 12 meters per minute.

A transfer car is provided to convey the reclaimer from the first longitudinal pile to the second longitudinal pile.

The transfer car is a structural frame "low hog," wheel mounted, traversing device complete with on-board electrical room and operator's cab. Anchors and tie-downs are provided in the transfer car, which is capable of speeds from 5 to 15 meters per minute.



## PROJECT SUMMARY

# Middle East Oil Refinery (MIDOR)

A turnkey design, supply, install and commission contract from the Middle East Oil Refinery (MIDOR) for a pet coke stockpiling and truck loading facility at the MIDOR refinery located near Alexandria, Egypt.

The project consisted of a traveling overhead bridge crane which picks the pet coke up from a pad and loads it into a hopper.

Under the hopper a 300MTPH feeder breaker reduces the pet coke and transfers it to a conveyor which stockpiles the material to an open pile.

The material is reclaimed from the stockpile by four variable rate vibratory feeders. The vibratory feeders feed a 300MTPH reclaim conveyor that transports the pet coke to a 100T surge bin.

The surge bin is equipped with a loading spout and cutoff gate to fill open trucks. A truck scale is provided under the bin to monitor the amount of pet coke loaded in each truck. The entire operation is controlled by a programmable logic controller (PLC).



## PROJECT SUMMARY

# Motiva Refinery

This contract was for engineering and procurement of the pet coke handling system at Motiva Enterprises LLC's refinery in Port Arthur, Texas.

The Motiva pet coke handling system is designed to receive coke from two 750 TPH pet coke crushers at discharge hoppers #1 and 2 with belt feeders at the transfer towers.

The pet coke is conveyed from the transfer towers to the train loadout area at 1,500 TPH.

The pet coke is transferred to the two train loadout silos by two silo feed conveyors.

The 1,600-ton capacity silos discharge to the railcars through diamond back hoppers with isolating chutes and rolling blade control gates.

All areas of the pet coke handling system are provided with wet dust suppression.

Ancillary systems at the train loadout area include washdown and service air.

Our experience in designing and building these systems, assures that we will find the optimum solution to suit your needs. It will be a solution that is economical, reliable, safety conscious and environmentally sound.



### About Petroleum Coke

The use of coker drum technology in an oil refinery improves the yield of the higher value gasoline and diesel products; as a result most new refineries include a coker in their design and many existing refineries are converting to add cokers. The residue from the coker, petroleum coke, is a solid carbon similar in many ways to coal and is typically used as a fuel to generate power or steam, often being blended with coal. Pet coke handling includes crushing, storage, reclaim, blending, loading/unloading, and transportation, both at the refinery and at the end use location.

## PROJECT SUMMARY

# Oxbow Carbon

Engineering, procurement and construction for the LAXT Petroleum Coke Storage and Reclaim Facility.

The Project consists of a storage facility, including a large storage shelter, an enclosed truck dump and associated material processing and material handling equipment.

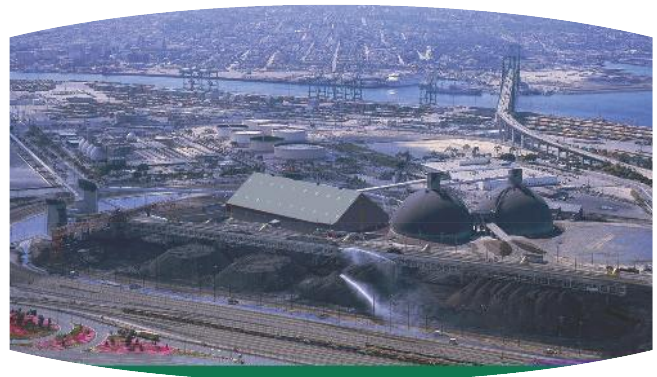
The project was integrated into the Existing Facilities, increasing enclosed petcoke storage and enhancing the performance and versatility of the Existing Export Facilities.

The Facilities receives petcoke and coal and provides storage to optimize shipping via ocean vessels.

This Project improved the availability of LAXT Facilities for receiving an expanded range of petcoke grades including uncrushed petcoke for onsite crushing to specification via a new 550 TPH truck dump system.

The Project increased the onsite petcoke storage capacity by 170,000 tons through a storage conveying system which includes a high angle conveyor and traveling tripper stacking conveyor in a new metal building with a footprint of 240' by 475' with an eave height of 95' above Grade.

The Project improved the Facilities ability to export of optimized blends of petcoke products via a 2200-TPH reclaim system.



## PROJECT SUMMARY

# Petrola Ameriven

Engineering, procurement, and commissioning Services for the design, supply and start-up of a coke and a sulfur processing facility at the Hamaca Refinery in Jose, Venezuela.

The petroleum coke handling system consists of a feeder breaker, a 36" coke loadout conveyor and four coke storage bins. Petroleum coke is received by end loader and fed onto the coke loadout conveyor.

36" coke loadout conveyor has a capacity of 350 TPH of petroleum coke weighing 56 pounds per cubic foot. The coke is fed to the top of the coke storage bins and sent through a 4-way diverter chute which allows the coke to be fed into one silo at a time. Each coke storage bin can hold a total of 175 tons of petroleum coke.

A coke truck loading spout is installed at the bottom of each bin for loading the coke into trucks.

The sulfur handling system consists of one high angle conveyor and two sulfur storage silos.

The high angle conveyor receives sulfur pastilles from one (1) to five (5) sulfur pastille conveyors provided by others and transfers the product to the top of two sulfur pastilles storage bins. A diverter gate on top of the silos distributes the pastilles into either bin No. 1 or bin No. 2.

Sulfur pastilles high angle conveyor has a capacity of 30 TPH and runs at a speed of 200 FPM. The incline of the high angle conveyor is 60 degrees.

Two truck loading spouts are installed on the bottom of each bin for loading out trucks.

Ancillary systems include insertable dust collectors, one on top of each coke bin. The insertable dust collectors are used to vent the bins during the loading operations as well as collect fugitive dust and return the dust back to the bins.

## **SECTION E: SCHEDULE AND MANPOWER CHART**



**BULK MATERIAL FACILITY ENCLOSURE**

Issue Date: 12-Jun-14

Activity ID	Activity Name	Duration Days	Start	Finish
<b>KOCH - BULK MATERIAL FACILITY ENCLOSURE</b>				
<b>MILESTONES</b>				
MST.1000	Milestones - Project Award	0	11-Jul-14*	12-Jan-17
MST.1010	Milestones - Project Complete	0		12-Jan-17
<b>PHASE III - PROJECT PLANNING &amp; FRONT END ENGINEERING</b>				
<b>GENERAL / MILESTONES</b>				
PFM.1000	Phase III - Start Phase III Project Planning & Front End Engineering	75	18-Jul-14	31-Oct-14
PFM.1010	Phase III - Review / Finalize Conceptual Design Plan (Risk / Value Added / Etc.)	0	18-Jul-14	07-Aug-14
PFM.1020	Phase III - Develop Permit Tracking Plan	10	08-Aug-14	21-Aug-14
PFM.1030	Phase III - Develop Hazard Analysis and Safe Work Plan	10	15-Aug-14	28-Aug-14
PFM.1040	Phase III - Develop Construction Plan	10	22-Aug-14	05-Sep-14
PFM.1050	Phase III - Develop Preliminary Turnover / Commissioning Plan	10	29-Aug-14	12-Sep-14
PFM.1060	Phase III - Complete Phase III Project Planning & Front End Engineering	0		31-Oct-14
<b>CIVIL</b>				
PFC.1000	Phase III - Conceptual Site Development Plan Finalized	45	25-Jul-14	26-Sep-14
PFC.1010	Phase III - Storm Water Management/ Retention Basin Upgrades Conceptual Plan Finalized	10	25-Jul-14	07-Aug-14
PFC.1020	Phase III - U/G Utilities - Conceptual Plan Finalized	15	01-Aug-14	21-Aug-14
PFC.1030	Phase III - Paving & Surfacing Plan Conceptual Plan Finalized	10	08-Aug-14	21-Aug-14
PFC.1040	Phase III - Landscaping & Irrigation Plan Conceptual Plan Finalized	5	15-Aug-14	21-Aug-14
PFC.1050	Phase III - Civil Conceptual Plans Finalized and Submitted for Koch Minerals Review	5	22-Aug-14	28-Aug-14
PFC.1060	Phase III - Civil Target Cost / Quantities / Man-Hours Developed	10	29-Aug-14	12-Sep-14
<b>FOUNDATIONS</b>				
PFF.1000	Phase III - Civil Target Cost / Quantities / Man-Hours Developed	10	15-Sep-14	26-Sep-14
PFF.1010	Phase III - Perform Soil Analysis	45	18-Jul-14	19-Sep-14
PFF.1020	Phase III - Deep Foundation Design	15	18-Jul-14	07-Aug-14
PFF.1030	Phase III - Foundations Design (Barns / Transfer Tower / Truck Wash / Misc.)	10	08-Aug-14	21-Aug-14
PFF.1040	Phase III - Foundations Conceptual Plans Finalized and Submitted for Koch Minerals Review	5	15-Aug-14	21-Aug-14
PFF.1050	Phase III - Foundations Conceptual Plans Finalized and Submitted for Koch Minerals Review	10	22-Aug-14	05-Sep-14
PFF.1060	Phase III - Foundations Target Cost / Quantities / Man-Hours Developed	10	08-Sep-14	19-Sep-14

**BULK MATERIAL FACILITY ENCLOSURE**

Activity ID	Activity Name	Duration Days	Start	Finish	2014												2015												2016												2017												2018											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>STRUCTURAL &amp; MECHANICAL</b>					<p>Phase III - Conveyor Equipment Conceptual Design &amp; Data Sheets Submitted</p> <p>Phase III - Structural Steel Conceptual Design (Barns / Transfer Towers / Truck Wash / Etc.)</p> <p>Phase III - Conveyors Conceptual Design (Steel / Grating / Handrail / Etc.)</p> <p>Phase III - Piping Diagrams (Dust Suppression / Dirty Water / Wash Down) Submitted</p> <p>Phase III - Ventilation Fans &amp; Lower Data Sheets Submitted</p> <p>Phase III - Structural &amp; Mechanical Conceptual Plans Finalized and Submitted for Koch Minerals Review</p> <p>Phase III - Structural &amp; Mechanical Target Cost / Quantities / Man-Hours Developed</p>																																																											
<b>ELECTRICAL</b>					<p>Phase III - Electrical Distribution Equipment Conceptual Plan Finalized</p> <p>Phase III - Raceways, wire, and cable Conceptual Plan Finalized</p> <p>Phase III - Lighting (Indoor / Outdoor / Emergency) Conceptual Plan Finalized</p> <p>Phase III - Develop 4160V One-Line Diagrams</p> <p>Phase III - Develop 480V One-Line Diagrams</p> <p>Phase III - Heat Trace Conceptual Plan Finalized</p> <p>Phase III - Instrumentation / Controls Conceptual Plan Finalized</p> <p>Phase III - Grey Water Recycle System Conceptual Plan Finalized</p> <p>Phase III - Electrical Conceptual Plans Finalized and Submitted for Koch Minerals Review</p> <p>Phase III - Electrical Target Cost / Quantities / Man-Hours Developed</p>																																																											
<b>FIRE PROTECTION</b>					<p>Phase III - Fire Protection Conceptual Plan Finalized</p> <p>Phase III - Fire Protection Target Cost / Quantities / Man-Hours Developed</p> <p>Phase III - Fire Protection Conceptual Plans Finalized and Submitted for Koch Minerals Review</p>																																																											
<b>PHASE IV - DETAILED ENGINEERING</b>					<p>Phase IV - Detailed Engineering</p> <p>Phase IV - Start Phase IV - Detailed Engineering (After Koch Approval of First Discipline Conceptual Plan)</p> <p>Phase IV - Updated Permitting Plan</p>																																																											

**BULK MATERIAL FACILITY ENCLOSURE**

Issue Date: 12-Jun-14

Activity ID	Activity Name	Duration Days	Start	Finish	2014												2015												2016												2017												2018											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
DEM.1020	Phase IV - Updated Risk Analysis	171	08-Sep-14	08-May-15	█												█												█												█												█											
DEM.1030	Phase IV - Updated Safe Work and Construction Safety Plan	171	08-Sep-14	08-May-15	█												█												█												█												█											
DEM.1040	Phase IV - Updated Procurement Plan incl. Eqp. List & Vendor Quotes	171	08-Sep-14	08-May-15	█												█												█												█												█											
DEM.1050	Phase IV - List of recommended Spare Parts	171	08-Sep-14	08-May-15	█												█												█												█												█											
DEM.1060	Phase IV - Updated Construction Plan	171	08-Sep-14	08-May-15	█												█												█												█												█											
DEM.1070	Phase IV - Updated Target Cost for Construction and Procurement (if appl.)	171	08-Sep-14	08-May-15	█												█												█												█												█											
DEM.1080	Phase IV - Complete Phase IV - Detailed Engineering	0		08-May-15	█												█												█												█												█											
<b>CIVIL</b>					█												█												█												█												█											
<b>Foundation &amp; Superstructure Permit</b>					█												█												█												█												█											
DEC.1000	Phase IV - Final Storm Water Management/ Retention Basin Upgrades Engineering Package	55	08-Sep-14	21-Nov-14	█												█												█												█												█											
DEC.1010	Phase IV - Final Site Development Engineering Package	30	15-Sep-14	24-Oct-14	█												█												█												█												█											
DEC.1020	Phase IV - Final U/G Utilities Engineering Package	50	15-Sep-14	21-Nov-14	█												█												█												█												█											
DEC.1030	Phase IV - Final Paving & Site Surfacing Engineering Package	30	15-Sep-14	24-Oct-14	█												█												█												█												█											
DEC.1040	Phase IV - Final Landscaping & Irrigation Engineering Package	30	15-Sep-14	24-Oct-14	█												█												█												█												█											
<b>FOUNDATIONS</b>					█												█												█												█												█											
<b>Foundation &amp; Superstructure Permit</b>					█												█												█												█												█											
DEF.1000	Phase IV - Foundation Design Engineering Package	50	20-Oct-14	31-Dec-14	█												█												█												█												█											
DEF.1010	Phase IV - Deep Foundation Engineering Package	30	20-Oct-14	02-Dec-14	█												█												█												█												█											
<b>STRUCTURAL &amp; MECHANICAL</b>					█												█												█												█												█											
<b>Foundation &amp; Superstructure Permit</b>					█												█												█												█												█											
DES.1000	Phase IV - Coke Barn No. 2 Engineering Package	35	22-Sep-14	07-Nov-14	█												█												█												█												█											
DES.1010	Phase IV - Coke Barn No. 1 Engineering Package	35	22-Sep-14	07-Nov-14	█												█												█												█												█											
DES.1020	Phase IV - General Arrangement/ Architectural Engineering Package	30	22-Sep-14	31-Oct-14	█												█												█												█												█											
DES.1030	Phase IV - Conveyor Mechanical Components Engineering Package	60	20-Oct-14*	15-Jan-15	█												█												█												█												█											
DES.1040	Phase IV - Conveyor Chutes Engineering Packages	50	20-Oct-14*	31-Dec-14	█												█												█												█												█											
DES.1050	Phase IV - Transfer Stations Structural Steel Engineering Package	55	20-Oct-14	08-Jan-15	█												█												█												█												█											
DES.1060	Phase IV - Conveyor Structural Steel Engineering Package	55	27-Oct-14	15-Jan-15	█												█												█												█												█											
DES.1070	Phase IV - Ventilation Fans Engineering Package	20	10-Nov-14	09-Dec-14	█												█												█												█												█											
<b>Interior Permit</b>					█												█												█												█												█											
<b>Interior Permit</b>					█												█												█												█												█											





**BULK MATERIAL FACILITY ENCLOSURE**

Activity ID	Activity Name	Duration Days	Start	Finish	2014												2015												2016												2017												2018											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
DEP.4030	Phase IV - Fire Prevention Bureau Final Review / Permit Issued	5	16-Jan-15	22-Jan-15	Phase IV - Fire Prevention Bureau Final Review / Permit Issued																																																											
<b>PHASE VI - PROCUREMENT STRUCTURAL &amp; MECHANICAL</b>					<b>PHASE VI - PROCUREMENT STRUCTURAL &amp; MECHANICAL</b>																																																											
PRS.1000	Procurement	543	20-Nov-14	12-Jan-17	Procurement																																																											
PRS.1010	Phase VI - Procurement - Structural and Conveyor Steel (Detailing / Engineering)	506	16-Jan-15	12-Jan-17	Phase VI - Procurement - Structural and Conveyor Steel (Detailing / Engineering)																																																											
PRS.1020	Phase VI - Procurement - Conveyors Components & Equipment (Detailing / Engineering)	70	16-Jan-15	23-Apr-15	Phase VI - Procurement - Conveyors Components & Equipment (Detailing / Engineering)																																																											
PRS.1030	Phase VI - Procurement - Trippers (Detailing / Engineering)	30	16-Jan-15	26-Feb-15	Phase VI - Procurement - Trippers (Detailing / Engineering)																																																											
PRS.1040	Phase VI - Procurement - Dust Suppression System (Detailing / Engineering)	55	16-Jan-15	02-Apr-15	Phase VI - Procurement - Dust Suppression System (Detailing / Engineering)																																																											
PRS.1050	Phase VI - Procurement - Conveyor Chutes (Detailing / Engineering)	40	16-Jan-15	12-Mar-15	Phase VI - Procurement - Conveyor Chutes (Detailing / Engineering)																																																											
PRS.2000	Phase VI - Procurement - Transfer Stations Roofing and Siding (Detailing / Engineering)	40	23-Jan-15	19-Mar-15	Phase VI - Procurement - Transfer Stations Roofing and Siding (Detailing / Engineering)																																																											
PRS.2010	Phase VI - Procurement - Transfer Stations Roofing and Siding (Detailing / Engineering)	50	13-Feb-15	23-Apr-15	Phase VI - Procurement - Transfer Stations Roofing and Siding (Detailing / Engineering)																																																											
PRS.2020	Phase VI - Procurement - Transfer Stations Roofing and Siding (Detailing / Engineering)	30	27-Feb-15	09-Apr-15	Phase VI - Procurement - Transfer Stations Roofing and Siding (Detailing / Engineering)																																																											
PRS.2030	Fabrication (After Building Permit Review Approval)	145	11-May-15	04-Dec-15	Fabrication (After Building Permit Review Approval)																																																											
PRS.2040	Phase VI - Fabrication - PEMB Barn No. 1 Phase 1	40	11-May-15	07-Jul-15	Phase VI - Fabrication - PEMB Barn No. 1 Phase 1																																																											
PRS.2050	Phase VI - Fabrication - Structural and Conveyor Steel	70	11-May-15	18-Aug-15	Phase VI - Fabrication - Structural and Conveyor Steel																																																											
PRS.2060	Phase VI - Fabrication - Conveyors Components & Equipment	145	11-May-15	04-Dec-15	Phase VI - Fabrication - Conveyors Components & Equipment																																																											
PRS.2070	Phase VI - Fabrication - PEMB Barn No. 2 Phase 1	40	09-Jun-15	04-Aug-15	Phase VI - Fabrication - PEMB Barn No. 2 Phase 1																																																											
PRS.2080	Phase VI - Fabrication - Conveyor Chutes	70	16-Jun-15	23-Sep-15	Phase VI - Fabrication - Conveyor Chutes																																																											
PRS.2090	Phase VI - Fabrication - Trippers	75	23-Jun-15	07-Oct-15	Phase VI - Fabrication - Trippers																																																											
PRS.2100	Phase VI - Fabrication - PEMB Barn No. 1 Phase 2	15	29-Jul-15	18-Aug-15	Phase VI - Fabrication - PEMB Barn No. 1 Phase 2																																																											
PRS.2110	Phase VI - Fabrication - Ventilation Fans	60	12-Aug-15	04-Nov-15	Phase VI - Fabrication - Ventilation Fans																																																											
PRS.2120	Phase VI - Fabrication - Transfer Stations Roofing and Siding	25	19-Aug-15	23-Sep-15	Phase VI - Fabrication - Transfer Stations Roofing and Siding																																																											
PRS.3000	Phase VI - Fabrication - PEMB Barn No. 2 Phase 2	15	26-Aug-15	16-Sep-15	Phase VI - Fabrication - PEMB Barn No. 2 Phase 2																																																											
PRS.3010	Phase VI - Fabrication - Dust Suppression System	35	26-Aug-15	14-Oct-15	Phase VI - Fabrication - Dust Suppression System																																																											
PRS.3020	Phase VI - Fabrication - PEMB Barn No. 1 Phase 3	15	10-Sep-15	30-Sep-15	Phase VI - Fabrication - PEMB Barn No. 1 Phase 3																																																											
PRS.3030	Phase VI - Fabrication - PEMB Barn No. 2 Phase 3	15	08-Oct-15	28-Oct-15	Phase VI - Fabrication - PEMB Barn No. 2 Phase 3																																																											
Delivery	Phase VI - Delivery - PEMB Barn No. 1 Phase 1	385	08-Jul-15	12-Jan-17	Phase VI - Delivery - PEMB Barn No. 1 Phase 1																																																											
PRS.3000	Phase VI - Delivery - PEMB Barn No. 1 Phase 1	10	08-Jul-15	21-Jul-15	Phase VI - Delivery - PEMB Barn No. 1 Phase 1																																																											
PRS.3010	Phase VI - Delivery - PEMB Barn No. 2 Phase 1	10	05-Aug-15	18-Aug-15	Phase VI - Delivery - PEMB Barn No. 2 Phase 1																																																											

**BULK MATERIAL FACILITY ENCLOSURE**

Activity ID	Activity Name	Duration Days	Start	Finish	2014												2015												2016												2017												2018											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PRS.3020	Phase V.I - Delivery - Structural and Conveyor Steel	105	02-Sep-15	02-Feb-16	[Gantt bar: Sep-15 to Feb-16]												Phase V.I - Delivery - Structural and Conveyor Steel																																															
PRS.3030	Phase V.I - Delivery - Conveyors Components	75	05-Nov-15	23-Feb-16	[Gantt bar: Nov-15 to Feb-16]												Phase V.I - Delivery - Conveyors Components																																															
PRS.3040	Phase V.I - Delivery - PEMB Barn No. 1 Phase 2	10	05-Nov-15	18-Nov-15	[Gantt bar: Nov-15 to Nov-15]												Phase V.I - Delivery - PEMB Barn No. 1 Phase 2																																															
PRS.3050	Phase V.I - Delivery - Trippers	25	12-Nov-15	18-Dec-15	[Gantt bar: Nov-15 to Dec-15]												Phase V.I - Delivery - Trippers																																															
PRS.3060	Phase V.I - Delivery - Transfer Stations Roofing & Siding	25	19-Nov-15	28-Dec-15	[Gantt bar: Nov-15 to Dec-15]												Phase V.I - Delivery - Transfer Stations Roofing & Siding																																															
PRS.3070	Phase V.I - Delivery - PEMB Barn No. 2 Phase 2	10	14-Dec-15	28-Dec-15	[Gantt bar: Dec-15 to Dec-15]												Phase V.I - Delivery - PEMB Barn No. 2 Phase 2																																															
PRS.3080	Phase V.I - Delivery - PEMB Barn No.1 Phase 3	10	14-Mar-16	25-Mar-16	[Gantt bar: Mar-16 to Mar-16]												Phase V.I - Delivery - PEMB Barn No.1 Phase 3																																															
PRS.3090	Phase V.I - Delivery - PEMB Barn No.2 Phase 3	10	18-Apr-16	29-Apr-16	[Gantt bar: Apr-16 to Apr-16]												Phase V.I - Delivery - PEMB Barn No. 2 Phase 3																																															
PRS.3100	Phase V.I - Delivery - Dust Suppression System / Insulation	25	07-Dec-16	12-Jan-17	[Gantt bar: Dec-16 to Jan-17]												Phase V.I - Delivery - Dust Suppression System												Phase V.I - Delivery - Dust Suppression System																																			
<b>ELECTRICAL</b>																																																																
PRE.1000	Phase V.I - Procurement - Duct Banks (If Any)	272	20-Nov-14	17-Dec-15	[Gantt bar: Nov-14 to Dec-15]												Phase V.I - Procurement - Duct Banks (If Any)																																															
PRE.1010	Phase V.I - Procurement - Site U/G - Grounding	8	20-Nov-14	03-Dec-14	[Gantt bar: Nov-14 to Dec-14]												Phase V.I - Procurement - Site U/G - Grounding																																															
PRE.1020	Phase V.I - Procurement - Above Grade Ground / Lighting Protection	20	04-Dec-14	02-Jan-15	[Gantt bar: Dec-14 to Jan-15]												Phase V.I - Procurement - Above Grade Ground / Lighting Protection																																															
PRE.1030	Phase V.I - Procurement - Electrical Distribution Equipment (MCC/TFXMR /PDP / etc.)	7	09-Jan-15	19-Jan-15	[Gantt bar: Jan-15 to Jan-15]												Phase V.I - Procurement - Electrical Distribution Equipment (MCC/TFXMR / PDP / etc.)																																															
PRE.1040	Phase V.I - Procurement - Raceways, Wire, and Cable	20	20-Feb-15	19-Mar-15	[Gantt bar: Feb-15 to Mar-15]												Phase V.I - Procurement - Raceways, Wire, and Cable																																															
PRE.1050	Phase V.I - Procurement - Lighting (Indoor / Outdoor / Emergency)	15	10-Apr-15	30-Apr-15	[Gantt bar: Apr-15 to Apr-15]												Phase V.I - Procurement - Lighting (Indoor / Outdoor / Emergency)																																															
PRE.1060	Phase V.I - Procurement - Gray Water Recycle System	5	10-Apr-15	16-Apr-15	[Gantt bar: Apr-15 to Apr-15]												Phase V.I - Procurement - Gray Water Recycle System																																															
PRE.1070	Phase V.I - Procurement - Heat Trace	105	17-Apr-15	15-Sep-15	[Gantt bar: Apr-15 to Sep-15]												Phase V.I - Procurement - Heat Trace																																															
PRE.1080	Phase V.I - Procurement - Instrumentation / Controls	60	16-Sep-15	10-Dec-15	[Gantt bar: Sep-15 to Dec-15]												Phase V.I - Procurement - Instrumentation / Controls																																															
PRE.1090	Phase V.I - Procurement - Fire Alarm System	5	11-Dec-15	17-Dec-15	[Gantt bar: Dec-15 to Dec-15]												Phase V.I - Procurement - Fire Alarm System																																															
<b>FIRE PROTECTION</b>																																																																
PRR.1010	Phase V.I - Procurement - Fire Protection - Barns	15	23-Jan-15	12-Feb-15	[Gantt bar: Jan-15 to Feb-15]												Phase V.I - Procurement - Fire Protection - Barns																																															
<b>PHASE V.II - CONSTRUCTION</b>																																																																
<b>GENERAL / MILESTONES</b>																																																																
CNM.1000	Phase V.II - Construction Start Milestone	486	16-Jan-15	13-Dec-16	[Gantt bar: Jan-15 to Dec-16]												Phase V.II - Construction Start Milestone																																															
CNM.1010	Phase V.II - Construction Finish Milestone	405	11-May-15	13-Dec-16	[Gantt bar: May-15 to Dec-16]												Phase V.II - Construction Finish Milestone																																															
		0	11-May-15		[Gantt bar: May-15 to May-15]												Phase V.II - Construction Start Milestone																																															
		0			[Gantt bar: May-15 to May-15]												Phase V.II - Construction Finish Milestone																																															
<b>CIVIL</b>																																																																
Survey / Layout		486	16-Jan-15	13-Dec-16	[Gantt bar: Jan-15 to Dec-16]												Survey / Layout																																															
		20	16-Jan-15	12-Feb-15	[Gantt bar: Jan-15 to Feb-15]												Survey / Layout																																															



**PRELIMINARY ENGINEERING, PROCUREMENT & CONSTRUCTION SCHEDULE**

**BULK MATERIAL FACILITY ENCLOSURE**

Activity ID	Activity Name	Duration Days	Start	Finish	2014												2015												2016												2017												2018											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CNC: 1000	Phase V.II - Pre-Permit Construction - Survey / Layout Excavation Limits	20	16-Jan-15	12-Feb-15	[Gantt bar: 16-Jan-15 to 12-Feb-15]																																																											
<b>Site Prep Temporary Spaces</b>																																																																
CNC: 1010	Phase V.II - Pre-Permit Construction - Install Temporary Stone and Grade Laydown Yards / Trailer City / Etc.	50	13-Feb-15	23-Apr-15	[Gantt bar: 13-Feb-15 to 23-Apr-15]																																																											
CNC: 1020	Phase V.II - Pre-Permit Construction - Install Trailers / Temporary Fencing	20	13-Feb-15	12-Mar-15	[Gantt bar: 13-Feb-15 to 12-Mar-15]																																																											
CNC: 1030	Phase V.II - Pre-Permit Construction - Prep. Temporary Construction Roads	15	13-Mar-15	02-Apr-15	[Gantt bar: 13-Mar-15 to 02-Apr-15]																																																											
<b>Demolition</b>																																																																
CNC: 1040	Phase V.II - Pre-Permit Construction - Demolition of Existing Water Cannons within Building Footprint	15	03-Apr-15	23-Apr-15	[Gantt bar: 03-Apr-15 to 23-Apr-15]																																																											
<b>Site Development</b>																																																																
CNC: 1050	Phase V.II - Excavate for Piles Barn #1	55	17-Apr-15	07-May-15	[Gantt bar: 17-Apr-15 to 07-May-15]																																																											
CNC: 1060	Phase V.II - Excavate for Piles Barn #2	50	17-Apr-15	07-May-15	[Gantt bar: 17-Apr-15 to 07-May-15]																																																											
<b>Storm Water Management / Retention Basin Upgrades</b>																																																																
CNC: 1070	Phase V.II - Storm Water Management/ Retention Basin Upgrades (SWPP Inspections) - Project Duration	405	11-May-15	13-Dec-16	[Gantt bar: 11-May-15 to 13-Dec-16]																																																											
CNC: 1080	Phase V.II - Retention Basins Upgrades (Secondary & Pre-Treatment)	405	11-May-15	13-Dec-16	[Gantt bar: 11-May-15 to 13-Dec-16]																																																											
CNC: 1090	Phase V.II - Retention Basin Upgrade (Primary)	15	08-Jul-15	28-Jul-15	[Gantt bar: 08-Jul-15 to 28-Jul-15]																																																											
<b>U/G Utilities - Gray Water, Fire Water, Potable Water</b>																																																																
CNC: 1100	Phase V.II - U/G Utilities Installation (Gray Water / Fire Water / Water / Electrical Duct Banks)	137	05-Aug-15	25-Aug-15	[Gantt bar: 05-Aug-15 to 25-Aug-15]																																																											
<b>Paving &amp; Surfacing Plan</b>																																																																
CNC: 1120	Phase V.II - Aggregate Base, Paving and Surfacing - Site Roads	91	11-May-15	20-Nov-15	[Gantt bar: 11-May-15 to 20-Nov-15]																																																											
CNC: 1130	Phase V.II - Aggregate Base, Paving and Surfacing - Bams	80	20-Jun-16	26-Oct-16	[Gantt bar: 20-Jun-16 to 26-Oct-16]																																																											
<b>Landscaping &amp; Irrigation Plan</b>																																																																
CNC: 1140	Phase V.II - Landscaping & Irrigation Plan	50	17-Aug-16	26-Oct-16	[Gantt bar: 17-Aug-16 to 26-Oct-16]																																																											
<b>FOUNDATIONS</b>																																																																
CNF: 1000	Deep Foundations (Piles, Etc.)	368	18-May-15	26-Oct-16	[Gantt bar: 18-May-15 to 26-Oct-16]																																																											
CNF: 1010	Phase V.II - Install Piles Barn No. 1	65	18-May-15	18-Aug-15	[Gantt bar: 18-May-15 to 18-Aug-15]																																																											
CNF: 1020	Phase V.II - Install Piles Barn No. 2	40	18-May-15	14-Jul-15	[Gantt bar: 18-May-15 to 14-Jul-15]																																																											
CNF: 1030	Phase V.II - Install Piles Transfer Towers & Conveyors	40	02-Jun-15	28-Jul-15	[Gantt bar: 02-Jun-15 to 28-Jul-15]																																																											
<b>Foundations (Bams / Transfer Towers / Truck Wash / Misc.)</b>																																																																
CNF: 1040	Phase V.II - Storage Barn No. 1 Foundations / Concrete Wall / West Stair Tower	45	16-Jun-15	18-Aug-15	[Gantt bar: 16-Jun-15 to 18-Aug-15]																																																											
CNF: 1050	Phase V.II - Storage Barn No. 2 Foundations / Concrete Wall / West Stair Tower	358	02-Jun-15	26-Oct-16	[Gantt bar: 02-Jun-15 to 26-Oct-16]																																																											
CNF: 1060	Phase V.II - Storage Barn No. 2 Foundations / Concrete Wall / West Stair Tower	120	02-Jun-15	16-Nov-15	[Gantt bar: 02-Jun-15 to 16-Nov-15]																																																											
CNF: 1070	Phase V.II - Storage Barn No. 2 Foundations / Concrete Wall / West Stair Tower	120	16-Jun-15	04-Dec-15	[Gantt bar: 16-Jun-15 to 04-Dec-15]																																																											
CNF: 1080	Phase V.II - Transfer Station 2 Foundations	5	22-Jul-15	28-Jul-15	[Gantt bar: 22-Jul-15 to 28-Jul-15]																																																											



**BULK MATERIAL FACILITY ENCLOSURE**

Activity ID	Activity Name	Duration Days	Start	Finish	2014												2015												2016												2017												2018											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CNF:1060	Phase V.II - Storage Transfer Conveyor 4 Foundations	3	29-Jul-15	31-Jul-15	Phase V.II - Storage Transfer Conveyor 4 Foundations																																																											
CNF:1070	Phase V.II - Transfer Station 3 Foundations	5	03-Aug-15	07-Aug-15	Phase V.II - Transfer Station 3 Foundations																																																											
CNF:1080	Phase V.II - Storage Transfer Conveyor 5 Foundations	3	10-Aug-15	12-Aug-15	Phase V.II - Storage Transfer Conveyor 5 Foundations																																																											
CNF:1090	Phase V.II - Transfer Station 4 Foundations	5	13-Aug-15	19-Aug-15	Phase V.II - Transfer Station 4 Foundations																																																											
CNF:1100	Phase V.II - Transfer Station 6 Foundations	5	20-Aug-15	26-Aug-15	Phase V.II - Transfer Station 6 Foundations																																																											
CNF:1110	Phase V.II - Reclaim Conveyor 10 Foundations (Transfer Station 6 to Transfer Station 5)	5	27-Aug-15	02-Sep-15	Phase V.II - Reclaim Conveyor 10 Foundations (Transfer Station 6 to Transfer Station 5)																																																											
CNF:1120	Phase V.II - Transfer Station 5 Foundations	5	03-Sep-15	10-Sep-15	Phase V.II - Transfer Station 5 Foundations																																																											
CNF:1130	Phase V.II - Reclaim Conveyor 10 (TS-5 to Existing Transfer Station 7) (TO BE COORDINATED WITH KOCH MINERALS)	5	11-Sep-15	17-Sep-15	Phase V.II - Reclaim Conveyor 10 (TS-5 to Existing Transfer Station 7) (TO BE COORDINATED WITH KOCH MINERALS)																																																											
CNF:1140	Phase V.II - Transfer Tower 7 Foundations (TO BE COORDINATED WITH KOCH MINERALS)	5	18-Sep-15	24-Sep-15	Phase V.II - Transfer Tower 7 Foundations (TO BE COORDINATED WITH KOCH MINERALS)																																																											
CNF:1150	Phase V.II - Modifications to Existing Transfer Structure Foundations C-4 (TO BE COORDINATED WITH KOCH MINERALS)	5	25-Sep-15	01-Oct-15	Phase V.II - Modifications to Existing Transfer Structure Foundations C-4 (TO BE COORDINATED WITH KOCH MINERALS)																																																											
CNF:1160	Phase V.II - Storage Transfer Conveyor 1 Foundations (TO BE COORDINATED WITH KOCH MINERALS)	10	02-Oct-15	15-Oct-15	Phase V.II - Storage Transfer Conveyor 1 Foundations (TO BE COORDINATED WITH KOCH MINERALS)																																																											
CNF:1170	Phase V.II - Reclaim Conveyor 8 Foundations	30	08-Oct-15	18-Nov-15	Phase V.II - Reclaim Conveyor 8 Foundations																																																											
CNF:1180	Phase V.II - Transfer Tower 1 Foundations (TO BE COORDINATED WITH KOCH MINERALS)	5	16-Oct-15	22-Oct-15	Phase V.II - Transfer Tower 1 Foundations (TO BE COORDINATED WITH KOCH MINERALS)																																																											
CNF:1190	Phase V.II - Reclaim Conveyor 9 Foundations	30	22-Oct-15	04-Dec-15	Phase V.II - Reclaim Conveyor 9 Foundations																																																											
CNF:1200	Phase V.II - Storage Transfer Conveyor 2 Foundations (TO BE COORDINATED WITH KOCH MINERALS)	8	23-Oct-15	03-Nov-15	Phase V.II - Storage Transfer Conveyor 2 Foundations (TO BE COORDINATED WITH KOCH MINERALS)																																																											
CNF:1210	Phase V.II - Storage Transfer Conveyor 3 Foundations (TO BE COORDINATED WITH KOCH MINERALS)	5	04-Nov-15	10-Nov-15	Phase V.II - Storage Transfer Conveyor 3 Foundations (TO BE COORDINATED WITH KOCH MINERALS)																																																											
CNF:1220	Phase V.II - Modifications to Existing Transfer Structure UC-2 Foundations (TO BE COORDINATED WITH KOCH MINERALS)	5	11-Nov-15	17-Nov-15	Phase V.II - Modifications to Existing Transfer Structure UC-2 Foundations (TO BE COORDINATED WITH KOCH MINERALS)																																																											
CNF:1230	Phase V.II - Barn(s) Trench Drains	20	29-Sep-16	26-Oct-16	Phase V.II - Barn(s) Trench Drains																																																											
<b>STRUCTURAL &amp; MECHANICAL</b>																																																																
<b>Structural Steel</b>																																																																
<b>Barns</b>																																																																
CNS:1000	Phase V.II - Coke Barn No. 1 Phase 1 (Offload / Handle / Erect / Detail / Siding / Roofing)	331	22-Jul-15	07-Nov-16	Phase V.II - Coke Barn No. 1 Phase 1 (Offload / Handle / Erect / Detail / Siding / Roofing)																																																											
CNS:1010	Phase V.II - Coke Barn No. 2 Phase 1 (Offload / Handle / Erect / Detail / Siding / Roofing)	283	22-Jul-15	30-Aug-16	Phase V.II - Coke Barn No. 2 Phase 1 (Offload / Handle / Erect / Detail / Siding / Roofing)																																																											
CNS:1020	Phase V.II - Coke Barn No. 1 Phase 2 (Offload / Handle / Erect / Detail / Siding / Roofing)	283	22-Jul-15	30-Aug-16	Phase V.II - Coke Barn No. 1 Phase 2 (Offload / Handle / Erect / Detail / Siding / Roofing)																																																											
CNS:1030	Phase V.II - Coke Barn No. 2 Phase 2 (Offload / Handle / Erect / Detail / Siding / Roofing)	85	22-Jul-15	18-Nov-15	Phase V.II - Coke Barn No. 2 Phase 2 (Offload / Handle / Erect / Detail / Siding / Roofing)																																																											
CNS:1040	Phase V.II - Offload / Erect Hanger Support Structure-Coke Barn (South No. 1)	90	19-Aug-15	28-Dec-15	Phase V.II - Offload / Erect Hanger Support Structure-Coke Barn (South No. 1)																																																											
CNS:1050	Phase V.II - Coke Barn No. 1 Phase 3 (Offload / Handle / Erect / Detail / Siding / Roofing)	88	19-Nov-15	25-Mar-16	Phase V.II - Coke Barn No. 1 Phase 3 (Offload / Handle / Erect / Detail / Siding / Roofing)																																																											
		88	29-Dec-15	29-Apr-16	Phase V.II - Coke Barn No. 2 Phase 2 (Offload / Handle / Erect / Detail / Siding / Roofing)																																																											
		45	28-Mar-16	27-May-16	Phase V.II - Offload / Erect Hanger Support Structure-Coke Barn (South No. 1)																																																											
		85	28-Mar-16	26-Jul-16	Phase V.II - Coke Barn No. 1 Phase 3 (Offload / Handle / Erect / Detail / Siding / Roofing)																																																											

**BULK MATERIAL FACILITY ENCLOSURE**

Activity ID	Activity Name	Duration Days	Start	Finish	2014												2015												2016												2017												2018											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CNS.1060	Phase V.II - Offload / Erect Hanger Support Structure - Coke Barn (North) No. 2	45	02-May-16	05-Jul-16																																																												
CNS.1070	Phase V.II - Coke Barn No. 2 Phase 3 (Offload / Handle / Erect / Detail / Siding / Roofing)	85	02-May-16	30-Aug-16																																																												
CNS.1080	Transfer Towers / Truck Wash / Misc. Phase V.II - Erect / Detail Transfer Station 2	150 40	02-Sep-15 02-Sep-15	05-Apr-16 28-Oct-15																																																												
CNS.1090	Phase V.II - Erect / Detail Transfer Station 3	50	08-Oct-15	18-Dec-15																																																												
CNS.1100	Phase V.II - Erect / Detail Transfer Station 4	40	19-Nov-15	19-Jan-16																																																												
CNS.1110	Phase V.II - Erect / Detail Transfer Station 6	15	29-Dec-15	19-Jan-16																																																												
CNS.1120	Phase V.II - Erect / Detail Transfer Station 5	15	13-Jan-16	02-Feb-16																																																												
CNS.1130	Phase V.II - Truck Wash Station	10	20-Jan-16	02-Feb-16																																																												
CNS.1140	Phase V.II - Modifications to Existing Transfer Station 7 (C-2) (TO BE COORDINATED WITH KOCH MINERALS)	20	27-Jan-16	23-Feb-16																																																												
CNS.1150	Phase V.II - Rotary Building Overlapping Door Flaps	5	03-Feb-16	09-Feb-16																																																												
CNS.1160	Phase V.II - Modifications to Existing Transfer Station (C-4) (TO BE COORDINATED WITH KOCH MINERALS)	15	10-Feb-16	01-Mar-16																																																												
CNS.1170	Phase V.II - Ashross Rail Dumper Overlapping Door Flaps	5	10-Feb-16	16-Feb-16																																																												
CNS.1180	Phase V.II - Erect / Detail Transfer Station 1 (TO BE COORDINATED WITH KOCH MINERALS)	20	24-Feb-16	22-Mar-16																																																												
CNS.1190	Phase V.II - Modifications to Existing Transfer Station (UC-2) (TO BE COORDINATED WITH KOCH MINERALS)	15	16-Mar-16	05-Apr-16																																																												
<b>Conveyors &amp; Equipment</b>																																																																
<b>Pre - Assemble Conveyors</b>																																																																
<b>Barn No. 1</b>																																																																
CNS.2000	Phase V.II - Pre-Assemble Storage Transfer Conveyor 4	163	19-Nov-15	12-Jul-16																																																												
CNS.2010	Phase V.II - Pre-Assemble Storage Transfer Conveyor 5	16	19-Nov-15	14-Dec-15																																																												
CNS.2020	Phase V.II - Pre-Assemble Storage Transfer Conveyor 10 (TS-6 to TS-5)	26	07-Dec-15	13-Jan-16																																																												
CNS.2030	Phase V.II - Pre-Assemble Storage Transfer Conveyor 3	26	14-Jan-16	18-Feb-16																																																												
CNS.2040	Phase V.II - Pre-Assemble Reclaim Conveyor 8	10	19-Feb-16	03-Mar-16																																																												
CNS.2050	Phase V.II - Pre-Assemble Reclaim Conveyor 6	43	04-Mar-16	03-May-16																																																												
<b>Barn No. 2</b>																																																																
CNS.2060	Phase V.II - Pre-Assemble Storage Transfer Conveyor 1	61	15-Apr-16	12-Jul-16																																																												
CNS.2070	Phase V.II - Pre-Assemble Storage Transfer Conveyor 2	143	29-Dec-15	19-Jul-16																																																												
CNS.2080	Phase V.II - Pre-Assemble Reclaim Transfer Conveyor 10 (TS-5 to TS-7)	43	29-Dec-15	26-Feb-16																																																												
		30	10-Feb-16	22-Mar-16																																																												
		26	09-Mar-16	13-Apr-16																																																												

**BULK MATERIAL FACILITY ENCLOSURE**

Issue Date: 12-Jun-14

Activity ID	Activity Name	Duration Days	Start	Finish	2014			2015			2016			2017			2018		
					Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar
CNS.2090	Phase V.II - Pre-Assemble Storage Transfer Conveyor 7	61	06-Apr-16	30-Jun-16															
CNS.2100	Phase V.II - Pre-Assemble Reclaim Conveyor 9	43	18-May-16	19-Jul-16															
<b>Erect Conveyors</b>		<b>118</b>	<b>23-Mar-16</b>	<b>07-Sep-16</b>															
CNS.3000	Phase V.II - Erect Storage Transfer Conveyor 4	3	23-Mar-16	25-Mar-16															
CNS.3010	Phase V.II - Erect Storage Transfer Conveyor 5	5	23-Mar-16	29-Mar-16															
CNS.3020	Phase V.II - Erect Reclaim Transfer Conveyor 10 (TS- 6 to TS-5)	11	30-Mar-16	13-Apr-16															
CNS.3030	Phase V.II - Erect Reclaim Transfer Conveyor 10 (TS- 5 to TS- 7) (TO BE COORDINATED WIT	9	14-Apr-16	26-Apr-16															
CNS.3040	Phase V.II - Erect Storage Transfer Conveyor 1 (TO BE COORDINATED WITH KOCH MINERALS)	10	27-Apr-16	10-May-16															
CNS.3050	Phase V.II - Erect Storage Transfer Conveyor 2 (TO BE COORDINATED WITH KOCH MINERALS)	8	11-May-16	20-May-16															
CNS.3060	Phase V.II - Erect Storage Transfer Conveyor 3 (TO BE COORDINATED WITH KOCH MINERALS)	4	23-May-16	26-May-16															
CNS.3070	Phase V.II - Erect Storage Transfer Conveyor 7	40	06-Jul-16	30-Aug-16															
CNS.3080	Phase V.II - Erect Reclaim Conveyor 8	15	06-Jul-16	26-Jul-16															
CNS.3090	Phase V.II - Erect Storage Transfer Conveyor 6	30	27-Jul-16	07-Sep-16															
CNS.3100	Phase V.II - Erect Reclaim Conveyor 9	15	10-Aug-16	30-Aug-16															
<b>Install Belts &amp; Hood Covers</b>		<b>158</b>	<b>28-Mar-16</b>	<b>07-Nov-16</b>															
CNS.4000	Phase V.II - Install Belts & Hood Covers Storage Transfer Conveyor 4	5	28-Mar-16	01-Apr-16															
CNS.4010	Phase V.II - Install Belts & Hood Covers Storage Transfer Conveyor 5	8	04-Apr-16	13-Apr-16															
CNS.4020	Phase V.II - Install Belts & Hood Covers Reclaim Transfer Conveyor 10 (TS-6 to TS-5)	8	14-Apr-16	25-Apr-16															
CNS.4030	Phase V.II - Install Belts & Hood Covers Reclaim Transfer Conveyor 10 (TS-5 to TS-7) (TO BE COORDINATED WITH KOCH MINE	8	27-Apr-16	06-May-16															
CNS.4040	Phase V.II - Install Belts & Hood Covers Storage Transfer Conveyor 1 (TO BE COORDINATED WITH KOCH MINERALS)	10	11-May-16	24-May-16															
CNS.4050	Phase V.II - Install Belts & Hood Covers Storage Transfer Conveyor 2 (TO BE COORDINATED WITH KOCH MINERALS)	9	25-May-16	07-Jun-16															
CNS.4060	Phase V.II - Install Belts & Hood Covers Storage Transfer Conveyor 3 (TO BE COORDINATED WITH KOCH MINERALS)	3	08-Jun-16	10-Jun-16															
CNS.4070	Phase V.II - Install Belts Reclaim Conveyor 8	13	27-Jul-16	12-Aug-16															
CNS.4080	Phase V.II - Install Belts Storage Transfer Conveyor 6	15	08-Sep-16	28-Sep-16															
CNS.4090	Phase V.II - Install Belts Storage Transfer Conveyor 7	15	29-Sep-16	19-Oct-16															
CNS.4100	Phase V.II - Install Belts Reclaim Conveyor 9	13	20-Oct-16	07-Nov-16															
<b>Misc. Equipments</b>		<b>118</b>	<b>23-Mar-16</b>	<b>07-Sep-16</b>															

**BULK MATERIAL FACILITY ENCLOSURE**

Issue Date: 12-Jun-14

Activity ID	Activity Name	Duration Days	Start	Finish	2014												2015												2016												2017												2018											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CNS.5000	Phase VII - Existing Conveyors (C-2, C-3) Drip Pans (TO BE COORDINATED WITH KOCH MINERALS)	5	23-Mar-16	29-Mar-16																																																												
CNS.5010	Phase VII - Existing Conveyors (C-1, C-4) Drip Pans (TO BE COORDINATED WITH KOCH MINERALS)	7	30-Mar-16	07-Apr-16																																																												
CNS.5020	Phase VII - Existing Conveyors - Ship Loading Drip Pans & Covers (TO BE COORDINATED WITH KOCH MINERALS)	5	08-Apr-16	14-Apr-16																																																												
CNS.5030	Phase VII - Existing Conveyors (UC-1, UC-2) Drip Pans (TO BE COORDINATED WITH KOCH MINERALS)	10	15-Apr-16	28-Apr-16																																																												
CNS.5040	Phase VII - Reclaim Hopper ( 8 Ea)	15	10-Aug-16	30-Aug-16																																																												
CNS.5050	Phase VII - Tripper 2	10	17-Aug-16	30-Aug-16																																																												
CNS.5060	Phase VII - Tripper 1	10	24-Aug-16	07-Sep-16																																																												
CNS.6000	Dust Suppression System / Insulation	100	25-Apr-16	14-Sep-16																																																												
CNS.7000	Insulation	100	25-Apr-16	14-Sep-16																																																												
CNS.8000	Dirty Water Drain Piping A/G	93	02-Mar-16	12-Jul-16																																																												
CNS.9000	Ventilation Fans	136	04-Mar-16	14-Sep-16																																																												
CNS.9010	Phase VII - Ventilation Fans & Louvers Barn No. 1	25	04-Mar-16	07-Apr-16																																																												
CNS.9020	Phase VII - Ventilation Fans & Louvers Barn No. 2	50	31-May-16	09-Aug-16																																																												
<b>ELECTRICAL</b>		<b>405</b>	<b>11-May-15</b>	<b>13-Dec-16</b>																																																												
CNE.1000	Site U/G - Grounding	40	11-May-15	07-Jul-15																																																												
CNE.2000	Above Grade Ground / Lightning Protection	60	11-May-15	04-Aug-15																																																												
CNE.1500	Duct Banks (if Any)	5	11-May-15	15-May-15																																																												
CNE.1510	Phase VII - Duct Banks (if Any)	5	18-May-15	22-May-15																																																												
CNE.3000	Electrical Distribution Equipment (MCC / TXFMR / PDP / etc.)	25	05-Aug-15	09-Sep-15																																																												
CNE.4000	Raceways, wire, and cable	305	05-Aug-15	14-Oct-16																																																												
CNE.5000	Lighting (Indoor / Outdoor / Emergency)	245	05-Aug-15	21-Jul-16																																																												

**BULK MATERIAL FACILITY ENCLOSURE**

Issue Date: 12-Jun-14

Activity ID	Activity Name	Duration Days	Start	Finish	2014	2015	2016	2017	2018										
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
<b>Heat Trace</b>																			
CNE:6000	Phase V.II - Heat Trace	80	19-Aug-16	13-Dec-16															
		80	19-Aug-16	13-Dec-16															
<b>Instrumentation / Controls</b>																			
CNE:7000	Phase V.II - Instrumentation / Controls	210	20-Jan-16	11-Nov-16															
		210	20-Jan-16	11-Nov-16															
<b>Fire Alarm System</b>																			
CNE:8000	Phase V.II - Fire Alarm System	165	20-Apr-16	13-Dec-16															
		165	20-Apr-16	13-Dec-16															
<b>Gray Water Recycle System</b>																			
CNE:9000	Phase V.II - Gray Water Recycle System	45	16-Jun-16	18-Aug-16															
		45	16-Jun-16	18-Aug-16															
<b>FIRE PROTECTION</b>																			
		348	26-May-15	05-Oct-16															
<b>Fire Protection - Tie In (Water Source)</b>																			
CNR:1000	Phase V.II - Fire Protection - U/G	15	26-May-15	15-Jun-15															
		15	26-May-15	15-Jun-15															
<b>Fire Protection - Barns</b>																			
CNR:2000	Phase V.II - Fire Protection - Barns	155	29-Feb-16	05-Oct-16															
		155	29-Feb-16	05-Oct-16															
<b>PHASE VI - CHECK OUT &amp; START-UP</b>																			
		336	16-Sep-15	12-Jan-17															
<b>STRUCTURAL &amp; MECHANICAL</b>																			
CSS:1000	Phase VI - Start-Up - Train Conveyor Belts (10 Each)	50	17-Oct-16	28-Dec-16															
		50	17-Oct-16	28-Dec-16															
<b>ELECTRICAL</b>																			
CSE:1000	Phase VI - Site U/G - Grounding	336	16-Sep-15	12-Jan-17															
		8	16-Sep-15	25-Sep-15															
CSE:1010	Phase VI - Duct Banks (If Any)	8	25-Sep-15	06-Oct-15															
		8	25-Sep-15	06-Oct-15															
CSE:1020	Phase VI - Above Grade Ground / Lighting Protection	8	07-Oct-15	16-Oct-15															
		8	07-Oct-15	16-Oct-15															
CSE:1030	Phase VI - Electrical Distribution Equipment (MCC/TXFMR / PDP / etc.)	20	16-Oct-15	13-Nov-15															
		20	16-Oct-15	13-Nov-15															
CSE:1040	Phase VI - Lighting (Indoor / Outdoor / Emergency)	10	22-Jul-16	04-Aug-16															
		20	19-Aug-16	16-Sep-16															
CSE:1050	Phase VI - Gray Water Recycle System	20	30-Nov-16	28-Dec-16															
		20	30-Nov-16	28-Dec-16															
CSE:1060	Phase VI - Raceways, Wire, and Cable	20	14-Dec-16	12-Jan-17															
		20	14-Dec-16	12-Jan-17															
CSE:1070	Phase VI - Heat Trace	20	14-Dec-16	12-Jan-17															
		20	14-Dec-16	12-Jan-17															
CSE:1080	Phase VI - Instrumentation / Controls	20	14-Dec-16	12-Jan-17															
		20	14-Dec-16	12-Jan-17															
CSE:1090	Phase VI - Fire Alarm System	20	14-Dec-16	12-Jan-17															
		20	14-Dec-16	12-Jan-17															

**Project : BULK MATERIAL FACILITY STORAGE**

Graycor Proposal No. 1091467

Issue Date: 6/13/14

**PRELIMINARY CONSTRUCTION MANPOWER CHART**

