



Dragon Products Company

VIA OVERNIGHT MAIL and
E-Mail (Marc.A.Cone@maine.gov)

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November 8, 2010

Mr. Marc A. R. Cone, P.E.
State of Maine
Department of Environmental Protection (DEP)
Bureau of Air Quality
17 State House Station
Augusta, Maine 04333-0017

**Re: Dragon Products Company, LLC (Dragon)
Draft 11/1/2010 Best Available Retrofit Technology (BART)
Findings of Fact and Order draft**

Dear Mr. Cone:

Dragon received the referenced draft BART Findings of Fact and Order (Order) on November 1, 2010. On November 3rd Mr. James Brooks agreed that DEP would consider any Dragon comments received prior to 12:00 noon on November 8th. Accordingly, please find our comments to the draft BART Order below. In short, Dragon reiterates its position that the proposed Order would impose requirements beyond those required by State or Federal law for no significant environmental gain at a cost that would negatively impact Dragon's ability to remain competitive. For these reasons, Dragon requests that the Department withdraw its draft BART Order and previously issued BART Order.

The Draft Order is Contrary to Federal Law, and Would Impose Costly Requirements That Were Never Intended to Apply to Modernized Facilities Already Using Best Technology

For the reasons provided in our previous comments, my November 2nd E-mail to you, and in this letter, we continue to assert that Dragon's new kiln system is not a "BART-eligible" source.¹ Dragon's new dry process kiln system would have been subject to New Source Performance

¹ The BART application process and determination with Dragon was originally initiated prior to the ownership of Dragon by Giant Cement Holding, Inc. (GCHI). After the acquisition of Dragon by GCHI we received an Air Emissions License Amendment (A-326-77-1-A) dated April 4, 2008 which found that Dragon was "BART-eligible" but the License also determined that "No further implementation is [was] required." Since the reopening of that determination on March 23, 2009, Dragon has consistently objected that it is in-fact "BART-eligible" but we may not have directly presented our objections as clearly as we should have in our 2009 submittals to the March 23, 2009 request for additional BART information.

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Standards (NSPS) 40 CFR Part 60, Subpart F upon start-up as a "reconstructed" source had the USEPA not provided an exemption in the PC-MACT (NESHAP) regulations at 40 CFR §63.1356(a). The purpose of the NSPS exemption was to eliminate regulatory overlap and duplicative requirements for major sources. At the time of application for the new dry process kiln Dragon did not have to address "reconstruction" costs because of the exemption, however, based on a review of our actual costs and avoided costs it is clear that Dragon reconstructed its kiln and it is not eligible for BART, as explained below.

EPA's Regional Haze Regulations for determining the applicability of BART are limited in scope and only apply to certain major stationary sources which were in existence on August 7, 1977 but which had not been in operation for more than 15 years as of that date. In addition, the regulations address the treatment of "reconstructions" and "modifications." EPA's BART Guidelines in 40 CFR Part 51, App Y, in section II, Step 2 contain a discussion of reconstructed sources. The last sentence of that section provides: "Similarly, any emission unit for which a reconstruction "commenced" after August 7, 1977, is not BART-eligible." It is clear from that sentence and the preceding discussion of BART-eligibility in Appendix Y that sources reconstructed after August 7, 1977 are not subject to BART requirements.

The New Dry-process Kiln at Dragon is "Reconstructed" per 40 CFR §60.15

Originally, a long, wet-process portland cement kiln without an in-line raw mill or other components was the production unit at the Thomaston site. After issuance of Dragon's Air License #A-326-71-U-A/R in 2002, construction began on the new Kiln System in which a small portion of the existing kiln shell and footers (i.e. approximately one-third of the steel shell and three concrete piers) was used in conjunction with a modernized and reconfigured four (4) stage preheater/precalciner, dry-process portland cement Kiln System with an in-line raw mill as part of the Kiln System. The modernized and reconfigured Kiln System was a complete re-building and reconstruction of Dragon's existing Kiln System, using a completely different technology and design. Again, the only components that still remain from the original long, wet-process kiln are approximately one third of the cylindrical steel kiln shell and its associated footers. All other equipment comprising the original long, wet-process kiln system was removed and/or replaced.

The new Kiln System included new refractory brick kiln lining, an in-line raw mill, fuel and raw material delivery systems, a preheater tower, an alkali bypass system, a gas-conditioning system, the replacement of the kiln drive system and electrical components and the associated kiln control devices (i.e., fabric filter dust collector, selective non-catalytic reduction system, and dry lime injection system), and all ductwork, exhaust, and conveyor belts associated with the Kiln System. Essentially Dragon constructed a new Kiln System and simply incorporated a piece of the old kiln in that system. Table 1 below shows the fixed capital cost of the new components for the new Kiln System exceeded 50-percent of the fixed capital cost to construct a comparable new facility. Accordingly, the "reconstructed" kiln at Dragon is not BART-eligible because it meets the definition of "reconstruction" as referenced in 40 CFR Part 51, Appendix Y. The only reason the new Kiln System was not subject to NSPS standards was because it was subject to the more stringent Portland Cement MACT standards that were in effect at the time of reconstruction.

Table 1
Dragon Kiln Modernization Project
"Reconstruction" Accounting Test Cost Summary

Project Item	Re-construction Cost (\$1,000) ⁽¹⁾	New Equipment Cost (\$1,000) ⁽²⁾
In-line Raw Mill ⁽³⁾	15,098	15,098
Rotary Kiln Modification/New Kiln ⁽⁴⁾	1,006	12,870
Pre-heater/Pre-calciner ⁽³⁾	22,528	22,528
Baghouse, Fan, Stack ⁽³⁾	2,833	2,833
Homogenizing Silo (Part of Raw Mill) ⁽³⁾	2,433	2,433
Cooler ⁽³⁾	3,695	3,695
Total Costs:	\$47,593	\$59,457
Re-construction Cost % of New Cost:	80%	

(1) Re-construction Cost represents the fixed capital cost of the modifications to the affected source.

(2) New equipment cost represents capital cost for the installation of a comparable new unit.

(3) These items were new installations. Therefore, the "reconstruction cost" is equivalent to the "New equipment costs."

(4) The "New Equipment Cost" for the rotary kiln represents the actual cost of a larger rotary kiln installation at Giant Cement Company (GCC) (parent company to Dragon). The GCC kiln is a larger kiln that that begin installation one year later than the Dragon kiln and therefore, represents a conservation estimate of what the "New Equipment Cost" would have been at Dragon at the time of the re-construction (i.e. no adjustments were made for inflation or to account for smaller equipment size).

Accompanying this letter as Attachment 1 is a detailed summary of the fixed capital cost information summarized in Table 1.

This Order Threatens the Economic Viability of Dragon, for No Significant Environmental Benefit

In addition to the draft Order being legally unjustifiable, compliance with this Order will easily double Dragon's annual cost per ton of NOx control at a time when resources are considerably constrained due to the depressed state of the construction market. Moreover, this Order would yield minimal, if any, environmental or health benefits. The technical record² is clear that additional controls or tighter operating limits at Dragon will not have any appreciable improvement in any of the associated Class I areas. Further, any such de minimis improvements would be potentially offset by the impacts of a large increase in the amount of ammonia usage. We believe that the DEP is pursuing an Order that exacerbates Dragon's dire economic situation, does not improve the

² September 15, 2009 Best Available Retrofit Technology (BART) Report prepared by All4, Kimberton, PA for Dragon Products Company, LLC.

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environment, and is not consistent with the intent of the regulation,³ because Dragon operates a "reconstructed" kiln. However, even if Dragon were "BART-eligible," then under the Regional Haze rules and the requirements of the DEP the "Cost of compliance" would have to be taken into account, and Dragon has shown that the proposed requirements in the draft Order do not result in a perceptible (i.e. $< 1 \text{ dv}^4$) improvement in visibility.⁵

Dragon is already subject to federally enforceable BACT and MACT requirements under its Title V permit and therefore is a very clean, low pollutant emitting source, and tighter limits are not technically, environmentally or legally justified. Moreover, the cumulative effect of this and the large number of other regulatory requirements anticipated to affect our facility over the coming years (e.g., the new PC NESHAP standards) could lead to the ultimate closure of our facility, where we directly employ well over 100 workers with well paying jobs with good benefits.

In summary, Dragon believes that its kiln is clearly not a "BART-eligible source" within the meaning of 40 CFR Part 51, Appendix Y because our new dry process Kiln System meets the definition of "reconstruction" found in 40 CFR §60.15, and even if it were, additional controls are not environmentally justified. Accordingly, the draft Order should be withdrawn from consideration.

If there are any questions, or if you require any additional information, then please contact me at (843) 851-5668.

Sincerely,



Stephen P. Holt, P.E.

Director, Environmental Affairs

Cc: Thaxter R. Trafton, Commissioner – DECD
Sen. Christopher W. Rector

³ 40 CFR Part 51, Appendix Y, II.A.2.Step 2, "What is a "reconstructed source?", answer no. 4, last sentence which states; " Similarly, any emission unit for which a reconstruction "commenced" after August 7, 1977, is not BART-eligible."

⁴ Less than 1 deci view (dv) is so miniscule it cannot be detected with the Human eye, Malm and Pitchford - 1994, as referenced in Dragons comments, October 1, 2010.

⁵ Dragon comments submitted October 1, 2010 to the DEP.

Attachment 1

From this point forward

CONFIDENTIAL BUSINESS INFORMATION

"COMPANY CONFIDENTIAL"

Per 40 CFR §2.203(b)

ATTACHMENT 1
 Dragon Products Company, LLC
 11/1/10 Draft BART Order Response
 Detailed Summary of Kiln Modernization Re-construction Costs

ASSET_NO	ASSET_TYPE	LOCATION	DESCRIPT	CAPACITY	SERIAL_NO	COST
In-line Raw Mill						
D0035	BUILDING	THOMASTON	BUILDING, RAW MILL	BLD115	CM-00-50	5,441,940.22
J0001	RAW MILL	THOMASTON	BELT, RAW MILL CROSS	R315	CM-00-50	151,570.41
J0001	RAW MILL	THOMASTON	WEIGHFEEDER, SILO #4	R316	CM-00-50	35,776.02
J0001	RAW MILL	THOMASTON	WEIGHFEEDER, SILO #6	R317	CM-00-50	37,098.96
J0001	RAW MILL	THOMASTON	WEIGHFEEDER, SILO #2	R320	CM-00-50	30,732.65
J0001	RAW MILL	THOMASTON	FAN, ROCK SILO W.F. D.C.	R330	CM-00-50	22,348.04
J0001	RAW MILL	THOMASTON	DUST COLLECTOR, ROCK SILO W.F.	R330D	CM-00-50	305.42
J0001	RAW MILL	THOMASTON	SCREW, CROSS BELT	R446	CM-00-50	16,321.54
J0001	RAW MILL	THOMASTON	WEIGHFEEDER, SILO #5	R450	CM-00-50	76,897.50
J0001	RAW MILL	THOMASTON	WEIGHFEEDER, SILO #1	R451	CM-00-50	82,716.07
J0001	RAW MILL	THOMASTON	BIN, IRON ORE	R452	CM-00-50	211,895.63
J0001	RAW MILL	THOMASTON	DUST COLLECTOR, IRON ORE BIN	R453	CM-00-50	9,500.50
J0001	RAW MILL	THOMASTON	FAN, IRON ORE BIN D.C.	R453A	CM-00-50	15,843.43
J0001	RAW MILL	THOMASTON	WEIGHFEEDER, IRON ORE	R454	CM-00-50	62,578.50
J0001	RAW MILL	THOMASTON	BELT, RAW MILL FEED	R455	CM-00-50	559,600.28
J0001	RAW MILL	THOMASTON	DUST COLLECTOR, FLY ASH BIN	R456	CM-00-50	12,923.57
J0001	RAW MILL	THOMASTON	FAN, FLY ASH BIN D.C.	R456A	CM-00-50	5,568.46
J0001	RAW MILL	THOMASTON	BIN, FLY ASH	R457	CM-00-50	207,083.35
J0001	RAW MILL	THOMASTON	FEEDER, FLY ASH BIN ROTARY	R458	CM-00-50	11,502.53
J0001	RAW MILL	THOMASTON	WEIGHFEEDER, FLY ASH BIN	R459	CM-00-50	53,316.25
J0001	RAW MILL	THOMASTON	CONVEYOR, FLY ASH SPILL DRAG	R459A	CM-00-50	7,310.21
J0001	RAW MILL	THOMASTON	DUST COLLECTOR, RAW MILL FEED	R460	CM-00-50	27,904.12
J0001	RAW MILL	THOMASTON	AIRLOCK, RAW MILL FEED BELT D.C.	R460A	CM-00-50	4,400.37
J0001	RAW MILL	THOMASTON	FAN, RAW MILL FEED BELT D.C.	R460B	CM-00-50	9,420.77
J0001	RAW MILL	THOMASTON	ANALYZER, CROSS BELT	R461	CM-00-50	400,266.98
J0001	RAW MILL	THOMASTON	SCALE, RAW MILL FEED BELT	R462	CM-00-50	9,284.51
J0001	RAW MILL	THOMASTON	BELT, RAW MILL MAGNET	R463	CM-00-50	29,033.45
J0001	RAW MILL	THOMASTON	MAGNET, RAW MILL FEED BELT	R463A	CM-00-50	40,130.44
J0001	RAW MILL	THOMASTON	DETECTOR, RAW FEED METAL	R464	CM-00-50	14,897.86
J0001	RAW MILL	THOMASTON	GATE, RAW MILL 2-WAY	R465	CM-00-50	21,209.40
J0001	RAW MILL	THOMASTON	CRANE, ROLLER MILL BRIDGE	R467	CM-00-50	126,594.44
J0001	RAW MILL	THOMASTON	AIRLOCK, RAW MILL FEED	R468	CM-00-50	222,403.74
J0001	RAW MILL	THOMASTON	CABINET, AIRLOCK HYDRAULIC	R468A	CM-00-50	14,409.70
J0001	RAW MILL	THOMASTON	PUMP, AIRLOCK HYDRAULIC	R468B	CM-00-50	19,046.99
J0001	RAW MILL	THOMASTON	HEATER, AIRLOCK HYDRAULIC OIL	R468C	CM-00-50	13,747.78
J0001	RAW MILL	THOMASTON	PUMP, TRIPLE AIRLOCK GREASE	R468D	CM-00-50	13,889.51
J0001	RAW MILL	THOMASTON	MILL, ROLLER	R474	CM-00-50	3,780,827.14
J0001	RAW MILL	THOMASTON	MOTOR, ROLLER MILL DRIVE	R475	CM-00-50	124,619.43
J0001	RAW MILL	THOMASTON	BLOWERS, ROLLER MILL MOTOR	R475A	CM-00-50	21,689.05
J0001	RAW MILL	THOMASTON	ROLLER MILL ID FAN	R477	CM-00-50	202,612.44
J0001	RAW MILL	THOMASTON	CABINET, ROLLER MILL PRESS HYDRAULIC	R478	CM-00-50	29,936.43
J0001	RAW MILL	THOMASTON	PUMP, ROLLER MILL PRESS HYDRAULIC	R478A	CM-00-50	32,586.04
J0001	RAW MILL	THOMASTON	HEATER, MILL PRESS HYDRAULIC OIL	R478B	CM-00-50	27,286.83
J0001	RAW MILL	THOMASTON	PUMP, ROLLER MILL CENTRAL GREASING	R482	CM-00-50	33,312.37
J0001	RAW MILL	THOMASTON	CABINET, ROLLER MILL LUBE HYDRAULIC	R483	CM-00-50	29,936.43
J0001	RAW MILL	THOMASTON	PUMP, ROLLER MILL LUBE HYD #1 SUCTION	R483A	CM-00-50	31,923.60
J0001	RAW MILL	THOMASTON	PUMP, ROLLER MILL LUBE HYD #2 SUCTION	R483B	CM-00-50	31,923.64
J0001	RAW MILL	THOMASTON	PUMP, ROLLER MILL LUBE HYD #3 SUCTION	R483C	CM-00-50	31,923.64
J0001	RAW MILL	THOMASTON	PUMP, ROLLER MILL LUBE HYD #1 DELIVERY	R483D	CM-00-50	31,923.64
J0001	RAW MILL	THOMASTON	PUMP, ROLLER MILL LUBE HYD #2 DELIVERY	R483E	CM-00-50	31,923.64
J0001	RAW MILL	THOMASTON	PUMP, ROLLER MILL LUBE HYD #3 DELIVERY	R483F	CM-00-50	31,923.64
J0001	RAW MILL	THOMASTON	HEATER, ROLLER MILL HYDRAULIC OIL	R483G	CM-00-50	27,286.83
J0001	RAW MILL	THOMASTON	CABINET, ROLLER MILL GEARBOX LUBE OIL	R491	CM-00-50	29,936.43
J0001	RAW MILL	THOMASTON	PUMP, ROLLER MILL GEARBOX LUBE OIL	R491A	CM-00-50	31,923.63
J0001	RAW MILL	THOMASTON	HEATER, ROLLER MILL GEARBOX LUBE OIL	R491B	CM-00-50	27,286.83
J0001	RAW MILL	THOMASTON	SEPERATOR, RAW MILL HIGH EFFICIENCY	R495	CM-00-50	571,288.32
J0001	RAW MILL	THOMASTON	PUMP, RAW MILL SEPERATOR LUBE	R495A	CM-00-50	41,487.32
J0001	RAW MILL	THOMASTON	SPRAY, ROLLER MILL WATER	R498	CM-00-50	51,464.98
J0001	RAW MILL	THOMASTON	TANK, ROLLER MILL WATER SPRAY	R498A	CM-00-50	29,051.45
J0001	RAW MILL	THOMASTON	PUMP, ROLLER MILL WATER SPRAY	R498B	CM-00-50	27,948.27
J0001	RAW MILL	THOMASTON	VALVE, ROLLER MILL WATER SPRAY	R498C	CM-00-50	23,013.66
J0001	RAW MILL	THOMASTON	BELT, ROLLER MILL REJECTS	R502	CM-00-50	144,516.37
J0001	RAW MILL	THOMASTON	SCALE, MILL REJECTS BELT	R503	CM-00-50	3,229.96
J0001	RAW MILL	THOMASTON	ELEVATOR, MILL REJECTS	R504	CM-00-50	167,789.70
J0001	RAW MILL	THOMASTON	GATE, 2-WAY REJECTS	R505	CM-00-50	25,366.57
J0001	RAW MILL	THOMASTON	DUST COLLECTOR, RAW MILL CONVEYOR	R506	CM-00-50	40,653.53
J0001	RAW MILL	THOMASTON	AIRLOCK, RAW MILL CONVEYOR D.C.	R506A	CM-00-50	4,400.37
J0001	RAW MILL	THOMASTON	FAN, ROLLER MILL CONVEYOR D.C.	R506B	CM-00-50	8,420.74
J0001	RAW MILL	THOMASTON	CYCLONE, SOUTH RAW MILL	R507	CM-00-50	175,907.91
J0001	RAW MILL	THOMASTON	AIRLOCK, SOUTH RAW MILL CYCLONE	R507A	CM-00-50	7,915.95
J0001	RAW MILL	THOMASTON	CYCLONE, NORTH RAW MILL	R508	CM-00-50	174,792.64
J0001	RAW MILL	THOMASTON	AIRLOCK, NORTH RAW MILL CYCLONE	R508A	CM-00-50	7,203.90
J0001	RAW MILL	THOMASTON	FAN, ROLLER MILL	R509	CM-00-50	333,459.66
J0001	RAW MILL	THOMASTON	DAMPER, MILL FAN CONTROL	R509A	CM-00-50	2,301.24
J0001	RAW MILL	THOMASTON	DAMPER, MILL FAN CONTROL	R509B	CM-00-50	2,301.24
J0001	RAW MILL	THOMASTON	AIRSLIDE, RAW MILL CYCLONE	R510	CM-00-50	50,775.18
J0001	RAW MILL	THOMASTON	BLOWER, CYCLONE AIRSLIDE	R510A	CM-00-50	6,710.98
J0001	RAW MILL	THOMASTON	DUST COLLECTOR, CYCLONE AIRSLIDE	R511	CM-00-50	23,200.10
J0001	RAW MILL	THOMASTON	AIRLOCK, CYCLONE AIRSLIDE D.C.	R511A	CM-00-50	3,654.99
J0001	RAW MILL	THOMASTON	FAN, CYCLONE AIRSLIDE D.C.	R511B	CM-00-50	8,136.15
J0001	RAW MILL	THOMASTON	SAMPLER, CYCLONE DUST	R512	CM-00-50	1,162.13
J0001	RAW MILL	THOMASTON	ELEVATOR, CYCLONE DUST	R513	CM-00-50	313,796.99
J0001	RAW MILL	THOMASTON	BLOWER, SILO FEED AIRSLIDE	R514	CM-00-50	5,446.99
J0001	RAW MILL	THOMASTON	BLOWER, DISTRIBUTION BOX	R515	CM-00-50	2,289.72
J0001	RAW MILL	THOMASTON	BOX, SILO FEED DISTRIBUTION	R516	CM-00-50	2,289.63
J0001	RAW MILL	THOMASTON	AIR CONDITIONER, RAW MILL ELECT RM	R590	CM-00-50	610.84
J0001	RAW MILL	THOMASTON	AIR CONDITIONER, ROLLER MILL ELECT RM	R591	CM-00-50	610.84
J0001	RAW MILL	THOMASTON	AIR CONDITIONER, RAW MATERIAL ELECT RM	R592	CM-00-50	610.84

Rotary Kiln Modification

J0002	KILN	THOMASTON	KILN	K001	CM-00-50	537,236.32
J0002	KILN	THOMASTON	BURNER GUN	K006	CM-00-50	244,738.49
J0002	KILN	THOMASTON	AIRLOCK, COAL CYCLONE	K054A	CM-00-50	3,446.09
J0002	KILN	THOMASTON	DRIVE, SOUTH KILN	K529B	CM-00-50	104,098.86

Pre-heater/Pre-calciner

D0036	BUILDING	THOMASTON	BUILDING, PREHEATER TOWER	BLD120	CM-00-50	10,119,962.89
D0037	BUILDING	THOMASTON	BUILDING, MAIN BAGHOUSE ELECT ROOM	BLD124	CM-00-50	1,353,332.16
D0038	BUILDING	THOMASTON	BUILDING, CONDITIONING TOWER	BLD125	CM-00-50	1,079,938.34
J0002	KILN	THOMASTON	WEIGHFEEDER, KILN FEED ROTARY	K826	CM-00-50	105,383.14
J0002	KILN	THOMASTON	GATE, KILN FEED 2-WAY	K827	CM-00-50	13,433.74
J0002	KILN	THOMASTON	DUST COLLECTOR, UPPER KILN FEED	K828	CM-00-50	26,831.66
J0002	KILN	THOMASTON	AIRLOCK, UPPER KILN FEED D.C.	K828A	CM-00-50	3,574.83
J0002	KILN	THOMASTON	FAN, UPPER KILN FEED D.C.	K828B	CM-00-50	8,109.82
J0002	KILN	THOMASTON	AIRSLIDE, KILN FEED	K831	CM-00-50	3,010.10
J0002	KILN	THOMASTON	BLOWER, KILN FEED AIRSLIDE	K831A	CM-00-50	5,066.98
J0002	KILN	THOMASTON	SAMPLER, RAW MEAL	K834	CM-00-50	1,162.13
J0002	KILN	THOMASTON	AIRLOCK, KILN FEED ROTARY	K837	CM-00-50	82,466.92
J0002	KILN	THOMASTON	TOWER, PREHEATER	K838	CM-00-50	651,977.60
J0002	KILN	THOMASTON	TOWER, PREHEATER STAGE #1	K838A	CM-00-50	682,300.84
J0002	KILN	THOMASTON	TOWER, PREHEATER STAGE #2	K838B	CM-00-50	721,663.75
J0002	KILN	THOMASTON	TOWER, PREHEATER STAGE #3	K838C	CM-00-50	724,636.75
J0002	KILN	THOMASTON	TOWER, PREHEATER STAGE #4	K838D	CM-00-50	722,909.79
J0002	KILN	THOMASTON	DIVIDER, MEAL	K839	CM-00-50	56,056.50
J0002	KILN	THOMASTON	DIVIDER, MEAL	K840	CM-00-50	57,095.17
J0002	KILN	THOMASTON	TOWER, CONDITIONING	K845	CM-00-50	511,481.48
J0002	KILN	THOMASTON	TANK, WATER	K846	CM-00-50	6,840.70
J0002	KILN	THOMASTON	PUMP, WATER #1	K848	CM-00-50	1,987.67
J0002	KILN	THOMASTON	PUMP, WATER #2	K849	CM-00-50	1,987.67
J0002	KILN	THOMASTON	LANCES, WATER SPRAY	K850	CM-00-50	6,236.92
J0002	KILN	THOMASTON	COMPRESSOR, WATER SPRAY #1 AIR	K851	CM-00-50	8,260.47
J0002	KILN	THOMASTON	COMPRESSOR, WATER SPRAY #2 AIR	K852	CM-00-50	14,052.51
J0002	KILN	THOMASTON	RECEIVER, WATER SPRAY AIR	K853	CM-00-50	4,529.24
J0002	KILN	THOMASTON	FAN, PREHEATER	K855	CM-00-50	610,905.18
J0002	KILN	THOMASTON	SCREW, 16" REVERSIBLE	K856	CM-00-50	19,782.65
J0002	KILN	THOMASTON	SCREW, 12"	K857	CM-00-50	14,912.74
J0002	KILN	THOMASTON	AIRLOCK, ROTARY	K859	CM-00-50	10,832.71
J0002	KILN	THOMASTON	AIRLOCK, ROTARY	K860	CM-00-50	9,149.64
J0002	KILN	THOMASTON	ELEVATOR, PREHEATER FREIGHT	K862	CM-00-50	464,706.28
J0002	KILN	THOMASTON	EXCHANGER, HEAT	K868	CM-00-50	387,431.47
J0002	KILN	THOMASTON	FAN, HEAT EXCHANGER #1	K868A	CM-00-50	5,581.25
J0002	KILN	THOMASTON	FAN, HEAT EXCHANGER #2	K868B	CM-00-50	5,581.25
J0002	KILN	THOMASTON	AIRLOCK, HEAT EXCHANGER	K869	CM-00-50	4,577.46
J0002	KILN	THOMASTON	FAN, PRIMARY AIR	K870	CM-00-50	35,111.09
J0002	KILN	THOMASTON	DAMPER, CONTROL	K870A	CM-00-50	15,369.23
J0002	KILN	THOMASTON	CHAMBER, QUENCH	K875	CM-00-50	6,874.92
J0002	KILN	THOMASTON	BYPASS QUENCH AIR FAN	K875A	CM-00-50	26,661.83
J0002	KILN	THOMASTON	TOWER, BYPASS CONDITIONING	K876	CM-00-50	113,377.64
J0002	KILN	THOMASTON	LANCES, WATER SPRAY	K881	CM-00-50	5,730.07
J0002	KILN	THOMASTON	DUST COLLECTOR, BYPASS TOWER	K886	CM-00-50	165,938.22
J0002	KILN	THOMASTON	BYPASS VENT ID FAN	K888	CM-00-50	122,462.27
J0002	KILN	THOMASTON	AIRLOCK, BYPASS TOWER D.C.	K889	CM-00-50	2,848.06
J0002	KILN	THOMASTON	SCREW, 16" REVERSIBLE	K890	CM-00-50	26,753.49
J0002	KILN	THOMASTON	AIRLOCK, DUST BIN	K893	CM-00-50	9,131.61
J0002	KILN	THOMASTON	AIRLOCK, DUST BLOWER	K894	CM-00-50	12,224.78
J0002	KILN	THOMASTON	BLOWER, CONDITIONING DUST	K896	CM-00-50	29,266.99
J0002	KILN	THOMASTON	GATE, BIN 2-WAY DIVERTER	K897	CM-00-50	8,909.72
J0002	KILN	THOMASTON	BIN, BY-PASS DUST	K900	CM-00-50	9,968.13
J0002	KILN	THOMASTON	DUST COLLECTOR, BYPASS SHIPPING BIN	K901	CM-00-50	18,867.20
J0002	KILN	THOMASTON	FAN, BYPASS SHIPPING BIN D.C.	K901A	CM-00-50	3,431.97
J0002	KILN	THOMASTON	VALVE, SHIPPING BIN FLOW CONTROL	K902	CM-00-50	5,504.74
J0002	KILN	THOMASTON	SPOUT, SHIPPING BIN LOAD	K904	CM-00-50	8,983.98
J0002	KILN	THOMASTON	DUST COLLECTOR, KILN DUST BIN	K906	CM-00-50	9,986.72
J0002	KILN	THOMASTON	FAN, KILN DUST BIN D.C.	K906A	CM-00-50	3,347.81
J0002	KILN	THOMASTON	BLOWER, KILN DUST RETURN	K907	CM-00-50	27,034.82
J0002	KILN	THOMASTON	CALCINER	K910	CM-00-50	1,724,763.23
J0002	KILN	THOMASTON	DUST COLLECTOR, HYDRATED LIME	K911	CM-00-50	10,658.94
J0002	KILN	THOMASTON	FAN, HYDRATED LIME D.C.	K911B	CM-00-50	3,405.38
J0002	KILN	THOMASTON	BIN, HYDRATED LIME	K912	CM-00-50	62,814.46
J0002	KILN	THOMASTON	VIBRATOR, HYDRATED LIME BIN	K913	CM-00-50	9,059.86
J0002	KILN	THOMASTON	VALVE, LIME BIN FLOW CONTROL	K914	CM-00-50	14,919.03
J0002	KILN	THOMASTON	BIN, DE-AERATION W/LOAD CELLS	K915	CM-00-50	14,999.63
J0002	KILN	THOMASTON	FEEDER, #1 HYDRATED LIME ROTARY	K916	CM-00-50	14,919.03
J0002	KILN	THOMASTON	HOPPER, HYDRATED LIME VENT	K917	CM-00-50	14,942.07
J0002	KILN	THOMASTON	FEEDER, #2 HYDRATED LIME ROTARY	K918	CM-00-50	17,172.03
J0002	KILN	THOMASTON	BLOWER, HYDRATED LIME	K919	CM-00-50	16,608.58
J0002	KILN	THOMASTON	FEEDER, CALCINER FUEL ROTARY	K920	CM-00-50	17,178.15
J0002	KILN	THOMASTON	SCALE, CALCINER FUEL IMPACT	K921	CM-00-50	22,277.09
J0002	KILN	THOMASTON	FEEDER, CALCINER BLO-THRU ROTARY	K922	CM-00-50	7,049.42
J0002	KILN	THOMASTON	SCREW, CALCINER FUEL	K923	CM-00-50	24,702.41
J0002	KILN	THOMASTON	BLOWER, CALCINER FUEL	K924	CM-00-50	28,822.76
J0002	KILN	THOMASTON	DAMPER, CONTROL DAMPER	K925	CM-00-50	92,526.58
J0002	KILN	THOMASTON	FAN, TERTIARY AIR DAMPER COOLING	K925A	CM-00-50	16,039.16
J0002	KILN	THOMASTON	DUCT, TERTIARY AIR	K925B	CM-00-50	994,319.10
J0002	KILN	THOMASTON	BIN, KILN FEED TOTE	K926	CM-00-50	4,487.86
J0002	KILN	THOMASTON	KILN, UNDESIGNATED DEPARTMENT	KIL0000	CM-00-50	22,359.49

Baghouse/Fan/Stack

J0002	KILN	THOMASTON	DAMPER, GUILLOTINE	K800	CM-00-50	33,816.31
J0002	KILN	THOMASTON	DAMPER, GUILLOTINE	K801	CM-00-50	33,313.63
J0002	KILN	THOMASTON	DAMPER, GUILLOTINE	K802	CM-00-50	33,407.57
J0002	KILN	THOMASTON	BAGHOUSE, MAIN	K804	CM-00-50	1,822,481.16
J0002	KILN	THOMASTON	AIRLOCK, DOUBLE FLAP	K804A	CM-00-50	4,159.00
J0002	KILN	THOMASTON	AIRLOCK, DOUBLE FLAP	K804B	CM-00-50	4,159.00
J0002	KILN	THOMASTON	AIRLOCK, DOUBLE FLAP	K804C	CM-00-50	4,159.00
J0002	KILN	THOMASTON	AIRLOCK, DOUBLE FLAP	K804D	CM-00-50	4,159.00
J0002	KILN	THOMASTON	AIRLOCK, DOUBLE FLAP	K804E	CM-00-50	4,159.00
J0002	KILN	THOMASTON	AIRLOCK, DOUBLE FLAP	K804F	CM-00-50	4,159.00
J0002	KILN	THOMASTON	AIRLOCK, DOUBLE FLAP	K804G	CM-00-50	4,348.23
J0002	KILN	THOMASTON	SCREW, WEST REVERSIBLE	K805	CM-00-50	41,878.30
J0002	KILN	THOMASTON	SCREW, EAST REVERSIBLE	K806	CM-00-50	42,087.53
J0002	KILN	THOMASTON	SCREW, SOUTH BAGHOUSE	K807	CM-00-50	24,284.68
J0002	KILN	THOMASTON	SCREW, NORTH BAGHOUSE	K808	CM-00-50	20,514.99
J0002	KILN	THOMASTON	SCREW, SILO CROSS	K809	CM-00-50	19,244.39
J0002	KILN	THOMASTON	FAN, EXHAUST	K810G	CM-00-50	1,693.90
J0002	KILN	THOMASTON	FAN, MAIN BAGHOUSE	K811	CM-00-50	129,715.67
J0002	KILN	THOMASTON	STACK, MAIN	K812	CM-00-50	364,361.13
J0002	KILN	THOMASTON	MONITOR, CONTINUOUS EMISSION	K812A	CM-00-50	133,768.18

Homogenizing Silo/Feed System

J0002	KILN	THOMASTON	SILO, RAW MEAL HOMOGENIZING	K810	CM-00-50	1,741,758.45
J0002	KILN	THOMASTON	BLOWER, RAW MEAL SILO AIRPAD	K810A	CM-00-50	1,173.65
J0002	KILN	THOMASTON	BLOWER, STANDBY AIRPAD	K810B	CM-00-50	1,173.65
J0002	KILN	THOMASTON	BLOWER, RAW MEAL SILO AIRPAD	K810C	CM-00-50	1,173.65
J0002	KILN	THOMASTON	VALVE, FLOW CONTROL	K810E	CM-00-50	1,173.65
J0002	KILN	THOMASTON	AIRSLIDE, RAW MEAL SILO DISCHARGE	K813	CM-00-50	16,196.38
J0002	KILN	THOMASTON	BLOWER, SILO DISCHARGE AIRSLIDE	K813A	CM-00-50	2,484.59
J0002	KILN	THOMASTON	DUST COLLECTOR, LOWER KILN FEED	K814	CM-00-50	21,697.80
J0002	KILN	THOMASTON	AIRLOCK, LOWER KILN FEED D.C.	K814A	CM-00-50	3,574.83
J0002	KILN	THOMASTON	FAN, LOWER KILN FEED D.C.	K814B	CM-00-50	6,252.62
J0002	KILN	THOMASTON	SCREW, ELEVATOR FEED	K815	CM-00-50	20,148.40
J0002	KILN	THOMASTON	ELEVATOR, KILN FEED	K817	CM-00-50	379,510.52
J0002	KILN	THOMASTON	GATE, KILN FEED BIN 2-WAY	K818	CM-00-50	17,604.68
J0002	KILN	THOMASTON	BIN, KILN FEED	K819	CM-00-50	119,873.86
J0002	KILN	THOMASTON	BLOWER, KILN FEED BIN	K819A	CM-00-50	1,173.65
J0002	KILN	THOMASTON	AIRSLIDE, KILN FEED BIN DISCHARGE	K821	CM-00-50	13,249.62
J0002	KILN	THOMASTON	GATE, MAINTENANCE	K822	CM-00-50	28.78
J0002	KILN	THOMASTON	GATE, FLOW CONTROL	K824	CM-00-50	28.78
J0002	KILN	THOMASTON	AIRSLIDE, KILN FEED BIN DISCHARGE	K825	CM-00-50	797.84
J0002	KILN	THOMASTON	DUST COLLECTOR, RAW MEAL SILO	K830	CM-00-50	22,630.06
J0002	KILN	THOMASTON	FAN, RAW MEAL SILO D.C.	K830B	CM-00-50	9,250.09

Clinker Cooler

J0002	KILN	THOMASTON	DUST COLLECTOR, COOLER BAGHOUSE	K053	CM-00-50	6,207.27
J0002	KILN	THOMASTON	CLINKER COOLER ID FAN	K562	CM-00-50	214,522.14
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K002	CM-02-26	2,220,227.88
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K571	CM-02-26	115,353.50
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K568	CM-02-26	83,643.81
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K569	CM-02-26	82,225.27
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K566	CM-02-26	79,122.98
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K567	CM-02-26	77,249.01
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K571C	CM-02-26	43,601.86
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K571B	CM-02-26	43,601.86
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K571A	CM-02-26	43,601.86
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K568A	CM-02-26	30,143.38
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K569A	CM-02-26	30,143.37
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K566A	CM-02-26	25,423.57
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K567A	CM-02-26	25,131.70
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K571D	CM-02-26	30,559.67
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K571E	CM-02-26	9,519.03
J0002	KILN	THOMASTON	CLINKER COOLER REPLACEMENT	K002	CM-02-26	366,758.85

Substation/Power

J0002	KILN	THOMASTON	SUBSTATION	GPM0000	CM-00-50	985,716.43
J0002	KILN	THOMASTON	THIRD TRANSFORMER	GPM0000	CM-00-50	179,212.27

Plant Air Compressor/Building

D0039	KILN	THOMASTON	BUILDING, PLANT AIR BUILDING	BLD173	CM-00-50	63,111.20
J0002	KILN	THOMASTON	PLANT AIR COMPRESSORS	GPM0000	CM0303	482,790.22

Crushing Plant

J0000	CRUSHING PLANT	THOMASTON	BELT, TRIPPER TOP OF SILO	Q200	CM-00-50	346,140.90
J0000	CRUSHING PLANT	THOMASTON	DRIVE, TRIPPER CART TOS	Q200A	CM-00-50	27,034.28
J0000	CRUSHING PLANT	THOMASTON	GATE, SLIDE SILO #3	Q200B	CM-00-50	7,663.19
J0000	CRUSHING PLANT	THOMASTON	GATE, SLIDE SILO #4	Q200C	CM-00-50	7,570.08
J0000	CRUSHING PLANT	THOMASTON	GATE, SLIDE SILO #6	Q200D	CM-00-50	7,570.08
J0000	CRUSHING PLANT	THOMASTON	GATE, SLIDE SILO #5	Q200E	CM-00-50	7,570.08
J0000	CRUSHING PLANT	THOMASTON	GATE, SLIDE SILO #9	Q200F	CM-00-50	7,570.08
J0000	CRUSHING PLANT	THOMASTON	DUST COLLECTOR, ROCK SILO #1	Q203	CM-00-50	36,667.80
J0000	CRUSHING PLANT	THOMASTON	AIRLOCK, ROCK SILO #1 D.C.	Q203A	CM-00-50	4,400.37
J0000	CRUSHING PLANT	THOMASTON	FAN, ROCK SILO #1 D.C.	Q203B	CM-00-50	19,016.72
J0000	CRUSHING PLANT	THOMASTON	BELT, EAST RAW MATERIAL	Q205	CM-00-50	18,066.93

Land Improvement/Finish Mills

	LAND					
B0033	IMPROVEMENT	THOMASTON	LAND IMPROVEMENT	GPM0000	CM-00-50	50,288.41
D0034	FINISH MILLS	THOMASTON	ELECTRIC ROOM, OLD MILL BUILDING	G660	CM-00-50	20,681.48
J0004	FINISH MILLS	THOMASTON	AIRSLIDE, SEPARATOR FEED	F080	CM-00-50	11,448.61
J0004	FINISH MILLS	THOMASTON	AIRSLIDE, SEPARATOR CROSS	F081	CM-00-50	12,717.88
J0004	FINISH MILLS	THOMASTON	AIRSLIDE, FEED SEPARATOR - WEST	F082	CM-00-50	14,930.59
J0004	FINISH MILLS	THOMASTON	AIRSLIDE, FEED SEPARATOR - EAST	F083	CM-00-50	14,796.93
J0004	FINISH MILLS	THOMASTON	WEIGHFEEDER, SILO #3	F318	CM-00-50	50,014.49
J0004	FINISH MILLS	THOMASTON	WEIGHFEEDER, SILO #1	F319	CM-00-50	6,491.90
J0004	FINISH MILLS	THOMASTON	WEIGHFEEDER, SILO #7	F321	CM-00-50	14,136.42
J0004	FINISH MILLS	THOMASTON	FAN, FM#1 DISCHARGE D.C.	F718	CM-00-50	13,642.60
J0004	FINISH MILLS	THOMASTON	DUST COLLECTOR, FM#1 DISCHARGE	F718D	CM-00-50	16,793.18
J0004	FINISH MILLS	THOMASTON	MILL, PREGRINDING	F760	CM-00-50	548,857.41
J0004	FINISH MILLS	THOMASTON	BALL CHARGE, PREGRINDING MILL	F760A	CM-00-50	379.94
J0004	FINISH MILLS	THOMASTON	ELEVATOR, PREGRIND DISCHARGE	F762	CM-00-50	156,923.83
J0004	FINISH MILLS	THOMASTON	BELT, PREGIND CROSS	F763	CM-00-50	83,027.12
J0004	FINISH MILLS	THOMASTON	ELEVATOR, FM#1 FEED	F764	CM-00-50	232,220.29
J0004	FINISH MILLS	THOMASTON	SCREW, FM#1 FEED	F765	CM-00-50	36,159.76
J0004	FINISH MILLS	THOMASTON	GATE, FM#1 FEED SLIDE	F765A	CM-00-50	2,882.03
J0004	FINISH MILLS	THOMASTON	PREGRINDER VENT ID FAN	F766	CM-00-50	65,661.86
J0004	FINISH MILLS	THOMASTON	DUST COLLECTOR, PREGRIND DISCHARGE	F766D	CM-00-50	11,177.18
J0004	FINISH MILLS	THOMASTON	DUST COLLECTOR, WEIGHFEED	F767	CM-00-50	41,113.88
J0004	FINISH MILLS	THOMASTON	FAN, WEIGHFEED D.C.	F767A	CM-00-50	7,224.00
J0004	FINISH MILLS	THOMASTON	AIRLOCK, WEIGHFEED D.C.	F767B	CM-00-50	2,458.75
J0004	FINISH MILLS	THOMASTON	SCREW, WEIGHFEED D.C.	F767C	CM-00-50	5,885.08
J0004	FINISH MILLS	THOMASTON	WEIGHFEEDER, SILO #8	F768	CM-00-50	55,783.02
J0004	FINISH MILLS	THOMASTON	SCREW, 2ND LIFT DUST COLLECTOR	F775	CM-00-50	19,367.08
J0004	FINISH MILLS	THOMASTON	GATE, SILO #8 2-WAY	F776	CM-00-50	7,374.55
J0004	FINISH MILLS	THOMASTON	DRAGLINE, RAW SILO FEED	F780	CM-00-50	179,158.72
J0004	FINISH MILLS	THOMASTON	GATE, SOUTH DRAG SLIDE	F780A	CM-00-50	3,229.96
J0004	FINISH MILLS	THOMASTON	DRAGLINE, TOP OF RAW SILO SOUTH	F781	CM-00-50	142,817.99
J0004	FINISH MILLS	THOMASTON	DRAGLINE, TOP OF RAW SILO NORTH	F782	CM-00-50	186,877.74
J0004	FINISH MILLS	THOMASTON	GATE, SILO #8 SLIDE	F782A	CM-00-50	3,229.96
J0004	FINISH MILLS	THOMASTON	DUST COLLECTOR, FM#1 FEED	F785	CM-00-50	42,590.61
J0004	FINISH MILLS	THOMASTON	AIRLOCK, FM#1 FEED D.C.	F785A	CM-00-50	5,642.66
J0004	FINISH MILLS	THOMASTON	FAN, FM#1 SEPARATOR D.C.	F785B	CM-00-50	19,359.15
J0004	FINISH MILLS	THOMASTON	FAN, FM#2 W.F.'S DUST COLLECTOR	L780A	CM-00-50	7,005.25
J0004	FINISH MILLS	THOMASTON	DUST COLLECTOR, FM#2 W.F.'S	L780D	CM-00-50	19,042.71
J0004	FINISH MILLS	THOMASTON	WEIGHFEEDER, SILO 5	L781	CM-00-50	6,223.38
J0004	FINISH MILLS	THOMASTON	WEIGHFEEDER, SILO 3	L800	CM-00-50	74,920.12

Total Project Cost:

51,070,511.09

Total Grouped Costs

Project Category:	Cost (\$)
Raw Mill	14,872,061
Rotary Kiln Modification	889,520
Pre-heater/Pre-calciner	22,308,560
Baghouse/Fan/Stack	2,729,741
Homogenizing Silo/Feed	2,380,956
Clinker Cooler	3,527,037
Substation Power	1,164,929
Plant Air Compressors	515,901
Crushing Plant	489,271
Land Improv./Finish Mill:	2,192,537
Total Project Costs:	51,070,511

General Line Items - Percent Allocation:

Source Group	General Item Percent Allocation		Allocated Costs (\$)	
	Substation Power	Plant Air Compressors	Substation Power	Plant Air Compressors
Raw Mill	15%	10%	174,739	51,590
Rotary Kiln Modification	10%	0%	116,493	0
Preheat/Pre-calciner	10%	20%	116,493	103,180
Baghouse/Fan/Stack	0%	20%	0	103,180
Homogenizing Silo/Feed	0%	10%	0	51,590
Clinker Cooler	10%	10%	116,493	51,590
Crushing Plant	55%	0%	640,711	0
Finish Mills	Included ⁽¹⁾	30%	Included ⁽¹⁾	154,770
Totals:	100%	100%	1,164,929	515,901

Note 1: 55% of substation power upgrades is allocated to crushing, finish grinding and pack/ship operations unrelated to affected source.

Total Grouped Costs Allocating Substation Power Upgrades and Plant Air Compressor Equipment

	Total Project Costs (\$)	Total Affected Source Costs (\$)
Raw Mill	15,098,390	15,098,390
Rotary Kiln Modification	1,006,013	1,006,013
Pre-heater/Pre-calciner	22,528,233	22,528,233
Baghouse/Fan/Stack	2,832,921	2,832,921
Homogenizing Silo/Feed	2,432,546	2,432,546
Clinker Cooler	3,695,120	3,695,120
Crushing Plant	1,129,981	0
Land Imp/Finish Mill	2,347,307	0
Total Cost:	51,070,511	47,593,223