Air → 1995.10.20 Dust Plan Revisions

Norlite Corporation

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October 20, 1995

Peter Mack, P.E.
Regional Engineer
New York State Department of
Environmental Conservation
Region 4
1150 N. Westcott Road
Schenectady, New York 12306-2014

RE: Modifications to the Fugitive Dust Plan

Dear Mr. Mack:

In response to our meetings of October 6 and 12, 1995, Norlite is submitting revisions to the Fugitive Dust Plan prepared by Sci-Tech, Inc. on February 24, 1995 and last amended on September 5, 1995. The modifications are being made to enhance the plan, by incorporating dust collection systems at certain points with a high potential of fugitive dust emissions, based on relative emission rate estimates presented in Tables 3-1 and 5-2 of the Sci-Tech report. Specifically, dust collections systems will be added for the following additional points:

PLANNED ADDITIONAL FUGITIVE DUST CONTROLS

Source ID	Description	CURRENT EMISSIONS (tons/year)	EMISSIONS AFTER CONTROL (tons/year)
39	Clinker transfer to screen feed	0.2	0.002
40	Triple deck finish mill screen	11.1	0.35
41	Discharge into oversize hopper	0.06	0.002
42	El Jay Crusher	1.6	0.016
43	Transfer to El Jay Loadout belt	1.6	0.016
44	El Jay belt transfer to screen belt	0.2	0.002

PLANNED ADDITIONAL FUGITIVE DUST CONTROLS (Cont')

Source ID	Description	CURRENT EMISSIONS (tons/year)	EMISSIONS AFTER CONTROL (tons/year)
45	Transfer from fines belt to fines silo belt	0.095	0.00095
46	Discharge from fines silo belt to fines silo	2.5	0.049
47	Finish fines silo screen	1.0	0.068
48	Transfer from screen belt to 3/4" belt	0.059	0.0012
51	Transfer from screen belt to 3/8" belt	0.039	0.00078
	TOTAL	**18.45**	**0.51**

The above 11 sources will be addressed with the addition of 5 new dust collection systems, baghouses, in the finishing plant. All of the above sources are associated with the finishing plant, which is located directly adjacent to the housing along the eastern boundary of the facility. The above additional improvements to the fugitive dust plan reduces the emissions from the finishing plant by 98%, and attacks 53% of the total dust emissions from the largest (77% of the contributing) dust sources at the plant. Since these sources are located directly adjacent to the housing, it is justified to place priority on controls for these finishing plant components, which also will eliminate 41% of the fugitive dust from the site.

Norlite has investigated dry dust collection systems for the primary crusher area. The cost of dust collection systems for the jaw crusher, traylor crusher, and associated screens is cost prohibitive, and Norlite cannot commit to this investment. Furthermore, these remaining sources, in the primary crusher area, are dedicated to processing natural shale, not affected by any hazardous waste processing. Norlite can install additional partial enclosures or localized wind screens in this area, blocking fugitive dust from the eastern boundary. This additional control technique will reduce the dust emissions from sources # 9, 11, 12, and 13 from 10.7 tons/year to 0.33 tons/year; eliminating an additional 10.4 tons/year of emissions. When combined with the dust collection systems in the finish plant, a total of 29 tons/year of dust is being eliminated.

The above controls in the finish plant and primary crusher area eliminates 83% of the dust from the highest 77% contributing sources, and 64% of the total dust emissions from the site. Combined with the other controls already committed to in the Sept. 1995 version of the Sci-Tech, Inc. report, a total of 36 tons/year or 80% of the current dust emissions are being eliminated.

Norlite will add an additional $365,000 to the escrow account for fugitive dust controls, making a total of $565,000 of funding available for reductions in fugitive dust. The other $200,000 already committed from the prior version of the dust control plan, will still be invested in the improvements identified, and will achieve an additional reduction of 7 tons/year. In total, 36 tons per year of dust will be eliminated, resulting in a net reduction of 80% in fugitive dust emissions. Funding for these new controls will be focused on 77% of the largest contributing sources, and sources within 200 yds of the eastern plant boundary, along which is housing is located.

The remaining sources are located at a the mid portion of the facility, beyond a radius of 200 yds from neighboring housing, and are not as much of a priority as the finishing plant. A new Figure 5-2 has been added to the report showing the sources within a 200 yd radius of the eastern boundary of the plant. New Table 5-3 shows the emissions from these sources. As can be seen, a total of 75% of the emission reductions are being achieved within this 200 yd radius, primarily through the installation of dry dust collection systems, wind barriers and other improvements to the finishing plant.

Attached to this letter are the revised pages to the fugitive dust plan. Table 5-2 has been revised to show the additional emission reductions resulting from the new controls. Section 8.0 has been revised to provide the description and schedule for installation of the additional controls. Both a highlighted and non-highlighted version of these tables are included so that NYSDEC can readily identify the changes. In addition, new Figure 5-2 and Table 5-3 have been added to show the sources controlled within 200 yds of the facility eastern boundary.

Norlite requests approval of this revised Fugitive Dust Plan by October 24, 1995. Our staff, as well as our consultants from Sci-Tech, Inc., are prepared to meet with you at any time to assist in your review. Thank you for your consideration in this matter.

Sincerely,

William J. Ziegler
Vice President of Health, Safety,
and Environmental Affairs

cc. Anthony Adamcyzk, Director - NYSDEC Region 4
Robert Warland - NYSDEC Region 4
William Clarke - NYSDEC Region 4
David Carabetta, President - United Industrial Services
Bill Morris - United Industrial Services
Bob Anderson, Norlite
Tony Horncastle, American NuKEM Corporation
Dennis Venters, Norlite
Chuck Vannoy, Norlite
Ed Burgher, Norlite
Kevin Young

REVISIONS TO SCI-TECH, INC. REPORT

Table 5-2

Anticipated Emissions of Fugitve Dust Sources

Source ID	Plant Locatioin	Source Name	Anticipated Production	Units	Anticipated Emission Rate Potential (tpy)	Impact Potential Adjustment Factor (0 ->1)	Weighted Emission Rate Potential (tpy)	Anticipated Control Method	Anticipated Control Efficiency (%)	Anticipated Emission Rate (tpy)
1	Quarry	Drilling at quarry	350,000	tpy	1.40E-01	0.05	7.00E-03	Mist suppression	50	3.5E-03
2	Quarry	Blasting at quarry	350,000	tpy	1.40E+01	0.05	7.00E-01	None	0	7.0E-01
3	Quarry	Formation of quarried stone pile	350,000	tpy	1.26E+00	0.05	6.31E-02	None	0	6.3E-02
4	Quarry	Loading of stone into haul truck	350,000	tpy	1.91E-01	0.05	9.56E-03	None	0	9.6E-03
5	Road	Quarry stone transport to crusher	8,400	vmt	5.62E+01	0.05	2.81E+00	Road watering	90	2.8E-01
6	Quarry	Stone dump onto stock pile	350,000	tpy	1.91E-01	0.2	3.83E-02	None	0	3.8E-02
7	Quarry	Quarry stone stock pile	350,000	tpy	1.41E-02	0.2	2.81E-03	None	0	2.8E-03
8	Road	Stone transfer into primary crusher	350,000	tpy	1.91E-01	0.2	3.83E-02	Water spray	90	3.8E-03
9	Primary	Primary Jaw crusher	350,000	tpy	2.61E+01	0.2	5.22E+00	Spray and partial encl	97	1.6E-01
10	Primary	Transfer to primary screen hopper (Surge Bin)	350,000	tpy	1.91E-01	0.2	3.83E-02	Spray and partial encl	97	1.1E-03
11	Primary	Primary screen	350,000	tpy	2.80E+01	0.2	5.60E+00	Spray and partial encl	97	1.7E-01
12	Primary	Secondary crusher	140,000	tpy	2.94E+01	0.2	5.88E+00	Spray and partial encl	97	1.8E-01
13	Primary	Triple deck screen for crushing	350,000	tpy	2.80E+01	0.2	5.60E+00	Spray and partial encl	97	1.7E-01
14	Primary	Discharge onto cone crusher belt (Drop from Traylor Crusher)	70,000	tpy	3.64E-01	0.2	7.28E-02	H2O carry-through	90	7.3E-03
15	Primary	Loading onto crushing operations fines pile	112,500	tpy	1.30E+00	0.2	2.60E-01	H2O carry-through	90	2.6E-02
16	Primary	Crushing operations fines pile	112,500	tpy	2.57E+00	0.2	5.15E-01	None	0	5.1E-01
17	Primary	Loading of fines into trucks	112,500	tpy	5.85E-01	0.2	1.17E-01	None	0	1.2E-01
18	Road	Transport of fines off-site	5,625	vmt	2.60E+01	0.2	5.19E+00	Road watering	90	5.2E-01
19	Primary	Loading of kiln feed onto stock pile	205,000	tpy	7.39E-01	0.2	1.48E-01	H2O carry-through	90	1.5E-02
20	Primary	Kiln feed stock pile	205,000	tpy	4.02E-01	0.2	8.04E-02	None	0	8.0E-02
21	Primary	Kiln feed to screen discharge belt	205,000	tpy	2.29E-01	0.2	4.58E-02	None	0	4.6E-02
22	Primary	Kiln feed transfer to silo conveyer	205,000	tpy	2.29E-01	0.2	4.58E-02	None	0	4.6E-02
23	Primary	Silo conveyor to kiln feed silo	205,000	tpy	2.29E-01	0.2	4.58E-02	Enclosure	90	4.6E-03
24	Kiln	Kiln feed transfer to #2 kiln belt	205,000	tpy	2.29E-01	0.2	4.58E-02	None	0	4.6E-02
25	Kiln	Kiln feed transfer to #1 kiln belt	102,500	tpy	1.15E-01	0.2	2.29E-02	None	0	2.3E-02
26	Kiln	#2 kiln feed transfer to loading belt	102,500	tpy	1.15E-01	0.2	2.29E-02	None	0	2.3E-02
27	Kiln	Loading of #2 kiln	102,500	tpy	1.60E-01	0.2	3.20E-02	Collection hood	95	1.6E-03
28	Kiln	Loading of #1 kiln	102,500	tpy	1.60E-01	0.2	3.20E-02	Collection hood	95	1.6E-03
29	Kiln	#2 kiln rim seal	102,500	tpy	1.48E+01	0.5	7.39E+00	Improved seals	95	3.7E-01
30	Kiln	#1 kiln rim seal	102,500	tpy	1.48E+01	0.5	7.39E+00	Improved seals	95	3.7E-01
31	Kiln	Removal of baghouse plug Vacuum Truck Unloading	500	tpy	3.60E-01	0.5	1.80E-01	Enclosure + slurry	99	1.8E-03
32	Eliminiated	Kiln + clinker dust transfer onto #2 belt	0	tpy	0.00E+00	1	0.00E+00	Eliminated	0	0.0E+00
33	Eliminiated	Kiln + clinker dust transfer onto #1 belt	0	tpy	0.00E+00	1	0.00E+00	Eliminated	0	0.0E+00
34	Kiln	Discharge of #2 clinker onto pile	89,100	tpy	3.79E-01	1	3.79E-01	Water spray	90	3.8E-02
35	Kiln	Discharge of #1 clinker onto pile	89,100	tpy	3.79E-01	1	3.79E-01	Water spray	90	3.8E-02
36	Kiln	#2 kiln clinker pile transfer to #1 pile	89,100	tpy	9.96E-02	1	9.96E-02	H2O carry-through	90	1.0E-02
37	Kiln	#2 kiln clinker pile	89,100	tpy	2.13E-01	1	2.13E-01	H2O carry-through	90	2.1E-02
38	Kiln	#1 kiln clinker pile	89,100	tpy	2.13E-01	1	2.13E-01	H2O carry-through	90	2.1E-02
39	Finish	Clinker transfer to screen feed belt	180,000	tpy	2.01E-01	1	2.01E-01	Baghouse	99	2.0E-03
40	Finish	Triple deck finish mill screen	440,000	tpy	3.52E+01	1	3.52E+01	Baghouse	99	3.5E-01
41	Finish	Discharge into oversize hopper	180,000	tpy	2.01E-01	1	2.01E-01	Baghouse	99	2.0E-03

Source ID	Plant Locatioin	Source Name	Anticipated Production	Units	Anticipated Emission Rate Potential (tpy)	Impact Potential Adjustment Factor (0 ->1)	Weighted Emission Rate Potential (tpy)	Anticipated Control Method	Anticipated Control Efficiency (%)	Anticipated Emission Rate (tpy)
42	Finish	El Jay crusher	180,000	tpy	1.62E+00	1	1.62E+00	Baghouse	99	1.6E-02
43	Finish	Transfer to El Jay loadout belt	180,000	tpy	1.62E+00	1	1.62E+00	Baghouse	99	1.6E-02
44	Finish	El Jay belt transfer to screen belt	180,000	tpy	2.01E-01	1	2.01E-01	Baghouse	99	2.0E-03
45	Finish	Transfer from fines belt to fines silo belt	85,000	tpy	9.50E-02	1	9.50E-02	Baghouse	99	9.5E-04
46	Finish	Discharge from fines silo belt to fines silo	85,000	tpy	4.90E+00	1	4.90E+00	Enclosure	90	4.9E-01
47	Eliminated	Fines silos screens	0	tpy	0.00E+00	0	3.40E+00	Eliminated	100	0.0E+00
48	Finish	Transfer from screen belt to 3/4" belt	105,000	tpy	1.17E-01	1	1.17E-01	Baghouse	99	1.2E-03
49	Finish	Discharge onto short-term 3/4" pile	105,000	tpy	3.78E-01	1	3.78E-01	Chute + water	90	3.8E-02
50	Finish	3/4" short-term storage pile	105,000	tpy	1.00E-02	1	1.00E-02	Watering	50	5.0E-03
51	Finish	Transfer from screen belt to 3/8" belt	70,000	tpy	7.82E-02	1	7.82E-02	Baghouse	99	7.8E-04
52	Finish	Discharge onto short-term 3/8" pile	70,000	tpy	2.52E-01	1	2.52E-01	Chute + water	90	2.5E-02
53	Finish	3/8" short-term storage pile	70,000	tpy	8.04E-03	1	8.04E-03	Watering	50	4.0E-03
54	Finish	Transfer from 3/8" pile belt to 3/8" silo belt	18,500	tpy	2.07E-02	1	2.07E-02	H2O carry-through	50	1.0E-02
55	Finish	Discharge from 3/8" silo belt to 3/8" silo pile	18,500	tpy	6.67E-02	1	6.67E-02	H2O carry-through	50	3.3E-02
56	Finish	3/8" silo pile	18,500	tpy	4.02E-04	1	4.02E-04	None	0	4.0E-04
57	Finish	Silo loading onto shipping belt	88,875	tpy	4.62E-01	1	4.62E-01	Enclosure	90	4.6E-02
58	Finish	Shipping belt transfer to stock belt	88,875	tpy	4.62E-01	1	4.62E-01	Partial Enclosure	70	1.4E-01
59	Finish	Stock belt discharge onto 88/12 pile	88,000	tpy	4.50E+00	0.5	2.25E+00	Radial stacker	90	2.3E-01
59	Finish	Stock pile belt discharge onto fines pile	875	tpy	5.05E-02	0.2	5.05E-02	Eliminated	100	0.0E+00
60	Finish	88/12 block mix short-term pile	88,000	tpy	1.71E-01	0.5	8.56E-02	None	0	8.6E-02
60	Finish	Finish mill straight fines pile	875	tpy	1.54E-03	1	1.54E-03	None	0	1.5E-03
61	Finish	Loading onto 3/4" long-term pile	52,500	tpy	1.27E-03	0.5	6.33E-04	None	0	6.3E-04
62	LT Pile	Long-term 3/4" storage pile	52,500	tpy	6.43E-01	0.5	3.22E-01	Watering	50	1.6E-01
63	Finish	Loading onto 3/8" long-term pile	25,750	tpy	1.53E-03	0.5	7.64E-04	None	0	7.6E-04
64	LT Pile	Long-term 3/8" storage pile	25,750	tpy	4.02E-01	0.5	2.01E-01	Watering	50	1.0E-01
65	LT Pile	Loading onto 88/12 long-term pile	88,000	tpy	1.64E-01	0.2	3.29E-02	None	0	3.3E-02
66	LT Pile	Long-term 88/12 storage pile	88,000	tpy	3.42E+00	0.2	6.85E-01	Pile shaping	25	5.1E-01
67	Road	Finish mill front-end loader travel	3,782	vmt	8.53E+00	1	8.53E+00	Road watering	90	8.5E-01
68	Finish	Loading of product into railcars	44,278	tpy	8.73E-02	0.5	4.36E-02	Water spray [1]	50	2.2E-02
69	Finish	Loading of product into trucks	119,716	tpy	2.36E-01	0.5	1.18E-01	Water spray [1]	50	5.9E-02
70	Road	Transport of product off-site by truck	2,982	vmt	1.67E+01	1	1.67E+01	Road watering	90	1.7E+00
71	Road	Travel of LGF delivery trucks	728	vmt	1.01E+01	0.5	5.06E+00	Road watering	90	5.1E-01
72	Road	Maintenance traffic	1,664	vmt	4.05E+00	0.5	2.02E+00	Road watering	90	2.0E-01
73	Road	Passenger vehicle traffic	5,040	vmt	7.49E+00	1	7.49E+00	Road watering	90	7.5E-01
	Eliminiated	Baghouse dust pile	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Loading of baghouse dust onto pile	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Baghouse dust discharge from silo	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Transfer of fines to kiln feed pile	0	tpy	0.00E+00	0.2	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Transport of baghouse dust off-site	0	vmt	0.00E+00	1	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Loading of baghouse dust into trucks	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Stock belt discharge onto 75/25 pile	0	tpy	0.00E+00	1	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	75/25 block mix short-term pile	0	tpy	0.00E+00	1	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Travel of coal delivery trucks	0	vmt	0.00E+00	1	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Dump into coal mill hopper	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Coal pile	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00

Source ID	Plant Locatioin	Source Name	Anticipated Production	Units	Anticipated Emission Rate Potential (tpy)	Impact Potential Adjustment Factor (0 ->1)	Weighted Emission Rate Potential (tpy)	Anticipated Control Method	Anticipated Control Efficiency (%)	Anticipated Emission Rate (tpy)
	Eliminiated	Unloading of coal onto pile	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00
		TOTAL			279	0.50	138		93	9.42

Table 5-3

Emissions From Sources within 200 Yards of the Eastern Boundary

Source ID	Plant Locatioin	Source Name	Anticipated Production	Units	Anticipated Emission Rate Potential (tpy)	Impact Potential Adjustment Factor (0 ->1)	Weighted Emission Rate Potential (tpy)	Anticipated Control Method	Anticipated Control Efficiency (%)	Anticipated Emission Rate (tpy)
29	Kiln	#2 kiln rim seal	102,500	tpy	1.48E+01	0.5	7.39E+00	Improved seals	95	3.7E-01
30	Kiln	#1 kiln rim seal	102,500	tpy	1.48E+01	0.5	7.39E+00	Improved seals	95	3.7E-01
31	Kiln	Removal of baghouse plug Vacuum Truck Unloading	500	tpy	3.60E-01	0.5	1.80E-01	Enclosure + slurry	99	1.8E-03
32	Eliminiated	Kiln + clinker dust transfer onto #2 belt	0	tpy	0.00E+00	1	0.00E+00	Eliminated	0	0.0E+00
33	Eliminiated	Kiln + clinker dust transfer onto #1 belt	0	tpy	0.00E+00	1	0.00E+00	Eliminated	0	0.0E+00
34	Kiln	Discharge of #2 clinker onto pile	89,100	tpy	3.79E-01	1	3.79E-01	Water spray	90	3.8E-02
35	Kiln	Discharge of #1 clinker onto pile	89,100	tpy	3.79E-01	1	3.79E-01	Water spray	90	3.8E-02
36	Kiln	#2 kiln clinker pile transfer to #1 pile	89,100	tpy	9.96E-02	1	9.96E-02	H2O carry-through	90	1.0E-02
37	Kiln	#2 kiln clinker pile	89,100	tpy	2.13E-01	1	2.13E-01	H2O carry-through	90	2.1E-02
38	Kiln	#1 kiln clinker pile	89,100	tpy	2.13E-01	1	2.13E-01	H2O carry-through	90	2.1E-02
39	Finish	Clinker transfer to screen feed belt	180,000	tpy	2.01E-01	1	2.01E-01	Baghouse	99	2.0E-03
40	Finish	Triple deck finish mill screen	440,000	tpy	3.52E+01	1	3.52E+01	Baghouse	99	3.5E-01
41	Finish	Discharge into oversize hopper	180,000	tpy	2.01E-01	1	2.01E-01	Baghouse	99	2.0E-03
42	Finish	El Jay crusher	180,000	tpy	1.62E+00	1	1.62E+00	Baghouse	99	1.6E-02
43	Finish	Transfer to El Jay loadout belt	180,000	tpy	1.62E+00	1	1.62E+00	Baghouse	99	1.6E-02
44	Finish	El Jay belt transfer to screen belt	180,000	tpy	2.01E-01	1	2.01E-01	Baghouse	99	2.0E-03
45	Finish	Transfer from fines belt to fines silo belt	85,000	tpy	9.50E-02	1	9.50E-02	Baghouse	99	9.5E-04
46	Finish	Discharge from fines silo belt to fines silo	85,000	tpy	4.90E+00	1	4.90E+00	Enclosure	90	4.9E-01
47	Eliminated	Fines silos screens	0	tpy	0.00E+00	0	3.40E+00	Eliminated	100	0.0E+00
48	Finish	Transfer from screen belt to 3/4" belt	105,000	tpy	1.17E-01	1	1.17E-01	Baghouse	99	1.2E-03
49	Finish	Discharge onto short-term 3/4" pile	105,000	tpy	3.78E-01	1	3.78E-01	Chute + water	90	3.8E-02
50	Finish	3/4" short-term storage pile	105,000	tpy	1.00E-02	1	1.00E-02	Watering	50	5.0E-03
51	Finish	Transfer from screen belt to 3/8" belt	70,000	tpy	7.82E-02	1	7.82E-02	Baghouse	99	7.8E-04
52	Finish	Discharge onto short-term 3/8" pile	70,000	tpy	2.52E-01	1	2.52E-01	Chute + water	90	2.5E-02
53	Finish	3/8" short-term storage pile	70,000	tpy	8.04E-03	1	8.04E-03	Watering	50	4.0E-03
54	Finish	Transfer from 3/8" pile belt to 3/8" silo belt	18,500	tpy	2.07E-02	1	2.07E-02	H2O carry-through	50	1.0E-02
55	Finish	Discharge from 3/8" silo belt to 3/8" silo pile	18,500	tpy	6.67E-02	1	6.67E-02	H2O carry-through	50	3.3E-02
56	Finish	3/8" silo pile	18,500	tpy	4.02E-04	1	4.02E-04	None	0	4.0E-04
57	Finish	Silo loading onto shipping belt	88,875	tpy	4.62E-01	1	4.62E-01	Enclosure	90	4.6E-02
58	Finish	Shipping belt transfer to stock belt	88,875	tpy	4.62E-01	1	4.62E-01	Partial Enclosure	70	1.4E-01
59	Finish	Stock belt discharge onto 88/12 pile	88,000	tpy	4.50E+00	0.5	2.25E+00	Radial stacker	90	2.3E-01
59	Finish	Stock pile belt discharge onto fines pile	875	tpy	5.05E-02	0.2	5.05E-02	Eliminated	100	0.0E+00
60	Finish	88/12 block mix short-term pile	88,000	tpy	1.71E-01	0.5	8.56E-02	None	0	8.6E-02
60	Finish	Finish mill straight fines pile	875	tpy	1.54E-03	1	1.54E-03	None	0	1.5E-03
61	Finish	Loading onto 3/4" long-term pile	52,500	tpy	1.27E-03	0.5	6.33E-04	None	0	6.3E-04
62	LT Pile	Long-term 3/4" storage pile	52,500	tpy	6.43E-01	0.5	3.22E-01	Watering	50	1.6E-01
67	Road	Finish mill front-end loader travel	3,782	vmt	8.53E+00	1	8.53E+00	Road watering	90	8.5E-01
68	Finish	Loading of product into railcars	44,278	tpy	8.73E-02	0.5	4.36E-02	Water spray [1]	50	2.2E-02
69	Finish	Loading of product into trucks	119,716	tpy	2.36E-01	0.5	1.18E-01	Water spray [1]	50	5.9E-02
70	Road	Transport of product off-site by truck	2,982	vmt	1.67E+01	1	1.67E+01	Road watering	90	1.7E+00
72	Road	Maintenance traffic	1,664	vmt	4.05E+00	0.5	2.02E+00	Road watering	90	2.0E-01

Source ID	Plant Locatioin	Source Name	Anticipated Production	Units	Anticipated Emission Rate Potential (tpy)	Impact Potential Adjustment Factor (0 ->1)	Weighted Emission Rate Potential (tpy)	Anticipated Control Method	Anticipated Control Efficiency (%)	Anticipated Emission Rate (tpy)
73	Road	Passenger vehicle traffic	5,040	vmt	7.49E+00	1	7.49E+00	Road watering	90	7.5E-01
	Eliminiated	Baghouse dust pile	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Loading of baghouse dust onto pile	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Baghouse dust discharge from silo	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Transfer of fines to kiln feed pile	0	tpy	0.00E+00	0.2	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Transport of baghouse dust off-site	0	vmt	0.00E+00	1	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Loading of baghouse dust into trucks	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Stock belt discharge onto 75/25 pile	0	tpy	0.00E+00	1	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	75/25 block mix short-term pile	0	tpy	0.00E+00	1	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Travel of coal delivery trucks	0	vmt	0.00E+00	1	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Dump into coal mill hopper	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Coal pile	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00
	Eliminiated	Unloading of coal onto pile	0	tpy	0.00E+00	0.5	0.00E+00	Eliminated	0	0.0E+00
		TOTAL			120	0.86	103		94	6.08

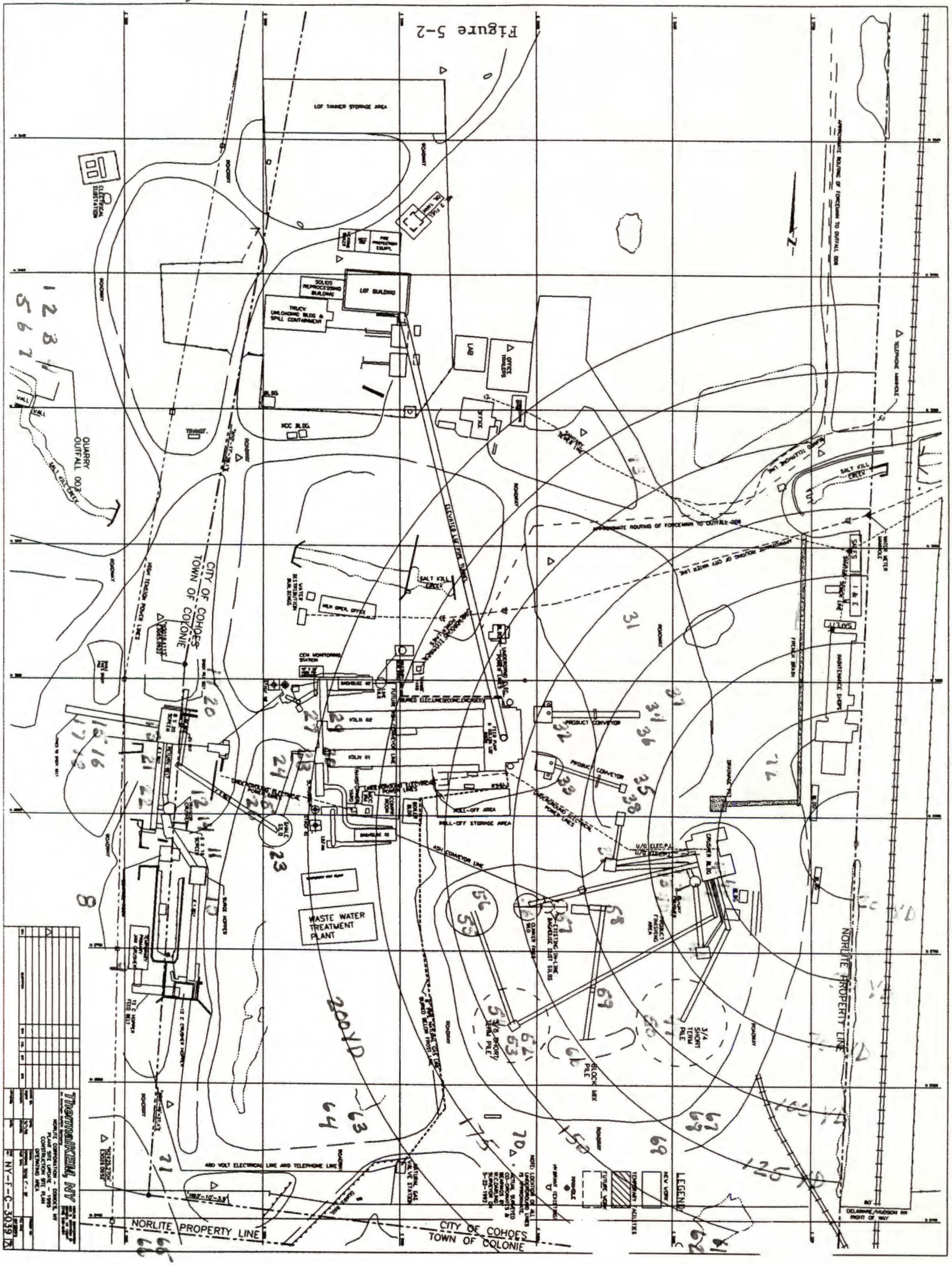

WASTE WATER TREATMENT PLANT
NORLITE PROPERTY LINE
CITY OF COHOES
TOWN OF COLONIE
QUARRY OUTFALL 001
SALT KILL CREEK
LAB
OFFICE
KILN 01
KILN 02
PRODUCT CONVEYOR
ROLL-OFF STORAGE AREA
CRUSHER BLDG.
LEGEND
NY-F-C-3039

Figure 5-2

8.0 SCHEDULE FOR IMPLEMENTATION

Table 8-1 presents the emission sources, the control methodologies to be implemented, and the schedule for their completion. Descriptions of the sources and the controls to be implemented are included herein. Figure 8-1 is an overall site plan drawing. Enlarged sections of the primary crusher and finish plant areas can be found on Figure 8-2, which provides greater detail and identifies emission control points. Figures 8-4 through 8-29 are photographs and sketches of the systems which are identified on the site plan and are discussed in the narrative below.

- Finish Mill Block Mix Production: Currently, block mix, a combination of bag house dust, light weight aggregate fines, and 3/8 inch light weight aggregate, is produced using two long conveyor belts and two 40 to 50 feet high drop chutes. Norlite will install a field conveyor (Fig. 8-2, Item 1) and a raising and lowering radial stacking conveyor (Fig. 8-2, Item 2) to eliminate the two high drop points (Fig. 8-2, Items 3 and 4, Figs 8-3 through 8-5) and shorten the distance the block mix must travel on conveyor belts. The current block mix conveyor belt (Fig. 8-2, Item 6; Fig 8-5) will be removed after the new stacking conveyor system is installed. The stacking conveyor will have a discharge chute located at the head pulley. Brightly colored bars or pipes will be attached to the chute and extend 12 to 18 inches beyond the end of the chute. The operator will control the height of the conveyor so that the end of the chute will not be more than 18 inches above the top of the pile, i. e., the colored pipe will always be in or on the pile. The maximum height of the pile will be approximately 34 feet.

- Finish Plant Crusher, Screens and Transfer Points: Norlite will contract a vendor with expertise in dust collection to design a baghouse system to collect dust at critical points in the finish plant area. Negative pressure dust collection controls will be installed on the triple deck screen, the El-Jay crusher, the oversize hopper, the shipping tunnel enclosure, and on the two block mix conveyor transfer points. These point sources have been identified for control because of their potential to emit dust as calculated in Table 5-2. Norlite will continue to operate the Toro or Rainbird sprinkler systems (Fig. 8-2; Item 7, Figs. 8-6 and 8-7) in the finish plant area to suppress dust on and around the production piles during non-freezing conditions.

One 30,000 ACFM baghouse dust collection system will be installed to collect dust from the El-Jay Crusher, the 6x20 Triple Deck Screen, the Oversize Hopper, and 6 conveyor belt transfer points surrounding the 6x20 Screen and the El-Jay Crusher. Dust will be discharged from the baghouse via a chute to the Fines to Silo conveyor belt. This dust transfer point will be enclosed in a hood which is vented to the baghouse.

A second baghouse will be installed to vent the #1 Finish Plant Conveyor and the transfer points to the # 2 Finish Plant Conveyor and the Recrush Conveyor. These three points will be totally enclosed in hoods and vented to a 1,500 ACFM baghouse.

A 1,500 ACFM bin vent type unit will be installed on the discharge end of the Fines to Silo Conveyor. This baghouse will provide negative pressure dust collection for both the Fines Silo and the transfer point into the silo.

Two 1,500 ACFM induced-draft bin vent dust collectors will be installed at the transfer points of the new block mix conveyors.

- Outdoor Fines and Dust Storage: Norlite will only produce light weight aggregate fines as a stand-alone product, on special order. Currently, there are only two or three orders a year. Norlite will not store these materials outdoors. When an order is received, fines will be conveyed from the fines storage silo to an interim transfer pile, from which it will be loaded onto a truck on the same day. Following the installation of the stacking conveyor, trucks transporting lightweight aggregate fines will be loaded directly from the conveyor to eliminate intermediate transfer and handling.

Norlite does not and will not store bag house dust outdoors. Only blockmix, which contains baghouse dust, will be stored outside. Block mix is produced in the finish mill and is stored nearby in a short-term production pile. Norlites's long-term block mix inventory is stored in a more remote area of the plant which is far removed from Norlite's neighbors. Current practices to minimize dust formation include frequent watering of the short-term production pile by an automatic sprinkler. The working faces of the long-term block mix storage piles face leeward, i.e., towards the southeast. Therefore, loose material is shielded from the prevailing wind. Undisturbed faces of these piles form a crust which virtually eliminates dust pickup by the wind.

Storage pile contouring will be adopted as a future measure to control emission of fugitive dusts from the long-term block mix storage piles. Storage piles will be kept as low to the ground as possible and will be oriented to present minimum working surface area to the prevailing wind. Additionally, the leading edges of piles will be smoothed to minimize air turbulence and dust pick up by the wind.

- Clinker Dust to Clinker Belt: The dust collected in the Barron system (Fig. 8-8) that is currently transferred to the clinker pile via the clinker conveyor belt will transferred to an enclosed hopper. The dust will be wetted in the hopper and transferred to the clinker pile as a wet mixture.

- Windblown Dust Migrating Across Eastern Boundary: Two rows of Douglas Fir or Spruce trees will be planted along the eastern boundary of the plant in area shown in Figure 8-2 (Item 8). The trees will be placed far enough apart to allow for future growth and will be staggered to provide a continuous wind break along the boundary. When planted, the trees will be 10 to 12 feet in height with an approximate branch span 6 feet. The trees will be planted on a raised berm to increase their effective initial height.

Douglas Fir or Spruce trees were selected because of they grow well in a variety of soil conditions, they have very dense foliage and they maintain their density as they grow. The Douglas Fir and Spruce trees were two of the three types of evergreen trees recommended by the Albany County Cooperative Extension Horticulture Agent.

- Finish Mill Short Term Storage Piles: The short term storage piles at the finish mill (Fig. 8-2; Item 7) are currently wetted with Toro or Rainbird type sprinklers as shown in Figures 8-6 and 8-7. These sprinkler systems will continue to be used in all non-freezing weather conditions. The sprinkler on the block mix conveyor belt will be installed at the new radial stacking conveyor head pulley (Fig. 8-2, Item 2) to ensure that the block mix pile will continue to be sprayed with water.

- Roadways: The procedure detailed in Section 7.0 of this report was implemented on May 1, 1995. The purpose of this procedure is to make sure that the facility roadways are adequately watered to suppress dust. This procedure includes provisions to ensure that equipment and manpower are always available to water the roads when the temperature is above freezing and there is heavy vehicle traffic present in the plant. A site plan drawing, Figure 8-11 has been included to depict areas that the water truck will cover.

Other methods of wetting the roadways were examined, including the installation of a pipe and sprinkler system. These methods were determined to be more problematic and costly than the labor intensive water truck method.

- Primary Crusher Area: A wet dust suppression system will be installed for the primary crusher area by Norlite. This system will be designed to capture dust from the primary jaw crusher (Fig. 8-2, Item 15; Fig. 8-9), the 6x16 Screen, the Traylor Cone Crusher (Fig. 8-10), and the 8x20 Screen (Fig 8-10) using low volume, high pressure mist. The system will be completely heat traced and insulated to allow operation under all conditions. An automatic air purge will ensure that the water lines are cleared when the water is not being sprayed.

A partial enclosure or wind screen will be installed around the Jaw Crusher to contain dust emissions. A wet spray system will be installed to control dust while the loader is dumping shale into the crusher hopper. The use of electronic controls to activate and de-activate the spray headers will be investigated by Norlite. These additional controls will improve winter operations.

Covers will be installed over the Traylor Crusher, the 6x16 Screen, and the discharge points around the Traylor Crusher, and the partial enclosure around the 8x20 Screen building will be completed on all four sides to further contain dust.

Stone is transferred to the 12 C hopper (Fig. 8-2, Item 16; Fig 8-11) from the primary jaw crusher via a conveyor belt. Dust will be suppressed in the 12 C hopper with two spray bars. One spray bar will be centered over the top of the hopper with the spray directed downward. The second spray bar will have two nozzles. One nozzle will be directed at the stone being discharged from the conveyor belt, while the second will point up at a 30° angle towards the center of the hopper.

Spray bars with one nozzle each will be attached to the discharge end of the #1 Conveyor belt in the Surge Hopper (Fig. 8-2, Item 17) and to the discharge of the #2 Conveyor belt (Fig. 8-2, Item 18).

- Improved Baghouse on Soda Ash Silo: The original Soda Ash Silo baghouse (Fig. 8-2, Item 14) was removed and replaced with a modern pulse-jet bag house bin vent (Fig. 8-12) in June, 1995

- Railcar and Truck Loading: Norlite will prepare a standard operating procedure (SOP) to cover loading of trucks and railcars with block mix near the eastern plant boundary. Since the fundamental problem is the transport of wind borne dust across the eastern plant boundary, Norlite will install local wind monitoring stations near the loading areas. The SOP will be developed by observing and experimenting with loading operation over the course of a representative period. The goal will be to identify a set of acceptable practices and conditions, including wind speed and direction, during which block mix can be loaded without generating fugitive dusts which migrate across the eastern plant boundary.

Preliminary tests indicate that dust from block mix will not cross the site boundary unless operations are conducted with westerly winds in excess of 10 miles per hour. Restriction developed for this SOP will not apply to loading 3/4's or 3/8's lightweight aggregate since dust formation and migration from handling these materials is minimal.

- Kiln Clinker Conveyors: The wet dust suppression systems for the clinker belts have been designed by Norlite. These systems have been designed to spray water at a mass flow rate of 1.5% of the aggregate mass flow using a hollow cone spray nozzle similar to figure 8-25. Current literature shows that 0.5 to 1.5:100 (0.5% to 1.5%) water to product ratio by weight is sufficient to make the material wet and suppress dust. This is equivalent to about 1 gallon per ton of stone.

Each clinker belt (Fig. 8-2, Item 11) will have two spray systems. One system operates on a 5 minute intermittent cycle to suppress dust on the clinker pile. The second spray bar operates continuously to wet the clinker as it falls off of the head pulley. The pile spray system is detailed in figures 8-13 through 8-15. The head pulley discharge spray bar has one nozzle and will be similar to figure 8-16.

- Finished Product Storage Silo: The Finished Product Storage Silo is vented through a fabric filter (sock) which is provided to remove entrained dust from air which is displaced by product (aggregate fines) during silo filling operation. In reality, displacement air and entrained (fugitive) dust bypasses the vent and escapes the silo through the rooftop fill opening. To provide a more positive means of controlling this fugitive dust source, Norlite will install an induced draft bin vent system which will keep the silo under negative pressure during filling operaitons.

A second source of fugitive dust was a defective drop chute on top of the silo (Fig. 8-2, Item 10). The chute had several wear holes caused by abrasive scouring. During May, 1995, the chute was repaired by replacing eroded material with an abrasion resistant metal. The repaired areas were fabricated as bolted sections which can be readily replaced for easier maintenance (Fig. 8-17). Regular inspection will ensure that the chute is properly maintained.

- Shipping Tunnel Mouth: The mouth of the shipping tunnel under the dust and fines silos was covered with a curtain of conveyor belt strips (Fig. 8-18) to prevent dust from escaping the area shown as figure 8-2, Item 9. Under normal operations dust is not produced in this area. During block mix production the level in the bag house dust silos decreases. Some dust is produced when the silo reaches its near empty point. At this point the finish mill operator will stop block mix production or switch to the other dust silo.

Another potential source of dust from this area is from equipment wear. Worn vanes on the rotary airlock feeders can allow bypass air and dust to escape into the shipping tunnel. Norlite will include these rotary airlock feeders in its preventative maintenance program.

Norlite will also seal the joints and seams of the shipping tunnel entrance shelter and connect this area to the negative pressure baghouse filter system to collect dust in this area.

- Blockmix storage by Elm Street Entrance: The area north-west of the Elm Street entrance is being used for long term block mix storage. Norlite will prepare a SOP which will instruct the loader operators how to shape the storage piles and handle these materials in a manner which minimizes fugitive dust emissions from this source.

- Stacking Tubes: The stacking tubes for the block mix (Fig. 8-5) will be eliminated once the radial stacking conveyor has been installed. Outlets in the 3/4's stacking tube (Fig. 8-6) will be covered with rubber flaps to minimize dust emissions in this area.

- Kiln Seals: The seals at the rear of each kiln (Fig. 8-2, Item 13) will be maintained during planned kiln shutdowns as needed to prevent emissions from this area (Fig. 8-19).

- Baghouse Dust Unloading Via Vacuum Truck: The current procedure of slurrying dust within the vacuum truck and then off-loading a full truck will continue. All supervisors and potential vacuum truck vendors will be trained on this procedure.

- Housekeeping and General Items: Pre-shift inspection checklists will be revised to include looking for missing conveyor covers and screen enclosure panels. Missing covers/panels will be replaced prior to starting equipment.

- Norlite Direct Line: A mechanism to enable the public to report dust complaints, i.e., the Norlite Direct Line, was established on May 1, 1995 according to Section 6.0 of this report.

- Finishing Plant Operations: In the past Norlite operated the Finishing Plant during the night so maintenance could be performed during the daytime when a full maintenance crew was available. To ensure better control over Finishing Plant operations, Norlite voluntarily curtailed nighttime operations. Effective January 16, 1995, the Finishing Plant began operating on a 7:30 AM to 11:30 PM, Monday through Friday schedule. Norlite has agreed to make all reasonable efforts to abide by this routine schedule; however, Norlite reserves the right to extend operations beyond these hours, or to include weekends, on those infrequent occasions when it is faced with unusual demand, or when routine operations have been disturbed by weather conditions or maintenance.

- Winter Operations: The spraying systems that will be installed have been designed with low point drains and air purge capability. When the temperature drops below freezing, the water sprays will be turned off, drained and purged with air. When the temperature rises above freezing, the water spray systems will be turned on.

Natural crusts form on the storage piles in the winters with ice and snow. These crusts prevent dust from being picked up by wind. Norlite will minimize any disturbance of the crusts on the storage pile's western faces. Furthermore, Norlite will make efforts to ensure that there is only one active storage pile of each size of aggregate at any one time.

- Drilling Operations: Norlite is currently investigating the feasibility of adding a more effective dust removal/suppression system to the current drill rig. In the mean time, since the quarry is located at least 1/4 mile from the nearest neighbor, and drilling operations take place 100 - 300 feet below the top level of the quarry, any dust which is not captured by the existing wet suppression system has little chance of leaving the quarry.

- Blasting Operations: Norlite has reviewed the literature and discussed dust control measures applicable to blasting with its blasting contractor. There appears to be a paucity of information on the subject, since few insights into effective preventative measures could be found. Recent quarry blasts have produced very little dust. The location and depth of the quarry should be sufficient to prevent dust from leaving the site.

As an experiment, Norlite will attempt to wet the face and top surface of the blast area to contain or minimize dust. We do not believe this practice will be effective, since wetting will only affect the surface, and dust is created principally from the breaking an moving of the rock mass.

- Disciplinary System For Dust Issues: Norlite's union contract indirectly addresses fugitive dust control via a contract provision which empowers Norlite's management to "direct the work force" toward its goals. Since DEC has escalated the importance of controlling fugitive dusts, Norlite has responded by instituting studies (such as the FDP), modifying its equipment and practices, and educating its work force regarding the importance of dust control. Norlite will continue to train its managers, supervisors, and hourly employees regarding the importance of properly operating and maintaining dust control equipment and of diligently observing procedures to control fugitive dusts. Additionally, Norlite will establish a formal policy on dust control and will revise its disciplinary policy to address censure for violation of dust control policy.

Table 8-1 Schedule for Implementation

1995 - 96 Dust Control Plan Phase I		
Emission Source Area	Control Methodology	Completion Schedule Months from DEC Approval of FDP
Finish Mill Block Mix Production	Install a transfer conveyor and stacking conveyor to control drop height of block mix	12
Block Mix Belt Transfer Points	Install bin vent dust collectors for each point	12
Wind Blown Dust Across Eastern Boundary	Plant two staggered rows of evergreen trees	12
Roadways	Follow procedure outlined in FDP Section 7.0	Started May 1, 1995
Finish Plant Crushers and Screens	Install a baghouse dust collector	12
Stacking tubes for 3/4's and 3/8's	Install and routinely maintain rubber flaps	4
Vacuum Truck unloading	Follow current procedure, train new operators	1
Norlite Direct Line	Method of public reporting	Completed May 1, 1995
Finish Plant Operation Schedule	Shift to day time operations	Complete Jan. 16, 1995
Soda Ash Silo Vent	Install new bin vent dust collector	Completed June, 1995
Drop Chute to Fines Silo	Install wear resistant metal plates on chute	Completed June, 1995
Kiln Seals	Continue Maintenance	On-going maintenance
	Phase II	
Clinker Dust to Clinker Belt	Collect dust in vented bins. Unload as a slurry.	18
Kiln Clinker Conveyors	Optimize spraying systems.	18
Primary Crusher Area	Optimize spraying systems.	20
Primayr Crusher Area	Partial enclosures on crusher and screens	20
Block mix storage by Gate 1	Install MET Stations	20
Fines Silo	Install baghouse to vent silo and transfer point.	22

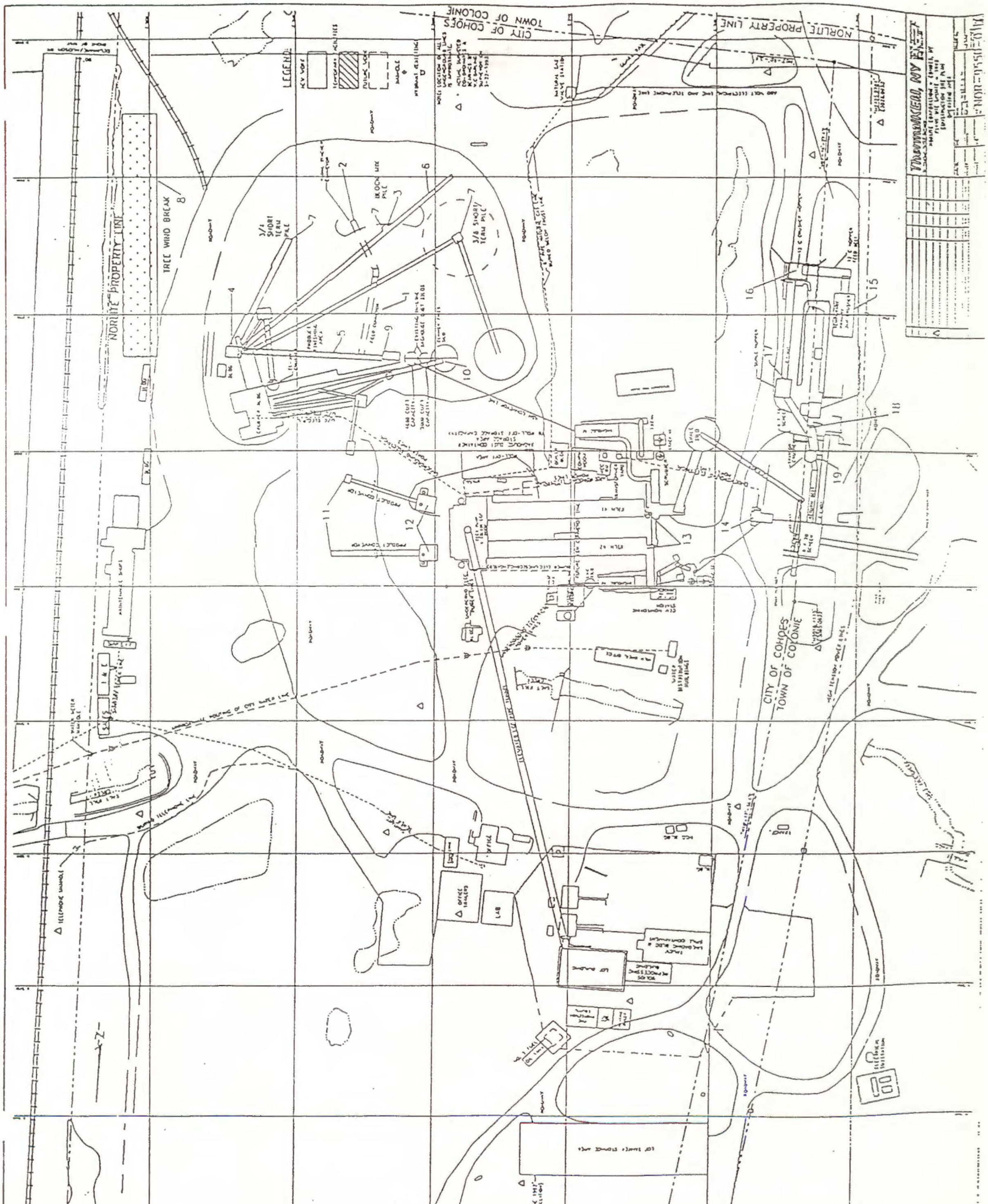
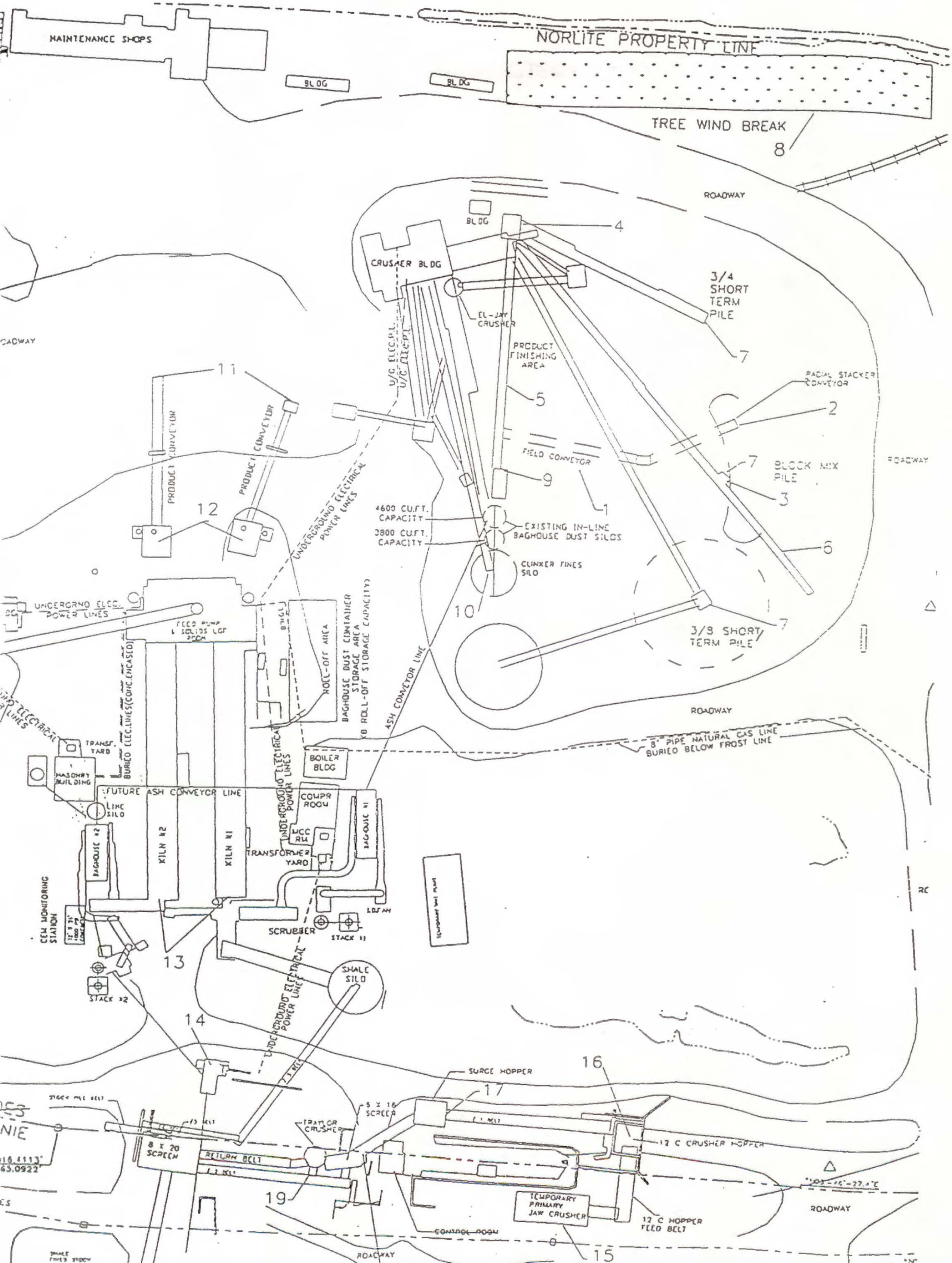

NORLITE PROPERTY LINE
CITY OF COHOES
TOWN OF COLONIE
TREE WIND BREAK
LEGEND:
3/4 SHORT TERM PILE
3/8 SHORT TERM PILE
BLOCK MIX PILE
OFFICE TRAILERS
LAB
NORLITE, NY

Fig. 8-1



MAINTENANCE SHOPS
BLDG
BLDG
NORLITE PROPERTY LINE
TREE WIND BREAK
8
ROADWAY
BLDG
4
CRUSHER BLDG
3/4
SHORT
TERM
PILE
EL-JAY
CRUSHER
PRODUCT
FINISHING
AREA
7
U/G ELEC.P.L.
U/G ELEC.P.L.
11
PRODUCT CONVEYOR
PRODUCT CONVEYOR
5
RADIAL STACKER
CONVEYOR
2
FIELD CONVEYOR
9
1
7
BLOCK MIX
PILE
3
ROADWAY
UNDERGROUND ELECTRICAL
POWER LINES
12
4600 CU.FT.
CAPACITY
3800 CU.FT.
CAPACITY
EXISTING IN-LINE
BAGHOUSE DUST SILOS
6
CLINKER FINES
SILO
10
7
3/8 SHORT
TERM PILE
UNDERGRND ELEC.
POWER LINES
FEED PUMP
& SOLIDS LGF
ROOM
BURIED ELEC.LINES(CONC.ENCASED)
ROLL-OFF AREA
BAGHOUSE DUST CONTAINER
STORAGE AREA
ROLL-OFF STORAGE CAPACITY)
ASH CONVEYOR LINE
ROADWAY
8" PIPE NATURAL GAS LINE
BURIED BELOW FROST LINE
TRANSF.
YARD
MASONRY
BUILDING
BOILER
BLDG
UNDERGROUND ELECTRICAL
POWER LINES
FUTURE ASH CONVEYOR LINE
LIME
SILO
COMPR
ROOM
BAGHOUSE #2
KILN #2
KILN #1
MCC
RM
BAGHOUSE #1
TRANSFORMER
YARD
CEM MONITORING
STATION
I.D. FAN
SCRUBBER
STACK #1
13
STACK #2
SHALE
SILO
UNDERGROUND ELECTRICAL
POWER LINES
14
SURGE HOPPER
16
17
5 X 16
SCREEN
TRAYLOR
CRUSHER
8 X 20
SCREEN
RETURN BELT
12 C CRUSHER HOPPER
19
TEMPORARY
PRIMARY
JAW CRUSHER
12 C HOPPER
FEED BELT
ROADWAY
CONTROL ROOM
ROADWAY
15
18

Fig. 8-2

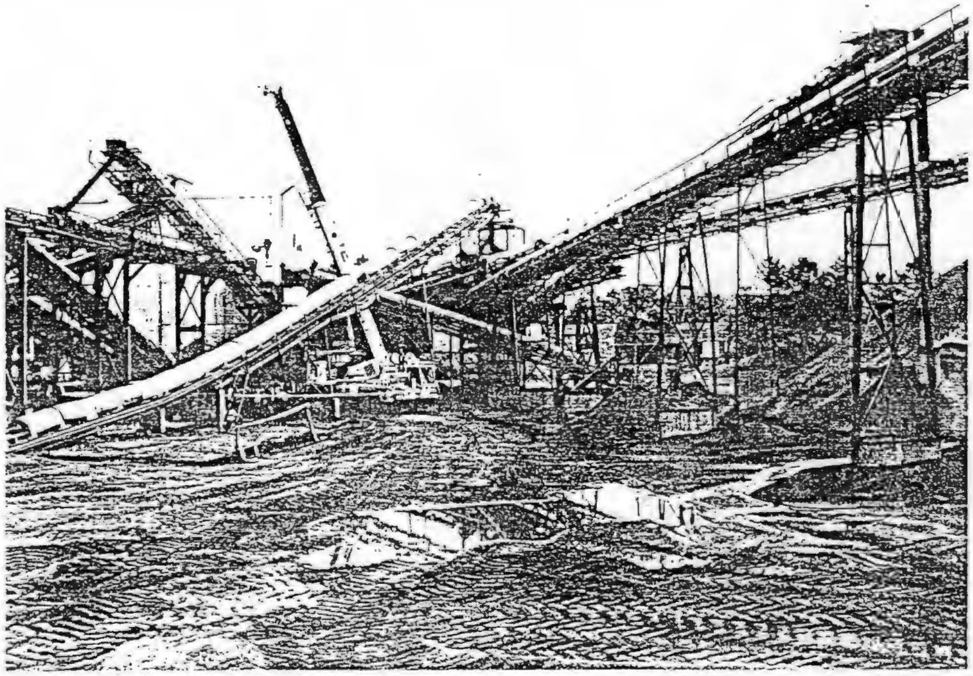


Figure 8-3

The Finish Plant Area
The new block mix field conveyor will be installed in the foreground of this photograph.

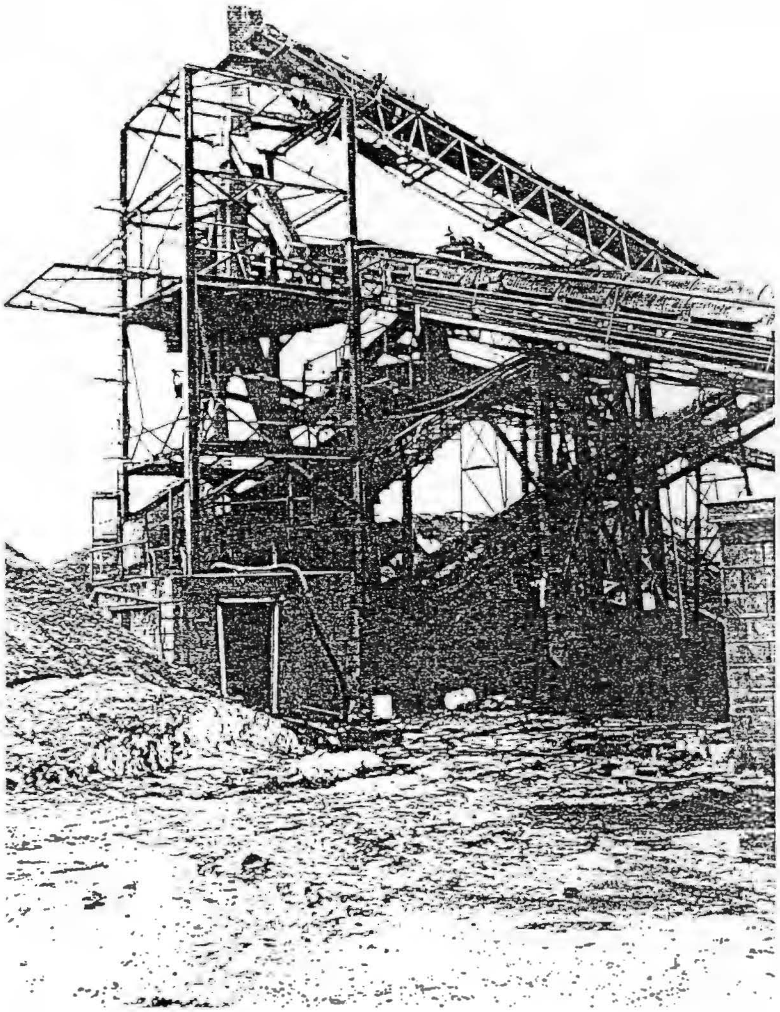


Figure 8-4
The Shipping Tower
This 40 foot high drop chute for block mix will be eliminated.

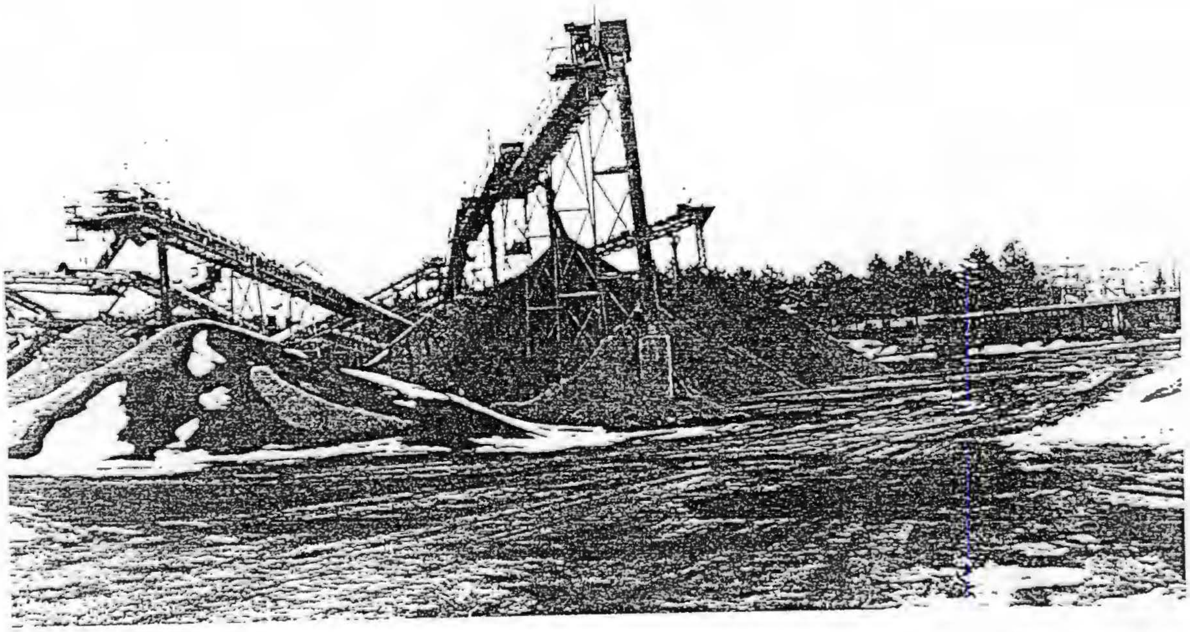


Figure 8-5

The current block mix conveyor and stacking tubes will be removed after the radial stacking conveyor is installed. The stacking tube plugs frequently and causes excessive drop heights. The radial stacker will raise and lower to control the drop height of block mix.

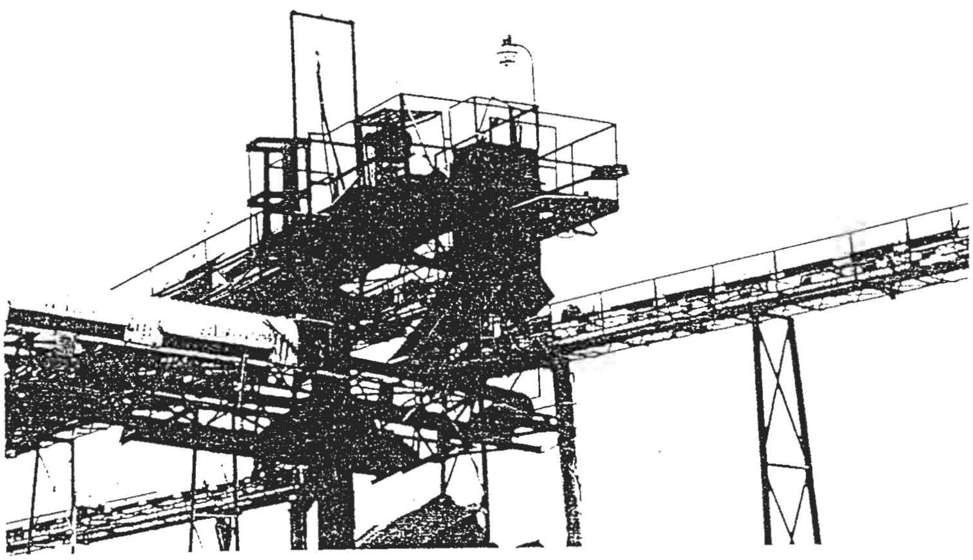


Figure 8-6

The 3/8s conveyor belt head pulley has a Rainbird sprinkler (left of the light) which waters the 3/8s pile and a small area around the pile. This sprinkler will remain in service.

Figure 8-7
The 3/4s conveyor belt and short term pile has a Toro sprinkler located next to the light at the head pulley. The holes in the stacking tube will be partially covered with rubber flaps to reduce wind blown dust.

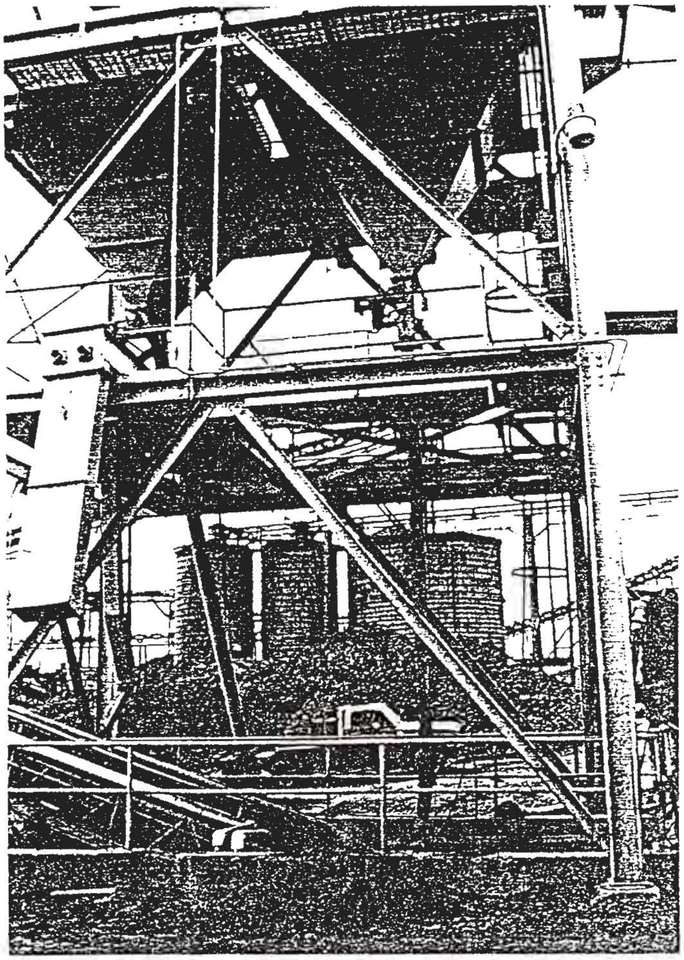


Figure 8-8

Excess air from the clinker cooler passes throught the Barren Fan system (shown).
Dust is removed from the air and is transferred from the hopper on the upper right to the clinker belt via a square chute. Dust will be transferred to a hopper and later mixed into the product piles.

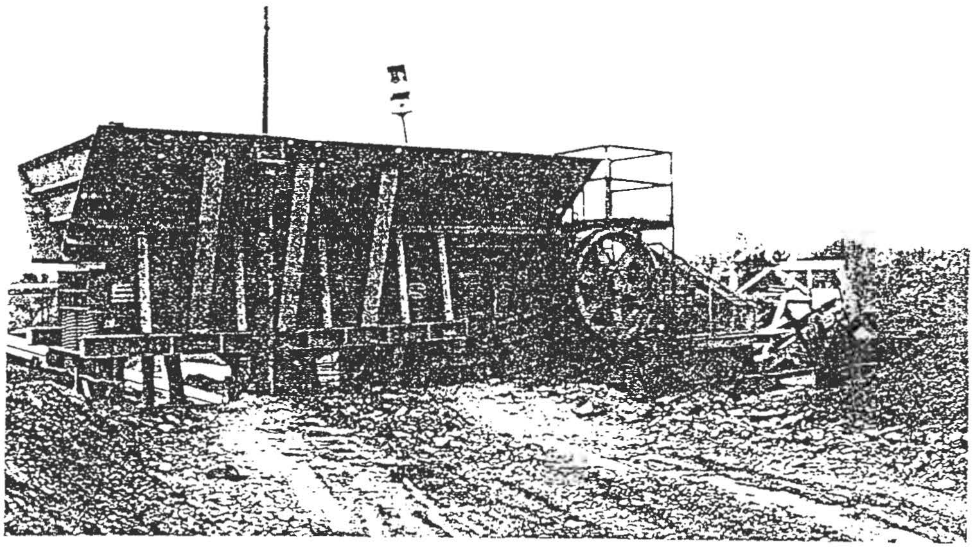


Figure 8-9
Primary Jaw Crusher and Ramp (foreground). Facing East.

Shale (Shot Rock) is dumped into the portable jaw crusher hopper by a front end loader. Crushed shale exits the crusher on the conveyor at the right.

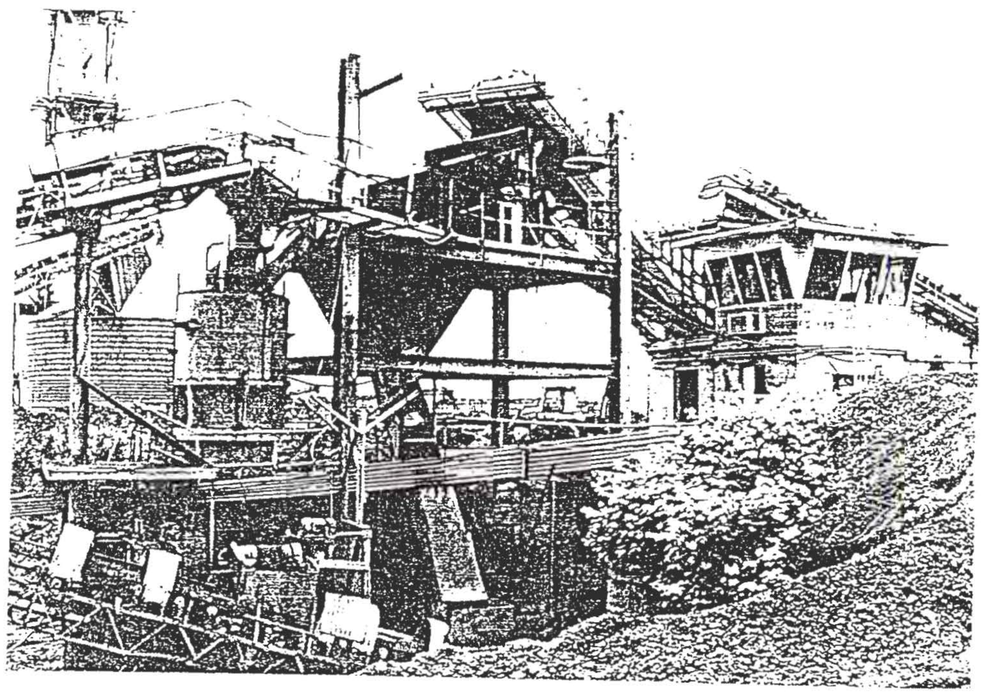


Figure 8-10
Secondary Crushing Operations

Shale from the 12 C Crusher hopper is conveyed to the surge bin (far right) and then to the 6x16 screen (center). Oversize rock is crushed in the Traylor Crusher (left).

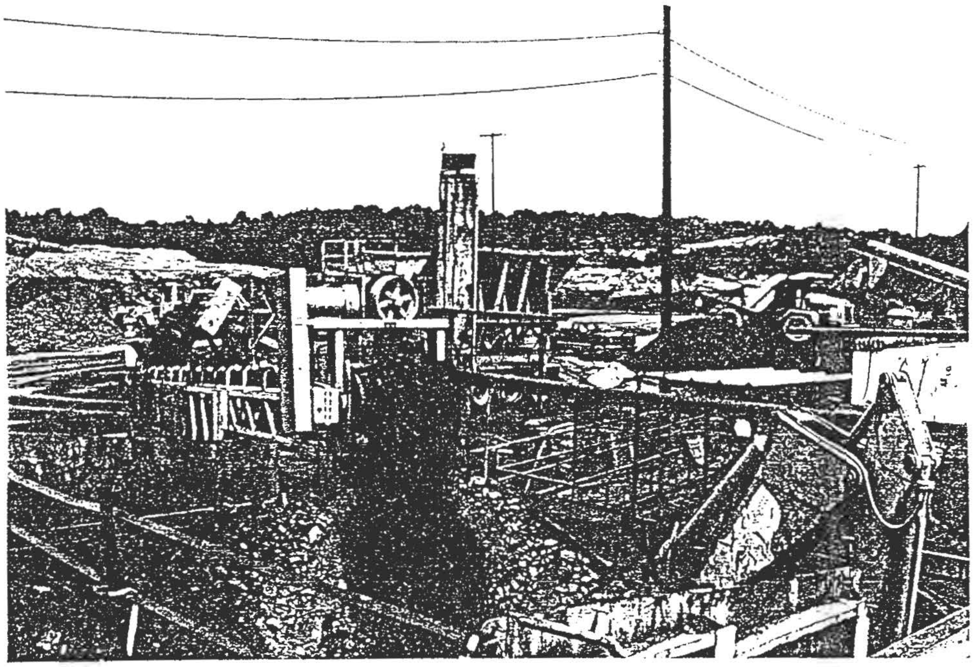


Figure 8-11
12 C Crusher Hopper Facing North-West.

Shale is conveyed to the 12 C Crusher Hopper from the primary jaw crusher via a transfer conveyor. One spray bar will be installed over the center of the hopper to suppress dust. Another spray bar will be installed closer to the head pulley of the transfer conveyor.

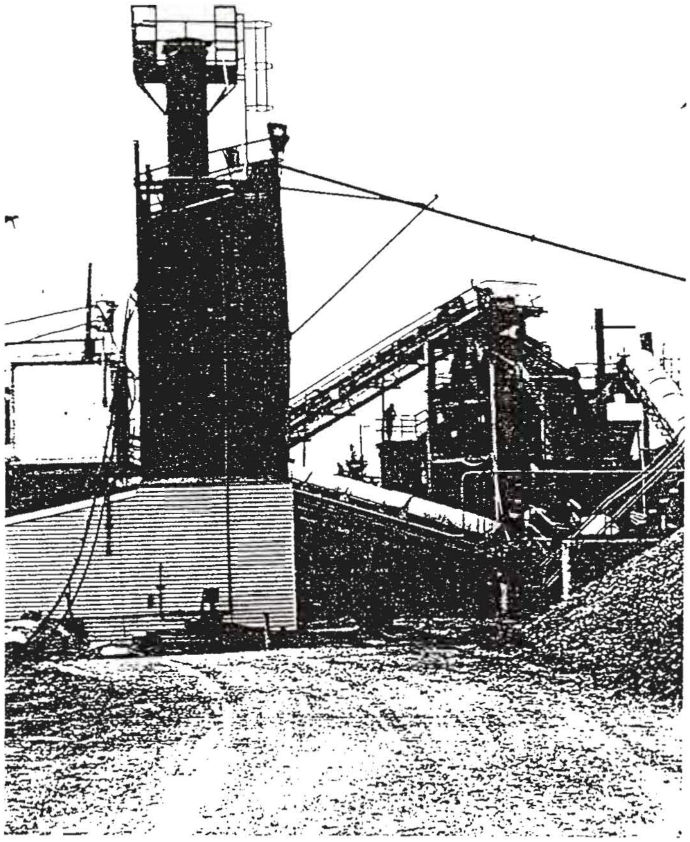


Figure 8-12

The Soda Ash Silo bin vent was replaced with a much larger Aeropulse bin vent (shown).

Clinker Belt Pile Spray System

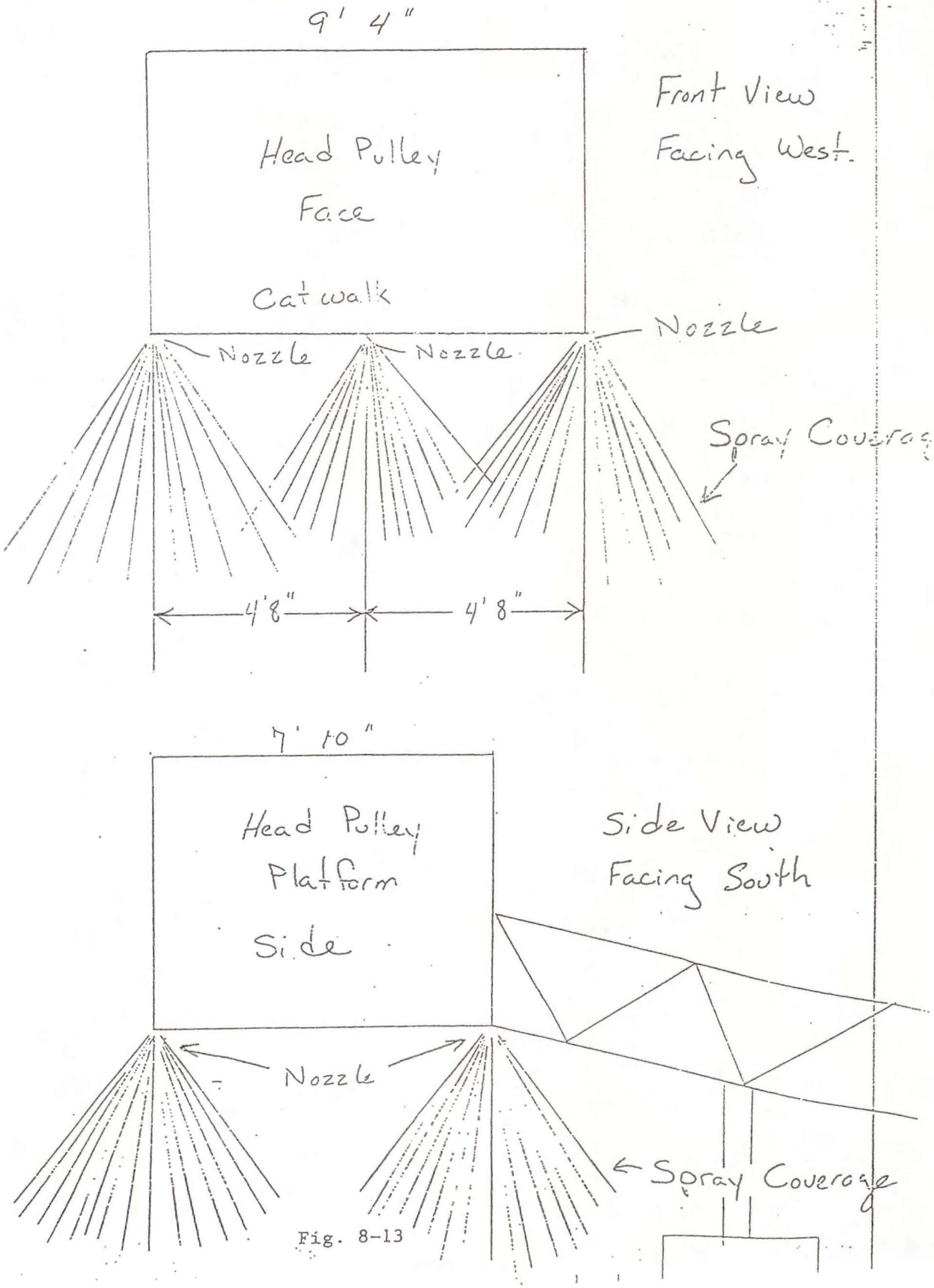
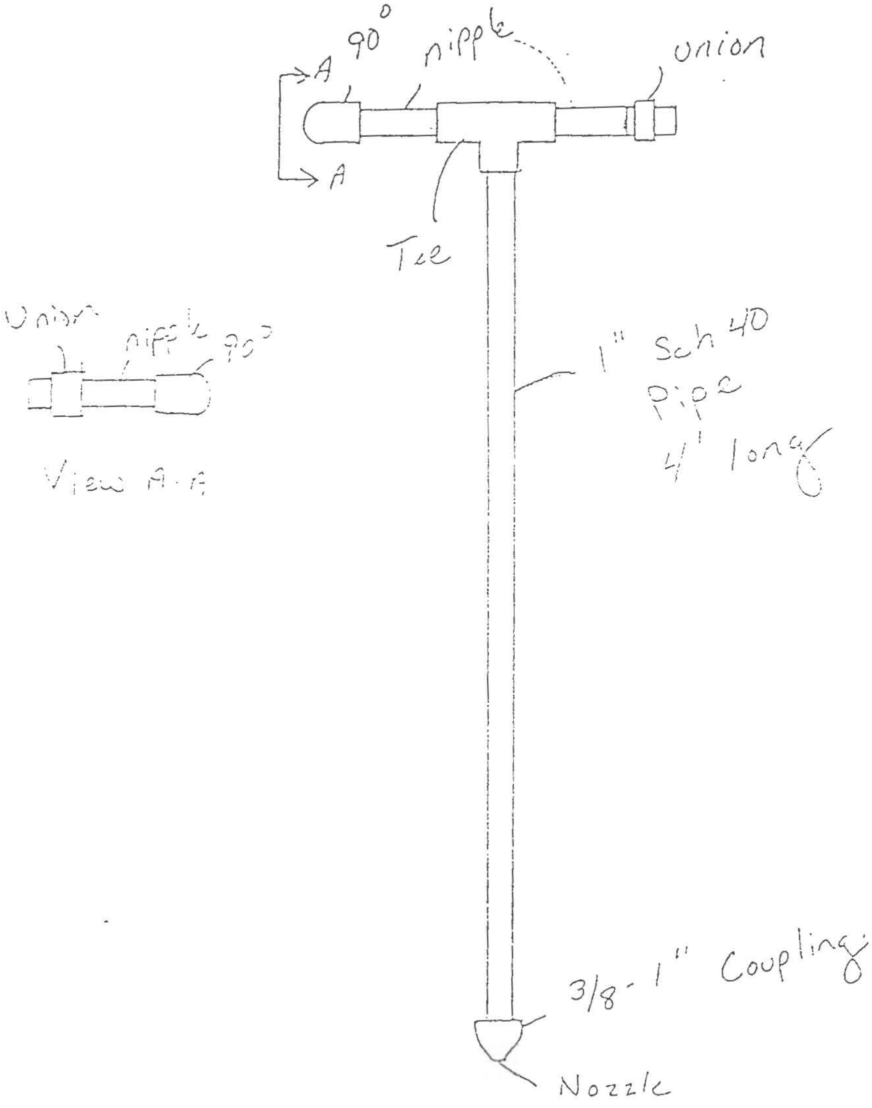


Fig. 8-13

Clinker Belt Pile Spray System



Spray on a 5 minute intermittent cycle

Fig. 8-14

Clinker Belt Pile Spray System

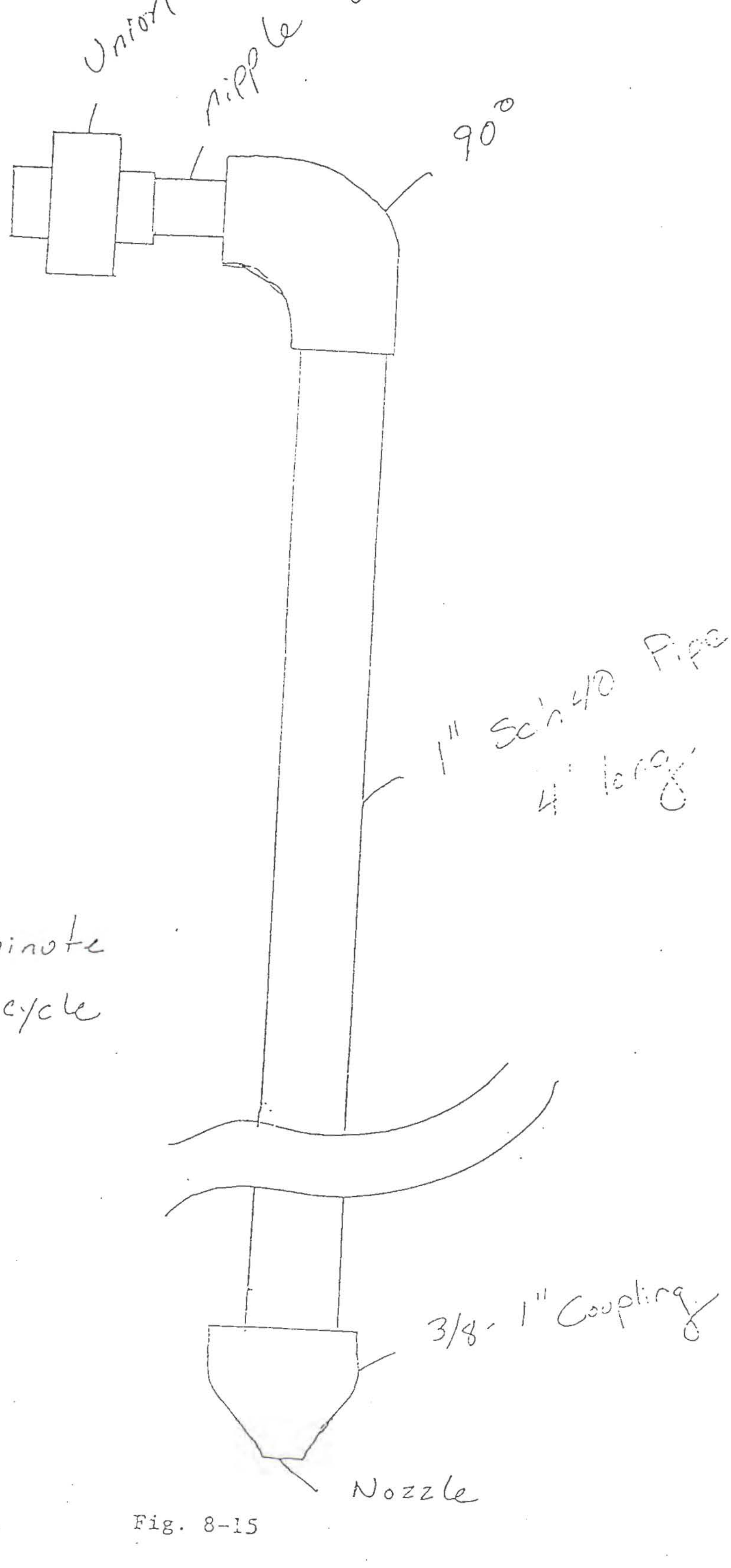
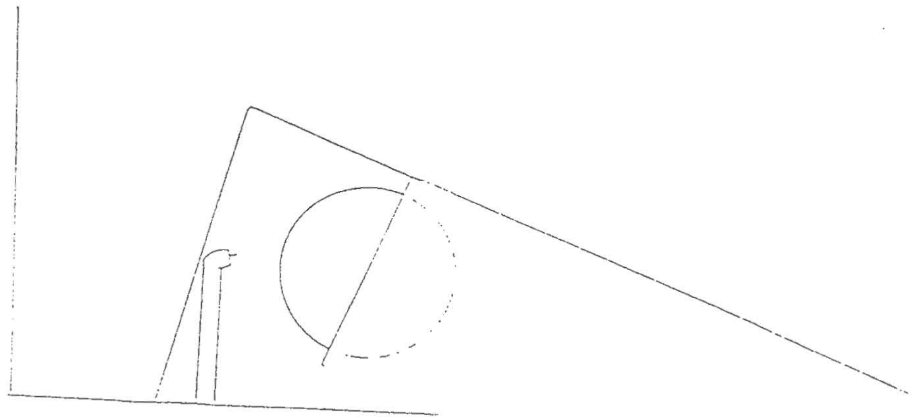


Fig. 8-15

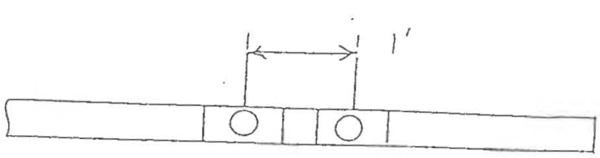
Conveyor Dischage Sprays



1 Spray Nozzle

Locations: 12 C - 1 Belt (To Surge Hopper)
12 C - 2 Belt (To 6 x 16 Screen)
Clinker Conveyor Head Pulley

Traylor Crusher Dischage



2 Nozzles Directed at Dischage under Traylor Crusher

Fig. 8-16

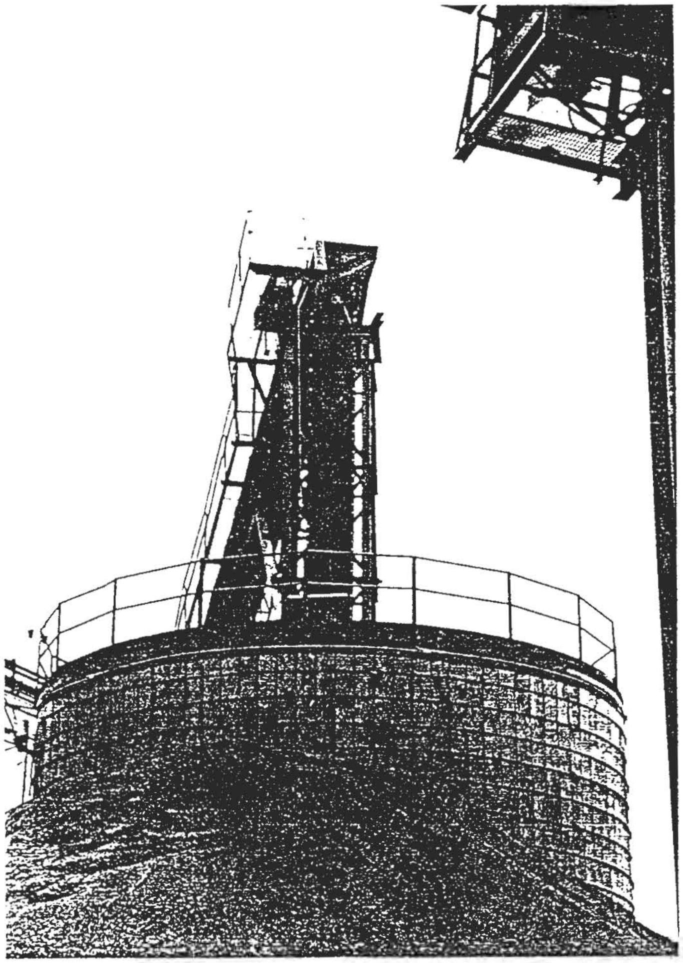


Figure 8-17
Finish Plant Fines Silo and Fines Chute

The West face of the fines silo chute (shown) has been redesigned with easily changed, wear resistant plates (also shown).

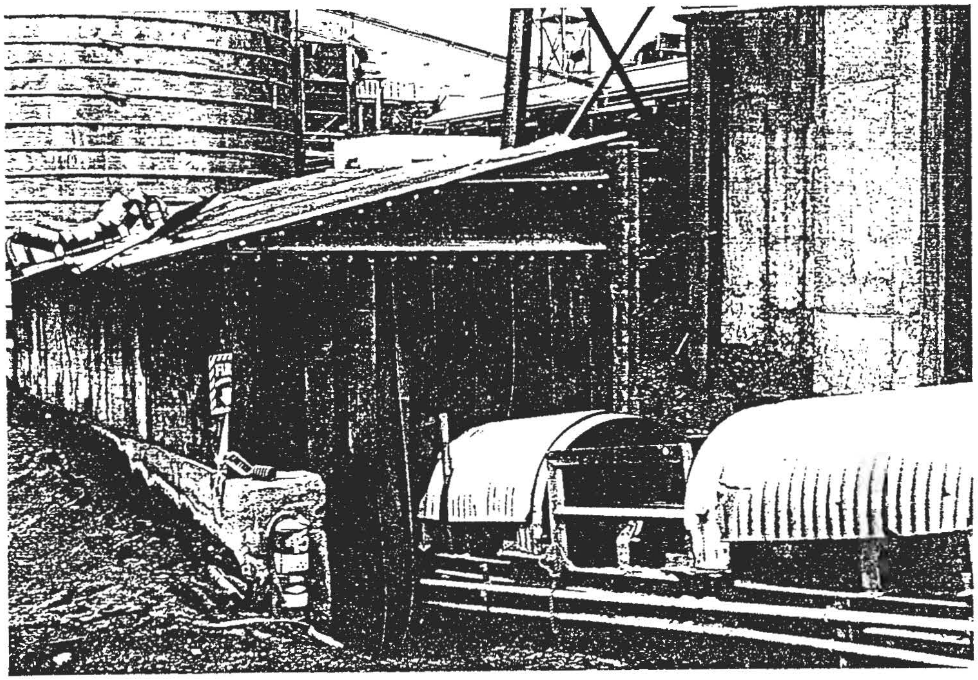


Figure 8-18
Shipping Tunnel Mouth Enclosure

The Shipping conveyor belt (right) extends under the three silos (left, not shown). The enclosure covering the mouth of the tunnel will be improved and sealed.

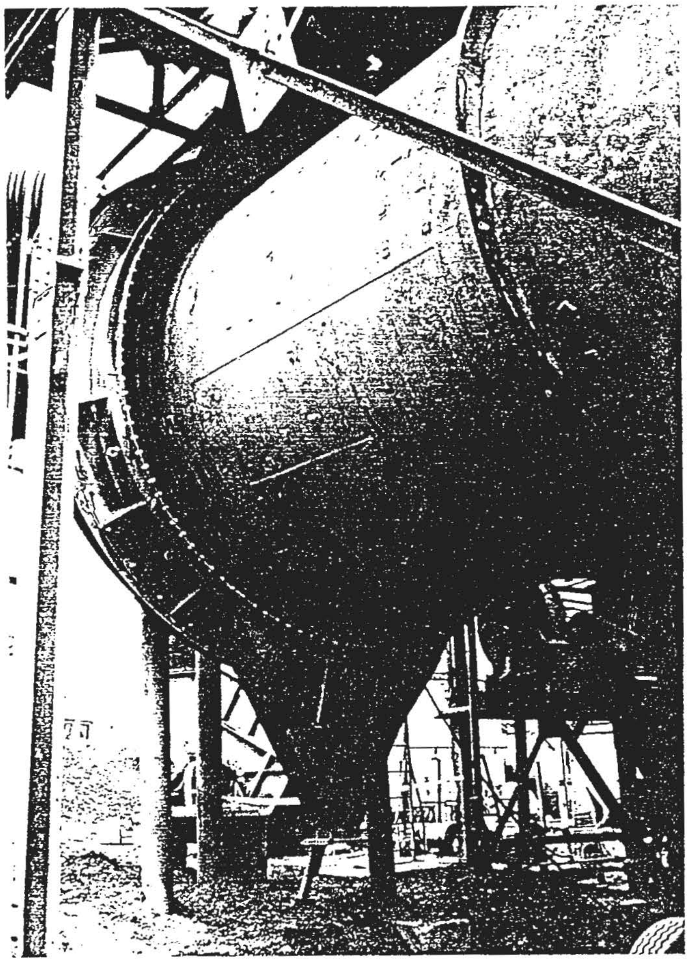


Figure 8-19
Rear Kiln Seals

The seal mechanism and knock out box will be maintained during all planned shutdowns.