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COMMENTS ON THE  
DRAFT ENVIRONMENTAL IMPACT  
STATEMENT AND NYSDEC PERMIT  
APPLICATIONS FOR THE  
ST. LAWRENCE CEMENT-GREENPORT PROJECT

JULY 2, 2001

## I. INTRODUCTION

Friends of Hudson presents these comments on the Draft Environmental Impact Statement (DEIS) for the proposed St. Lawrence Cement (SLC) plant in Greenport and Hudson in Columbia County. These comments are also directed at the draft permits from the Department of Environmental Conservation (DEC or Department) which have been applied for by SLC. Taken as a whole these permits represent an attempt by SLC to dramatically alter the eastern shore of the Hudson River and to renew a heavy industrial presence in that area that has been absent for more than a quarter of a century. While the DEIS attempts to minimize the significance of the impacts associated with the project, the fact remains that SLC has failed to meet its burden under SEQRA and the individual regulatory programs sufficient to approve the projects as presently configured. Instead, the DEC, as Lead Agency under SEQRA, has an obligation to take a hard look at the proposal and not simply accept the representations of SLC or acquiesce to SLC's desire to optimize its project when those plans result in significant unmitigated adverse environmental impacts. If other reasonable alternatives serve to meet SLC's legitimate needs, while protecting the environment of the Hudson Valley, then that alternative must be chosen. As will be more fully discussed below, the DEIS and the permit applications fail to meet the legal threshold of alternatives analysis necessary for the Department to issue SEQRA Findings and to issue the requested permits.

Friends of Hudson (FOH) is a grass roots citizens organization which is a sponsored project of the Open Space Institute. FOH currently has over 2100 dues-paying members from throughout Columbia County and adjoining areas in the Mid-Hudson Valley. FOH is dedicated to preserving and protecting the environment of the City of Hudson, the Hudson River and the Hudson Valley and supports sustainable development which complements the unique beauty and historical character of the area. FOH predates the recent controversy surrounding the SLC project, however it has grown as a result of the SLC project and for the last several years has focused its efforts against the SLC proposal.

Faced with the largest heavy industrial project to face the Mid-Hudson Valley in decades,<sup>1</sup> FOH sought the legal and technical expertise to advise them on the review of the project. FOH has retained Young, Sommer, Ward, Ritzenberg, Wooley, Baker & Moore, LLC for legal assistance and Camp Dresser & McKee as its primary engineering

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<sup>1</sup> Given the physical size, noise, air pollution and material handling operations associated with the project, SLC's proposal dwarfs the Athens Generating project which has been the focus of controversy in the area over the past several years. Whereas, the State approved Athens after significant modifications to mitigate many of its most significant impacts, the impacts from SLC are far greater and will require more drastic alterations to begin to mitigate its impacts. Where FOH has not been satisfied with the final approval by the state and federal governments for Athens Generating, FOH recognizes that SLC poses a far greater threat to the area than the Athens project.

consultants. FOH has also retained Alex J. Sagady Associates for additional air pollution impact analysis, and Robert Mclean, Esq. former counsel at the Office of General Services to review SLC's current holdings along the Hudson waterfront and its application for additional lands of the State underwater. With these and other experts derived locally and regionally, FOH has determined that contrary to the incessant rhetoric of SLC that it strives to operate an environmentally protective state-of-the-art facility, the truth is far less reassuring.

SLC is proposing a monstrously large coal-burning cement plant with less than state-of-the-art emissions controls, thus failing to meet its obligations under the Clean Air Act and SEQRA. Even where SLC's proposed emissions ostensibly meet regulatory standards for air pollution it is depositing its pollution in a densely populated area and sensitive receptors including an elementary school and hospital approximately one mile from the plant. Belying its protestations of its concern for its host community and its commitment to environmental excellence, SLC adamantly refuses to address the significant environmental impacts associated with a 300% increase in its mining operations, choosing instead to hide behind an invalid claim that all of its operations at the mine no matter how they are increased or in what manner are legally exempt from consideration under SEQRA.

Associated with the expanded mining operations, but certainly not limited to the operations in the mine, are the noise impacts from the SLC operations. Once again SLC has grossly mischaracterized the impact it will have, the lack of controls and the mitigation which it is willing to undertake to eliminate those impacts. SLC seeks to avoid any responsibility for controlling its noise impacts by seeking shelter under facially inadequate and inappropriate noise ordinances which are not directed at industrial operations such as SLC's. Regardless of the applicability of those ordinances, the Department cannot abdicate its responsibility under SEQRA with respect to noise impacts by failing to protect the general public and other communities that will be affected by SLC's operations.

In terms of the visual impact SLC seeks to hide behind the backdrop of Hudson's distant industrial past as an excuse for the desecration of a largely unspoiled aesthetic gem. In reality, the current proposal dwarfs anything from the past. Moreover, SLC has the audacity to claim it is mitigating the adverse impact of its decision, not by reducing the size or altering the location of its project, but by a partial deconstruction of the industrial detritus which it allowed to remain and decay in the area for the past quarter of a century. After having recovered from the cement industry's abandonment of Hudson and recovering its beauty despite the decay left by the industry, the County is now asked to accept an industrial presence which dwarfs what was there before in exchange for the belated partial remediation of SLC's past mess.

SLC claims, in its continuous public relations blitz, that it will be providing economic

benefits to Greenport and Hudson of such magnitude that any adverse environmental impacts should be happily accepted in exchange for the economic boon to follow. The reality appears in the DEIS where SLC recognizes no net employment gain from its proposal, but nevertheless claims great secondary economic benefits. An independent analysis of those economic benefits reveals that like all the other SLC claims, it is grossly overstated.

SLC's plans for the waterfront are intended as a complement to the City of Hudson's plans for waterfront revitalization and increased public access. Research conducted by members of FOH reveals that SLC lacks title to much of the land it currently occupies on the waterfront and where it does have title, SLC and its predecessors have violated clear conditions of those state grants by failing to maintain the required public access to the dock. SLC's errors of the past are coupled with its current waterfront plans which will unnecessarily impede other waterfront redevelopment initiatives.

The common thread of the deficiencies in SLC's DEIS and permit applications is the appallingly inadequate alternatives analysis. SLC presents a virtually unprecedented conclusory alternatives analysis which insults the intelligence of any objective reviewer. Given its present holdings, neighboring holdings of other entities in which it is involved in joint ventures and clear operational and design flexibility, its refusal to provide the objective information to legitimately eliminate reasonable alternatives highlights the fact that such alternatives do exist. Alternatives to this project which will avoid or minimize the adverse environmental impacts are readily available and must be more fully considered.

Separate from the review of the project itself is the question of SLC's competence and trustworthiness to be granted the requested approvals. Since 1990, SLC's record of compliance at its Catskill facility has shown a disturbing pattern and practice of lax attention to compliance with the important environmental laws. The problems with the Catskill facility cannot be brushed aside as an aberration or the past problems of erstwhile management. Instead they are clearly indicative of the corporate culture of the parent company of which SLC is inextricably intertwined and which has an abysmal record of environmental compliance throughout the United States and Canada. SLC's record of compliance is not only relevant as a basis for the denial of the requested permits, but highlights the need to have strict permitting conditions to assure that if any permits are issued, they contain the means to assure that the representations embodied in the DEIS and SLC's public statements are indeed fulfilled. As currently drafted, the proposed permits consistently fail to include such conditions, including as basic a condition as legally enforceable commitment that SLC's Catskill facility will be shut down upon the commencement of operations at Greenport. As currently drafted, there is no such legally enforceable assurance.

FOH does not deny that the Mid-Hudson Valley has been a center of the cement industry for more than 100 years. FOH also recognizes that given the availability of limestone and the proximity to local markets, such a presence is likely to continue. However, the State is faced with a challenge and also a golden opportunity. All the existing cement facilities in the area have reached the end of their useful life. The time has come for the owners of those facilities to make major reinvestments to maintain their viability. Since any such investment will last for 50 to 100 years, the Department has unique opportunity to use SEQRA as it was originally intended, to take a comprehensive view of the needs of the industry and the burdens on the local community and approve projects which maintain a harmony amongst the disparate interests. As will be more fully set forth herein, sound planning calls for redevelopment of the cement industry, if at all, in the area of the existing facilities south of Catskill. Such redevelopment represents a true "Brownfields" program that modernizes and continues an existing area of heavy industrial activity. If the Department were to ignore that clear alternative and instead allow industrial activity to spread to a previously unspoiled area, that would represent an abdication of responsibility and terrible missed opportunity to plan for the economic and environmental future of New York State.

## **II. INADEQUATE OPPORTUNITY FOR PUBLIC COMMENT**

The scope of the issues presented by this project and the deficiencies in the DEIS and permit applications are too numerous to be addressed by FOH alone. That difficulty is compounded by SLC's and the Department's failure to provide the required information in a timely manner. For example, sufficient copies of the DEIS, Air application, joint permit application, SPDES application and application for lands underwater were not effectively provided until May 14, 2001, two weeks after the Notice of Completion was published and the public comment period began. Initially, the Department required that written comments on the DEIS and the applications be submitted on June 20, 2001, the date of the public hearing on the DEIS. That notice was facially illegal, by failing to provide the minimum 10 day period for written comments following a public hearing as required by the SEQRA regulations. 6 NYCRR Sec. 617.9(a)(4)(iii). While the Department corrected the notice to provide the bare minimum required by law, it did not extend the period to provide a meaningful opportunity for public comment.

Following repeated requests for an extension by many interested parties, including the Town of Greenport and the City of Hudson, the host communities to this project and during a conference call held by ALJ Helene G. Goldberger, the date for the filing of petitions for party status was extended from June 13, 2001 until July 11, 2001. Included within the Order from ALJ Goldberger was a requirement that the Department make its files available to those who requested it pursuant to the Freedom of Information Law and that draft permits for the non-delegated permits be supplied by June 21, 2001. On that date

the Department did produce draft permits for Protection of Water (ECL Article 15, Title 5); Water Quality Certification (6 NYCRR Part 608); Mined Land Reclamation (Article 23, Title 27); and Freshwater Wetlands (Article 24). However, contrary to the ALJ's June 8<sup>th</sup> Order, Department Staff did not produce the required Coastal Assessment Determination. At the June 21, 2001 opening of the Issues Conference, the prospective parties reiterated their demand for the draft determination and Department Staff promised to provide the assessment by June 29, 2001. As of the date of these comments, July 2, 2001, the assessment had not been received.

On June 27 and 28, 2001, FOH's consultant was finally provided an opportunity to inspect the air permitting records of the Department at both the Division of Air Resources and DEC Region IV. That inspection revealed that the Department had not provided numerous documents to FOH despite previous Freedom of Information requests over the past 6 months. Of the most significance was that until June 28, 2001, the Department had not supplied copies of SLC's February 27, 2001 response to the Department's February 7, 2001 Notice of Incomplete Application which primarily concerned the air permit application. SLC's February 27<sup>th</sup> submission was a significant compilation of additional technical information and purported justification for its claimed pollution control measures. The February 27<sup>th</sup> submission is specifically mentioned and incorporated by reference in the April 27, 2001 Air Permit Application [p. 5-1] which was made available to the public for review and comment, yet it was not included and not available for review and comment. Although, FOH received copies of the documents late in the day on June 28<sup>th</sup>, there is clearly insufficient time to review those documents and incorporate any comments into these being submitted. As a result, FOH respectfully demands the opportunity to supplement its written comments on the DEIS and the applications after all the relevant information has been provided and an adequate time has been provided for public comment.

### **III. THE DEPARTMENT'S OBLIGATIONS UNDER SEQRA**

As the Department is well aware, in addition to its statutory obligations under various sections of the ECL, SEQRA provides a broader obligation to look at the environmental consequences of its actions. In this case, those actions involve issuing the primary permits necessary for the construction and operation of this project. As Lead Agency under SEQRA, the Department has the obligation to identify all the relevant areas of potential environmental impact, take a hard look at those potential impacts, and make a final decision which demonstrates that all of those issues have been studied and that from among the reasonable alternatives considered, consistent with social, economic and other essential considerations, the chosen alternative is one that avoids, minimizes and mitigates the adverse environmental impacts of the projects to the maximum extent practicable. These comments will focus first on issues concerning the draft air permit and impacts to air

quality since those present some of the most technical issues of this project. Thereafter the comments will address other specific deficiencies in the DEIS.

The final decision represents a balancing test to be decided by the Lead and Involved agencies. However, a condition precedent to that final decision is the ability to take the “hard look”. If obvious areas of environmental concern are not identified or not discussed, then it is legally impossible for such the “hard look” to occur. As will be shown below, especially in regards to impacts to air resources, impacts from mining and the alternatives analysis, there is insufficient information for the Department to fulfill its legal responsibilities. These deficiencies cannot be cured by responding to comments in the FEIS, because even if additional information is supplied in the FEIS, the public is denied its opportunity to comment on that information. The only way the deficiencies can be cured is the preparation of a Supplemental Draft EIS to include the missing information. FOH respectfully demands that the ALJ order the preparation of a SDEIS. [See, H.O.M.E.S. v. New York State Department of Environmental Conservation, 69 A.D.2d 222 (4th Dep’t 1979) 6 NYCRR Sec. 617.11(d)].

#### **IV. AIR IMPACTS AND STATE FACILITY PERMIT**

##### **A. Introduction.**

These comments apply to Section 14 of the DEIS and the April 30, 2001 draft State Facility Permit made available for public comment for the SLC facility in Greenport. The comments are organized generally by subject matter. Where appropriate, a reference has been included to the specific permit condition under discussion. All references to the “SLC Air Permit Application” refer to the document entitled *St. Lawrence Cement Greenport Project, SLC Hudson Valley Operation, Air Permit Application* (April 27, 2001).

As set forth in greater detail below, the draft SLC permit is fatally flawed. It omits key applicable regulatory requirements arising under various statutes and regulations, including all reference to the federal Prevention of Significant Deterioration program. As a result of these omissions, key facility emissions (in particular, carbon monoxide, volatile organic compounds, and sulfuric acid) are essentially unregulated. With respect to certain other contaminants (in particular, particulate matter and sulfur dioxide), the permit conditions proposed fail to satisfy the underlying applicable requirements because they do not establish appropriate, enforceable short-term limits. In particular, the application and the proposed permit have failed to incorporate an approvable control technology review and approvable emissions limitations reflecting legally binding Best Available Control Technology and Lowest Achievable Emission Rate requirements applicable to the proposed facility. In light of these and other gross deficiencies, we believe the draft permit should be withdrawn and the public review process terminated pending a complete

should be withdrawn and the public review process terminated pending a complete redrafting of the permit and issuance of a SDEIS. At minimum, the permit must be revised completely to address the concerns raised in these comments and then subjected to additional public notice and comment. The permit cannot, however, be issued in its current form without violating crucial federal and New York State air pollution control program requirements.

## **B. General Comments/Concerns.**

### **1. The Draft Air Permit Omits Key Applicable Requirements, in Particular, Those Relating to Compliance with the Prevention of Significant Deterioration Program.**

#### **a. DEC's Efforts to "Streamline" the Permit Omit Key Regulatory Requirements.**

A preconstruction permit must include all applicable legal requirements necessary to construct and operate a proposed facility. Our review of the draft SLC permit suggests that key applicable requirements, including those relating to compliance with the Prevention of Significant Deterioration (PSD) program, 40 C.F.R. § 52.21, are not in the permit. As discussed in greater detail below, the permit contains no reference whatsoever to the PSD program, let alone any permit requirements specifically addressing compliance with Best Available Control Technology (BACT). The permit also omits key provisions required under the State's portland cement plant regulations, 6 NYCRR Part 220, and the State's nonattainment New Source Review (NSR) regulations for newly constructed sources of nonattainment contaminants, 6 NYCRR Subpart 231-2, among other programs.

Discussions with DEC representatives suggest that DEC believes that the applicable BACT requirements (and presumably the other "missing" regulations) are addressed in conditions that are already in the draft permit presumably in an effort to "streamline" the permit consistent with EPA's "White Paper" entitled *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permit Program* (March 5, 1996) (hereinafter "White Paper 2"). White Paper 2 attempts to simplify the permitting of emission sources covered by multiple, overlapping applicable requirements. Under the guidance, multiple emission limits may be streamlined into one limit if that limit is at least as stringent as the most stringent limit. If no one requirement is unambiguously more stringent than the others, the applicant may synthesize the conditions of all the applicable requirements into a single new permit term that will assure compliance with all applicable requirements.

Although the goals of White Paper 2 are admirable, DEC has gone too far in the case of the SLC facility. While it may be appropriate to streamline overlapping requirements under

the most stringent standard, the approach adopted by DEC essentially obliterates all reference to the underlying bases for the “streamlined requirement”. For example, the only standard for particulate emissions from the kiln is found in Permit Condition 59, which cites only 40 CFR § 63.1343(b)(1) as the legal basis for the standard, despite the fact that PM is regulated under various other programs. A person reviewing the permit has no indication whether this standard also is intended to satisfy the BACT requirements under 40 CFR § 52.21 or the particulate matter standards of DEC’s own portland cement regulations. In fact, it appears that DEC has determined that the PM limit of the MACT Standard meets the PM BACT requirement. DEC must revise the permit to ensure that the key applicable regulations subsumed in a particular permit condition are referenced in that permit, to ensure that the underlying legal bases for the permit conditions are clear and that the standard is the BACT, not the MACT Standard.

In several cases, moreover, the permit fails to include key emission limitations identified as applicable requirements in the application. As discussed in Section III. C. below, the emission limit for PM that satisfies BACT is significantly lower than that found in the permit at Permit Condition 59. This stricter limit appears only in the state enforceable section of the permit describing kiln operations. Also, the permit contains no PM limits whatsoever for material handling activities. These and other similar omissions, whether intentional or inadvertent, must be rectified before the permit is issued.

DEC’s failure to reference all applicable requirements in the permit raises serious enforcement concerns. Unless the underlying bases for each emission limitation are spelled out in the permit, everyone – EPA, DEC, citizens, even SLC – may have difficulty assessing the enforcement implications of any failure by SLC to comply with a particular permit limitation. As EPA noted in White Paper 2, a source violating streamlined permit conditions may be subject to enforcement action for violating one or more of the subsumed applicable limits to the extent a violation of the subsumed emission limit is documented. Without specific references to the subsumed limits in the permits, questions will inevitably arise in the future about the intended scope of those limits, making enforcement extremely difficult. This problem is of particular concern for citizens who may not have easy access to the materials upon which the permit conditions were based. The permit must state on its face what regulations apply to the facility and how the facility proposes to demonstrate compliance with those requirements. Otherwise, the permit is unenforceable, particularly for citizens.

**b. Emissions of Certain Contaminants are Omitted Altogether from the Permit.**

Emissions of certain regulated contaminants – in particular, volatile organic compounds (VOCs) and carbon monoxide (CO)/sulfuric acid – are omitted altogether from the permit.

Although these contaminants are listed as being emitted from the facility, the permit contains no emission limitations for them, despite the fact that they are regulated by the nonattainment NSR and PSD programs, respectively. In the case of VOCs, SLC has proposed that its projected standardized VOC emission rate of 0.10 lb. total hydrocarbons (THC) per ton of clinker meets the LAER requirement for comparably designed cement facilities. SLC Air Permit Application, p. 6-4. As discussed in greater detail below, FOH has serious questions about whether this conclusion is correct. At the very least, however, this emission rate (or a revised, corrected rate) must be included in the permit as an enforceable emission limit, together with appropriate compliance monitoring provisions. In the absence of such conditions, it is unclear from the permit that the facility's VOC emissions are even regulated under the nonattainment NSR program, let alone, what the applicable standard is or how the facility proposes to demonstrate compliance with that standard.

In the case of CO and sulfuric acid, the permit application does not include a specific limit as BACT but instead proposes various controls and/or work practices to minimize production of these contaminants. These strategies should be embodied in the permit as enforceable emission limits. At minimum, these control strategies must be identified as BACT in the permit, together with a mechanism for ensuring that the work practices are implemented (i.e., maintenance, regular inspections, intermittent stack testing, etc.) Otherwise, there are no enforceable provisions in the permit to ensure that SLC meets its CO and sulfuric acid control obligations under PSD. The absence of these permit conditions alone is sufficient grounds for disapproving the draft permit.

The reliance upon work practices as a substitute for numerical emission limits for CO and sulfuric acid is an unacceptable means of satisfying PSD requirements. The permit should also include periodic stack testing for CO and sulfuric acid and the high probability of process upsets demands continuous emission monitoring for CO. Any proposed emission limits on monitoring must be made available for public review and comment.

## **2. The Permit is Difficult to Understand and Poorly Organized.**

A major obstacle to understanding the draft SLC permit (and to ensuring compliance with that permit) is the permit itself. Much of the difficulty lies with DEC's AFS system, which organizes the permit around the relevant applicable requirements rather than the underlying emission sources and processes. However, SLC's minimalist approach to describing facility processes exacerbates the problem. SLC has included only the barest descriptive information in the permit and has not made any attempt whatsoever to describe, in prose, what emission sources and emission points are associated with each emission unit. SLC should be required to revise the descriptive information in the state

facility section of the permit to describe, in detail, for each emission unit, what emission sources are associated with each step in the production or product/raw material handling process and what emission points vent pollutants from these sources. The goal should be a permit that describes for those unfamiliar with the facility (and with cement processing generally) what emissions are associated with each stage in the production process and how those emissions are managed.

The core of the permit – the provisions setting forth the relevant applicable requirements – do not appear to be organized in any meaningful way. The problem is particularly acute with respect to the Emission Unit Level section of the permit. Currently, for example, the emission limitation for dioxins/furans under 40 CFR Part 63, Subpart LLL, is set forth in Permit Condition 54 and the required operating conditions in Permit Condition 55. However, the provisions for monitoring compliance with this standard are set forth in Permit Conditions 62, 64 and 65. Similarly, the provisions governing opacity from the kiln under Subpart LLL are found in Permit Conditions 60, 63, 73, and 75. It appears that this organizational scheme is motivated by a desire to cluster all Subpart LLL emission standards together, all monitoring provisions together, and all emission point/process-specific requirements together. However, this approach makes it extremely difficult to understand how precisely the facility is being regulated with respect to each contaminant. We would recommend reorganizing the permit requirements by contaminant and, within each contaminant, by applicable requirement. In the alternative, DEC could organize the permit by applicable requirement (i.e., all NESHAP provisions together, all PSD provisions together, etc.).

Although we recognize that DEC is committed to the AFS permitting system, we urge it to consider following the permit format used recently for the Athens Generating Facility. In Part A of that permit, DEC listed for each emission unit the emission limit for each regulated contaminant and the underlying applicable requirement (BACT/LAER), any operational restrictions, the testing and compliance certification requirements, and applicable reporting and recordkeeping requirements. Part B of the permit, which followed the AFS format, contained all other applicable state and federal requirements, including general permit conditions and other state and federal permit requirements such as federal New Source Performance Standards (NSPS) and various state regulations governing combustion installations.

The Athens permit more clearly identifies for each component of the permit, what permit conditions apply to what emission units and how the facility proposes to demonstrate compliance with those requirements. To the extent an emission limit is intended to address more than one applicable requirement (for example, the BACT and LAER requirements for NO<sub>x</sub>), that fact is clearly identified in the permit. The permit thus addresses many of the ambiguities in SLC's current draft permit.

## **Other Concerns**

SLC's draft air permit raises other concerns, which are summarized briefly below:

- SLC's BACT analysis, particularly for PM, is inadequate.
- SLC's air modeling understates the impacts of PM.
- The permit does not contain permit conditions sufficient to satisfy the PSD preconstruction permitting requirements for PM, SO<sub>2</sub>, and CO.
- SLC's LAER analysis for NO<sub>x</sub> incorrectly dismisses switching from coal to gas as a LAER alternative.
- SLC's LAER analysis for VOCs ignores treatment technologies implemented by its own parent company.
- The proposed issuance of the permit without establishing a final NO<sub>x</sub> LAER standard violates NSR. The permit must be revised to set a threshold emission limit once the three-year transition period ends and to require public review of the final LAER determination.
- SLC has failed adequately to certify the compliance status of its existing facilities as required by the nonattainment NSR regulations.
- SLC's nonattainment NSR alternatives analysis is inadequate.
- The draft air permit omits key applicable requirements under New York's Portland Cement regulations.
- The draft air permit omits key elements of various applicable requirements under the National Emission Standards for Hazardous Air Pollutants (NESHAP) program for portland cement plants.
- The draft air permit overstates the scope of the exemption for air toxics under 6 NYCRR Part 212 and, as a result, omits required permit conditions for various hazardous air pollutants emitted from the facility.
- C. Prevention of Significant Deterioration (PSD).

## **I. Introduction and Background.**

Emissions of various contaminants from the SLC plant, including sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), particulate matter (PM), carbon monoxide (CO) and sulfuric acid, are regulated under the federal Prevention of Significant Deterioration (PSD) program, set forth at 40 CFR § 52.21. Authority to issue permits under the PSD program has been delegated to New York State, which is authorized to implement the federal regulations. 6 NYCRR § 200.10(a). Congress adopted the basic PSD program requirements as part of the 1977 amendments to the Clean Air Act. The goal of the program is to ensure that major facilities proposed to be constructed or modified in areas that have achieved the National Ambient Air Quality Standards (NAAQS) for a particular pollutant do not cause a “significant deterioration” in the air quality of that region. This goal is achieved both by assessing the anticipated impact of proposed newly constructed or modified major facilities on existing air quality (including the impact on national parks designated as “Class I areas” deserving of additional protection) and by ensuring that facilities that trigger the PSD regulations install appropriate emission controls. Facilities covered by the PSD program must obtain a preconstruction permit from the appropriate regulatory authority prior to commencing construction.

The PSD program applies only to “major emitting facilities” (otherwise known as “major sources”), a term which includes facilities in specific source categories with potential emissions of any regulated air pollutant of 100 tons per year or more (250 tons for sources not included in the listed source categories). SLC concedes in its permit application that it is a major source of the following contaminants for which Columbia County is in attainment: SO<sub>2</sub>, NO<sub>2</sub>, PM, and CO. As a result, the facility must obtain a PSD permit prior to commencing construction.

To obtain a PSD permit, SLC must meet satisfy the following requirements:

***a. apply the best available control technology (BACT);***

A BACT analysis is done on a case-by-case basis, and considers energy, environmental, and economic impacts in determining the maximum degree of reduction achievable for the proposed source or modification. In no event can the determination of BACT result in an emission limitation which would not meet the applicable standard of performance under 40 CFR Parts 60 and 61, [the federal New Source Performance Standards (NSPS) and the National Emission Standards for Hazardous Air Pollutants (NESHAP)].

***b. conduct an ambient air quality analysis;***

Each PSD source or modification must perform an air quality analysis to demonstrate that its new pollutant emissions would not violate either the applicable NAAQS or the applicable PSD increment. [NOTE: The PSD increment represents the maximum allowable increases in a pollutant's predicted ambient concentrations over the existing ambient baseline concentration.]

***c. analyze impacts to soils, vegetation, and visibility:***

An applicant is required to analyze whether its proposed emissions increases would impair visibility, or adversely affect soils or vegetation. Not only must the applicant look at the direct effect of source emissions on these resources, but it also must consider the indirect impacts from general commercial, residential, industrial, and other growth associated with the proposed source or modification.

***d. not adversely impact a Class I area; and***

If the reviewing authority receives a PSD permit application for a source that could have an impact on a Class I area, it must notify the Federal Land manager and the federal official charged with direct responsibility for managing these lands. . . [who can recommend that the reviewing authority deny the permit].

***e. undergo adequate public participation by the applicant.***

Specific public notice requirements and a public comment period are required before the PSD review agency takes final action on a PSD permit.

EPA, *New Source Review Workshop Manual*, pp. 6-7 (Oct. 1990) (Draft).<sup>2</sup>

We believe that SLC's air permit application and the draft permit circulated for review fail to comply with the requirements of the federal PSD program for the following reasons:

- A. the application does not contain an approvable Best Available Control Technology demonstration covering all stack emission sources of PM, sulfur dioxide, sulfuric acid aerosols, and carbon monoxide.
- B. the draft permit does not contain any federally enforceable numerical emission limitations reflecting a degree of emissions achievable with the installation of the required Best

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Although the NSR Workshop Manual was issued in 1990 and remains a draft document, it is still considered one of EPA's primary resources for understanding the PSD program.

Available Control Technology; the draft permit allows excessive visible emissions from the main kiln stack of 20%, a level of visible emissions that does not reflect imposition of BACT PM controls.

- C. the application did not consider short term emission rates achievable with BACT for any of the PSD pollutants and no short term emission rates are imposed in order to protect PSD ambient increments.
- D. for several material handling and fugitive emission sources, there has been no PM emission characterization, no PM emission limitations and no specification of BACT level control equipment and operational practices that are enforceable by the terms of the
- E. 2. The Draft Permit Does Not Include Any Permit Conditions whatsoever Specifically Addressing PSD.**

Although emissions of various contaminants (in particular, PM, NO<sub>2</sub>, CO, SO<sub>2</sub> and sulfuric acid) from the SLC facility are regulated under the PSD program and are subject to BACT requirements, the permit includes no reference whatsoever to the PSD regulations. To satisfy the PSD regulations, DEC must issue a preconstruction permit to SLC that includes permit conditions identifying BACT for each PSD-regulated contaminant/source. Typically, these permit conditions take the form of emission limitations based on a determination of what constitutes BACT for a particular contaminant/source. The permit also must contain specific provisions detailing how the permittee will monitor compliance with the PSD-based emission limits, including compliance monitoring, recordkeeping and reporting requirements. None of these provisions have been included in SLC's draft preconstruction permit, rendering the permit facially invalid. In fact, the PSD regulations are not even cited.

The only specific mention of PSD in the permit documents issued for review is in the Fact Sheet accompanying the draft permit, which is specifically entitled "Draft PSD Permit Conditions" and includes a brief reference to the PSD program and the need to install BACT. It also includes a table entitled "PSD Pollutants" which lists five pollutants (PM<sub>10</sub>,<sup>3</sup> SO<sub>2</sub>, NO<sub>x</sub>, CO and VOC) and their ton per year "emission limits." With the exception of NO<sub>x</sub> and SO<sub>2</sub>, however, none of these ton per year limits are expressly included in the permit itself. Moreover, the table includes VOCs which are not even regulated under the PSD program in New York. The permit itself contains no reference whatsoever to PSD, let alone any permit conditions specifically addressing compliance with BACT requirements

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PM<sub>10</sub> refers to particulate matter smaller than 10 microns.

under that program. This glaring omission must be addressed.<sup>4</sup>

Newly constructed or modified sources that exceed PSD thresholds must obtain preconstruction permits under that program. These permits must contain all provisions necessary to ensure compliance with the requirements of the PSD program. The permit, as currently drafted, does not compel SLC to install the controls and comply with other requirements necessary to satisfy BACT and thus violates both the federal PSD program and the state's air permit regulations governing the issuance of preconstruction permits.

### **3. SLC's BACT Determinations, Particularly for PM, Are Inadequate and/or Are not Reflected in SLC's Draft Air Permit.**

Under the federal PSD regulation, BACT is defined as:

an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under the Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR parts 60 and 61. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results. 40 CFR § 52.21(b)(12).<sup>5</sup>

As previously noted, under the federal PSD regulations, each source which is a new major stationary source or major modification must obtain a permit that incorporates emission

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<sup>4</sup> The omission of any reference to the PSD program in the draft preconstruction permit is striking. The draft permit recently issued to the owner/operator of the proposed Athens Generating Station includes a whole section devoted specifically to PSD and nonattainment NSR compliance, which includes all of the components missing from the SLC permit.

<sup>5</sup> DEC has adopted its own definition of BACT found at 6 NYCRR § 200.1(j), which is arguably less strict than its federal counterpart. Because DEC is implementing the federal regulations, the federal definition applies.

limitations that reflect BACT after undergoing a control technology review. 40 CFR §§ 52.21(i)(1),(2),(3), (j)(1), (2).

EPA has further refined and clarified exactly how PSD BACT determinations are to be carried out. EPA has published a “top down” BACT determination process that must be followed in making all BACT determinations. This “top down” process has been articulated by EPA as follows:

In brief, the top-down process provides that all available control technologies be ranked in descending order of control effectiveness. The PSD applicant first examines the most stringent – or “top” – alternative. That alternative is established as BACT unless the applicant demonstrates, and the permitting authority in its informed judgment agrees, that technical considerations, or energy, environmental, or economic impacts justify a conclusion that the most stringent technology is not “achievable” in that case. If the most stringent technology is eliminated in this fashion, then the next most stringent alternative is considered, and so on.

Draft NSR Workshop Manual, p. B.2.<sup>6</sup>

As the above, somewhat lengthy discussion suggests, a proposed permit which is

<sup>6</sup>

EPA describes a five-step process for conducting such a “top down” analysis:

STEP 1: Identify All Control Technologies.

- is comprehensive (LAER included).

STEP 2: Eliminate Technically Infeasible Options.

- A demonstration of technical infeasibility should be clearly documented and should show, based on physical, chemical, and engineering principles, that technical difficulties would preclude the successful use of the control option on the emissions unit under review.

STEP 3: Rank Remaining Control Technologies by Control Effectiveness.

Should include:

- control effectiveness (percent pollutant removed);
- expected emission rate (tons per year);
- expected emission reduction (tons per year);
- energy impacts (BTU, kWh);
- environmental impacts (other media and the emissions of toxic and hazardous air emissions); and
- economic impacts (total cost effectiveness, incremental cost effectiveness).

STEP 4: Evaluate Most Effective Controls and Document Results.

- Case-by-case consideration of energy, environmental, and economic impacts.
- If top option is not selected as BACT, evaluate next most effective control option.

STEP 5: Select BACT

- Most effective option not rejected is BACT.

Draft NSR Workshop Manual, p. B.6.

required to incorporate an emission limitation that embodies a PSD BACT decision should include numerical emission limitations on the quantity, rate or concentration of such PSD pollutants. If it is not technically or economically feasible to establish such a numerical emission limitation, then the permit writer must include design, equipment, work practice, or operational standards as required by the federal BACT definition noted above.

In the case of SLC, the draft permit does not even cite PSD, let alone specifically identify as BACT emission limitations or other standards (e.g., equipment design, work practices, etc.) for any of the regulated contaminants, making the permit facially invalid. Equally important, to the extent SLC contends that the emission limits in the permit satisfy BACT (even if the PSD program is not specifically mentioned in the permit), they are simply wrong. The key emission limitations in the permit relating to PM, SO<sub>2</sub>, CO and sulfuric acid do *not* meet BACT standards either because the draft permit does not reflect the BACT determinations made in the application or because the BACT determination is itself inadequate.

#### **A. Particulate Matter.**

The SLC Air Permit Application estimates potential PM emissions from the Greenport facility, after controls, at 488 tons per year, 358 tons of which consists of PM<sub>10</sub><sup>7</sup>. PM is a generic term for a broad class of chemically and physically diverse substances that exist as discrete particles, either liquid droplets or particles. PM originates from a variety of sources, both natural and manmade. It can be emitted directly or forms in the atmosphere by transformations of gaseous emissions such as sulfur oxides (SO<sub>x</sub>), NO<sub>x</sub>, and VOCs. PM is strongly associated with chronic lung and heart disease and contributes to visibility problems, including regional haze.

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<sup>7</sup>

The Application does not include any estimates of potential PM emissions prior to controls in the text; these numbers are buried in Appendix E which contains the calculations and emission estimates supporting the permit.

**1. SLC Did Not Model Ambient Air Impacts for the Proposed Plant at the Maximum Potential to Emit for PM<sub>10</sub> in Violation of Key PSD and Modeling Requirements**

Federal PSD regulations provide:

“(k) Source impact analysis. The owner or operator of the proposed source or modification shall demonstrate that **allowable emission increases** from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of (1) Any national ambient air quality standard in any air quality control region; or (2) Any applicable maximum allowable increase over the baseline concentration in any area.” 40 CFR 51.21(k) (emphasis added)

According to EPA’s Draft 1990 NSR workshop manual:

“For both NAAQS and PSD increment compliance demonstrations, the emissions rate for the proposed new source or modification must reflect the maximum allowable operating conditions as expressed by the federally enforceable emissions limit, operating level, and operating factor for each applicable pollutants and averaging time. The applicant should base the emissions rates on the results of the BACT analysis..... [NOTE: It is important that the applicant demonstrate that all modeled emission rates are consistent with the applicable permit conditions.]” EPA 1990 draft NSR workshop manual, Section IV.D.4, p. c.45.

According to the Air Quality Modeling Guideline (Appendix W):

“At a minimum, the source should be modeled using the design capacity (100 percent load). Section 9.1.2 recommendation, Appendix W. [see also table 9-2, Appendix W indicating that the model should use “maximum allowable emissions or federally enforceable permit limit”]

Tables C-7, p. C-11 and C-8, p. C-13 in Appendix 10 of the air permit application shows that the maximum PM<sub>10</sub> emission rate modeled for the facility for SCREEN3 (simple and complex terrain) in preliminary analysis was 4.89 grams per second for the main kiln stack. Table C-9, p. C-15 and C-10, p. C-16 of Appendix C shows that the refined modeling effort used 4.42 grams per second for PM<sub>10</sub> in the refined modeling exercise for the main kiln stack with 153.6 tons per year used for the annual average emissions.

Information on p. E-20 indicates the main kiln stack will have the potential to emit 55.7

lbs per hour of total particulate. At a factor of 0.85 for PM<sub>10</sub>, this is equivalent to a PM<sub>10</sub> potential to emit of 47.3 lbs per hour or 5.97 grams per second, and 208 tons per year. The PM<sub>10</sub> hourly potential to emit is 22% higher than the PM<sub>10</sub> emission rate used in the screening modeling and 35% higher than the PM<sub>10</sub> emission rate used in the refined modeling exercise. The annual potential to emit for PM<sub>10</sub> is also 35% higher than what was used in the modeling.

Under the procedures articulated in the PSD regulations, the draft EPA NSR workshop manual and the Appendix W Guideline on Air Quality Models, SLC's failure to use the PM<sub>10</sub> potential to emit for the maximum PM<sub>10</sub> emissions for the facility renders its PM<sub>10</sub> air quality modeling effort defective and unapprovable.

Given that SLC found that the proposed facility consumed 76% of the short term PM<sub>10</sub> significant deterioration increment, this is not merely an academic failure. A reiteration of the modeling effort must be done at the PM<sub>10</sub> potential to emit to ensure that the facility does not cause significant deterioration of air quality for PM<sub>10</sub>.

#### **SLC Fails to Undertake a Proper BACT Analysis.**

SLC's permit application indicates that it intends to install approximately three dozen baghouses on the kiln and other PM sources to control PM and PM<sub>10</sub> emissions for purposes of satisfying the BACT requirements of the PSD program. According to the application, these baghouses will be designed to achieve a maximum PM concentration in the exhaust of 0.01 gr/dscf. SLC Air Permit Application, p. 5-10, 28.

SLC fails to perform a complete BACT analysis for PM, calling into serious question the merits of its final BACT determination for this crucial contaminant. The draft application provides no engineering information about the mix of baghouse options selected. There is no information on the air-to-cloth ratios, the type of bags to be used, the design of compartment baghouse pressure drop monitoring systems, or the type of bag-cleaning method to be employed. There is no information on PM control device inlet loading and separated volumetric flows in dry standard conditions for the kiln/in-line mill, coal mill and clinker cooler. In section 5.3.1.2 of the air permit application, SLC readily admits that these factors are determinative of the performance to be achieved by any selection of baghouse controls. Then, in section 5.3.1.5, without providing any engineering details about the types of baghouses to be selected and consideration of alternatives, the leap is made to select the final technology solely on the basis of a baghouse vendor guarantee that the baghouses will achieve control levels of 0.01 gr/dscf or 25 mg/Nm<sup>3</sup>. There is no consideration of alternate baghouse design specifications and/or a larger baghouse with lower air-to-cloth ratios. There is no discussion of alternate emission control

efficiencies associated with different baghouse designs in the original selection of control options. Presumably a larger baghouse with more efficacious controls could achieve greater control efficiencies<sup>8</sup>.

Attempting to base a BACT determination solely on a vendor guarantee and without supplying engineering information on the technology selected undermines the “top down” BACT requirement. Presumably, a different design would produce a different vendor guarantee so the mere existence of a vendor guarantee cannot become the absolute determinative factor in the selection of BACT.

Second, although the application represents that a main stack outlet gas concentration of 0.01 gr/dscf or 25 mg/Nm<sup>3</sup> is BACT for PM/PM<sub>10</sub>, these emission limitations are not provided anywhere in the draft permit.<sup>9</sup> The only emission limit for PM is found in Permit Condition 59 which cites as the controlling regulatory authority the federal portland cement NESHAP (in particular, 40 CFR § 63.1343(b)) and sets an emission limit of 0.30 lb. per ton of dry feed. This limit of 0.30 lbs. of PM per ton of dry feed is exactly the same emission limitation that was applied in federal New Source Performance Standards for the portland cement industry adopted in 1977, over 25 years ago.

At 1.03E6 Nm<sup>3</sup>/hr. of exit flow and 24.55 mg./Nm<sup>3</sup> PM gas concentration, the plant discharges 55.7 lbs. of PM per hour. At 7275 tons of clinker per day, the plant processes 303 tons of clinker per hour with 1.59 feed-to-clinker ratio, or a feed rate of 481 tons of feed per hour. Taking the ratio of the hourly emission rate to the hourly feed rate gives a final rate of 0.116 lbs. PM per ton of dry feed at the conditions deemed in the application to be PM BACT. The emission limitation of 0.30 lb. PM/ton of feed is over twice as high as the calculated rate at the conditions specified for PM BACT.

This 0.30 lb. PM/ton dry feed rate does not represent a BACT level of particulate emission control and the permit cannot be approved as complying with the PSD BACT

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<sup>8</sup> There is also no discussion of particle size considerations in the selection of specific baghouse designs and the potential to reduce PM<sub>2.5</sub> which poses the greatest potential health threat. At present, PM<sub>2.5</sub> emissions are not specifically regulated (except as PM<sub>10</sub>) so the control technology discussion of all PM should have considered how design alternatives for baghouse controls would affect PM<sub>2.5</sub> emissions. PM<sub>2.5</sub> refers to particulate matter smaller than 2.5 microns. In 1997, EPA adopted new NAAQS for PM<sub>2.5</sub> which were promptly challenged in court. Early this year, the United States Supreme Court upheld the PM<sub>2.5</sub> standards. EPA and the states currently are in the process of collecting data on PM<sub>2.5</sub> levels in ambient air for purposes of designating PM<sub>2.5</sub> nonattainment areas.

<sup>9</sup> There is mention of 0.01 gr/dscf in Permit Condition 82.1, but it is stated as a vendor guarantee and not as a permitted emission limitation. Moreover, it is included only in the “state enforceable” section and thus is not a federally enforceable limitation under PSD.

emission limitation requirement in its current form. At the very least, the draft permit must be amended to set a short- term emission limitation of 25 mg/Nm<sup>3</sup> or 0.01 gr/dscf as a federally enforceable PM BACT emission limitation for the main stack. Consistent with the BACT requirements, the BACT analysis should be revised to more thoroughly address the baghouse design details to see if greater emission reductions are “achievable”. The permit must specifically reference the PSD program as the basis for the resulting PM limit and must specify how the facility will monitor operations of the baghouse (e.g., installation of pressure monitoring device to measure pressure drop across the baghouse) as well as any other monitoring, recordkeeping and reporting requirements necessary to demonstrate compliance with BACT.

The foregoing is based on the PM figures used in the application, which as noted in the previous section understated the PM emissions by more than 20%. A BACT emission based on the rate of 4.89 grams per second from the main kiln should result in a baghouse limit 0.008 gr/dscf instead of the 0.01 gr/dscf.

The permit also must be revised to include a PM limit as BACT for all PM sources other than those regulated under the kiln. Currently, the permit includes PM limits only for Emission Unit O-CPROD, Emission Unit 1KILN. No emission limits are included for other PM sources (e.g., raw and finish mills, storage bins, conveying system transfer points, etc.) that are required to install BACT. DEC must revise the permit to establish an emission limit of 0.01 gr/dscf (or lower based on a more thorough BACT analysis) to satisfy the BACT requirement for these sources. The permit also should require installation of continuous opacity monitors on MILL1 and MILL2 because of the magnitude of potential emissions from these facilities in the event the baghouse controls fail; it should also require a stack compliance test for PM emissions at least every five years.

**a. Opacity.**

As noted above, under the federal PSD regulation, BACT includes “an emission limitation *including a visible emission standard.*” 40 C.F.R. § 52.21(j) (emphasis added.) The federal PSD regulations thus contemplate establishing opacity limits to satisfy BACT for PM. The chief advantage of this approach is that opacity can easily be monitored using a continuous emission monitoring system while PM cannot.

Permit Conditions 31.1, 56.2, 60.2 and 73.2, as well as the federal MACT standard for portland cement plants discussed in Section VI below, require a 20% opacity limit. However, as noted above, BACT for the kiln and other key sources of PM at the facility is 0.01 gr/dscf, or 0.008 gr/dscf lower. Those standards would translate into an opacity limit much lower than 20%. This lower opacity limit should be included in the permit as BACT

for PM emissions from the kiln. The main stack PM opacity limitation should, at minimum, be reduced to 10% to more closely reflect the PM BACT limit.

The failure to reduce the 20% opacity limit down to 10% for the main stack will allow the company the latitude to operate with broken and degraded bags or other degraded conditions in the baghouses with ducts to the main stack. The opacity monitor is the only federally enforceable continuous monitoring check on the efficacy and performance of the PM emission control system. To allow the facility to operate its PM emission control system so that opacities marginally approaching 20% are achieved is to fail to ensure adequate continuous compliance with good PM emissions control practice.

**b. Sulfur Dioxide.**

With respect to SO<sub>2</sub> emissions, the permit does not include any condition specifically citing the PSD program and establishing emission limits for SO<sub>2</sub> that constitute BACT. The permit application indicates that SLC intends to use inherent dry scrubbing, wet scrubbing and dry scrubbing to satisfy its obligations to meet BACT under PSD but does not propose an emission limit. Permit Condition 57 proposes to cap emissions of SO<sub>2</sub> at 850 tons per year, citing as the regulatory authority 6 NYCRR § 220.6(a), which contains the state regulations for establishing gaseous emission limits for SO<sub>2</sub> under the state's portland cement regulations. Permit Condition 58 specifies that a CEMS will be used to determine compliance with this limit, based on a 12-month rolling total.

As a preliminary matter, the permit does not specify that the 850 ton annual limit is intended to satisfy BACT; in fact, the permit contains no reference to PSD for SO<sub>2</sub> whatsoever. Moreover, reliance on an annual limit violates EPA guidance on establishing BACT which specifies that PSD permits "must contain short-term emission limits to ensure protection of the applicable . . . NAAQS and PSD increments." Memo from G. Emison, Director, EPA Office of Air Quality Planning and Standards, to D. Kee, Director, EPA Air Management Division, Region V, *Need for Short-Term Best Available Control Technology (BACT) Analysis for Proposed William A. Zimmer Power Plant* (Nov. 24, 1986). (A copy of the memo is attached as *Exhibit A*.)

SLC's approach also does not satisfy the requirements for BACT because compliance with this limit does not necessarily require reliance on BACT controls. The 850 ton per year limit was derived based on certain assumptions regarding how the kiln will be operated (e.g., number of hours, anticipated controls, etc.) It is theoretically possible that SLC could operate at less than "BACT levels" and still meet the cap by simply shutting

down.<sup>10</sup> The permit must be modified to clearly specify what conditions SLC must meet to satisfy BACT.

To address this problem, the permit ideally should include enforceable hourly and/or per ton of feed emission limits that reflects the emission rates achievable using the control technologies identified in the permit application as BACT for SO<sub>2</sub> (i.e., inherent dry scrubbing, wet scrubbing and dry scrubbing), as well as all the other regulated pollutants. At minimum, the permit must include enforceable permit conditions for achieving BACT, in the form of specific controls, work practice standards, etc., together with provisions governing monitoring, recordkeeping, etc. necessary to demonstrate compliance with the standard.

Moreover, the application and the permit do not contain any detail concerning the wet scrubber recirculation rate, the rate of limestone addition to the wet scrubber solution, and expected injection rates and causticity of lime water for the dry scrubber. The scrubbers will not work at their optimum efficiencies unless their design parameters are met on a continuous basis. There is no provision in the permit that explicitly requires these two scrubbers to be operated at optimum efficiencies at all times and that the devices not be bypassed during source operation.

### **c. Other Contaminants.**

As noted in Section II, although the permit application includes BACT analyses for both CO and sulfuric acid, the permit contains no permit provisions whatsoever addressing these contaminants under PSD or any other regulatory program<sup>11</sup>. In the case of CO, the air permit application identifies combustion optimization design and good combustion practices as BACT. However, the application does not endeavor to translate implementation of these practices into an enforceable emission limit. Numeric limits for CO are a common element of many PSD permits for portland cement plants and SLC has provided no explanation for why they are not part of the Greenport permit. In the absence of numeric limits, the permit must include enforceable work practice standards reflecting

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<sup>10</sup> SLC could attempt to argue that compliance with the equivalent emission limitations under 6 NYCRR § 225-1.5(b) will ensure that this scenario will not occur. As discussed in greater detail in Section IX below, the permit does not contain sufficient detail regarding how equivalency will be determined to make this judgment.

<sup>11</sup> Carbon monoxide is a colorless, odorless poisonous gas formed when carbon in fuels is not burned completely. It is commonly emitted by motor vehicles and by various industrial facilities, including cement plants. Excessive carbon monoxide reduces oxygen delivery to the body and can cause health problems, particularly for individuals suffering from cardiovascular disease.

SLC's BACT determination for CO. Without such provisions, any PSD determinations are unenforceable. Limitations reflecting the PSD determinations for sulfuric acid also must be included in the permit either as numeric or work practice standards.

In addition to this basic concern regarding the absence of any PSD permit conditions for CO, SLC's application and the resulting draft permit are based on an inadequate BACT analysis. As a preliminary matter, SLC does not appear to have accounted for disassociation of carbon dioxide in the sintering zone to carbon monoxide, a process which increases CO emissions. This effect was identified by EPA in its rulemaking on hazardous waste combustion in cement kilns and may be occurring here as well. 61 Fed. Reg. 17397. Although we do not have available emission factor data to estimate the additional carbon monoxide emissions, the presence of additional carbon monoxide may influence PSD BACT cost calculations in favor of additional add-on controls. SLC should address this issue in its BACT analysis for CO.

Moreover, the required PSD BACT determination for carbon monoxide does not satisfy the requirements for a "top-down" BACT analysis. The first defect in SLC's analysis is the failure to consider the combination of two technically feasible options – optimized combustion design and good combustion practices along with a regenerative thermal oxidizer (RTO) – as yet a third technically feasible option that must be considered, compared and analyzed in the top-down hierarchy. Moreover, SLC improperly assumed when considering the environmental impact review of the RTO (in the context of the BACT decision) and its potential to generate higher sulfuric acid aerosol that it would not also operate in conjunction with a wet limestone scrubber which the applicant had already selected for both sulfur dioxide and sulfuric acid control.

SLC's analysis also is misleading in its discussion of RTO implementation on an existing cement kiln in Michigan. SLC writes that:

Suppliers have not manufactured a single thermal oxidizer unit for the treatment of large volumes of gas typical of a cement kiln exhaust. Operation of multiple units will create significant operating difficulties in trying to balance flow among four to six units as well as concerns about increased maintenance requirements.

There are two U.S. facilities in the early stages of evaluating thermal oxidizer installations, Holnam in Dundee, MI , and TXI in Midlothian, TX. . . . Neither facility has completed permitting the proposed thermal oxidizers and no operational data has been obtained on the effectiveness of thermal oxidation operation on a cement kiln exhaust. . . . There are no RTO systems in application on a cement kiln in the U.S. and RTO is not a demonstrated technology for cement kilns.

SLC Air Permit Application, p. 5-16.

SLC's assertions in this section are either flatly wrong or deliberately misleading. The RTO/scrubber installation at the Holnam plant in Michigan, which is owned by Holnam, SLC's parent company, was permitted on March 20, 2000, over a year before SLC's final air permit application was submitted. Based on conversations with Michigan Department of Environmental Quality staff, it appears that the equipment has been installed and the units have been running for the last two and one-half months. That the Holnam Plant in Michigan is under common ownership by Holcim makes SLC's assertions particularly troubling.

SLC's next error was failing to conform to Step 3 of the top-down BACT procedures which requires an exposition of the following analysis and ranking of all remaining technically feasible options:

In step 3, all remaining control alternatives not eliminated in step 2 are ranked and then listed in order of overall control effectiveness for the pollutant under review, with the most effective control alternative at the top. A list should be prepared for each pollutant and for each emissions unit (or grouping of similar units) subject to a BACT analysis. The list should present the array of control technology alternatives and should include the following types of information:

- control efficiencies (percent pollutant removed);
- expected emission rate (tons per year, pounds per hour);
- expected emissions reduction (tons per year);
- economic impacts (cost effectiveness);
- environmental impacts [includes any significant or unusual other media impacts e.g. water or solid waste), and, at a minimum, the impact of each control alternative on emissions of toxic or hazardous air contaminants];
- energy impacts.

NSR Workshop Manual, p. B 7-8. SLC failed adequately to address the best control technology available – combustion optimization and RTO – and thus failed to conduct a complete top-down BACT analysis. SLC's evaluation of the "most effective control technology" in Section 5.3.3.4 of the air permit application is thus inadequate.

SLC's analysis also failed to acknowledge the environmental benefits associated with RTO control of hazardous air pollutants, volatile organic compounds and odors associated with organic carbon compounds found in the Greenport rock. This failure to incorporate the environmental benefits of RTO implementation violates basic principles of BACT analysis.

As discussed in Section IV below, RTO controls should be required as LAER controls for VOC emissions from the facility. This requirement would reduce the cost of RTO controls to zero for the control of carbon monoxide, further buttressing comments that this technology and an appropriate emission limitation reflecting its ability to control carbon monoxide emissions should be selected as BACT for this pollutant.

Finally, Table 5-2 on Page 5-19 of SLC's application provides further basis to reject the implied conclusion of the application that 3.0 lb. CO per ton of clinker constitutes a valid carbon monoxide BACT determination. Five permits issued in 9/2000, 8/1997, 2/1997, 11/1995, and 7/1994 all show standardized rates for pounds of carbon monoxide emissions per ton of clinker to be lower than the implied limit cited by SLC of 3.0 lb. CO/ton clinker. This provides further support for an argument that lower carbon monoxide emissions are achievable in this industry even without using an RTO, undermining any suggestion that the limit represents a valid PSD BACT determination.

#### **4. SLC's Application Fails to Provide Sufficient Explanation of Why it Abandoned Efforts to Obtain Site-Specific Meteorological Data.**

Section 52.21(m) of 40 C.F.R. requires applicants for PSD permits to obtain air quality monitoring data collected over a period of at least one year prior to submission of the application for a permit to construct for purposes of assessing the impact of the project on PSD increments and on ambient air quality generally. Meteorological data also is needed as part of the air quality analysis. This data must be "representative of the atmospheric dispersion and climatological conditions at the site of the proposed source," making site-specific data "preferable to data collected elsewhere." Draft NSR Workshop Manual, p. C.22.

In the present case, SLC obtained permission from the Town of Greenport to construct a meteorological tower at the proposed site of the Greenport facility in late Summer 1999. It is our understanding that the tower was constructed shortly thereafter and began collecting data in approximately January 2000. Despite undertaking the significant burden and expense of installing the tower, SLC successfully petitioned EPA for a waiver to allow them to use data from Albany Airport, which is located approximately 40 miles away, instead of the site-specific data being collected to this day by the on-site met tower. SLC's

decision to seek a waiver raises serious questions. Where, as here, site-specific data which would allow for a true and accurate picture of site conditions for modeling purposes is available, it is perplexing that the applicant has elected not to use that data, relying instead on data collected 40 miles away. Given differences in topography and wind conditions there is at least a 50% chance that local meteorological data would result in stricter emission limits.

In recent discussions, SLC representatives have indicated that the met data collected using the tower has not been validated and that this is a long and complex process. However, SLC has been collecting met data using the tower for approximately 18 months; presumably the data could have been validated during this period. SLC also has suggested that meteorologists believe that five years' worth of data from Albany Airport is preferable to one years' worth of on-site data. However, the local data could presumably be used to verify the appropriateness of using the Albany Airport data at the Greenport site. Since the data has been collected, why not verify and use it to ensure the best possible analysis of the air quality impacts of this major project?

#### **D. Nonattainment New Source Review**

##### **1. Introduction/Background**

The PSD program establishes emission control and other requirements to address emissions of “attainment contaminants” from newly constructed and modified major stationary sources. EPA has established a similar, but stricter, program to address emissions of “nonattainment contaminants”. In New York, DEC has adopted its own regulations to implement the so-called nonattainment new source review (NSR) program. These regulations, which are set forth at 6 NYCRR Subpart 231-2, establish stringent emission control and other requirements intended to ensure that newly constructed or modified major sources located in areas designated as nonattainment for one or more contaminants do not adversely affect existing air quality. Because the air in nonattainment areas fails the NAAQS, these requirements are much stricter than those applicable to sources regulated under the PSD program. Like the PSD program, facilities covered by the nonattainment NSR program must obtain a preconstruction permit from DEC prior to commencing construction. 6 NYCRR § 231-2.3(a).

As with the PSD program, the nonattainment NSR program applies only to “major sources” of nonattainment contaminants. However, the definition of “major source” differs depending on both the contaminant being emitted and the location of the proposed new or modified source. As SLC correctly notes in its application, New York State is currently part of the Northeast Ozone Transport Region (OTR). As a result, all of the state is

classified, at minimum, as a moderate nonattainment area for ozone. This designation means that facilities are considered major if they have the potential to emit more than 50 tons per year of volatile organic compounds (VOCs) or 100 tons per year of nitrogen oxides (NO<sub>x</sub>). The SLC plant is a major source of both VOCs and NO<sub>x</sub> under this definition. As a result, the facility must obtain a nonattainment NSR permit prior to commencing construction.<sup>12</sup>

To obtain a nonattainment NSR permit, SLC must meet satisfy the following requirements:

***a. Meet lowest achievable emission rate (LAER);***

As with BACT, a LAER analysis is done on a case-by-case basis. However, LAER is stricter than BACT, representing the “most stringent emission limitation achieved in practice for a category of emission sources taking into consideration each air contaminant which must be controlled.” 6 NYCRR §§ 200.1(ak), 231-2.4(a)(iii), 231-2.5.

***b. Obtain emission offsets;***

In addition to achieving LAER, the source must obtain emission reductions (offsets) of the nonattainment pollutant from other sources which impact the same area as the proposed source. 6 NYCRR §§ 231-2.1(b)(13), 231-2.3(b), 231-2.4(b), (c).

***c. Certify compliance with all applicable air regulations; and***

Any nonattainment NSR application must include a certification from the applicant that any major facilities under its control are in compliance with, or are on a schedule of compliance with, all applicable state air regulations. 6 NYCRR § 231-2.4(a)(2)(i).

***d. Prepare alternatives analysis.***

The applicant must prepare an analysis of alternative sites, sizes, production processes and environmental control techniques which demonstrate that the benefits of the project

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<sup>12</sup> Traditionally, the Clean Air Act regulated only VOCs in its effort to control ground level ozone. However, both VOCs and NO<sub>x</sub> are “ozone precursors” – that is, they both contribute to ground level ozone formation. In recognition of the role of NO<sub>x</sub> in the creation of ozone, Congress amended the Clean Air Act in 1990 to specifically designate NO<sub>x</sub> as an ozone precursor, making it subject to the nonattainment NSR program. However, NO<sub>2</sub>, which is a subcategory of NO<sub>x</sub>, remains subject to regulation under the PSD program as well. The PSD requirements for NO<sub>2</sub> are generally superseded by the stricter nonattainment NSR limits for NO<sub>x</sub>.

outweigh the environmental and social costs. 6 NYCRR § 231-2.4(a)(2)(ii).

We believe that SLC's air permit application and the draft permit circulated for review fails to comply with the requirements of the nonattainment NSR program for the following reasons, among others: (1) SLC's NO<sub>x</sub> LAER analysis rejects switching from coal to gas as a means of controlling emissions without proper justification; (2) the phased-in LAER approach violates NSR which requires LAER to be established at the time the preconstruction permit is issued. At minimum, the permit must contain a baseline LAER limit that kicks in at the end of the third year regardless of the results of the LAER phase-in; moreover, any final LAER determinations after the phase-in period should be subject to public review; (3) SLC's LAER analysis ignores VOC controls at a facility owned by an affiliated company; moreover, the permit contains no LAER limit whatsoever for VOCs; (4) SLC has failed to certify compliance at the Catskill facility as required by the nonattainment NSR regulations; (5) SLC's alternatives analysis is inadequate; and (6) SLC attempts inappropriately to take credit for emission decreases associated with the shutdown of the Catskill facility.

## **2. SLC's NO<sub>x</sub> LAER Analysis is Inadequate.**

As previously noted, 6 NYCRR Subpart 231-2 requires sources that trigger nonattainment NSR to install LAER technology. LAER is defined as the "most stringent emission limitation achieved in practice for a category of emission sources taking into consideration each air contaminant which must be controlled." 6 NYCRR § 200.1(ak). SLC has correctly determined that emissions of both VOCs and NO<sub>x</sub> from the proposed Greenport plant are subject to the LAER requirement. However, SLC ignores and/or improperly rejects as LAER various control options which could significantly reduce emissions of NSR contaminants. In the case of NO<sub>x</sub>, the approach adopted for LAER calls for a lengthy phase-in period and contains no enforceable emission limit once LAER is fully implemented in violation of the NSR requirements.

### **a. SLC Rejects Too Quickly Switching from Coal to Gas as an Alternative for Reducing NO<sub>x</sub> Emissions.**

Ground level ozone has been one of the nation's most persistent air pollution problems. Ground level ozone is formed when VOCs and NO<sub>x</sub> react in sunlight to form ozone. Although ozone in the upper atmosphere is essential to protect the earth from harmful ultraviolet radiation, at ground level it can cause various health problems, including decreased lung function and respiratory symptoms, particularly in sensitive populations such as children and the elderly. Combined with airborne PM, ground level ozone creates

the air pollution problem commonly known as smog.

From the outset, SLC has proposed to use coal as the primary fuel at the Greenport facility. In support of this decision, SLC argues that natural gas typically produces the highest NO<sub>x</sub> per ton of clinker of any fuel used at cement plants, even though it has the lowest nitrogen content. According to SLC, “coal and oil fired kilns typically have longer, less aggressive flames that disperse thermal energy more directly to the kiln feed and thereby reduce the quantity of thermal NO<sub>x</sub> formed per unit of clinker produced” and many cement plants have converted from gas to coal for NO<sub>x</sub> reduction purposes. SLC Air Permit Application, p. 6-13. However, SLC does not indicate whether it undertook any investigation to determine whether there is a technology available that would reduce the NO<sub>x</sub> emissions associated with natural gas down to levels comparable to coal. Our review suggests that the Ash Grove cement plant in Durkee, Oregon, tested and utilized a low NO<sub>x</sub> natural gas burner (Gyro-Therm) which gave similar results to coal for NO<sub>x</sub> emissions. Although the facility recently switched to coal as the primary fuel because of the high price of natural gas, it meets its current NO<sub>x</sub> permitted emission levels using either natural gas or coal as its primary fuel. The LaFarge Cement Co. plants in Richmond, British Columbia, Canada, also tested and utilized the same low NO<sub>x</sub> burner technology.<sup>13</sup> These examples contradict SLC’s assertions that switching to gas from coal will inevitably result in the emission of additional thermal NO<sub>x</sub>.

The existence of technologies that reduce NO<sub>x</sub> emissions associated with burning gas at cement plants raises serious questions about the conclusions of SLC’s LAER analysis. Natural gas combustion produces significantly less SO<sub>2</sub> and PM than coal. If NO<sub>x</sub> levels associated with burning natural gas can be reduced to a level comparable to, or even slightly above those for coal, a switch to natural gas would be justified under NSR.

To the extent that burning coal, in fact, results in less NO<sub>x</sub> production than natural gas, SLC has failed to explore options associated with reducing the NO<sub>x</sub> associated with coal combustion. For example, certain coal contains a significantly higher nitrogen content than other coal. SLC should explore the possible air quality benefits of using low nitrogen coal.

b. SLC Overstates the Difficulties Associated with Installing SNCR.

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<sup>13</sup> In support of its argument that fuel switching is not an option for controlling NO<sub>x</sub>, SLC cites an EPA report that states that thermal NO<sub>x</sub> formation is higher from natural gas than coal. However, that report looks only at low NO<sub>x</sub> burners that burn coal. It does not look at the Gyro-Therm low NO<sub>x</sub> burners for gas.

Initially, SLC proposed a low-NO<sub>x</sub> combustion calciner, a low NO<sub>x</sub> burner in the kiln, and combustion optimizing controls aided by an expert process optimizing control system as LAER. After negotiations with DEC, SLC also agreed to include selective non-catalytic reduction (SNCR) as part of LAER. SLC, while reluctantly agreeing to install SNCR (see discussion below), nevertheless offers numerous criticisms of SNCR as LAER for its facility. Among other things, SLC argues that: (1) the SNCR chemical reaction can only occur in a narrow temperature band; (2) reagent injection must be strictly controlled to get optimum NO<sub>x</sub> removal; (3) competing reactions involving the reagent will reduce NO<sub>x</sub> reduction; and (4) ammonia slip may occur during direct operation. Each of these arguments is discussed below:

- ***SNCR chemical reaction can only occur in a narrow temperature band.*** SLC argues that the SNCR chemical reaction can only occur in a temperature band between 1600% and 1900% F. According to EPA's NO<sub>x</sub> Control Technologies for the Cement Industry Final Report, p. 70 (Sept. 19, 2000), (hereinafter "EPA 2000 Cement Report") "In preheater/precalciner type cement kilns, the temperatures at the cooler end of the rotating kiln, in the riser duct, and in the lower section of the cyclone preheater tower are likely to be in the temperature window appropriate for SNCR. Such kilns are therefore good candidates for application of SNCR technology." The Greenport facility will be a preheater/precalciner plant and is therefore a good candidate for SNCR application. The temperature range required can be found at the end of the kiln, in the riser duct or in the preheater. Temperature range thus is not an insurmountable obstacle. Moreover, according to the EPA report, the temperature window may be lowered to 1300% F by the addition of hydrogen along with the reducing agent.
- ***Reagent injection must be strictly controlled to get optimum NO<sub>x</sub> removal.*** While reinjection may need to be strictly controlled, these types of controls are nothing new to the cement industry. Controls are used in the amount of fuel burned to keep the kiln in its optimum temperature range. Controls are used in the milling process to produce the optimum stone size. A continuous emission monitor (CEM) device for NO<sub>x</sub> and ammonia concentration can be used to assist in the optimizing of the SNCR process. The CEM will provide a good indication of the NO<sub>x</sub> and ammonia concentrations in the kiln. This information can then be used to control the reagent addition. Tests conducted at other SNCR plants and reported in the EPA document show that molar ratios of ammonia to NO<sub>x</sub> of 0.5 to 1.2 have seen NO<sub>x</sub> reductions of 40% to 85%.
- ***Competing reactions involving the reagent will reduce NO<sub>x</sub> reductions.*** SLC argues that

reactions involving the reagent will reduce the NO<sub>x</sub> reduction. These competing species may include the SO<sub>2</sub>, the fuel (in a fuel rich environment) and other species in the kiln exhaust. Although this statement may be true, the problem can be addressed by applying additional reagent. That is why there is a range of ammonia to NO<sub>x</sub> molar ratios reported in the literature. Ideally, an exact stoichiometric molar ratio would give 100% NO<sub>x</sub> reduction. Non-ideal mixing conditions and competing reactions necessitate the greater than stoichiometric molar ratio. Real world tests reported reduced NO<sub>x</sub> emissions up to 90% when the molar ratio was 10 to 20 percent in excess of the ideal stoichiometric ratio, competing reactions and all. EPA 2000 Cement Report, p. 72.<sup>14</sup>

- ***Ammonia slip may occur during direct operation.*** SLC argues in its application that ammonia slip may occur during direct operation (kiln exhaust bypasses the raw mill) due to the release of absorbed ammonia during the compound operation (kiln exhausts through the raw mill). If additional ammonia is added in the SNCR process, the plume may detach and the measured opacity may become greater than the permit level leading to fines and community complaints. However, an ammonia sensor in the kiln will let the operator know if there is a buildup of ammonia in the kiln. When the ammonia begins to build up in the kiln, the ammonia injection can be scaled back to maintain the correct NO<sub>x</sub> to ammonia ratio for optimal NO<sub>x</sub> removal. This is one of the controls necessary to maintain optimal SNCR performance.

As the above summary suggests, these concerns do not argue against installing SNCR at the Greenport facility. They only indicate that SLC will have to exercise care in installing and operating the system.

SLC rejects SNCR as representing “at best, an unproven potential transfer of technology.” SLC Air Permit Application, p. 6-20. However, according to EPA’s 2000 Cement Report (Sept. 19, 2000), referenced in the air permit application, SNCR has been piloted at two plants in the United States and is operating in 18 plants in Europe. The NO<sub>x</sub> reductions in the European plants ranged between 10 and 85%. Reductions at the two U.S. plants averaged 50%. This history suggests that SNCR is far from an “unproven technology.”

### **C. The Proposed Issuance of the Permit Without Establishing a Final NO<sub>x</sub>**

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<sup>14</sup> F.L. Smidth and Company tested SNCR on a preheater/precalciner kiln. Ammonia was injected into the lower cyclone of the preheater tower where temperatures are favorable for the reduction reactions to occur. NO<sub>x</sub> emissions reductions during this experiment averaged 40 percent, but NO<sub>x</sub> reductions of over 90 percent were obtained when the ammonia injection rate was 10 to 20 percent in excess of stoichiometric.

## LAER Standard Violates NSR.

New York's nonattainment NSR regulations require that LAER be established at the time the preconstruction permit is issued. 6 NYCRR § 231-2.5(c). SLC's permit does not comply with this requirement. Instead, in an apparent effort to accommodate SLC's concerns regarding the effectiveness of LAER generally and SNCR, in particular, the permit contains a series of rather complex permit conditions which delay establishment of final LAER until three years after first clinker. The provisions are summarized below:

- Permit Condition 52 – Caps total NO<sub>x</sub> emissions from Emission Unit 0-CPROD (which includes all process equipment related to the actual manufacture of cement) at 4121 tons per year.
- Permit Condition 66 – Identifies technologies that will be installed at the kiln itself, presumably to satisfy LAER. These technologies include low-NO<sub>x</sub> combustion calciner, a low NO<sub>x</sub> burner in the kiln, combustion optimizing controls aided by an expert process optimizing control system, including continuous emission monitoring systems (CEMS), and SNCR. This provision specifies that implementation of SNCR will commence prior to the end of the 12th month after first clinker from the kiln.
- Permit Condition 67 – Establishes schedule for LAER determination as follows:
  - End of initial operation month 6 – SLC to submit protocol describing implementation of control optimization demonstration.
  - Between operating months 13 and 24 – Conduct optimization demonstration.
  - End of initial operating month 26 – Provide DEC with results of optimization study; submit protocol for statistical evaluation methodology which will be utilized on NO<sub>x</sub> CEMS data obtained below.
  - Initial operating months 25-36 – Obtain actual CEMS NO<sub>x</sub> performance results to provide basis for permanent LAER determination.
  - End of initial operating month 38 – Submit report providing statistical analysis pursuant to protocol previously submitted, including review of SNCR performance.

At the close of this process, Permit Condition 67 calls for DEC to establish the permanent NO<sub>x</sub> LAER limit for the facility. This LAER determination will be stated as an annual tonnage limit for NO<sub>x</sub> based on a 12-month rolling total, a 12-month rolling average of

pounds of NO<sub>x</sub> per ton of clinker, and a 30-day average pound of NO<sub>x</sub> per hour limit.

- Permit Condition 68 – Requires installation of NO<sub>x</sub> CEMS within 180 days of first clinker from kiln; establishes upper limit of monitoring for NO<sub>x</sub> of 4121 tons.
- Permit Condition 69 – Establishes limits on NO<sub>x</sub> emissions per ton of clinker during initial operating months 1 to 36 as follows (12-month rolling average):
  - Months 1 - 24 – 3.6 lbs./ton of clinker (4121 tons per year).
  - Months 25 - 36 – gradual reduction in lbs./ton of clinker limit from 3.5 lbs./ton (initial operating months 25 and 26 to 2.8 lbs./ton (month 36 until LAER established).
  - Once LAER established – to be determined.
- Permit Condition 70 – Translates lbs./ton of clinker limits into ton per year limits (12-month rolling total).
- Permit Condition 71 – Translates lbs./ton of clinker limits into pound per hour limits (30-day rolling average calculated each 24 hours).

As previously noted, nonattainment NSR requires LAER to be established at the time the permit for the project is issued. SLC's permit, by comparison, does not establish LAER until more than three years after the facility begins operation in direct violation of NSR. Based on documentation available to date, it appears DEC adopted this approach because SLC has concerns about how well the various control strategies proposed to be implemented, in particular, SNCR, will perform. Theoretically, delaying the final determination regarding LAER until after these strategies are operational could result in stricter emission limits than if LAER were established at the time the permit is issued. Friends of Hudson is concerned, however, because the permit contains no stated minimum once the transition period ends. The permit establishes specific emission limits through the 36th month after the initial operating month. Thereafter, LAER is whatever DEC and SLC decide it should be. This approach violates the requirements of nonattainment NSR and basic rules for source air permitting.

For the reasons set forth above, we believe SNCR has been adequately demonstrated to be LAER for DEC to set a final enforceable LAER limit now. To the extent DEC believes an extended "shakedown" period is necessary to optimize the various controls and establish a final LAER, the permit should include a baseline emission limit beginning in the 36th month after the initial operating month that reflects DEC's best assessment of what constitutes LAER at the time the permit is issued. This limit would represent the minimum

SLC would be expected to achieve at the facility. If the LAER demonstration required by the permit shows that a lower emission limit can be achieved by the facility, this limit should be included in the permit to satisfy LAER.

Regardless of whether DEC establishes a minimum LAER standard, the permit must include a deadline for establishing the final LAER standard. It must also specifically require public review of the final LAER determination. Under the approach embodied in the current permit, well over three years will elapse between the time the permit is issued and the time DEC makes its final LAER determination. Many things can change in three years, particularly from an emission control perspective. Under these circumstances, it is crucial that the final LAER determination be subject to public review and comment.

Other concerns about DEC's NO<sub>x</sub> LAER permit conditions are summarized below:

- The schedule measures compliance milestones based on “initial operating months” (e.g., SLC shall conduct optimization demonstration during initial operating months 13-24). However, the term “initial operating month” is not well defined. The state’s nonattainment NSR regulations speak in terms of “commencing operation” which is defined as the date the facility first increases emissions of any nonattainment contaminant subject to regulation under Part 231. Where a source is a functional replacement for another source (and will use ERCs from the replaced source), the definition allows for a 180-day shakedown period. 6 NYCRR § 231-2.1(b)(7). Permit Condition 68 requires installation of a NO<sub>x</sub> CEMS within 180 days of first clinker from the kiln, and establishes an upper limit for NO<sub>x</sub> of 4121 tons. Since compliance with the various operating limits presumably cannot be determined until the CEMS is installed, this would suggest that the “initial operating month” is the month the CEMS becomes operational. The definition of “initial operating month” and the relationship from a timing perspective of the various nonattainment NSR permit conditions must be clarified before the permit is issued to ensure that all parties understand what must be done when.
- The analysis requires SLC to achieve gradual reductions in NO<sub>x</sub> emissions during months 25 to 36 while it obtains actual CEMS NO<sub>x</sub> performance results to provide a basis for the permanent LAER determination. However, the permit application contains no factual basis for these limits and thus no evidence showing that the gradual emission reductions are, in fact, achievable.
- The emission limits for NO<sub>x</sub> established to satisfy LAER appear to apply to different regulated entities. Permit Condition 36, which is found in the facility-wide section of the permit, establishes a NO<sub>x</sub> cap of 8,242,000 lbs. (4121 tons) per year. This condition

identifies the cap as applying to the “sum of emissions from the emission units specified in the permit,” suggesting that the NO<sub>x</sub> cap applies to all emission units at the facility. However, the identical cap is also established in the emission unit section of the permit for emission unit 0-CPROD. Based on the remainder of the permit, it appears that the cap is intended to apply only to Emission Unit 0-CPROD. This inconsistency must be addressed.

### **3. SLC’s VOC LAER Analysis is Inadequate**

#### **a. SLC’s LAER Analysis for VOCs Ignores Control Options Recently Implemented at a Facility Owned by its Parent Company.**

In its application, SLC asserts that its review of new and existing cement plants in the United States and world wide “did not reveal any facilities operating add-on control technologies for the control of VOCs.” SLC Air Permit Application, p. 6-3. It goes on to note that while two facilities in the United States are considering installing thermal oxidizers due to the “uniquely high organic content” of the raw material feed, the performance of these units is unknown. What SLC fails to mention is that more than two months ago, a facility in Dundee, Michigan, owned by Holnam, its parent company, installed a valveless regenerative thermal oxidizer to control VOC emissions. According to the air permit application for the Dundee facility, the unit is expected to reduce VOCs by 80% to 90% and to reduce CO between 75% and 85%.

SLC’s failure to specifically mention the Dundee facility is, at best, disingenuous and, at worst, grossly misleading. It was incumbent upon SLC to specifically discuss the Dundee plant in its LAER analysis and to explain why the technology being implemented there is (or is not) LAER for Greenport.

As previously noted, LAER is the “most stringent emission limitation achieved in practice for a category of emission sources taking into consideration each air contaminant which must be controlled.” 6 NYCRR § 200.1(ak). Under this definition, if a new effective technology has already been implemented at other similar facilities an NSR applicant must consider that technology in its LAER analysis. Failure to do so renders the LAER analysis inadequate. Accordingly, SLC must be required to revise its LAER analysis to specifically address the Dundee facility.

#### **b. The Permit Contains no LAER Limits for VOCs.**

As noted in Section II, the draft air permit does not contain any provisions whatsoever establishing LAER for VOCs. Although the application proposes to meet LAER

requirements for VOCs by limiting the VOC emission rate to 0.10 lb. total hydrocarbons per ton of clinker, this limit does not appear anywhere in the permit. Enforceable emission limits based on SLC's revised LAER analysis for VOCs (consistent with Section IV.B.3. above) must be included in the permit to satisfy the requirements of nonattainment NSR review.

#### **4. DEC Must Allow for Public Notice and Comment Regarding SLC's Emission Offsets.**

As previously noted, Part 231-2 requires sources that trigger nonattainment NSR to offset increased emissions of nonattainment contaminants associated with a new or modified major source. Under 6 NYCRR § 231-2.4(b), prior to issuance of a permit for a proposed major facility, the applicant must submit a list of offset sources, including the name and location of the facility, the DEC ID number (if applicable), and the emission reduction mechanism. If a part or all of the list is submitted or if the list changes after the department's notice of complete application, then a supplemental public notice and 30-day comment period is required.

In this case, the draft permit (in particular, Permit Conditions 37 and 38) indicates that SLC will obtain a specified number of emission offsets for NO<sub>x</sub> and VOCs; however, it does not provide any details regarding the source of these offsets. As discussed in greater detail below, SLC emphasizes repeatedly in its application that it intends to shut down the kiln at Catskill; presumably Catskill will be the source of some or all of SLC's emission offsets for Greenport. However, the application does not commit SLC to acquiring offsets from Catskill. Accordingly, information about the source must be made available before the permit is issued and must be subject to a supplemental notice and 30-day public comment period, consistent with 6 NYCRR § 231-2.4(b)(1).

To the extent SLC obtains offsets from a source other than Catskill, it cannot be allowed to continue to operate the Catskill kiln once the Greenport kiln is running. New York's NSR regulations require all emission offsets to be in place at the time the NSR source begins operating, unless the new source is considered a functional replacement and "proposes to use [emission reduction credits] generated from the replaced sources or units to the maximum extent possible." 6 NYCRR §§ 231-2.1(b)(7), 231-2.3(b). If SLC elects to obtain offsets from a source other than Catskill it cannot operate both kilns simultaneously.

#### **5. SLC has Failed to Certify Compliance as Required by the Nonattainment NSR Regulations.**

6 NYCRR § 231-2.4(a)(2)(i) specifically requires applicants for source projects subject

to nonattainment NSR to “certify that all emission units which are part of any major facility located in New York State and under the applicant’s ownership or control (or under the ownership or control of any entity which controls, is controlled by, or has common control with the applicant) are in compliance, or are on a schedule for compliance, with all applicable emission limitations and standards under Chapter III of this title.” SLC’s application does not contain a certification of compliance as required by this section for its existing Catskill facility which is currently a “major source”. Our review of records obtained from DEC concerning the past compliance history of Catskill indicate that the facility has been cited in the past for violations of various state air regulations. In light of this history, it is imperative that SLC be required to certify its compliance status now, as part of this nonattainment NSR application. If it cannot certify compliance, it must submit a schedule of compliance, particularly for those emission units at Catskill that will remain in operation after the Greenport plant becomes operational.

Also, SLC should be required to certify the compliance status of other facilities it controls in New York State. SLC’s ultimate parent, Holcim, is a 10% owner of Dyckerhoff AG which owns Glens Falls Cement. Glens Falls Cement is in a joint venture with Lehigh Cement for the Lehigh/Glens Falls facility in Catskill, as a 10% owner Holcim is deemed an “owner” under SEC regulations and EPA guidance of Dyckerhoff. Therefore, SLC must certify compliance of Glens Falls and the Leigh/Glens Falls Joint Venture facilities.

## **6. SLC’s Alternatives Analysis is Inadequate.**

Section 231-2.4(a)(2)(ii) of 6 NYCRR requires applicants for major NSR sources to submit an analysis of “alternative sites, sizes, production processes, and environmental control techniques which demonstrates that the benefits of the proposed source project or proposed major facility significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification within New York State.” For the same reasons discussed below we believe that the alternatives analysis submitted as part of the EIS fails adequately to assess possible alternatives to the proposed SLC project. Accordingly, SLC has failed to satisfy this requirement of New York’s nonattainment NSR regulations.

## **7. SLC Attempts Inappropriately to Take Credit for Emission Decreases Associated with the Shutdown of the Catskill Facility**

In its initial air permit application, SLC attempted to argue that the Greenport and Catskill operations were, in fact, one “facility” and that SLC could take credit for the emission decreases associated with shutdown of much of the Catskill facility for purposes of determining the applicability of the PSD and nonattainment NSR programs. This approach enabled them to avoid the requirement to obtain emission offsets and to install

LAER technology for VOCs and NO<sub>x</sub>. This approach was rejected by the United States Environmental Protection Agency. Although SLC acknowledges in its revised air permit application that Catskill and Greenport are separate facilities for purposes of PSD and nonattainment NSR, they repeatedly, and we believe, inappropriately, emphasize the purported air quality benefits associated with the shutdown of the Catskill plant.

SLC is proposing to shut down the kiln at Catskill when the new kiln becomes operational at Greenport. However, SLC proposes to continue cement manufacturing support activities at the Catskill facility. Emission sources remaining at the Catskill facility will include storage, handling, grinding, packaging and distribution systems. Also, SLC will continue to operate the cement kiln dust (CKD) landfill at Catskill. It is unclear, however, what limits, if any, will be placed on emissions associated with these ancillary operations. For example, is it possible that the Catskill facility will be equipped to accept cement for grinding and processing from plants other than Greenport? If yes, total emissions of PM and other contaminants from the “Hudson Valley Operation” could be significantly higher than those anticipated by the application.

Also, SLC’s emphasis on the air quality benefits associated with shutting down the kiln at Catskill effectively assumes that the Catskill facility would be able to operate indefinitely in its current state. SLC’s application is somewhat vague in its discussion of the history of the Catskill facility. It is our understanding, however, that the wet process kiln in Catskill has been in operation for some time; presumably, at some time in the not-to-distant future, SLC would have been required to upgrade the existing wet process kiln at Catskill in order to keep it operational. Under these circumstances, the air quality benefits associated with the shutdown of the smaller, “dirtier” Catskill kiln and its replacement with the purportedly cleaner but much larger Greenport kiln are somewhat illusory.

Finally, the air permit application is extremely unclear as to when, in fact, the Catskill kiln will be shut down. It is our understanding that Greenport intends to use emission reductions from the shutdown of the kiln at the Catskill facility as its source of emission offsets required under the nonattainment NSR program. As noted above, however, the draft permit does not specify the source of emission reduction credits for the new Greenport facility, suggesting that SLC could seek ERCs elsewhere, eliminating the need to shut down Catskill. Also, the draft permit contains no provisions specifically committing SLC to shut down Catskill. The absence of such provisions raises real questions as to whether, and, if so, when, the kiln at Catskill will, in fact, be shut down.

## **E. New York’s Portland Cement Plant Regulations.**

### **1. Introduction/Background.**

The primary regulations driving the SLC project from an air pollution perspective are the PSD and nonattainment NSR rules. However, there are numerous other regulations that apply to SLC's proposed Greenport project. In particular, SLC must comply with New York's Portland Cement Plant regulations, set forth at 6 NYCRR Part 220. These regulations establish emission limits and other requirements tailored specifically to portland cement plants. Emissions regulated under the rule include particulate, opacity, and various gaseous emissions, including SO<sub>2</sub> and NO<sub>x</sub>.

Although several of the pollutants addressed by Part 220 are covered by other, more recent and/or more stringent regulations such as PSD, nonattainment NSR and the portland cement NESHAP (discussed below), Part 220 still regulates newly constructed cement plants and must be addressed fully in any permit to construct issued to a new source, such as the proposed SLC plant. As discussed in greater detail below, however, the draft air permit for the SLC facility omits many key elements of Part 220.

## **2. The Draft Air Permit Omits Key Applicable Requirements under New York's Portland Cement Plant Regulations.**

Specific issues arising under Part 220 are summarized below.

- *Particulate emission limits.* 6 NYCRR § 220.3 establishes particulate emission limits for kilns and clinker coolers at portland cement plants. However, these limits are not included in the draft air permit as applicable requirements. The permit must include the emission limits in 6 NYCRR §§ 220.3(a) and (b), together with a description of how SLC intends to achieve and monitor compliance with these limits (e.g., installation of baghouses and monitoring pressure drop) and other necessary reporting and recordkeeping provisions. To the extent this provision is intended to be covered by another permit condition, that condition should specifically reference Part 220 so that Part 220 is specifically identified in the permit as an applicable requirement for enforcement purposes.
- *Gaseous emissions from kiln stacks (SO<sub>2</sub>)* (Permit Condition 57). Section 220.6(a) of 6 NYCRR allows the owner of a cement kiln to purchase fuel exceeding the fuel sulfur limits required by 6 NYCRR Part 225 if burning the fuel will not result in emissions of SO<sub>2</sub> at a rate greater than would result from the use of compliant fuels. To comply with this requirement, SLC proposes to limit SO<sub>2</sub> emissions from the kiln to 850 tons per year and monitor emissions using a CEMS. This permit condition raises several concerns. First, the calculations for SO<sub>2</sub> do not take into account any sulfur from the fuel. SLC Air Permit Application, p. E-31 to -32. Second, Permit Condition 57 specifies that "This compliance certification requirement satisfies the emission limits of 225-2," implying that the facility

will be burning waste fuels. However, Permit Condition 35 specifically prohibits the facility from burning waste fuels. The quoted language from the monitoring description should be deleted or perhaps revised to reference Subpart 225-1. Third, the description of the Reference Test Method ("40 CFR Part 60") is incomplete and should include a specific reference to the appropriate reference test method.

- *Gaseous emissions from kiln stack (NO<sub>x</sub>)* (Permit Condition 57). Section 220.6(b) of 6 NYCRR requires owners and/or operators of portland cement kilns to submit a plan which identifies reasonably available control technology (RACT) for emissions of NO<sub>x</sub> from cement kilns. Although the controls proposed to satisfy LAER for NO<sub>x</sub> also will satisfy RACT, the permit should nevertheless include a specific reference to 6 NYCRR § 220.6(b) to establish that the facility also is subject to RACT requirements for NO<sub>x</sub> emissions.
- *Source monitoring (Permit Condition 74)*. This permit condition addresses source monitoring under 6 NYCRR § 220.8(a). To make this condition more consistent with the underlying regulation, it should be revised as follows:

The owner must maintain records of daily production rates, kiln feed rates, and particulate emission measurements. These records must be retained for five years and made available for inspection by the Department during normal business hours.

- *Opacity limits (Permit Condition 78)*. 6 NYCRR § 220.4 establishes opacity limits for various sources located at portland cement plants. Although the draft permit references opacity under Part 220 as an applicable requirement, it is incorrect in the following respects: (1) the only opacity provision cited under Part 220 is 6 NYCRR § 220.4(d). That provision has been repealed; (2) the permit only includes opacity limits for the material handling emission unit (Emission Unit: 0-MATLT). Section 220.4(a) contains a 20 percent opacity standard for portland cement kilns, clinker coolers or other confined processes; Section 220.4(b) contains a 10 percent opacity standard for certain other sources constructed after August 17, 1971. Both of these opacity standards apply to new cement kilns and should be included as permit conditions, accompanied by the appropriate compliance monitoring requirements. To the extent these opacity limits are intended to be covered by another permit condition, that condition should specifically reference Part 220 as an applicable requirement.

## **F. National Emission Standards for Hazardous Air Pollutants (NESHAP).**

### **1. Introduction/Background.**

Hazardous air pollutants from portland cement plants are regulated under the recently

enacted National Emission Standards for Hazardous Air Pollutants (NESHAP) for cement plants set forth at 40 CFR Part 63, Subpart LLL. Under the NESHAP program, required by 42 U.S.C. § 7412, EPA must develop a list of source categories that emit specific hazardous air pollutants (HAPs). EPA must then develop maximum achievable control technology (MACT) standards for new and existing sources in these source categories. MACT is defined in the statute as “the maximum degree of reduction in emissions of the HAP that the Administrator [i.e., EPA], taking into consideration the cost of environmental impacts and energy requirements, determines is achievable for new or existing sources in the category or subcategory to which such emission standard applies.” 42 U.S.C. § 7412(d)(2). For new sources, MACT must be at least as stringent as the emission control achieved in practice by the best controlled similar source in that source category. 42 U.S.C. § 7412(d)(3). If the technology based-MACT standard does not adequately protect public health, EPA ultimately must develop a stricter risk-based standard pursuant to 42 U.S.C. § 7412(f).

In July 1992, EPA published a list of source categories slated for regulation under the NESHAP program. This list included portland cement plants. According to EPA, portland cement plants emit a wide variety of HAPs including various hazardous metals (arsenic, cadmium, chromium, lead, manganese, mercury, nickel, and selenium), volatile and semi-volatile organic compounds and other air toxics (including acetaldehyde, benzene, chlorobenzene, formaldehyde, hexane, hydrogen chloride, naphthalene, phenol, polycyclic organic matter, styrene, toluene and xylenes) and dioxins and furans. EPA proposed the draft NESHAP for portland cement plants in the Federal Register in March 1998. 63 Fed. Reg. 14182 (Mar. 24, 1998). After extensive public comment, EPA issued the final NESHAP on June 14, 1999. 64 Fed. Reg. 31897. The NESHAP applies to all cement kilns and in-line kiln/raw mills regardless of the material being combusted in the kiln (except for hazardous waste burning cement kilns and hazardous waste in-line kiln/raw mills). For portland cement plants with on-site non-metallic mineral processing facilities, the first affected source in the sequence of material handling operations subject to the NESHAP is raw materials storage, which is just prior to the raw mill. The primary and secondary crushers and any other equipment in the non-metallic minerals processing plant, which precede the raw material storage are not affected sources under this NESHAP. The first conveyor system transfer point subject to this NESHAP is the transfer point associated with the conveyor transferring material from the raw material storage to the raw mill. 64 Fed. Reg. 31900.

Rather than regulate HAP metals directly, the NESHAP establishes emission limitations for particulate matter as a surrogate for HAP metals. The NESHAP also establishes emission limitations for dioxins and furans and total hydrocarbons (as a surrogate for organic HAPs). However, the emission limitations for total hydrocarbons apply only to new “greenfield.” kilns. To demonstrate compliance with these limits, the

NESHAP contains fairly detailed emission monitoring provisions for particulate matter, dioxins and opacity.

Although many of the key elements of the portland cement plant NESHAP are included in the draft preconstruction air permit circulated for comment, the draft nevertheless raises several concerns: (1) key language from various NESHAP requirements has been omitted from the permit; and (2) certain NESHAP applicable requirements appear to have been omitted from the permit. These and other concerns are summarized below.

As discussed in greater detail in Section VIII. C. below, the federal District of Columbia Circuit Court recently remanded key elements of the portland cement plant MACT standard back to EPA for further rulemaking, concluding, among other things, that EPA improperly failed to set individual emission standards for key HAPs, including mercury, sulfuric acid and total hydrocarbons (as a surrogate for organic HAPs). Thus, even assuming SLC meets the MACT standard, it is arguably not sufficient.

## **2. Key Language Has Been Omitted from Various NESHAP-Related Applicable Requirements.**

As part of our permit review, we compared the provisions in the draft air permit with the NESHAP regulations to ensure that all applicable requirements were included in the permit. In many cases, DEC incorporated the NESHAP language into the permit verbatim or essentially verbatim. In other cases, however, key information from the applicable requirement was omitted from the permit. Although states have adopted different approaches to incorporating applicable requirements into their air permits, for the most part, New York State has included the actual text from the regulation as permit conditions (rather than cross-referencing or paraphrasing the relevant regulatory requirements). Under these circumstances, DEC must, for consistency purposes, include all key regulatory text in the permit itself; if the text is simply too long, DEC should include a statement indicating that the applicable requirements can be found in the regulation (so that the reader does not assume that the text in the permit is complete).

From a substantive perspective, DEC has omitted from the permit key language relating to the applicability of particular requirements. For example, the permit indicates that the facility will be equipped with an alkali by-pass; however, references to alkali by-pass have been omitted from several key applicable requirements. Similarly, it appears that the kiln is equipped with an “in-line kiln/raw mill as that term is defined in 40 C.F.R. §

63.1341 of the NESHAP regulations.<sup>15</sup> In several cases, however, DEC has omitted reference to in-line kiln/raw mills in the permit.

Specific suggested revisions to the permit are set forth below:

- *Permit Condition 43.* This permit condition should be revised as follows:

. . . procedures to be used during an inspection of the components of the combustion system of each kiln and each in-line kiln/raw mill located at the facility at least once per year;

procedures to be used to periodically monitor affected sources subject to opacity standards under 40 CFR 63.1346 and 63.1.48. Such procedures must include provisions of paragraph (a)(4)(i) through (a)(4)(iv) of Section 63.1350(a).

- *Permit Condition 47.* This permit condition should be revised as follows:

. . . -Initial notifications as required by 40 CFR 63.9(b) through (d).  
- Notification of performance tests as required by 40 CFR 63.7 and 63.9(e).  
- Notification of opacity and visible emission observations as required by 40 CFR 64.1349 in accordance with section 63.6(h)(5) and 63.9(f). - Notification of the date that the continuous emission monitor performance evaluation required by 40 CFR 63.8(e) is scheduled to begin  
- Notification of compliance status as required by 40 CFR 63.9(h).

- *Permit Condition 49.* This permit condition should be revised as follows:

The owner or operator shall maintain files of all information (including all reports and notifications) required in 40 CFR 63.1355 in a form suitable and readily available for inspection or review as required by 40 CFR 63.10(b)(1). . . . The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

- *Permit Condition 59.* This permit condition should be revised as follows for purposes of satisfying the NESHAP:

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<sup>15</sup> The permit itself does not specify that the facility is an in-line kiln/raw mill. However, the permit application indicates that “[h]ot exhaust gases from the kiln system are recycled into the mill to supply heat for drying the raw mix and to sweep the finely ground raw mix from the mill.” SLC, Air Permit Application, p. 2-3. This description of the process suggests that the facility is an “in-line kiln/raw mill” as that term is defined in the NESHAP. Moreover, the permit includes various permit conditions (e.g., Permit Condition 62) which indicate that the facility is an in-line kiln/raw mill.

. . . to the kiln. This limit applies both to emissions from the kiln itself and the portion of the kiln system exhaust that will go through the alkali bypass. Emissions testing consistent with 40 CFR 63.1349(b)(1) is required . . .

- *Permit Condition 60.* This permit conditions should be revised as follows:

. . . which exhibit opacity greater than 20 percent. Compliance with this standard shall be monitored in accordance with 40 CFR 63.1350(c).

In addition, the “Monitoring Type” specifies “Monitoring of Process or Control Device Parameters as Surrogate.” However, the condition specifies that opacity is being monitored directly via Method 22. These and other inconsistencies in the compliance monitoring provisions must be reconciled.

- *Permit Condition 61.* This permit condition should be revised as follows:

. . . of 40 CFR 63.1349. The performance testing required by this permit condition shall be completed with 180 days of first clinker.

- *Permit Condition 63.* This permit condition should be revised as follows:

. . . where emissions are vented from these affected sources, including alkali bypasses.

- *Permit Condition 64.* This permit condition establishes the emission monitoring provisions for dioxins/furans. However, the condition includes some, but not all of the requirements found in 40 CFR 63.1350(f). This provision should be revised either to include all of the relevant language from this section or to simply cross-reference the regulation.

- *Permit Condition 65.* This permit condition should be revised as follows:

The owner or operator of any kiln or in-line kiln/raw mill subject to a D/F emission limit under Subpart LLL . . .

- *Permit Condition 79* – This provision establishes a 10 percent opacity limit for various sources (storage bins, conveying system transfer points, bagging system and bulk loading/unloading system) under 40 CFR § 63.1348 but does not clearly specify how compliance with those limits is to be determined. The permit includes for Monitoring Type “Monitoring of Process or Control Device Parameters as Surrogate” but does not specify what surrogate is being monitored or how. It also indicates that opacity will be monitored monthly but, again, does not specify how. These omissions must be addressed.