Illinois Environmental Protection Agency
Bureau of Air
Permit Section

December 29, 2014

Responses to Comments on the Draft CAAPP Operating Permit for U.S. Silica Company for a Silica Sand Mining facility in Ottawa, Illinois

Source Identification No.: 099825AAA
Application No.: 95060046

TABLE OF CONTENTS

I. BACKGROUND

On January 30, 2008, the Illinois EPA, Bureau of Air received a permit renewal application from U.S. Silica Company, for its Clean Air Act Permit Program (CAAPP) permit for an existing silica sand mining facility in Ottawa, IL.

The Illinois EPA has completed a public comment period on the draft renewal CAAPP permit. Comments were received from the public and USEPA, Region 5. The Illinois EPA held a public hearing on September 30, 2014, at the request of the public commenters. The Illinois EPA has prepared this document, which addresses significant comments to accompany the submittal of proposed CAAPP permit.

II. RESPONSES TO PUBLIC COMMENTS

1. Has Illinois EPA required that U.S. Silica update its application?

Yes. US Silica was required to update the contents of its application pursuant to the requirements of the CAAPP. Specifically, on April 16, 2013, Illinois EPA requested updates to four forms (200-CAAPP, 286-CAAPP, 391-CAAPP, 464-CAAPP forms) and an updated and complete listing of emission units and control devices at US Silica. All requested information was received from US Silica. US Silica also updated items such as its Episode Action Plan, its insignificant activities list (297-CAAPP form) and more recently it's Fugitive PM Operating Program.

2a. Why has it taken ILLINOIS EPA six years to review this permit?

b. This permit is way overdue. It expired in 2008, so a renewal for 2014 should not even be valid.

c. It appears that the permit for this facility expired in 2008 and the renewal is in 2014. How is it possible that a facility could operate for 6 years without a permit and not be shut down?

The application dates to 2008, however, it has been updated. Also, the previously issued CAAPPP permit was effective in the interim. CAAPP permits are complex and processing is involved. Measures have been designed and implemented to reduce existing and prevent future backlog. It is not the intent of the Illinois EPA to delay permitting actions.

U.S. Silica submitted an application to renew its existing CAAPP Permit (the 2003 permit) on January 30, 2008. After the date which the 2003 CAAPP Permit expired, US Silica has operated under an application shield resultant from a timely and complete renewal application submittal. [415 ILCS 5/39.5(5)(l) of the Act]. An application shield allows US Silica to continue operation under its existing CAAPP permit until a renewed permit is issued by the Illinois EPA.

In order to be granted an application shield from the Illinois EPA, renewal application had to be timely and complete. A timely renewal CAAPP permit application is one that must be submitted at least 9 months prior to the expiration date of the previously issued CAAPP permit. In this case, the renewal application had to be received 9 months prior to October 29, 2008, and U.S. Silica submitted the renewal application on January 30, 2008. Therefore, this submittal was timely. The application that was received by the Illinois EPA was deemed complete in the "CAAPP APPLICATION COMPLETENESS DETERMINATION" that was made on January 31, 2008. A complete application must contain the appropriate forms and meet the requirements on 415 ILCS 5/39.5(5) of the Act.

In addition, US Silica has been required to operate in accordance with the construction permits issued during this timeframe. (See response to Comment #3 below)

3. Has Illinois EPA approved any new construction permits for U.S. Silica since 2008 or any other facility or permit modifications under the expired permit and what are they?

U.S. Silica submitted an administrative amendment to the application on June 7, 2013, which updated the responsible official identified in the Draft CAAPP permit. US Silica also submitted a minor permit modification request to incorporate the newly issued construction permits identified below. U.S. Silica has been issued six construction permits since 2008. These construction permits were incorporated into this draft renewal CAAPP permit. The construction permits issued to US Silica included the following:

1) 08060067 – Issued 2/13/09 - This Permit authorized the installation of five screens, four bucket elevators, and a distribution box (the affected units). The new screens would enable the Permittee to process sand into additional sizes of product, and it authorized the installation of a new Cartridge Type Dust Collector, Baghouse K, to control the affected units.

2) 11010056 – Issued 4/4/11 - This permit authorized the installation of two mineral separators, three screw conveyors, and associated chutes (the affected units) for the Fine Sand Plant. The new equipment, which would replace existing air sizers and associated transfer equipment, would enable the Permittee to process sand into four streams of fine sand. This permit also authorized venting the affected units to an existing Dust Collector, Baghouse K, to control emissions of the affected units. The baghouse currently controls other emission units in the Fine Sand Plant, including emission units authorized by Construction Permit 08060067.

3) 11020014 – Issued 10/16/13 - This permit authorized the following changes at the industrial sand processing plant:

a) Installation of a new sand dryer, Dryer #4, a 130 tons/hour natural gas fired fluid bed sand dryer controlled by a wet scrubber (the affected new dryer); b) Modification of existing Dryers #1 and 2 by installation of new 40 million Btu/hour natural gas fired burners. This will enable an increase in throughput to 130 ton/hour of dry sand for each dryer; c) Installation of wet scrubbers on existing Dryers #1, 2, and 3 (the affected existing dryers); and d) Installation of three new mineral separator screeners, #7, 8 and 9, and associated conveyors, controlled by a new dust collector, Baghouse L (the affected screening operations).

4) 12070009 – Issued 11/13/12 - This Permit authorized the installation of a sand crushing operation consisting of a crusher, a screen and associated slurrying and conveying equipment (the affected units). The new operation would provide an alternative method of preparing sand extracted by the existing mining operations, which is currently prepared using water cannons. The new operation would be installed to provide a more consistent supply of sand slurry to the existing sand processing plant, as a possible replacement of the current sand preparation process. Only one of these operations would operate at any time. This Permit also authorized the installation of alternative crusher(s) or screen(s) in conjunction with the operational evaluation of the new crushing operation. This authorization is provided, as requested by the application, as the Permittee indicates that uncertainty exists about the operational capability of the equipment that would initially be installed. This authorization is subject to notification in accordance with Condition 9(a) and conduct of additional performance testing for the new equipment in accordance with Condition 7. This authorization terminated on September 30, 2014.

5) 13010018 – Issued 3/7/13 - This permit authorized installation of three new dust collectors to control PM emissions from eight existing Product Flour Bins, bins 7 through 14 (the affected units). The new dust collectors will provide control of emissions from the affected units in lieu of existing dust collector Baghouse G. This will maintain effective control of the affected units while eliminating the need to transport some of the collected dust from Baghouse G.

6) 13100032 – Issued 2/11/14 - This Permit authorized the installation of an industrial sand loadout operation consisting of 3 discharge chutes, a bucket elevator, a conveyor, a splitter/sampler, a weigh hopper and a 4-way spout (the affected units). The new operation would provide additional flexibility in loading out finished product for shipment off-site. Dust pickup points at the conveyor head, splitter/sampler, weigh hopper and a 4-way spout will be ducted to Baghouse I along with the pickup

points for the existing equipment that already are controlled by this baghouse. Dust pickup points at the conveyor tail and the bucket elevator will be ducted to Baghouse K. This Permit also authorized the installation of a new cartridge dust collector with hopper to replace existing Baghouse I.

4. Has U.S. Silica certified compliance with the 2008 permit each year since 2008, or what permit compliance verification has Illinois EPA required of the company since 2008?

Yes. U.S. Silica has submitted an Annual CAAPP Compliance Certification for each year since its previously issued CAAPP permit in 2003, including those years for which the permit renewal application has been pending issuance.

5. Why is the last Illinois EPA site inspection as far back as 2010?

The Statement of Basis stated that 2010 was the last inspection report that was available for review. However, an inspection was completed in August 2012 and in June 2014. The most recent inspection report, for the inspection performed in June 2014, showed no violations. As a CAAPP source, the site is required to be inspected at least once every two years.

6. What documentation has U.S. Silica provided to Illinois EPA regarding compliance with PM levels and how is that verified?

U.S. Silica has provided all documentation required by the permit. US Silica has also performed stack testing as was noted in the Statement of Basis (See page 12 of the Statement of Basis). US Silica has also submitted annual compliance reports, semi-annual monitoring reports, and NSPS reports.

7. Has Illinois EPA or the company done modelling of the potential for airborne sand particles at the 4 micron level, which has been indicated by current health studies to be harmful?

To date, there has been no source specific modelling for PM-4 for the U.S. Silica Ottawa facility.

8a. Has Illinois EPA reviewed any information regarding new sand mines, barge loading, or sand processing facilities in the area in addition to U.S. Silica since 2008?

b. There are many other fracking sand mines in the area that have already lead to higher amounts of air pollution in LaSalle County. These other nearby operations should be taken into consideration when allotting emissions for this facility.

c. I would also ask that you take into account the five brand new sand mines recently approved in La Salle County (all since January 2012).

d. I would like to ask Illinois EPA, since this is one of many now sand mines, and they are cropping up with numbers here in the county, is there anything that Illinois EPA does to consider the cumulation of these productions of PM levels by numerous new mines in addition to this permit?

e. Is there a way for the public to look at, you know, the overall effects when Illinois EPA looks at this new CAAPP permit and others? How do we find out the overall effects that Illinois EPA is looking at for the Ottawa area? ...does Illinois EPA look at the cumulative impacts of all these new plants and this plant?

f. And so as far as the air issues, am I hearing this right, that Illinois EPA doesn't look at anything on a cumulative version?

g. Does Illinois EPA have any analysis of windflow and potential air pollution on Starved Rock State Park from this facility?

Such analysis would not be required as part of this CAAPP Permit reissuance. Rather such analysis would be performed as part of a construction permit review, which triggered either PSD or NSR.

Emissions are not allotted through a CAAPP Permit. Construction permits, which a source is required to obtain prior to any increases in operational rate or for the construction of new equipment would be the permitting action in which emissions are allotted to the source and/or to specific emission units at the source.

9. Can citizens request additional monitoring as part of this permit?

Citizens may provide comments during the public comment period for each Draft CAAPP permit. All comments received are taken into consideration as to whether the Agency needs to revise the permit. It should be noted the Agency may not have the authority to cope with every comment received in the context of CAAPP permitting.

10a. How is U.S. Silica handling fugitive dust?

b. Make U.S. Silica Company control its fugitive dust with actual Best Management Practices from AP42 or its current equivalent and monitor them more frequently and closely to address the hazards of silica air dust. Put record keeping requirements into the permit so they will implement the dust control as a minimum if you issue the permit.

U.S. Silica is required to operate in accordance with a Fugitive PM Operating Program (or Fugitive Dust Plan). This Plan requires U.S. Silica to use best management practices to control its fugitive dust emissions. These practices include; water sprays for roadways and stock piles in accordance with a watering schedule, removing material spillage on paved roadways, cleaning aprons from the plant onto public roadways, minimizing drop

distances for loading and unloading activities, performing inspections for any fugitive dust leaks, and following a "blasting schedule", which requires that blasting activities occur only when it has been determined that emissions related to the blast will remain primarily on-site - for example, days with calm or low wind speeds. The frequency of watering activities is dependent on climatic conditions such as temperature and wind speed. These best management practices are the same best management practices noted by AP-42.[1]

Recordkeeping for the Fugitive Dust Plan and for activities completed according to the Fugitive Dust Plan is required in Condition 3.2(a)(iv) of the Draft CAAPP Permit.

The Fugitive Dust Operating Program is incorporated by reference into this permit and enforced by regular inspections of Illinois EPA's field office. Incorporation by reference is the act of including a second document within another document by only mentioning the second document. If done properly, the entire second document becomes part of the main document. In order for a document to be properly incorporated by reference, there are 3 criteria: 1) document existed at the time the main document was created; 2) the main document must describe the particular document to be incorporated with enough specificity to be identified; and 3) the main document must clearly identify the intent that the document be incorporated by reference. Nothing in USEPA guidance, including the White Paper 2 or previous orders responding to public petitions, supports the notion that permit authorities incorporating a document by reference must also restate contents of a given plan in the body of the Title V permit. Such an interpretation contradicts USEPA recognition that permit authorities need not restate or recite an incorporated document so long as the document is sufficiently described. This approach is consistent with USEPA guidance, which has previously embraced a similar approach to other plans and programs.

11. What is Illinois EPA using as best practices for silica sand dust suppression and can this be part of the permit?

Silica sand is classified as particulate matter (PM) by the EPA. Therefore, the Fugitive PM Operating Program, which is incorporated by reference into this permit, addresses the best management practices, as discussed more thoroughly in Comment #10.

12a. Does U.S. Silica produce at a constant level or are there variations in production levels over a year? If production levels vary can Illinois EPA require better controls during times of greatest production rather than annual limits and a year-long rolling average? How do annual limits and a year-long rolling average protect public health if there are times when air conditions are heavily loaded with sand dust?

[1] AP 42, Fifth Edition, Volume I, Chapter 13: Miscellaneous Sources

b. Due to seasonal differences in climate within LaSalle County, we are concerned that annual limits and 12 month rolling averages are insufficient to limit pollution during drier months and in those months when blasting is more frequent. Has the agency taken this into consideration?

c. The practice of measuring pollutants in twelve month rolling averages is very much so less than ideal in that blasting is much more frequent during the more dry months of LaSalle County.

d. The permit fails to properly address ambient silica dust controls: Due to seasonal differences in climates within LaSalle County, annual limits in 12-month rolling averages prove insufficient to limit pollution during dryer months, and in those months blasting is more recurring.

As per the most recent Annual Emissions Report submitted by U.S. Silica to the Illinois EPA, the various emission units operate at a consistent level throughout the year. Therefore, twelve month rolling averages would be an accurate representation of the facility.

It should also be noted that throughout the Draft CAAPP permit, US Silica is required to keep records on a short term basis for emissions and throughput. Where there are annual limits in the permit, US Silica must maintain records on at least a monthly basis. These monthly records are used to determine compliance with annual limits on twelve month rolling averages. In most instances, annual limits are backed by short term limits, which are generally set in pounds per hour or tons per month. In these cases, US Silica must not only comply with annual limits, but also the short term limits.

Compliance with annual limits by means of twelve month rolling averages is generally established by construction permits issued by the Illinois EPA. Construction permits use twelve month rolling averages, as this is how the PSD and NSR programs are administered. The limits in this permit were established by construction permits and are PSD avoidance limits. Hence, using a twelve month rolling average is the compliance method that must be used to demonstrate compliance with these limits. USEPA also generally considers 12 month rolling averages backed by a form of short term limitations to be practically enforceable.

13. Can Illinois EPA require the plant to go on hiatus if air conditions cause public health threats?

The Illinois EPA does not have authority to simply mandate that a certain source be placed on hiatus, but legal authority exists whereby Illinois EPA can request that the State's Attorney or Attorney General seek court order to require a source to halt operations. However, seeking to enjoin a source from operating is an extraordinary measure that is seldom sought and only under

unique factual circumstance where other legal and technical remedies would not suffice.

14a. I urge Illinois EPA to monitor and test for 2.5 PM which are the most dangerous to our lungs.

b. I feel that the air monitoring done by US Silica is not sufficient to test for $PM_{2.5}$ not only at the plant but at areas such as sand piles and transportation routes.

The Draft CAAPP Permit does not require specific $PM_{2.5}$ testing because US Silica is not subject to any limits or standards addressing $PM_{2.5}$. Where there are PM limits, the permit addresses appropriate periodic monitoring to demonstrate compliance with those PM limits. It should be noted that $PM_{2.5}$ is simply a speciation of the overall PM category. So testing for PM includes all PM, including $PM_{2.5}$.

15. How will this permit protect neighbors from increases in dangerous pollutants in the air? How will these emissions be measured? Will measurements be taken from all emitting sources?

The Draft CAAPP Permit requires US Silica to monitor, test, and keep records of the emissions from individual emission units. Specific emission testing is required for various emission units (e.g., the Fluid Bed Dryers) to directly measure the emissions. Direct measurements (i.e., testing) are not required for all emission units at U.S. Silica. For example, emission units that are insignificant would not typically be tested. Testing for small emission units is not always reasonable and sometimes not feasible or even possible.

Other types of emission units at US Silica operate in a manner that is not conducive to testing or direct parameter monitoring. For these emission units and control measures, the permit requires periodic inspections to verify that the emission units are operating and being maintained in a manner consistent with good air pollution control practice for minimizing emissions. For each set of periodic monitoring established by the Draft CAAPP Permit, the justification for its adequacy can be found in the Statement of Basis, which was made available during the public notice period.

16a. All silica sand should be transported by hydraulic trucks specifically designed to contain the sand and dust.

b. In the permit, or is there anything with the EPA if there's a law that governs how much sand is lost out the back of a semi? Is this facility responsible at all for the transportation of the sand under the permit?

c. So once it's outside the facility, the truck is no longer the responsibility of the facility, the transportation, if I understand what you said?

The Illinois EPA issues permits that regulate stationary sources and emission units. There are no statutory or regulatory requirements, which can be applied in a CAAPP permit, in the Illinois EPA air regulations to address emissions from mobile sources such as identified in the comment.

17. **I am also concerned with the water discharge permit (permit No IL0080047) requested by quality sand. The permit would allow polluted water into a creek that is already polluted and will be discharged into the I&M Canal water system. I am also concerned with the number of Sand mines in the LaSalle and Utica area in such a concentrated area and the pollution as a whole that this will cause to the area in close proximity to these mines – especially to the south of the sand mines that the water will drain towards.**

Water discharge permits are not under the jurisdiction of the Bureau of Air in a CAAPP Permit. US Silica has a permit from the Illinois EPA, Bureau of Water for it's operations in LaSalle County. The Bureau of Water should be contacted regarding water pollution issues.

In addition, Illinois EPA, Bureau of Water held a public hearing for the NPDES permit for Quality Sand Products (US Silica) on June 17, 2014. Information regarding this hearing can be found at the following link: http://www.epa.state.il.us/public-notices/npdes-notices.html.

18a. **Fugitive emissions are not properly addressed in the permit. What is being done about them? What is the best practice in the industry? Best practices should be required to protect LaSalle County residents.**

b. **I have concerns in the issuing of this CAAPP permit renewal to U.S. Silica because fugitive emissions are not properly addressed in the permit nor has what has been done to quell them.**

c. **The controls for fugitive particulate matter are insufficient to protect human health and the environment for the following reasons:**

   (a) **The limitation and compliance method listed in Section 3.1(a) do not protect against dangerous PM_{10} and $PM_{2.5}$. The permit requirements for fugitive particulate matter include a prohibition against visible dust emissions from the site and visual monitoring "upon request". Not only is this insufficient to monitor and control dust emissions, it does not even consider dangerous small particulates that are not visible to the naked eye.**

   (b) **The description of the Fugitive PM Operating Program in Section 3.2(a) is vague and unenforceable.**

   (c) **The requirement to operate under a Fugitive PM Operating Program does not mandate any specific controls or any**

objective for public safety. Neither the Permit nor 35 Ill. Adm. Code 212.309(a) define what it means to "significantly reduce" fugitive PM emissions, so there is no objective standard or way to determine whether the facility is meeting this requirement. There is no indication of what constitutes "best management practices" or how these practices compare to the operations at other similar facilities.

Pollution sources are viewed as producing either process-stream or fugitive emissions. Process-stream emissions occur when dust releases are inherent to the primary function of an activity. Fugitive emissions are ancillary to the primary activity and are not confined to the process stream. Examples of crystalline silica process-stream emissions would be particles released during silica kiln operations. An example of fugitive crystalline silica emissions would be soil particles containing crystalline silica entrained to the atmosphere by vehicles from unpaved roads. In general, regulatory actions have focused on process-stream emissions.

Both quarrying and mining of sand generate process-stream and fugitive particulate emissions because both activities involve manipulation of sand which inherently contains crystalline silica. There is difficulty separating process-stream emissions from fugitive emissions, and classification may be more arbitrary than factual. Fugitive dust emissions arise from blasting, manipulation of outdoor storage piles containing either product or spent tailings, truck traffic in and around storage piles as well as conveying operations. Fugitive emissions tend to be generated after the product has been acquired or produced. Emissions will vary depending on the nature of material within the storage piles, loading and removal activity, moisture content, precipitation, control procedures, and wind activity. The crystalline silica component of emissions is determined primarily by the nature of the material involved in the process stream. The percent of crystalline silica within larger size particles characteristic of ambient emissions is usually higher in larger size fractions. Fugitive sources are the pre-dominant contributors to ambient PM_{10}. Less than 25% of fugitive dust (PM_{10}) comes from construction, mining, or quarrying activities. The remainder comes predominantly from agricultural tilling, road traffic, and wind erosion. Thus, the fraction of dust that is silica can be expected to vary depending on regional soil characteristics and mineralogy which require individual situations to be evaluated.

The permit itself does not mandate specific controls but does mandate the source operate consistent with a written Fugitive Dust Operating Program. It is this program that contains the specific controls for which the comment appears to be referring. The contents of this program are more fully discussed in the response to Comment #10. The description of the program in Condition 3.2 is simply the requirement by which the Illinois EPA has authority to administer. As noted in Comment #10, the

Illinois EPA has supplemented this requirement under its periodic monitoring authority in the CAAPP program to require that the source operate in accordance with this program. In addition, the requirement is now more than simply the requirement to have a program, but also to operate consistent with the submitted program. As stated earlier in the response, the specific components of US Silica's fugitive dust program would constitute "best management practices" for the industry as well as those identified by AP-42. Therefore, the Illinois EPA would consider the Draft CAAPP permit as requiring US Silica to significantly reduce fugitive PM emissions and the program itself would be the objective standard by which to gauge compliance.

Also see Comment #10, which further addresses the Fugitive PM Operating Program.

19. **The previous Fugitive PM Operating Program, which is incorporated by reference but not available for review with the permit, has not been updated since 2006-long before the current fracking sand mining boom. The Fugitive PM Operating Program lacks specificity and accountability and is likely out of date. Because fugitive dust makes up such a large part of the emissions at facilities like this one, the requirements to control fugitive PM must be clear and enforceable. The Agency should incorporate articulable requirements into the Permit and should clarify that violations are enforced to the same extent as the rest of the Permit.**

U.S. Silica has updated its Fugitive PM Operating Program as recently as 2/27/14. The Program, as submitted to Illinois EPA contains the minimum criteria necessary for the Fugitive PM Operating Program. However, U.S. Silica's Program goes further than the minimum.

Additionally, this Permit does incorporate the Program by reference and if the most recently updated Program is not followed, a violation may result.

Comment #10 further addresses the Fugitive PM Operating Program as well as its incorporation by reference.

20. **The Permit should require a PM_{10} Contingency Measure Plan pursuant to Section 3.2 (b). The yearly maximum totals for the emission units listed in Sections 4.1, 4.2, and 4.3 exceed 139 tons of PM annually. Pursuant to Section 3.2(b) of the permit and 35 Ill. Adm. Code 212.700, if the facility exceeds 15 tons yearly of PM_{10} emissions, it must submit a PM_{10} Contingency Measure Plan. Based on the lack of monitoring of fugitive emissions and the permitted volume of PM emissions from the units that are monitored, it is reasonable to expect that PM_{10} emissions from the facility exceed 15 tons per year. Accordingly, the Permit must be modified to include a PM_{10} Contingency Measure Plan.**

The Illinois EPA agrees that the PM_{10} emissions from U.S. Silica are greater than 15 tons yearly. However the requirement to

develop a PM_{10} Contingency Measure Plan also depends on the location of a source.

In the case of U.S. Silica, a PM_{10} Contingency Measure Plan is not required. Pursuant to 35 IAC 212.700(a), the requirements to have a PM_{10} Contingency Measure Plan shall only apply to those sources in the areas designated in and subject to Sections 212.324(a)(1) or 212.423(a) and that have actual annual source-wide emissions of PM_{10} of at least fifteen (15) tons per year. U.S. Silica is not located within areas designated in and subject to Sections 212.324(a)(1) nor 212.423(a). Therefore, U.S. Silica is not subject to this requirement.

21. Both the Fugitive PM Operating Program and the PM_{10} Contingency Measure Plan should be subject to public notice and comment.

A PM_{10} Contingency Measure Plan is not required for US Silica. (See response to Comment #20 above) The Fugitive Dust Operating Program is part of US Silica's permit file. As such, this plan was available to any person interested in viewing the contents of the plan. The Fugitive Dust Operating Program was available in the public repository during the comment period. Alternatively, a copy of the Fugitive Dust Operating Program may be requested from the Illinois EPA under the Freedom of Information Act (FOIA). The USEPA dealt with the need for Plans and Programs to be publicly available and concluded that Plans and Programs need not be mandatorily available for public access, but rather must be made available upon submittal of a request to the permitting authority.

22. We are concerned about the advanced mining technologies that allow for hyper-mining of a product which byproduct and its airborne particulate matter resulting from the mining, milling, and transportation in and through densely populated areas of the county has recently been established as a toxic substance in a study from the U.S. EPA and Occupation Safety and Health Administration.

The Illinois EPA has reviewed this comment, and the comment will be made part of the Permit Record. However, this comment fails to identify any specific flaw(s) in the Draft CAAPP Permit. Also noteworthy is that this comment does not propose an alternative to any periodic monitoring or conditions established by the Draft CAAPP Permit. Moreover, this comment does not specifically relate to the issues involved with this air permitting action.

23a. Particulate matter from Ottawa's west side milling operation, layers front porches, windows, window frames, and automobile finishes with layers of fine sand.

b. The majority of residents polled on Ottawa's west side feel neither local media nor public officials have shown the slightest understanding, awareness, or concern for residents over the quite visible air quality problems on Ottawa's west side.

c. **Neither local media nor public officials have shown an interest in seeking expert help to inform either themselves or residents of the possible dangers involved in living so close to a silica mining and milling operation, which residents understand may be affecting their own and their children's health.**

In the event that citizens have complaints or concerns of this nature, the Illinois Field Operation Section (FOS) can be contacted. Complaints regarding dust emissions should be directed to the Illinois EPA, Bureau of Air, FOS, which can be contacted at 309-671-3022.

To the extent or on occasions that residents experience fugitive particulate material emissions leaving the facility, a complaint should be filed with the Illinois EPA. Complaints may be filed electronically online at http://www.epa.illinois.gov/pollution-complaint/index, by filling out and mailing a complaint form found at the above website, by calling the Illinois EPA Regional Office at 309-671-3022, or by calling the Illinois EPA contact at the end of this document. The Illinois EPA routinely inspects US Silica (See response to Comment #5). The Illinois EPA has not had recent complaints regarding the US Silica plant.

24. **I know in the application it says under 2.6 there's a fee for the particulate matter for tons per year, and so is that – is that 233.83 tons per year of PMs estimated or modeled? How is that amount figured out for this specific permit? …I'm just trying to get a handle on how many tons Illinois EPA is assessing on this plant for particulate matter per year.**

The fee structure for the Illinois EPA, Bureau of Air, as established requires a source to pay an amount that correlates to the amount of emissions generated by that source. The only requirements are the following: 1) A source must pay for at least the amount of actual emissions it generated; 2) The fee amount must not be greater than the permitted (i.e., allowable) emissions for the source. In other words, the fee structure is actual ≤ fee ≤ permitted.

25. **I don't understand with the many new sand mines here and the existing older mines and the, you know, location of this plant so close to town with potentially often prevailing westerly winds, which would, you know, bring particulates right into residential areas, I don't understand how Illinois EPA cannot consider this permit under an environmental justice concern. Could you please elaborate on that?**

Environmental Justice, as established in the Illinois EPA's Environmental Justice Policy, is defined by demographic data of an area not by the type or quantity of sources. The Illinois EPA's Environmental Justice Policy may be found at http://www.epa.illinois.gov/topics/environmental-justice/ej-policy/index. The location of the US Silica facility is not by current demographic data defined as being in a "potential" Environmental Justice area.

26. **And then just for the advice for citizens who have, you know, concerns locally, could Illinois EPA advise us as citizens what kind of data do we collect? Would it be, like, the number of elderly, the number of kids with asthma? What kind of assessment could we provide in our written comments to help you look more closely at environmental justice issues for Ottawa?**

As described in the response for Comment #26, above, an area is defined by the Illinois EPA's Environmental Justice Policy based on minority and income demographic data.

27. **I just wanted to know is there any possibility that at some point Illinois EPA would look at the larger picture of environmental impacts, like, because of the frac sand permits, it increases fracking which increases methane and other global warming gases?... I realize that's not directly under the CAAPP. I was going to ask, is there any point in time when these CAAPP permits would take in the larger picture? Would we ever consider life-cycle type of impacts?**

The Illinois EPA has reviewed this comment, and the comment will be made part of the Permit Record. However, this comment fails to identify any specific flaw(s) in the Draft CAAPP Permit. Also noteworthy is that this comment does not propose an alternative to any periodic monitoring or conditions established by the Draft CAAPP Permit. Moreover, this comment does not specifically relate to the issues involved with this air permitting action.

28. **Is that (ambient air monitoring/air quality planning section) a subsidiary of your agency or is that a separate agency?**

Ambient air monitoring/air quality planning section is a part of the Illinois EPA, Bureau of Air. The Bureau of Air at the Illinois EPA is comprised of the Division of Air Pollution Control and the Division of Mobile Source Programs. Within the Division of Air Pollution Control, there are four sections. These sections are Field Operations, Permits, Air Monitoring/ Air Quality Planning, and Compliance. Each section has its own responsibilities and duties.

29. **Seasonal activities at area parks, schools, and other locations may coincide with high sand dust production times. What options do local citizens have to protect themselves, their children, or others with breathing problems, at such times?**

Mine operators and communities can work together to create a mining operation that is economically viable and protective of the health of workers and the surrounding community. Local agencies have an opportunity to influence sand mining operations primarily through zoning and direct negotiation with mine developers to use best management practices appropriate for the specific location.

III. RESPONSES TO USEPA COMMENTS

1. Condition 4.1.4(a) (Title 1 Requirements for the Fluid Bed Dryers) requires testing for CO and NO_x emissions once every 5 years or once every 10 years if the initial performance test shows >50% compliance margin. Testing once every 10 years is not frequent enough to be considered periodic. Also, the requirement is not clear as what happens if one pollutant has a compliance margin >50% and the other is <50%.

U.S. Silica must conduct testing for both CO and NO_x emissions. If one pollutant were to have a compliance margin of <50% and the other pollutant were to have a compliance margin of >50%, one pollutant would have to be retested in 10 years and the other would have to be retested in 5 years, respectively.

A test once every 10 years is a periodic test, and therefore periodic monitoring. In order to be periodic, a test must be occurring or recurring at regular intervals. In this case the interval would be defined as 10 years. Noting that for the type of natural gas firing occurring in the fluid bed dryers that significant variations in CO or NO_x emissions would not be expected, Illinois EPA believes a 10 year interval is sufficient if the initial testing demonstrates greater than a 50% compliance margin.

2a. Condition 4.1.2(b)(ii)(B) (PM testing) requires PM testing once every 5 years. This testing is one of the monitoring methods for a source-wide PM limit established in a construction permit (see condition 3.3(a)(ii)(A)) but the SOB does not explain why this testing frequency is sufficient. The SOB should include a discussion of why this PM testing frequency is sufficient of this emission unit.

b. The list on page 6 of the SOB (Applicable Federal Regulations) fails to include NSPS, subpart UUU, which are applicable regulations for the dryers. Please include NSPS, Subpart UUU in the list of applicable federal regulations.

c. The SOB on page 12, Section 3.6 (Source Wide Justification and Rationale) refers to a chart of applicable requirements and their location in the permit, for source-wide synthetic minor limits. The SOB does not adequately explain the methods for determining compliance, or how the recordkeeping and reporting is sufficient monitoring for PM emissions. The SOB justifies periodic monitoring using generic language without specifics for the affected units:

i. Emissions do not vary significantly under normal operation and/or vary slowly with time.

ii. Source has not exhibited a history of non-compliance.

iii. Monitoring is consistent with other sources in this source category.

It is not the practice of the Illinois EPA to revise a SOB after the permit has undergone the public notice period(s). Therefore, Illinois EPA is providing this response to provide discussion and explanation to the comments above.

Illinois EPA agrees that Subpart UUU should have been included in the list on page 6 of the SOB. Subpart UUU not being included in the SOB was only an oversight. US Silica is subject to the requirements of Subpart UUU, as required in the Draft CAAPP Permit.

The Illinois EPA believes that a test for each fluid bed dryer at least once every 5 years is sufficient to demonstrate ongoing compliance with the applicable limits and standards for the Fluid Bed Dryers. To date US Silica has performed initial PM testing on Dryers #1, #2, and #4, which all showed the ability of US Silica to comply with the applicable limits and standards. The following are the results of these tests:

Emission Unit	*Date*	*Pollutant*	*Results of Run #1*	*Results of Run #2*	*Results of Run #3*	*3-Run Average*	*Compliance Margin %*
Fluid Bed Dryer #1	3/11/14	PM	0.80 lb/hr	0.94 lb/hr	0.89 lb/hr	0.88 lb/hr	84.8 %
	3/11/14	PM	0.0034 gr/dscf	0.0041 gr/dscf	0.0039 gr/dscf	0.0038 gr/dscf	84.8 % NSPS
	3/11/14	PM	0.0034 gr/dscf	0.0041 gr/dscf	0.0039 gr/dscf	0.0038 gr/dscf	74.7 % T1
	3/11/14	Opacity	0 %	0 %	0 %	0 %	30% opacity
Fluid Bed Dryer #2	3/26/13	PM	2.23 lb/hr	1.88 lb/hr	2.12 lb/hr	2.08 lb/hr	64.1 %
	3/26/13	PM	0.0116 gr/dscf	0.0097 gr/dscf	0.0104 gr/dscf	0.0105 gr/dscf	58.0 % NSPS
	3/26/13	PM	0.0116 gr/dscf	0.0097 gr/dscf	0.0104 gr/dscf	0.0105 gr/dscf	30.0 % T1
	3/26/13	Opacity	0 %	0 %	0 %	0 %	30% opacity
Fluid Bed Dryer #4	5/8/12	PM	4.8 lb/hr	3.3 lb/hr	2.4 lb/hr	3.5 lb/hr	32.7 %
	5/8/12	PM	0.017 gr/dscf	0.011 gr/dscf	0.008 gr/dscf	0.012 gr/dscf	52 % NSPS
	5/8/12	PM	0.017 gr/dscf	0.011 gr/dscf	0.008 gr/dscf	0.012 gr/dscf	20.0 % T1
	5/8/12	Opacity	0 %	0 %	0 %	0 %	30% opacity

Based on these results, ongoing periodic testing for these units at least once every 5 years was deemed sufficient to verify that units continue to achieve similar testing results that demonstrate compliance with the applicable limits and standards into the future.

The language used for justification in Section 3.6 of the SOB is backed by other sections of the Draft CAAPP ‟ "The periodic monitoring/testing requirements sufficient to meet 39.5(7)(f) of

the Act are addressed by the applicable requirements in Section 4 of this Permit." The source-wide limits in 3.3(a)(i) of the Draft CAAPP Permit require only recordkeeping and reporting in Section 3.3 of the Draft CAAPP Permit because this record is intended to aggregate the PM emissions from the various Section 4 emission units in the Draft CAAPP Permit. The majority of which are required to test for PM on a periodic basis. If the source-wide limits in Section 3.3.(a)(i) of the Draft CAAPP Permit are exceeded, U.S. Silica is required to report in accordance with Section 3.5 of the Draft CAAPP Permit.

3. **The wording in condition 2.7(a) (Permit Shield) is not complete. Please complete in the final permit.**

   Illinois EPA agrees. The appropriate date will be added to the Final CAAPP Permit prior to issuance. This is the case for every Draft CAAPP permit at the time of notice because the USEPA 45 day review period is generally not known at the time public notice begins.

4. **Condition 4.1.2(b)(ii) (Compliance Method for PM Requirements for the Fluid Bed Dryers) is missing a citation, presumed to be 40 C.F.R. Part 64. Please complete in the final permit.**

   Illinois EPA agrees. The appropriate edits have been made to the Final CAAPP Permit.

IV. RESPONSE TO AMBIENT/FENCELINE MONITORING RELATED COMMENTS

(Please note: Individual comments are listed in Attachment A)

The Illinois EPA received numerous comments and requests regarding ambient and fence line monitoring for US Silica's operations in Ottawa as well as the surrounding area of Ottawa. Given the extent of such comments and the Illinois EPA's capabilities to handle such matters in a permit, this response has been separated out from the comments that were directly (and indirectly) linked to the permit or a specific permit condition. It should be noted that most of these comments generically referred to "monitoring" and were not specific to the type of monitoring. There are three basic levels of monitoring, 1) periodic monitoring which is included in the permit and used to demonstrate compliance with the applicable requirements identified in the permit, 2) fence line source-specific monitoring used to determine quantities of emissions that cross a particular boundary (usually the fence line or property boundary of a source) and 3) ambient air monitoring which is similar to fence line monitoring but is more representative of a larger area and/or population. Any comments that were related to periodic monitoring or were reasonably associated with periodic monitoring in the permit have responses in Sections II or III in this document. The response below specifically addresses ambient and fence line monitoring comments or those reasonably associated with these two types of monitoring.

1. Ambient Air Monitoring

The basic purpose of ambient air monitoring is to evaluate the status of the atmosphere as compared to clean air standards and historical information. The Illinois EPA manages programs to improve air quality in areas where the current quality is unacceptable and to prevent deterioration in areas where the air is relatively free of contamination. The determination as to whether an areas atmosphere is unacceptable or relatively free of contamination is established by the USEPA in the National Ambient Air Quality Standards (NAAQS) for each of the criteria pollutants. There are two types of standards -- primary and secondary. Primary standards protect against adverse health effects; secondary standards protect against welfare effects, such as damage to farm crops and vegetation and damage to buildings or property. Because different pollutants have different effects, the NAAQS are also different. Some pollutants have standards for both long-term and short-term averaging times. The short-term standards are designed to protect against acute, or short-term, health effects, while the long-term standards were established to protect against chronic health effects. http://www.epa.gov/air/criteria.html

The Clean Air Act requires Illinois to operate a network of air monitoring stations[2] for criteria pollutants, using criteria set by USEPA for each location and operation. These monitoring stations each have a monitoring objective of providing air quality data to the public and supporting compliance with the NAAQS. The determination as to whether a monitoring station's geographical location is representative of a specific area depends on the relationship between the objectives, the type of monitoring and the spatial scale. Spatial scale is basically the dimensions of an air parcel for which the pollutant of concern is reasonably similar.

The monitor's geographical location is representative regardless of the wind direction because the spatial scale of the monitor is designed such that the air parcels in the proximity are reasonably similar. PM monitoring consists of PM_{10} and $PM_{2.5}$ monitors. Based on the Metropolitan Statistical Areas (MSA) population and historic concentration levels, the LaSalle/Peru/Ottawa area currently does not require PM_{10} or $PM_{2.5}$ monitoring to be performed.

However, there are operational monitors operating at other locations that provide an indication of the PM levels.[3] The installation of such monitoring equipment would be dependent on

[2] The Ambient Monitoring Technology Information Center (AMTIC) site is part of the TTNWeb. AMTIC is centered around the exchange of ambient monitoring related information. It contains all Federal Regulations pertaining to ambient monitoring, as well as ambient monitoring QA/QC related information and some information on ambient monitoring related publications. There is also available information on ambient monitoring news, field and laboratory studies of interest and available related training.

[3] See Attachment B to this document.

the monitoring objectives, the use of the data and any municipal or local ordinances, regulations, etc. Monitors of various types are available for public purchase. Aside from the cost to purchase a monitor, there are costs to operate and maintain the monitor to ensure its performance is reliable. There is also the potential cost of laboratory analysis that would need to be conducted depending on the type of sampler purchased.

The comments in Attachment A do not provide the Illinois EPA with any additional or new information that would suggest the area has air quality concentrations of pollutants that would exceed the NAAQS. Thus, there is not a need for the Illinois EPA to initiate any type of action to install such additional ambient air monitoring at this time.

2. Fence Line Monitoring

Fence line monitoring includes next-generation air pollution sensor systems that are designed with several purposes in mind – 1) community engagement and awareness of air pollution, 2) increasing the spatial coverage of air pollution monitoring and 3) advancing the ability to measure and communicate air pollution information continuously, in near real-time. This type of monitoring concept would relate a sources operation to the impact on communities (outdoor areas where people gather, such as playgrounds, parks, outdoor museum spaces, gardens, and outdoor performance venues).

Community fence line monitoring involves an array of decisions and planning on the part of regulatory agencies, local community planners, the source itself and citizens. There currently does not exist, any fence line standard that establishes a set action level whereby further pollution minimization techniques would be developed and implemented. US Silica's CAAPP permit currently has appropriate, definitive measures (see comment #10). In addition, there currently is limited, if any, authority under the CAAPP that would provide for fence line monitoring. However, there are programs such as Next Generation Compliance Monitoring that provide for a source voluntarily going beyond compliance with its monitoring obligations in a permit.

Fence line monitoring is an expensive endeavor that requires time and effort to develop a monitoring plan that includes such tasks as modeling for the target pollutant to determine monitoring location, meteorological data to best design for the impacts on the targeted populations, network systems to handle all the data, laboratory involvement to analyze the samples, data acquisition and handling, QA/QC procedures, procurement of equipment and utilities to operate the monitors and a variety of other decisions such as community communication channels and regulatory agencies involvement.

Fence line monitoring is not expressly authorized nor required by Title V of the Clean Air Act. This said, the Illinois EPA has considered the comment and will consider its options.

V. RESPONSE TO HEALTH RELATED COMMENTS[4]

(Please note: Individual comments are listed in Attachment C)

Several of these comments also encompass or blend in some aspect of fence line monitoring at US Silica. This response is intended only to discuss the current (published) US EPA knowledge from studies done on existing documentation for "silica dust". A fuller response to ambient monitoring and fence line monitoring is provided in Section IV above.

The term "silica" refers to silicon dioxide (SiO_2; Chemical Abstracts Service [CAS] No. 7631-86-9), which occurs naturally in a variety of crystalline and amorphous forms; however, it often is used to refer specifically to crystalline silica forms. The principal naturally occurring crystalline silica exists as quartz; three other forms of crystalline silica are cristobalite, tridymite, and tripoli. Although identical chemically (i.e., all are composed of the elements silicon and oxygen in the form of SiO_2), they differ from each other in their crystal parameters. Pure crystalline silica that is not combined with any other elements is sometimes called free silica. When elements such as sodium, potassium, calcium, magnesium, iron, and aluminum are substituted into the crystalline silica matrix, the compound is called a silicate. Examples of silicates are kaolin, talc, vermiculite, micas, bentonite, feldspar, etc. Amorphous silica also is composed of SiO_2, but the SiO_2 molecule is randomly linked, forming no repeating crystal pattern. Naturally occurring sediments or rock that contain amorphous forms of silica include diatomaceous earth (soils), a hydrated form of silica (e.g., opal), and an un-hydrated form (e.g., flint).

Crystalline silica is widely used in industry and has long been recognized as a major occupational hazard (one which exists in the workplace, close proximity to the worker). Environmental emissions of silica can arise from natural, industrial and farming activities. However, ambient levels are not well quantified for crystalline silica, principally because existing measurement methods, although capable of distinguishing crystalline silica (e.g., X-ray diffraction), were not designed to deal with the large amounts of non-silica particles in ambient air. In addition, concern about non-occupational or ambient silica exposure, specifically crystalline silica, has emerged only recently.

Most crystalline silica particles released into the environment are greater than 2.5 um mass median aerodynamic diameter (MMAD). Particles less than 5 um MMAD are those deposited primarily in the lower respiratory tract when inhaled and those particles less than 1 um MMAD are likely to deposit in alveolar regions. The term "respirable" is generally used to refer to particles less than 5 um MMAD. Because of the large number of sources and widespread emissions, there is

[4] This discussion is based off of the EPA report, "Ambient Levels and Noncancer Health Effects of Inhaled Crystalline and Amorphous Silica: Health Issue Assessment" (November 1996)

potential for some ambient crystalline and amorphous silica particles to be in the respirable range, although most silica particles having an MMAD of greater than 5 um would be expected to be deposited in the upper respiratory tract (reducing the health effects). An increased cancer risk to humans that already have developed adverse non-cancer effects from silica exposure (e.g., work place exposures) has been shown, but the cancer risk to otherwise healthy individuals is not clear. **Conversel**y, the causal relationship between inhalation of dust containing crystalline silica and chronic lung disease(s), is well established. Mining environments (the worker) generally are considered more hazardous (i.e., more freshly fractured dust, finer particles, more peak exposures) than ambient environmental exposure to silica. A USEPA analysis, however, shows that even if a comparable ambient environment is assumed, the risk of silicosis to an otherwise healthy population continuously exposed for 70 years to the highest silica levels anticipated under the EPA National Ambient Air Quality Standards (NAAQS) for particulate matter would be less than 1%.

Ambient silica exposures and human health research must be characterized as tentative and suggestive because particle size and surface properties are known to be important factors in the toxicity of silica. Ambient crystalline silica is almost completely absent from the fine (2.5 um aerodynamic diameter) fraction of particulate matter, making the risk to the general public less than what might be predicted from occupational studies, which were based on worker exposure to particles less than 5 um aerodynamic diameter. The general public may likely not be exposed to as much freshly ground or fractured crystalline particles as are miners. Freshly ground crystalline silica has been found to be much more cytotoxic than aged crystalline silica because grinding or fracturing is thought to break the silicon oxide radicals on the surface of the particles. These surface radicals decay as fractured silica dust is aged. Other exposure factors that should be considered include the duration and period of exposure during an individual's life span and the dose-rate pattern. Interferences with the results of studies must also be taken into consideration such as individuals who engaged in certain household activities such as vacuuming, dusting, cooking, etc. This population had higher overall PM_{10} and silica exposures, suggesting that, although indoor silica levels, as measured by stationary monitors, may be lower than outdoor levels, peak exposures from indoor activities contribute significantly to an individual's overall cumulative exposure.

VI. FOR ADDITIONAL INFORMATION

Questions about the public comment period and permit decision should be directed to:

Bradley Frost, Community Relations Coordinator
Illinois Environmental Protection Agency
Office of Community Relations
1021 North Grand Avenue, East
P.O. Box 19506
Springfield, Illinois 62794-9506

217-782-7027 Desk line

217-782-9143 TDD
217-524-5023 Facsimile

brad.frost@illinois.gov

ATTACHMENT A

Questions and Comments related to ambient/fenceline air monitoring:

1. **I just wanted to go ahead and support the concern that Illinois EPA, however possible, encourage this plant, require this plant, ask this plant to put in air monitors.**

2. **You're going to issue a permit for a specific site and you're going to monitor a specific site. You don't do cumulative air sampling of the area.**

3. **Are they (Region 5) the only group other than the air quality, Illinois Pollution Control Board that has authority to require monitoring?**

4. **It was my understanding that Region 5 actually stipulated that it was the company's obligation to handle that, rather than the agency.**

5. **The Illinois Environmental Protection Agency should exercise its authority to require ambient air quality monitoring for particulate matter (PM) in the Permit. For the following reasons, the Agency should include a requirement for ambient air monitoring in the CAAPP permit.**

   (a) **The Permit does not list yearly maximum PM emissions from significant emission units.**

   (b) **Scientific research supports the need for PM monitoring near sand mines.**

   (c) **The permit fails to account for the proliferation of mining in LaSalle County and the changes in background PM levels.**

6. **Because the mining industry in LaSalle County is changing, a new baseline for ambient PM is needed. It is not clear from the permit when or if background levels of PM were established for LaSalle County. Without monitoring, it is possible that the concentration of PM in the air has already exceeded safe and permissible limits. As mines expand and begin to operate in LaSalle County, it will benefit all parties to know how the ambient air quality is changing with respect to PM. Citizens, regulators, and facilities all deserve to know the quality of the air they breathe and the effect each new sand mine has on the ambient air quality.**

7. **It is imperative that there be monitoring for particulate matter throughout LaSalle County.**

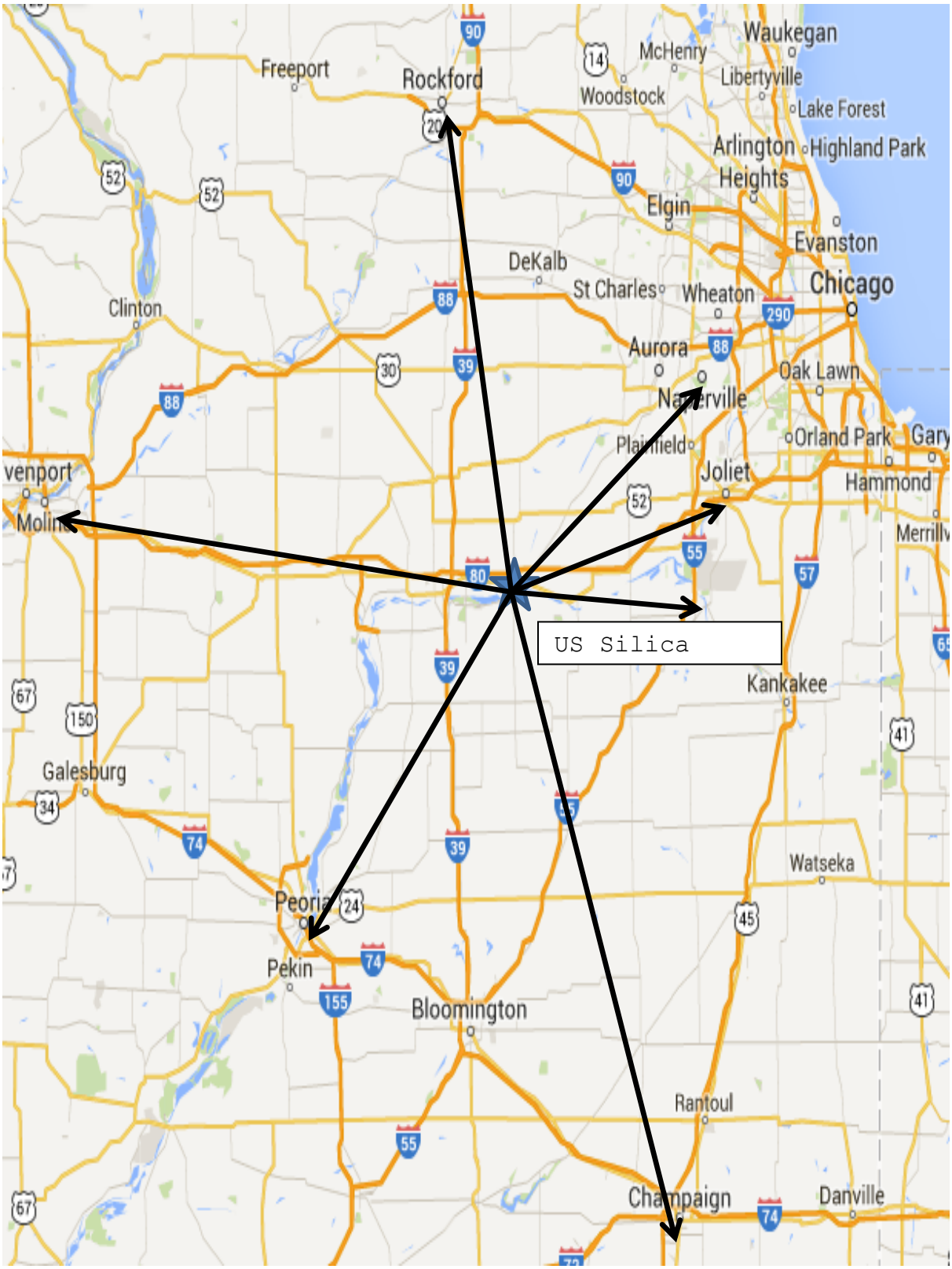
8. **Frequent air monitoring should be mandatory near such a sand mine. The tests for particulate matter must be done during daylight hours. And during U.S. Silica's time of greatest output of emissions. And during blasting. And during all months of the year. This is critical.**

9. **Has Illinois EPA required air monitors in areas of Ottawa and the surrounding community shown by wind plume maps to be down-wind of the plant since 2008?**

10. We respectfully request that Illinois EPA issue particulate matter monitors be installed as soon as possible. It makes sense that information regarding the quality of the air be collected and known by the public prior to issuance of clean air permits.

11. Prior to any consideration of a clean air permit to mine, mill, or transport silica sand, we in LaSalle County need an ongoing and official air monitoring program for particulate matter subsidized by mining companies, overseen by the Illinois EPA and local citizen member boards with findings made available to the public through the oversight of citizen member boards.

ATTACHMENT B



AQS ID	Address	Monitoring Objective	Spatial Scale	Representation of Monitor (approx.)	Distance (miles) from US Silica
17-019-0006	904 N. Walnut, Champaign, IL (Champaign County)	Primary – Population	Neighborhood	109-546 yards	95
17-019-1001	500 E. Township Rd, Bondville, IL (Champaign County)	Primary – Background Secondary – Population	Regional	31-62 miles or greater	95
17-043-4002	400 S. Eagle St., Naperville, IL (DuPage County)	Primary - Population	Urban	2-31 miles	46
17-143-0037	613 N.E. Jefferson, Peoria, IL (Peoria County)	Primary - Population	Urban	2-31 miles	50
17-161-3002	32 Rodman Ave., Rock Island, IL (Rock Island County)	Primary - Population	Urban	2-31 miles	89
17-197-1002	Midland & Campbell St., Joliet, IL (Will County)	Primary – Population	Neighborhood	109-546 yards	50
17-197-1011	36400 S. Essex Rd., Braidwood, IL (Will County)	Primary – Background Secondary – Population	Regional	31-62 miles or greater	50
17-201-0013	201 Division St., Rockford, IL (Winnebego County)	Primary - Population	Urban	2-31 miles	65

ATTACHMENT C

Questions and Comments related to health:

1. **The comments I encountered and recent EPA findings make it difficult to understand official resistance to an air monitoring program as well as the disclaimers and denials of public officials at all levels of government in an area of LaSalle County long known for its elevated levels of heart and lung problems, so-called allergies and asthma, and probable deaths resulting from silicosis.**

2. **It is imperative that the Illinois EPA mandate monitoring for not simply U.S. Silica's total suspended particulates and PM_{10}, but, most importantly, for their particulates of respirable fraction smaller than 2.5 microns in diameter.**

3. **How can the public and those with breathing problems know when air conditions due to silica sand dust are at a risk level?**

4. **This permit allows silica dust, a known carcinogen, to be released into the air. I would like to know how residents and land owners will be protected.**

5. **Currently, six states are regulating crystalline dust exposure, why hasn't there been such standards established in Illinois?**

6. **Essentially, I'm not asking for regulation of generic particles but for those that pose the greatest risk to human health, primarily in children and the elderly, fine crystalline silica particles. I ask that you, the Illinois EPA, exercise your authority to regulate all forms of particle emissions from U.S. Silica. I ask that multiple air monitors be installed on and off U.S. Silica sites, including detailed mapping of downwind plumes of fine crystalline dust.**

7. **The problem that we've had is every time we've approached the legislation side of this, they keep telling us, Don't worry. It's already covered by the Illinois EPA or it's already covered by the IDNR. And if you really want to see things happen, we have to get legislation changed. Well, for us to do that we have to build a case, and that is part of the reason I'm here tonight… we continue to do is bounce back and forth… getting some more monitoring in this area, along with the other things, that is what we're hoping for.**

8. **So the only thing that would actually change the idea here of monitoring would be that there would have to be more legislation enacted for your agency to become involved on your permits?**