

OhioEPA
Division of Air Pollution Control

Response to Comments

**Project: Draft Permits To Install and Operate (PTIOs) for Solsil, Inc.
PTIO # P0103722 and PTIO # P0103843**

Ohio EPA ID #: 0684005001

Agency Contacts for this Project

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On September 10, 2008, Ohio EPA issued a draft permit-to-install-and-operate for ten 1,000 kW induction furnaces and a solar grade crushing and sizing line to be located at a Solsil facility in Waterford, Ohio. On October 24, 2008, Ohio EPA issued a draft Permit to Install and Operate for the paved roadways and parking areas associated with the Solsil facility in Waterford, Ohio. A public information session and hearing were held on December 2, 2008.

This document summarizes the comments and questions received during the associated comment period, which ended on December 5, 2008.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format.

Air Pollutant Types and Quantities

Comment 1: Concerns were expressed regarding the silicon dioxide and sodium dioxide pollutants. A citizen stated that there was not enough data to accurately know what the effects might be on health (respiratory & digestive concerns), specifically on long-term exposure to these pollutants.

Response 1: Silicon dioxide and sodium dioxide are not considered hazardous or toxic air pollutants by state or federal regulations. Silicon dioxide and sodium dioxide are solid materials, as used/generated in/by Solsil's proposed operations. Because no other specific regulation exists for these solid materials, the Ohio EPA regulates the materials as particulate matter. Particulate matter is a criteria pollutant per the Clean Air Act, therefore, National Ambient Air Quality Standards (NAAQS) have been set by the United States Environmental Protection Agency (USEPA). The NAAQS are limits established to keep pollution out of the air at concentrations that will harm and cause a nuisance to the very young and very old. The air quality standards are conservative by nature and take into account these sensitive populations. Our review indicates that the plant will not interfere with the maintenance of these standards and are protective of human health. (For more detail please see response 5). If, in the future, additional health studies or other information would become available, the Ohio EPA would reassess our standards to ensure that they were protective of human health.

Comment 2: **Concerns were expressed regarding the particles flying off trucks into the air from truck deliveries and shipping of finished products.**

Response 2: The facility's draft permit-to-install-and-operate for the roadways and parking areas contain emission limitations, operational restrictions, monitoring, record keeping, and reporting requirements to address the particulate emissions (PE). Though it is not possible to have zero particulate emissions from roadways associated with any roadway (public or private), Ohio EPA has included all applicable emission limitations to minimize or eliminate visible PE of fugitive dust from this source. During the public hearing, the company representatives also indicated that they did not want the raw materials, by-products, or finished products getting wet. As such, all incoming or outgoing materials should be covered. In addition, the permit contains the following to address fugitive PE from roadway and parking areas:

- The standard that there shall be no visible PE from the paved roadways and/or parking areas except for a period of time not to exceed six minutes during any

60-minute period.

- The requirement that reasonably available control measures shall be used to minimize or eliminate visible PE of fugitive dust. This includes sweeping facility roadways and parking areas by sweeping at sufficient treatment frequencies to ensure compliance with the above standard.
- The requirement that the permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.
- The requirement that open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

Comment 3: **Concerns were expressed regarding the pollutants that will fall to the ground and have effects on home, car, yard, and gardens. The citizen is fearful that emissions might damage property as well as have effects on vegetable gardens and lawns.**

Response 3: If issued, the permits for this facility would allow some particulate matter to be released to the atmosphere. While Ohio EPA cannot predict with absolute certainty how the allowable emissions will impact every individual living near the facility, the Agency does believe that the controlled emission levels from the facility will still allow the NAAQS to be achieved without adversely affecting the health and welfare of the citizens in the vicinity of the facility.

Ohio EPA is also authorized to initiate enforcement actions against regulated operations that cause air pollution nuisances if the facility emissions should endanger the health, safety or welfare of the public, or cause unreasonable injury or damage to property.

Comment 4: **A citizen expressed concerns that the pollutants from this project would add to “the many pollutants already**

in the area.” The citizen stated that, “It is one more issue for this area in air and water pollution, truck pollution, noise pollution, etc. already affecting what was once a pristine environment.” The citizen wanted a response demonstrating how the environmental impact from this project will not “add to the problem already existing in this area.”

Response 4:

The federal government has set National Ambient Air Quality Standards (NAAQS) for pollutants that they believe should be regulated, including particulate (PM/PM10), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), ozone (formed from VOCs and NO_x) and lead (Pb). The air quality standards are conservative by nature and are designed to protect sensitive segments of the population (the very young and the elderly) regardless of the source’s location.

To protect the NAAQS, U.S. EPA established rules pertaining to areas currently meeting the NAAQS standards and areas that are not currently meeting the standards. These areas are referred to as attainment and non-attainment areas, respectively. Attainment areas have rules to keep them in attainment called Prevention of Significant Deterioration standards (PSD). PSD requires the best economically reasonable technology for controlling emissions to be installed as well as modeling to be performed. The modeling is the projection of the pollutants’ path in the air and the worst case impacts of that path. The modeling result must be below regulatory thresholds to protect the NAAQS. Ohio has developed other laws to protect the NAAQS which include employing the best available technology.

Areas in non-attainment have different standards than PSD. If a source large enough wants to be installed in a non-attainment area, that source must emit the lowest emissions possible and get other pollution sources in the area to reduce emissions for a net environmental benefit before installing. Ohio’s requirements to protect the NAAQS still apply in non-attainment areas. To be a large source of pollution in a non-attainment area the source must emit 100 tons of one specific type of pollution (such as 100 tons of PM 2.5). If emissions of these pollutants surpass trigger levels, then modeling is required to ensure that ambient air quality is not significantly impacted in such a way as to endanger human health.

The amount of particulate emissions from Solsil's facility operations is expected to be relatively low (less than 16 tons of PE per year, combined) and will not surpass these trigger levels. Therefore, the agency does not believe that the emissions from this facility will significantly affect the ambient air quality in the area.

Water Pollution Types and Quantities

Comment 5: **Concerns were expressed regarding pollutants from the proposed project that may enter the settling ponds and would be discharged into Wolf Creek.**

Response 5: Ohio EPA's Division of Surface Water has issued a draft National Pollution Discharge Elimination System (NPDES) permit to address possible surface water impacts from the proposed Solsil facility. An NPDES permit may include monitoring and limits for pollutants in the discharge based on water quality standards which are protective of both aquatic and human health. The NPDES permit also contains a provision stating that discharges shall not be toxic to human health or the environment.

Currently, the facility NPDES application is limited to the request to discharge cooling water and storm water from the facility. The draft NPDES permit includes monitoring and limits for total suspended solids (TSS), total dissolved solids (TDS), chlorine and pH. However, depending on the type of material that would be stored outside, Part IV, V and VI of the NPDES permit may require additional monitoring of the storm water runoff. If Solsil would store all material under roof, as they have proposed, then they may apply for a "no exposure" certification to eliminate this language from the NPDES permit.

Facility Operations

Comment 6: **Concerns were expressed regarding how and where the disposal of slag will take place from the facility.**

Response 6: Ohio EPA has discussed with Solsil, Inc. the disposal of slag and the location of its storage at the proposed site. The facility has responded that all slag material will be sold and

shipped off-site as product. Between production of slag and shipping of the material, all slag material will be stored inside of buildings and under roof to prevent the material from becoming wet. Due to the inside storage of the material, DAPC does not require the material storage piles to obtain a permit-to-install or operate. However, if the facility begins to store the slag material outside of the buildings, Ohio EPA would reassess to determine what permits would be required and what emission limitations and control measures would apply to the slag storage piles.

Noise levels

Comment 7: **Concerns were expressed regarding noise levels from the facility (such as the bag house noise), since there are no ordinances in the area.**

Response 7: Ohio EPA is not authorized to regulate noise levels from facility operations. You will sometimes find that noise levels are covered under local ordinances or city codes. You may want to investigate local ordinances in your area to see if they cover noise. Some cities prohibit activities that would create a public nuisance and limit excessive noise between certain hours.

There are noise level requirements for employees of workplaces under the Occupational Safety and Health Administration (OSHA). This can include noise measurements, engineering controls to reduce noise, hearing examinations for exposed employees and personal protective equipment. You can find more information through the OSHA Web site at <http://www.osha.gov/>.

.Property Value

Comments 8: **Concerns were expressed regarding the effect of such a facility on local property value and length of time to sell property in the area.**

Response 8: Ohio EPA cannot base a permitting decision upon whether the value of area property may change after a facility is built. Furthermore, Ohio EPA does not have regulatory authority related to acceptable land use standards, such as zoning regulations. Required land use regulations are primarily

determined through local zoning ordinances.

Ohio EPA Division of Air Pollution Control can take into consideration only those factors for which we are given regulatory authority. Ohio EPA performs its functions as specified in the Ohio Revised Code (ORC). Ohio EPA is obligated to act upon permit applications, either denying or approving, on the basis of the available facts and information. If a source complies with the laws and rules, and meets the criteria for decisions within them, Ohio EPA is obligated to approve the application.

Ohio EPA Oversight and Inspections

Comment 9: During the information session an Ohio EPA inspector mentioned that inspections would be performed on an “as needed” basis. A citizen has expressed concern that once full production begins and after all initial inspections occur, this approach may be somewhat lacking the needed oversight over the long run. The citizen expressed the need for unannounced, unscheduled inspections (evenings, Sundays, etc.).

Response 9: Under grant agreement with U.S. EPA, Ohio EPA inspects Synthetic Minor facilities at least once every five years. Ohio EPA makes every effort to visit these types of facilities more frequently. It is routine in the Division of Air Pollution Control, Southeast District Office for inspectors to conduct unannounced inspections at regulated facilities. If we receive a complaint about any facility or air pollution issue, we investigate within 14 days. In addition, Ohio EPA staff review reports that facilities submit to Ohio EPA on an annual basis and any malfunction of any air pollution source or air pollution control equipment must be reported to the agency immediately. If Ohio EPA feels that the facility is having problems staying within the designated emission limits of a permit, we may require that the company conduct emission testing. While having a government inspector on-site at all times would be ideal, it would take more resources than available to commit at this time.

Citizens living near a facility can also help reduce the need for additional state resources by assisting Ohio EPA in oversight of a facility’s operations. Informing Ohio EPA of observed abnormal or unlawful activities can initiate Agency action well ahead of any scheduled facility inspection.

Comment 10: A citizen stated that since the area lacks zoning ordinances, they feel that without some federal oversight, this will end like Globe and AEP. As part of this statement the citizen submitted three digital pictures that the citizen states were “photos taken from my house on a ridge about 3 miles away.”

Response 10: Ohio EPA was created in response to the 1970 Clean Air Act (CAA) and is responsible for protecting the environment and public health of the citizens of Ohio. Our authority is delegated by the federal government to maintain National Ambient Air Quality Standards (NAAQS). As part of this process, states are required to develop plans (the State Implementation Plan (SIP)) in order to meet the requirements developed by U.S. EPA such as the NAAQS. The SIP includes things like strategies, personnel commitments, laws, and rules that are used to develop and implement the air pollution programs. Once a state develops a SIP, U.S. EPA must review and approve it. States then must implement and enforce the rules required by the SIP. Therefore, our Agency’s air pollution control program is as stringent as the federal regulations and has been approved by the U.S. EPA.

In addition, Ohio EPA has requested and obtained delegation to enforce the federal New Source Performance Standards (NSPS) and the National Emissions Standards of Hazardous Air Pollutants (NESHAPS). Ohio EPA has also obtained conditional approval to enforce the federal Maximum Achievable Control Technology (MACT) standards. These delegations/approvals allow Ohio EPA to regulate emissions units subject to these federal standards through the Ohio EPA permit system. The MACT is designed to protect the health of U.S. citizens from hazardous air pollutants (HAP). In addition to the MACT, Ohio EPA has developed an air toxics regulation to protect Ohio’s citizens from air toxics. The regulation involves modeling as previously discussed and is designed to protect the environment to a level better than in-plant workers are protected from toxic compounds.

In conclusion of this overview, the state’s program does contain adequate oversight provisions and when applied and enforced properly, the rules developed by U.S. EPA and Ohio EPA will protect human health from the impacts of air

pollution.

Ohio EPA was not in a good position to respond to the citizen's photographs submitted with the written comments. The photographs appeared to show some visible emissions, but it was not clear which facility the emissions emanated from or how the visible emissions affected the permit provisions for Solsil's proposed facility.

Comment 11: **The following comment was submitted: "As your agency is fragmented and ultimately ineffective to monitor the local situation as a "whole", how do we establish a collective EPA oversight in which all concerns are addressed? Can your Agency divisions speak and collaborate on the issues as a whole? And, why wouldn't they?"**

Response 11: We respectively disagree with the statement that our agency is ultimately ineffective to monitor the local situation as a "whole". For the regulations we are authorized to enforce, we believe we do effectively monitor compliance with the applicable rule provisions.

Ohio EPA divisions work closely with one another on proposed projects requiring permits when needed. As stated in Ohio Administrative Code (OAC) rule 3745-31-05(J), Ohio EPA is required to coordinate the review and issuance of an air pollution permit-to-install or PTIO with any other relevant Ohio EPA division's permit-to-install program. This coordination of an individual permit-to-install or PTIO shall involve the identification of materials to relevant programs and the coordination of the granting or denying of program separate or program combined permit-to-installs or PTIOs. Though sources such the furnaces controlled with baghouses typically may only require coordination with Ohio EPA's Division of Hazardous Waste Management, Ohio EPA's Southeast District Office notifies all Ohio EPA divisions of any air permit application and requests if coordination is required. In the case of the proposed Solsil facility, the only other division requiring a permit action was the Division of Surface Water. The Division was notified of the application and declined coordination with the air permit due to the lack of overlap concerning the requirements in the permits.

There may be situations where it is beneficial to have all

Ohio EPA divisions present at a public hearing. However, as indicated above, only two divisions will be issuing permits for this proposed facility; therefore, it was not necessary to involve all Ohio EPA divisions in this public hearing. Due to the lack of overlaps in the water and air permit requirements, the timeframes that the permit applications were submitted to the two divisions, and the current division workloads, it was determined that the Division of Air Pollution Control should move forward with the issuance of the draft permits for the furnaces, crushing line, and facility roadways. If an additional public hearing is necessary for the Division of Surface Water's permit, it will be held.

Comment 12: **A citizen expressed the need to establishing monitoring procedures that are effective over the long-run and for the agency to take part in interagency discussions on the local impact of this project as a whole.**

Response 12: The permits-to-install-and-operate for the facility will require emissions testing of select furnaces to ensure that the furnaces are complying with the allowable particulate emission limitation. The testing will be required within three months after the furnaces begin operation. In addition, the permit requires a number of mechanisms for monitoring the emissions units including the facility conducting daily checks for visible emissions from the baghouse stacks and roadways.

Ohio EPA also monitors the ambient air quality on prescribed frequencies and, as indicated above, Agency representatives will conduct announced and unannounced inspection of the facility's operations.

In response to the comment regarding interagency discussions, Ohio EPA does discuss proposed projects with the other affected divisions within the agency (see response to comment 11). However, it is not normally feasible or practical to involve all state agencies having any association with a proposed facility project in community discussions. Some of the other state agency requirements are already prescribed (i.e., roadway, speed, noise, and/or weight limits) and certain issues or concerns are best addressed on the local level (i.e., zoning – whether for safety, aesthetics or property protection).

End of Response to Comments