

July 15, 2009

Richard Feldt, CEO
Evergreen Solar
112 Barnum Road
Devens, MA 01434

Re: Evergreen Solar Noise Violation Resolution

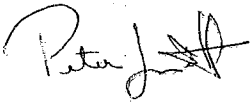
Dear Mr. Feldt,

Attached is a copy of the Evergreen Solar Noise Violation Resolution approved by the Devens Enterprise Commission (DEC) at their July 14, 2009 Special Meeting. As you are aware, the Resolution contains a number of requirements and milestones that Evergreen must achieve in order to continue operations and come into compliance with the DEC Rules and Regulations concerning noise (974 CMR 4.05). In coming to the conclusion that Evergreen has demonstrated good faith efforts in resolving this outstanding violation and providing Evergreen with additional time to bring the Facility into full compliance, the Commission, neighbors and the Town of Harvard trust that you will fulfill your commitments to achieve compliance by the specified dates.

Failure to meet the requirements of this resolution will result in the DEC issuing a cease and desist order and pursuing additional legal action. We trust this will not be the case and appreciate Evergreen Solar's continued cooperation with respect to this violation.

DEC Staff and their consultant will continue to monitor progress towards compliance and will attend Evergreen Solar's weekly Noise Committee meetings to stay current with noise reduction activities that have or are in the process of being implemented. Please ensure agendas and meeting schedules are forwarded to Neil Angus, Staff Planner for the DEC.

Sincerely,



Peter Lowitt, Director, Land Use Administrator

Cc: Harvard Board of Selectman
Jay Wallace
Laura McGovern
Bill Carrol
Berwind Brothers, LLC
Tom Cusson, DEP
Sen. Jamie Eldridge
Rep. Jennifer Benson



DEVENS ENTERPRISE COMMISSION

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**Devens Enterprise Commission
Evergreen Solar Noise Violation Resolution
July 14, 2009**

Violator: Evergreen Solar, Inc. 112 Barnum Road, Devens, MA
Violation of: 974 CMR 4.05(3) Noise Limits and Standards

Definitions:

“Evergreen Solar (Evergreen)”: includes its successors and assigns, officers, directors, principals, employees, agents, servants and any person in active concert or participation with it or them.

“Facility” – means Evergreen Solar’s manufacturing facility and all related equipment located at 112 Barnum Road.

“External Residential Receptor” – defined at 974 CMR 4.01(3), means residential properties abutting or in close proximity to the Facility, within the Town of Harvard including but not limited to those specifically identified by the DEC (42 Old Mill Road, 48 Old Mill Road, 62 Old Mill Road, and 309 Ayer Road).

“Tier 1 Noise Sources” – The interim Noise Report prepared for the DEC by Modeling Specialties dated June 1, 2009 listed those noise sources which must be addressed to move the facility toward compliance with the DEC’s Regulation and referred to them as Tier 1 Noise Sources. The Tier 1 noise sources are: Argon and Nitrogen Gas Deliveries; Main VOC Blowers; VOC Combustion Blowers; ASX Stack outlet; Cooling Tower south face and exhaust fans.

“Tier 2 Noise Sources” – means noise including, but not limited to the following sources: The elevated combustion air blowers above the Thermal Oxidizers (TO); the exposed faces of the Thermal Oxidizer unit bodies; the elevated ASX blowers at the top of the platform above the TO; the rooftop gooseneck exhaust vents; the elevated blowers on the NOx collector system; the silicon dust blowers.

Plan – refers to Exhibit A which includes a letter from the Harvard Board of Selectmen to the DEC dated July 13, 2009 and attached Evergreen Solar Noise Abatement Plan – July 13, 2009 signed and dated 7/13/09 by Richard Feldt, President and CEO of Evergreen Solar.

Overview:

The following resolution outlines the details of the Evergreen Solar noise violations to date, complaints made by neighbors, actions taken by the DEC, subsequent responses by Evergreen, findings of the DEC and conditions which the DEC places on Evergreen to resolve the noise violation.

The DEC regulations which applicable to noise violations include:

974 CMR 1.14, including without limitation subsection 3(b) thereof authorizing determinations regarding the correction or elimination of violations about which complaints have been received by the DEC and

974 CMR 4.05, including without limitation subsections 2(a)&(b) thereof requiring the source of a noise or vibration nuisance identified with reasonable certainty to “provid[e] reasonable mitigation measures that essentially resolve the difficulty” and to correct noise violations of the Industrial Performance Standards or demonstrate that **“good faith efforts have been initiated to correct the objectionable**

circumstances,” in order to avoid remedies in the Devens By-Laws, including levying of fines, requirements to post performance guarantees, permit reconsideration by the DEC, or legal action. Also relevant is 974 CMR 4.05 (3)(d)(5) – “any facility found to be in violation shall...**mitigate the problem as soon as reasonably possible.**”

Based on these regulations, the findings to be made by the DEC with regard to the Evergreen noise violation are:

1. Has Evergreen initiated “good faith efforts” to correct the violation?
2. Has Evergreen taken steps to mitigate the problem “as soon as reasonably possible”?

Violation Background Details:

1. On March 19, 2009, the DEC received a written noise complaint from Janice Perry of 42 Old Mill Road, Harvard, MA.
2. On March 20, 2009 and over the course of several visits, the DEC Building Official conducted preliminary noise measurements at 42 Old Mill Road and found that noise from the Evergreen Solar facility (“Facility”) frequently exceeded the Devens Industrial Performance Standards for Noise [974 CMR 4.05(3)(c)] at 42 Old Mill Road (External Residential Receptor). The DEC contracted with professional noise consultant Modeling Specialties, Inc. which then conducted additional detailed noise measurements at 42 Old Mill Road and the Facility on March 28 and 29, 2009 and determined that noise generated from the Facility was in fact violating the DEC Industrial Performance Standards set forth at 974 CMR 4.05(3)(c).
3. On April 1, 2009, the DEC notified Evergreen in writing of the violation and ordered Evergreen to begin to mitigate the violation within 30 days reducing by at least 10dBA the sound produced by the Facility.
4. On May 6, 2009, the DEC received a written report from Evergreen listing the “number of steps to address the noises that were being heard from the neighboring area,” including: repairs taking place between April 6, 2009 and April 13, 2009 that according to Evergreen included replacing the VOC scrubber equipment motor and blower fan and placing an acoustic blanket around the equipment; steps taken after discussions with the Old Mill Road neighbors, including shutting off door exit alarms on the back side of the building, taking offline a chiller unit pump and effecting repairs, causing all rollaway doors to be closed except when actively being used for loading and unloading materials and products; and working with the liquefied gas delivery vendor to resolve additional identified noises.
5. On May 7, 2009, the DEC held a public meeting to review the status of the violation and Evergreen’s efforts to mitigate. Numerous residents attended the meeting. In general they stated that there were still persistent and variable noise issues emanating from the Facility.
6. On May 8, 2009 the DEC issued a written Request for Proposal, with responses due no later than May 15, 2009 in order to better understand the impact of the Facility-created sounds on the neighboring properties. The study was to include the results of week-long continuous monitoring at the Facility property boundary and three of the closest residences (42 Old Mill Road, 48 Old Mill Road and 309 Ayer Road). The DEC required that the study include noise measurements of all the Facility exterior mechanical equipment in order to target the specific sources of the offending noise, an evaluation of these

sources and recommended noise reduction measures that might bring the Facility into compliance with 974 CMR 4.05.

7. On May 14, 2009, Evergreen provided to the DEC a written progress update on noise reduction measures it stated that it implemented, including restricting the truck delivery hours and experimenting with reduced pumping pressure for the liquefied gas product.

8. On May 18, 2009, the DEC selected Modeling Specialties as its noise consultant after a thorough review of the responses from three consultants conducted in accordance with MGL c. 30B and the DEC's procurement procedures and authorized Modeling Specialties to proceed. Monitoring was initiated on the same day (May 18, 2009).

9. On May 26, 2009, the DEC issued to Evergreen, by certified mail, a second written notice of a violation of the DEC's Industrial Performance Standard for noise (Evergreen said it received the Notice on May 27, 2009), which concluded that the "pure tone" condition in the original noise violation letter appears to have been addressed; however, the follow-up monitoring indicated that noise levels from the Facility continuously exceeded the daytime and nighttime DEC noise standards. Furthermore, Facility door alarms were still active and gas deliveries were still occurring outside of the agreed upon hours of 8AM to 5PM. The notice of violation ordered Evergreen to immediately install temporary sound attenuation equipment to mitigate the gas delivery noise until Evergreen implemented a long-term solution and concluded that fines would be levied if the Facility was not brought into compliance within 30 days from receipt of the violation notice. The letter also indicated that a permanent Certificate of Occupancy would not be issued until Evergreen brings the Facility into full compliance with 974 CMR 4.05(3).

10. On June 1, 2009, Evergreen provided to the DEC a written update on the noise mitigation measures it said it implemented including preventing liquefied gas deliveries outside the agreed-upon hours, providing a plan for a permanent solution to the gas delivery noise by installing new, insulated, ground-mounted pumps, continuing to investigate temporary mitigation solutions during the 8 to 10 week lead time for the pump installation, monitoring noise twice daily to help identify excess noise sources, and assessing additional monitoring as needed after review of the DEC consultant's monitoring report.

11. The DEC's noise consultant confirmed that twice daily monitoring was not sufficient and that the Facility would need to conduct continuous monitoring to fully understand how the Facility noise levels are effecting the External Sensitive Receptors.

12. On June 1, 2009, the DEC received from its consultant Modeling Specialties an interim release of a Facility Noise Analysis, including a community survey, compliance evaluation, emission source inventory, and concept mitigation options. This analysis measured sound levels as follows:

Location	Actual Daytime Wednesday, May 20, 2009 11:00 am – 2:00 pm	DEC Daytime Compliance Level	Actual Late Night Tuesday, May 26, 2009 3:30 am – 5:30 am	DEC Nighttime Compliance Level
R1 Devens P/L	47 dBA	43 dBA	47 dBA	38 dBA
R2 48 Old Mill	41	43	40	38
R3 309 Ayer Rd.	48	43	46	38
R4 42 Old Mill	42	43	40	38

13. On June 4, 2009, the DEC held a second public meeting at which residents continued to voice their concerns about the elevated noise levels from the Facility. The DEC ordered Evergreen to submit a plan with action items and dates of completion on or before June 11, 2009. Evergreen also provided an overview of Facility operations and a tour of the Facility to the DEC.

14. On June 8, 2009, Evergreen provided to the DEC its weekly written update on the measures it said it implemented to date to reduce the noise levels of the Facility, including summarizing action underway for each of the "Tier 1 noise source" found by the DEC's consultant to need remedial action, including: for the Praxair Gas Delivery, placing (potentially expedited) purchase orders for the ground mounted pumps as a permanent solution and designing and obtaining quotes on a temporary acoustical material wall as a short term improvement; for the VOC Scrubber, contracting for enclosures to be designed and constructed and considering silencers and containment vessels; and for the Cooling Towers, having the contractor obtain a delivery and installation timeline for installing intake baffles and fan stack extensions and minimizing or stopping operation of the cooling tower unit that does not have an intake baffle facing the property line. Temporary cooling tower operations were unsuccessful at reducing noise levels due to an extended pattern of high saturation, causing the cooling towers to run at maximum speeds for extended periods over the past few weeks (confirmed by DEC Noise Consultant).

15. On June 10, 2009, Evergreen provided to the DEC a written action plan for Facility noise reduction by targeting a 15dBA noise reduction on all Tier 1 noise sources through: installing ground pumps and enclosures for the Argon and Nitrogen gas deliveries by August 21, 2009; constructing enclosures for the three VOC RTO process blowers by July 10, 2009; installing stack attenuators for the two ASX exhaust stacks by August 21, 2009; installing intake silencers for the Phase 2 No. 5 Cooling Tower by September 4, 2009; installing exhaust fan attenuators for all nine cooling towers by September 4, 2009; and installing enclosures for the VOC combustion blowers by July 17, 2009. On June 15, 2009, Evergreen presented to the DEC a written noise compliance plan which outlined all of the above measures.

16. On June 17, 2009, the DEC issued a written order to Evergreen that since the DEC's Noise Consultant indicated addressing the Tier 1 noise sources only would still not bring the Facility into full compliance with 974 CMR 4.05, the proposed noise wall planned in the original application was necessary to achieve full compliance with DEC noise standards and therefore is required to be constructed as per condition #24 of the Phase 2 Unified Permit Record of Decision for Evergreen Solar dated April 3, 2008. Evergreen has stated that it is obtaining cost estimates and design specifications to address this issue.

17. On June 18, 2008 the DEC received a letter from the Harvard Board of Selectman requesting that the DEC restrict Evergreen's Temporary Certificate of Occupancy and limit the Facility's hours of operation to 7:00AM to 4PM Monday through Friday to provide the neighbors with temporary relief, until compliance with DEC noise standards is achieved.

18. On June 19, 2009 the DEC received another noise complaint from an adjacent property owner regarding a new loud and irritating noise from the Facility. The DEC engaged its Noise Consultant who, through consultation with the Evergreen, determined the source to be the gooseneck vents on the Facility roof.

19. On June 22, 2009 Evergreen provided to the DEC its weekly written update on the measures it said it implemented to date to reduce the noise levels of the Facility, including for the Process Gas deliveries, having its vendor actively pursuing parts and materials procurement and opportunities to expedite and targeting completion of the temporary wall by June 30; for the Thermal Oxidizer blowers,

structurally completing the process blower enclosures with sound proofing material expected to be installed by June 30 and having its vendor for the permanent enclosures for the combustion blowers working to expedite the original delivery date of July 17; for the Oxidizer (ASX) exhausts, having its vendor for the exhaust stack attenuators working to expedite the original delivery date of August 21; for the Cooling Tower Intake, having its vendor for the intake attenuators working to expedite the original delivery date of September 4.

20. On June 26, 2009 DEC Staff consulted with MA DEP to bring them up to speed on the noise violation and request its input as to the Facility's non-compliance with its State Air Permit requirements concerning noise.

21. On June 29, 2009 the DEC received a noise complaint from Laura McGovern, 62 Old Mill Road, concerning the Facility noise. The DEC's noise consultant took measurements that evening and confirmed continued non-compliance with 974 CMR 4.05.

22. On June 30, 2009, the DEC held another public meeting where Evergreen presented a noise compliance update (on July 3, Evergreen sent this material to the DEC), claiming specific reductions in sound levels of 106 to 84 dBA for the ASX exhaust, 106 to 74 dBA for VOC process blowers, and 92 to 83 dBA for VOC combustion blower, which together may result in an estimated 2 dBA reduction at the nearest receptor (not confirmed by DEC noise consultant).

23. On July 8, 2009 the DEC received from Jay Wallace, Dunroven Farm, a letter requesting that the "DEC use the full force and weight of its regulatory responsibility to protect the public" and requested the DEC to make certain findings as listed in the letter.

24. On July 13, 2009 the DEC received from the Harvard Board of Selectmen a letter (attached as Exhibit A) stating that the BOS has "been engaged in a series of discussions with Richard Feldt, President and CEO of Evergreen Solar, and other senior officials of the Evergreen management team, to develop a protocol designed to resolve the issues surrounding the noise levels emanating from the Evergreen facility in excess of the Industrial Noise Standards established by the DEC. Attached to the letter is the "Evergreen Solar Noise Abatement Plan – July 13, 2009, signed by Richard Feldt and dated 7/13/09.

25. On July 13, 2009 the DEC received from its Noise Consultant a review "of the mitigation status [the measures taken by Evergreen] for the period ending on June 30". The review states as follows:

Mitigation measures that were already in place at the time of the Notice of Violation were noted. Additional measures were considered by Evergreen to treat the primary sources of facility sound. The measures were described and documented to the degree practical in the near field and also at the DREZ property line. An enclosure treated each of the VOC primary blowers. Another temporary enclosure treated the combustion fan sound. An operational measure provides preliminary relief from the cooling tower sound intrusion and its 31.5 Hz fan tone. While the measure provides little benefit during periods when the atmosphere is saturated, it provides substantial benefit when the air has a lower relative humidity. A series of rooftop sources were identified by Evergreen and fitted with temporary absorbers.

The most intrusive sound related to the facility has been the delivery of industrial gases to the on-site storage tanks. A temporary wall provides about 10 dB reduction of the truck unloading sound as measured from the DREZ property line.

While some of these mitigation measures are temporary or frequently neutralized by prevailing weather conditions, they together have produced measurable benefits at the residential properties. Under similar

conditions to the original compliance survey, the mitigation measures have produced a broadband improvement of about 2 dB. However, the 40 Hz tone is substantially reduced at the sensitive land uses. In addition, the 31.5 Hz tone from the cooling towers has also been reduced for the periods when the prevailing humidity is unsaturated.

26. The DEC continues to monitor the Facility sound levels at Evergreen's lease line which monitoring continues to show non-compliance with 974 CMR 4.05. The DEC has continued to receive noise complaints from the neighbors since the original March 19, 2009 violation and they include, but are not limited to those shown on Exhibit B (attached).

Findings:

The following findings demonstrate that Evergreen has initiated good faith efforts to correct the objectionable circumstances provided that it complies with the Conditions set forth below:

- Evergreen has initiated or completed since the DEC May 26, 2009 Notice of Violation a number of mitigation measures.
- Evergreen has stated that it has "encumbered" over a million dollars to implement noise mitigation measures.
- The mitigation measures have produced a broadband improvement of about 2 dBA. However, the 40 Hz tone is substantially reduced at the sensitive land uses. In addition, the 31.5 Hz tone from the cooling towers has also been reduced for the periods when the prevailing humidity is unsaturated.
- Evergreen has stated that it has offered neighbors the opportunity to participate in its noise assessment committee meetings (conducted on a daily basis) to review the status of its efforts to mitigate the noise violation.
- Evergreen has been providing weekly noise updates to the DEC and the Community via the DEC website since May 14, 2009.
- Evergreen has stated that it's reached out to the neighboring property owners to gather feedback and attempt to provide temporary relief from facility noises while it works towards achieving compliance.
- Evergreen has provided the DEC with a noise abatement plan, dated July 13, 2009 (signed by Richard Feldt, President and CEO of Evergreen Solar on July 13, 2009), outlining benchmarks for achieving compliance with 974 CMR 4.05 requirements by August 17, 2009 (Exhibit A).
- Evergreen has volunteered that from and after it receives a permanent Certificate of Occupancy or Use, the DEC may exercise any of the powers under its By-laws and Regulations, including without limitation the right and privilege to revoke or suspend Evergreen's Certificate of Occupancy or Use if Evergreen fails to resolve within 5 business days any violation determined to arise from Evergreen's sustainably generating noises greater than 5 dBA above the then-existing ambient noise condition.