

1998 WL 714214 (Ill. Pol. Control Bd.)

Illinois Pollution Control Board

State of Illinois

CHARTER HALL HOMEOWNER'S ASSOCIATION AND JEFF COHEN, COMPLAINANTS
v.
OVERLAND TRANSPORTATION SYSTEM, INC. AND D.P. CARTAGE, INC., RESPONDENTS

PCB 98-81
October 1, 1998

(Enforcement - Citizen, Noise)

*1 Bill S. Forcade and Steven M. Siros, of Jenner & Block, Appeared on Behalf of Complainants; and Mark J. Steger, of McBride, Baker & Coles, Appeared on Behalf of Respondents

INTERIM OPINION AND ORDER OF THE BOARD

This citizens' enforcement action concerns a trucking terminal in Palatine, Illinois. Respondent Overland Transportation System, Inc. leases the trucking terminal to respondent, D.P. Cartage, Inc., which operates the facility. Complainants, Charter Hall Homeowner's Association and Jeff Cohen, allege that noise from the trucking terminal exceeds Illinois' numeric sound limits and unreasonably interferes with the lives of residents living immediately east of the trucking terminal. Complainants maintain that respondents therefore have violated the Illinois Environmental Protection Act (Act), 415 ILCS 5/1 *et seq.* (1996), and Board regulations. Complainants request that the Board order respondents to undertake several measures to ensure that the noise will be abated, impose civil penalties, and grant other relief.

The Board finds that complainants have failed to establish that respondents violated the Board's numeric sound limits. However, the Board does find that noise from respondents' facility has unreasonably interfered with the enjoyment of life. The Board therefore finds that respondents have violated the Act and the Board's regulations.

The hearing officer bifurcated hearings in this matter at the request of the parties. The initial hearing was to address only whether respondents violated the Act and regulations. Having found violations, the Board now orders this matter to hearing on an expedited basis to address the issue of remedies, including civil penalties.

PROCEDURAL MATTERS

Overview

Complainants filed a complaint on December 9, 1997. On January 22, 1998, the Board accepted this matter for hearing. Hearing Officer Jack Burds held a hearing in this matter from May 12, 1998, through May 14, 1998. Complainants presented 11 witnesses: eight residents and three sound experts. Complainants also offered 26 exhibits, all of which were admitted. Respondents presented one witness, an Overland employee. Respondents offered two exhibits, both of which were admitted. The parties also offered one joint exhibit, which was admitted.¹ Both parties filed posthearing briefs.

Scope of Initial Hearing

On May 8, 1998, respondents filed an agreed motion. In the motion, the parties requested, among other things, that the hearing officer bifurcate the hearings in this matter so that the initial hearing would "only relate to liability with the civil penalty issue being reserved for future hearing dates, if any." On May 12, 1998, the hearing officer granted the motion, stating that the initial hearing "will relate only to liability," and noting that an additional hearing, if necessary, will "deal with any civil penalty to be imposed."

*2 The parties now disagree on the scope of the initial hearing. In its posthearing brief, complainants ask that the Board not only find respondents in violation, but also that the Board, in its interim order, grant complainants the following relief: (1) order respondents to cease and desist from further violations; (2) establish sound limits applicable specifically to the trucking terminal; (3) order respondents to continuously monitor sound from the facility to ensure that respondents comply with the site-specific sound limits; (4) order respondents to make certain physical and operational changes at the facility to abate noise; (5) establish fixed penalty amounts that respondents must pay for any future violations; and (6) order respondents to post a performance bond or other security to ensure timely performance of noise abatement measures. Complainants expect the next hearing to address only civil penalties for past violations.

Respondents state in their response brief that under the hearing officer order of May 12, 1998, this portion of the proceeding only relates to liability and that the issues of civil penalties and other remedies are reserved for a future hearing, as needed.

The Board agrees with respondents. The Board finds the hearing officer order unambiguous on the scope of the initial hearing. The initial hearing was limited "only to liability." While a second hearing, if necessary, would address any civil penalties, the hearing officer order did not limit that second hearing to "only" civil penalties. Accordingly, this interim order will address only liability, *i.e.*, whether respondents violated the Act and Board regulations.

However, Board findings of fact and conclusions of law in this interim opinion that are relevant to the issue of remedies, including civil penalties, may be relied upon by the parties for those purposes. Consistent with the Board's earlier order granting complainants' request for expedited consideration, the Board orders this matter to hearing on an expedited basis. At hearing, the parties may introduce any evidence not already in the record that is relevant to the issue of remedies, including civil penalties.

Motion to Dismiss

In their posthearing response brief, respondents move to dismiss Charter Hall Homeowner's Association for lack of standing. Respondents maintain that for an association to have standing, it must have a recognizable interest capable of being affected in the dispute.

The Board denies respondents' motion to dismiss. Under Section 31(d) of the Act, "any person may file with the Board a complaint." 415 ILCS 5/31(d) (1996). The Act defines "person" as follows:

any individual, partnership, co-partnership, firm, company, limited liability company, corporation, association, joint stock company, trust, estate, political subdivision, state agency, or any other legal entity, or their legal representative, agents or assigns. 415 ILCS 5/3.26 (1996).

*3 Charter Hall Homeowner's Association is a "person" under the Act and is proceeding under Section 31(d) of the Act. Section 31(d) imposes no requirement that a person must be injured or adversely affected to file a complaint with the Board. Accordingly, Charter Hall Homeowner's Association has standing.

Motion to Strike and Motion for Leave to Add Complainants

In their response brief, respondents also move to strike the testimony of the seven nonparty residents that complainants presented. Respondents maintain that all resident testimony, except for Mr. Cohen's, should be stricken because these witnesses "are not parties to this action and their testimony is irrelevant to the allegations made by Mr. Cohen."

The Board denies respondents' motion to strike. First, there is no requirement that only named complainants can be witnesses. Second, the testimony of the nonparty residents is relevant to whether respondents have unreasonably interfered with the enjoyment of life in violation of the Act and Board regulations, as alleged in the complaint.

In their reply brief, complainants moved for leave to add the seven nonparty witnesses as complainants if the Board agreed with respondents. Since the Board denies the motion to strike, complainants' motion is moot.

FINDINGS OF FACT

Description of Parties and Vicinity

Overland Transportation System, Inc. (Overland) leases a trucking terminal to D.P. Cartage, Inc. (Cartage). Joint Exh. at 3. The trucking terminal (facility) is located at 419 West Northwest Highway in Palatine, Illinois. Tr. at 459. Cartage operates the facility on a day-to-day basis. Joint Exh. at 3. Overland and Cartage are owned by Vitran Corporation. Joint Exh. at 1. Cartage and Overland have been combined. Tr. at 459-460. The Board refers to Overland and Cartage collectively as "Overland" or respondents.

Charter Hall Homeowner's Association is a not-for-profit corporation that was formed in 1992. It is composed of homeowners from approximately 50 residential property lots located along the east and west sides of a generally north-south street, Charter Hall Drive, in Palatine, Illinois. The northern boundary of these residential lots is Northwest Highway. Tr. at 12-14; Comp. Exh. 1; Joint Exh. at 2-3, Exh. B. The Board refers to this residential development as "Charter Hall."

The trucking terminal is located immediately east of a number of the Charter Hall homes. These homes are on the east side of Charter Hall Drive. The trucking terminal's western boundary abuts the easternmost lot line of Charter Hall lots 5 through 23. The addresses for these lots are 605, 609, 613, 627, 631, 635, 639, 643, 647, 655, 659, 663, 667, 679, 683, 687, 691, 695, and 699 Charter Hall Drive. Tr. at 12-16, 51-53, 92-93, 124-126, 157-159, 181-184, 203-206, 248-251; Comp. Exh. 1; Comp. Grp. Exh. 1, Photo 2, 4, 5; Comp. Grp. Exh. 2, Photo 1, 2, 5-11, 13, 14, 16-18, 21, 22, 24-26; Joint Exh. at 3, Exh. E.

*4 A small plaza of offices and stores is located immediately north of the facility. Northwest Highway is immediately north of the plaza. Tr. at 33, 56-58; Comp. Exh. 1; Comp. Grp. Exh. 1, Photo 1. A shopping center is located immediately east of the trucking terminal and to the south of the facility is a marsh or swamp. Tr. at 34, 38, 183-184, 421; Comp. Exh. 1. Other residential subdivisions are located both immediately north of Northwest Highway and immediately west of Charter Hall. Charter Hall is the only residential subdivision directly adjacent to the trucking terminal. Tr. at 35, 38-39; Comp. Exh. 1.

Charter Hall

The homes immediately west of the trucking terminal are two-story townhomes. Off of their first floors to the east, they have patios. East of the patios, the homes have backyards. A wooden fence approximately eight feet tall stands at the eastern edge of the backyards and faces the trucking terminal. Trees are planted just to the west of the fence and extend above it. Pulte Home Corporation (Pulte), which built Charter Hall, constructed the fence. The fence blocks the view of the trucking terminal from the first floor of the homes. The distance from the fence to the eastern edge of the homes ranges from approximately 30 to 45 feet. Tr. at 14, 16-17, 36-37, 47, 51-53, 86-87, 92-93, 118, 124-126, 128-133, 137, 138, 157-159, 182-184, 203-206, 248-251; Comp. Exh. 1; Comp. Grp. Exh. 1, Photo 5; Comp. Grp. Exh. 2, Photo 1, 2, 5-11, 13, 14, 21, 22, 24; Joint Exh. at 2.

The eastern sides of the homes' second floors have one or more bedrooms with windows. Looking from these windows, homeowners can view the trucking terminal beyond the wooden fence. Many of the operations at the trucking terminal are visible from this vantage. Tr. at 16-17, 52-53, 128-133, 137, 138, 157-159, 182-184, 205-206, 249-251; Comp. Exh. 1; Comp. Grp. Exh. 2, Photo 1, 2, 5-11, 13, 14, 21, 22, 24.

The wooden fence divides Charter Hall and the trucking terminal. Tr. at 35. The fence runs north-south along the backyards of 699 through 627 Charter Hall Drive. Tr. at 36; Comp. Exh. 1. There is a drop off on the Overland side of the fence because the fence sits on top of an approximately eight to 10 foot tall berm. The berm slopes down from the bottom of the fence approximately 22 feet to the asphalt of the facility's west side. Tr. at 36-38, 87; Comp. Grp. Exh. 1, Photo 5.

Overland's Operations

Overland operates the facility as a motor freight terminal for the loading and unloading of trailer trucks. The facility's Standard Land Use Coding Manual (SLUCM) Code designation is 4221 (motor freight terminal), as identified in 35 Ill. Adm. Code 901.Appendix B. Joint Exh. at 3-4. Overland provides freight service for general commodities. It delivers on a next morning, next day, or two day basis. Its customers include Medline, a distributor of medical supplies. Tr. at 469-470, 475,

477.

The facility has one building, which runs north-south on the property. The northern portion of the building has administrative offices. The southern portion of the building is the loading dock, which has 15 bays on its west side and 15 bays on its east side. The distance from the west side of the loading dock to the wooden fence at Charter Hall is approximately 170 feet. Comp. Exh. 1.

*5 Trailer trucks arrive at the facility from Northwest Highway. If the trailer is to be unloaded immediately upon arrival, the driver drives it to one of the bays at the terminal where it is unloaded. If the trailer is not to be immediately unloaded, the driver parks it on the east side of the facility. Overland uses a yard spotter to move both empty and loaded trailers around the facility. Tr. at 30, 482-484, 496; Joint Exh. at 3-4.

Overland divides the facility's operations into a.m. and p.m. shifts. The a.m. shift begins when the shift supervisor arrives at the facility at 2:00 a.m. The a.m. shift's dock workers arrive at approximately 3:00 a.m. and begin to unload the trailers. Unloading and loading continues until approximately 10:00 a.m. Trucks that are to be unloaded on the a.m. shift begin to arrive at the facility at 11:00 p.m. The a.m. shift unloads and loads approximately 30 trucks, most of which arrive at the facility between 5:00 a.m. and 8:00 a.m. Tr. at 472-476; Joint Exh. at 3-4.

The p.m. shift begins at 1:00 p.m. when the shift supervisor arrives. The trucks that are to be unloaded on the p.m. shift begin to arrive at the facility at 2:00 p.m. Overland's dock workers on the p.m. shift arrive between 2:30 p.m. and 3:00 p.m. and begin unloading trailers. The p.m. shift unloads and loads approximately 30 to 40 trucks and continues until approximately 12:00 midnight. Tr. at 477-480; Joint Exh. at 4.

Overland parks empty trailers on the asphalt area immediately west of its building. This asphalt area is immediately east of Charter Hall. Most of the parked trailers are located in this area. Loaded trailers are not parked in this area. Overland parks truck cabs and some trailers in the asphalt area immediately east of the building. The east side has room to park additional trailers. Tr. at 56-61, 83, 133-138, 495; Comp. Exh. 1; Comp. Grp. Exh. 1, Photo 1-5; Comp. Grp. Exh. 2, Photo 15-20, 23, 25, 26.

Overland has chain link fencing running east-west on both the north and south sides of the facility. Tr. at 38, 197-198. In addition to parking on the west and east sides of its building, Overland parks trucks immediately north of the northern fence, *i.e.*, between the northern fence and the small plaza further to the north. Tr. at 205-206, 422-423, 427; Comp. Exh. 1; Comp. Grp. Exh. 1, Photo 2; Comp. Grp. Exh. 2, Photo 16-19. The marsh or swamp lies beyond the southern fence. Tr. at 38, 183-184, 198, 421.

Overland employs 41 people at the facility (28 drivers, eight dock workers, five clerical and administrative persons). In 1997, its payroll was just over one million dollars and it paid approximately \$102,000 in taxes. Tr. at 468-469.

History of Property Uses

The trucking terminal was built in 1972. Before Overland's arrival in November 1995, Yellow Freight operated the facility. The facility was vacant for approximately six to nine months between the respective operations of Yellow Freight and Overland. Tr. at 206-208, 272, 292-293, 510; Resp. Exh. 2. Overland's operations involve more trucks and activities than did those of Yellow Freight. Tr. at 18-19, 23, 25, 49, 63, 82, 93-95, 110-111, 186, 195, 207-209, 252-253, 272-273, 288-289.

*6 Pulte built Charter Hall in 1991-1992. Joint Exh. at 2. Pulte provided written notice that the real estate upon which the trucking terminal is located is zoned for industrial uses and is presently being used as a motor freight terminal that operates 24 hours per day. Joint Exh. at 2, Exh. C. Pulte recorded the notice with the Cook County recorder on October 30, 1992. Joint Exh., Exh. C.

Complainants presented the testimony of eight Charter Hall residents, all of whom own homes on the east side of Charter Hall Drive, next to the trucking terminal. Tr. at 11-12, 15-16, 40, 51-52, 92-93, 124; Comp. Exh. 1. Complainant Jeff Cohen and his wife, Tara Cohen, purchased and moved into their home in November 1992. Tr. at 11-12, 15-16, 40. He is the president of complainant Charter Hall Homeowner's Association. Tr. at 15.

Before moving into his home, Mr. Cohen was aware of Pulte's notice regarding the neighboring trucking operation. Tr. at 17-18. Mr. and Mrs. Cohen visited their property several times before purchasing it and never found the noise from the trucking operation troublesome. The visits took place during the day and in the early evening. At the time, Yellow Freight operated the facility. Tr. at 18-19, 40-41.

Mary Ann and Dennis Bergau moved into their home in June 1993. Tr. at 51-52, 117-118. They were aware of the trucking terminal before they purchased their home. They drove past the trucking terminal several times before purchasing their home and did not hear any noise. The visits took place in the early evening and during the day and on one occasion at approximately 9:00 p.m. Yellow Freight operated the facility at the time. Tr. at 61-63, 82, 87-88, 93, 110, 118.

Behram Dinshaw purchased his home in August 1996. Tr. at 125. He was aware of the trucking operation before he purchased his home, but was unaware of Pulte's written notice regarding the operation. Tr. at 138-139. Before purchasing his home, Mr. Dinshaw visited Overland and was told that the facility shuts down at 10:00 p.m., that they do not work on weekends, and that they do not disturb neighbors. Tr. at 139. Mr. Dinshaw also visited his property several times before purchasing it and found it to be quiet. One visit took place on a Saturday and another took place at around midnight on a Friday. Tr. at 139-140, 155.

Tibebu Senbatta and his wife moved into their home in May 1997. Tr. at 158. At the time, he was aware of the trucking operation but not Pulte's written notice. Tr. at 160. Before purchasing their home, they visited the property at least ten times and heard no objectionable noise coming from the trucking terminal. These visits occurred at around 6:00 a.m., 6:00 p.m., and 9:00 p.m. Mr. Senbatta also phoned Overland and was told that the facility stops operations by around 10:00 p.m. and that he need not be concerned about noise. Tr. at 160-162, 173-174, 179-180.

Kathryn Hayden and her husband moved into their home in December 1992. Tr. at 182. At that time, they were aware of the trucking operation. They found out about the Pulte notice at their closing. Tr. at 184. They visited their property during the construction of their home. The construction created a lot of noise, but Ms. Hayden could not recall if she heard noise from the trucking facility, which Yellow Freight operated at the time. Tr. at 184-186.

*7 Judith Lexby moved into her home in June 1995. Tr. at 204. At the time, she was aware of the trucking terminal, but it was vacant. The residents who sold her the home told her that noise from Yellow Freight was very minor and had not caused them any problems. Tr. at 206-208.

Existence and Sources of Noise

Complainants' witnesses complained primarily about three types of noise from Overland. First, they hear a bang sound caused by the hitching of trailers to the trucks or to the yard spotter. The back end of the truck or yard spotter has a device that locks into a device on the front end of the trailer. To lock properly, the truck or yard spotter must back into the trailer with some speed. This collision creates the bang sound. Tr. at 21-22, 67, 97-98, 142-143, 167, 481-482.

Second, complainants' witnesses hear bang sounds that forklifts cause when they load and unload trailers. The forklifts cause a double bang sound when they drive over dock plates. The dock plates are made of metal and they extend from the loading dock to the trailer when the trailer has pulled into a bay. The dock plates rest on the back of the trailer, which is also made of metal. The forklifts drive over the dock plates when they drive into and out of the trailers to load and unload. The double bang comes from each set of a forklift's wheels hitting the dock plate. In a 10 minute period of loading and unloading, the homeowners may hear the double bang approximately 30 to 40 times. The forklifts cause another bang sound when they drop loads in trailers. The various bang sounds are impulsive in nature and last approximately one to two seconds each time. Tr. at 21-22, 66-67, 97, 142, 166, 190-192, 212, 255-256, 259-260, 289-290, 480-481; Comp. Exh. 16, 17.

Third, complainants' witnesses hear the sound of metal dragging on asphalt when the truck or yard spotter pulls a trailer that has not been properly hitched. The sound is the trailer dragging on the asphalt. This activity causes the homes of complainants' witnesses to vibrate. The dragging sound lasts for approximately 5 to 10 seconds each time and occurs much less frequently than the bang sounds. Tr. at 21-22, 24, 67-68, 98, 101, 143, 167, 191-192, 257, 260, 289-292.

Most of complainants' witnesses identified these sources of the noise by either firsthand observation or based on conversations with Overland. Overland does not dispute that it generates these noises from these sources or that complainants' witnesses hear these noises. Tr. at 21, 66, 142-143, 145, 166, 256, 480.

Interference

When Yellow Freight operated the trucking terminal, the noise it generated either did not disturb complainants' witnesses or disturbed them much less frequently. Tr. at 18-19, 23, 49 (Jeff Cohen), 63, 82 (Mary Ann Bergau), 93-95, 110 (Dennis Bergau), 186 (Kathryn Hayden), 252, 273, 288-289 (Tara Cohen). For most of the witnesses, noise problems began when Overland took over the trucking terminal. Overland noises occur more frequently than did those of Yellow Freight. Tr. at 23, 25 (Jeff Cohen), 63, 82 (Mary Ann Bergau), 93-94, 110-111 (Dennis Bergau), 186, 195 (Kathryn Hayden), 207-209 (Judith Lexby), 252-253, 272, 288-289 (Tara Cohen).

*8 Overland's noise bothers complainants' witnesses almost daily. The disturbances typically occur throughout the week with the exception of Sunday during the day. The residents hear the noises repeatedly during Overland's a.m. and p.m. shifts. Tr. at 19-21, 25, 31, 49 (Jeff Cohen), 63-65, 80, 82 (Mary Ann Bergau), 95-97, 100-101, 110-111 (Dennis Bergau), 140-141, 148-149, 152 (Behram Dinshaw), 163-165, 174, 176 (Tibebu Senbetta), 187-190 (Kathryn Hayden), 209-211 (Judith Lexby), 252-254 (Tara Cohen).

Because of Overland's noise, complainants' witnesses and their family members have difficulty falling asleep or awakened from sleep. Tr. at 20, 23-25 (Jeff Cohen), 67, 72-73, 77, 80 (Mary Ann Bergau), 95-102 (Dennis Bergau), 140-142, 147-149, 151-152 (Behram Dinshaw), 163, 165-166, 169, 171-172 (Tibebu Senbetta), 188-190, 193-195 (Kathryn Hayden), 210, 215-219 (Judith Lexby), 253-254, 261-262, 264-265, 269-272 (Tara Cohen). Their sleep is frequently disrupted. Tr. at 24 (Jeffrey Cohen), 72-73, 77, 82 (Mary Ann Bergau), 95-97, 99, 102 (Dennis Bergau), 141-142, 147-149 (Behram Dinshaw), 194-195 (Kathryn Hayden), 210 (Judith Lexby), 269-272 (Tara Cohen). For example, Overland's noise wakes up Mary Ann Bergau every night. Tr. at 82.

Complainants' witnesses also do not use their patios or backyards or leave their windows open because of the noise. Tr. at 23-24 (Jeff Cohen), 64, 81 (Mary Ann Bergau), 94 (Dennis Bergau), 150 (Behram Dinshaw), 192-193, 195 (Kathryn Hayden), 273 (Tara Cohen). In addition, the noise disrupts residents when they watch television and carry on normal conversations. Tr. at 24 (Jeff Cohen), 64, 81-82 (Mary Ann Bergau), 101 (Dennis Bergau), 150 (Behram Dinshaw), 169-171 (Tibebu Senbetta), 187 (Kathryn Hayden), 210, 218 (Judith Lexby), 273 (Tara Cohen). It also limits the residents' ability to entertain guests. Tr. at 81 (Mary Ann Bergau), 101 (Dennis Bergau), 151 (Behram Dinshaw), 193 (Kathryn Hayden), 217-218 (Judith Lexby), 274 (Tara Cohen).

Several of complainants' witnesses kept logs to document the noise from the trucking terminal. Mr. Bergau kept a log from October 28, 1996, to September 3, 1997. He made an entry only when noise from the facility woke him up. Mr. Bergau made entries on approximately 134 different dates. Besides the date, Mr. Bergau noted the time of the disturbance. On some dates, he entered more than one time, such as on January 3, 1997, when he noted disturbances at 12:40 a.m. and 4:00 a.m. The noise from the trucking terminal woke up Mr. Bergau approximately 146 times.² All but several of his entries are between 10:00 p.m. and 8:15 a.m., with the majority of his entries falling between 2:00 a.m. and 6:00 a.m. Tr. at 99-100; Comp. Exh. 4.

Mr. Dinshaw kept a noise log from November 21, 1996, to April 9, 1997. He made an entry only when noise from the trucking terminal awakened him. Mr. Dinshaw made entries on approximately 89 different dates. He also noted the time of the disturbance. On many dates, he made multiple time entries, such as 2:15 a.m. and 5:30 a.m. on November 25, 1996. The trucking terminal noise woke up Mr. Dinshaw approximately 122 times. All but several of his entries are between 11:45 p.m. and 8:15 a.m., with the majority of his entries falling between 2:00 a.m. and 6:00 a.m. Tr. at 146-149; Comp. Exh. 7.

*9 Mrs. Cohen kept a noise log from October 7, 1996, to May 12, 1998. She made an entry each time noise from the facility woke up or kept up her or her husband, Jeffrey Cohen. Mrs. Cohen made these entries on approximately 208 different dates. The trucking terminal noise woke up or kept up Mrs. Cohen or her husband approximately 284 times. Tr. at 260-269; Comp. Exh. 8-10.

The noise problem was continuing as of the time of the hearings. Tr. at 24-25, 31-32 (Jeff Cohen), 82-83 (Mary Ann Bergau),

98-101 (Dennis Bergau), 141, 147-148, 153-154 (Behram Dinshaw), 171 (Tibebu Senbetta), 219 (Judith Lexby), 260, 527-528 (Tara Cohen).

Some of complainants' witnesses occasionally hear sounds from sources other than Overland, such as airplanes, but these other sounds do not disrupt their lives. Tr. at 47-48, 89-90, 155-156, 176, 201-202.

Sound Measurements

Sound Measurements of Citizens

Mrs. Cohen used a Radio Shack sound level meter at her bedroom window to measure sounds coming from the trucking terminal. Greg Zak of the Illinois Environmental Protection Agency (Agency) recommended this particular measuring device to Mrs. Cohen and instructed her how to use it. Mr. Zak is an expert in sound measurement, sound control, and human response to noise. He has past experience assessing and addressing noise from trucking operations and he observed the Overland facility from several vantage points on May 8, 1998. Tr. at 274-276, 387-389, 392-393, 401, 419-423, 431-432; Comp. Exh. 20.

The Radio Shack sound level meter has three settings: (1) the range (from 60 to 120 decibels in 10 decibel increments); (2) the weighting ("A" or "C"); and (3) the response (slow or fast). Mrs. Cohen set her meter for A-weighting and slow response. She set the range either at 60 or 70 decibels. The instrument also has a scale that shows sound measurements up to 10 decibels below and up to six decibels above the range setting. For example, if the range is set at 60 decibels, the meter can measure from 50 to 66 decibels. In this example, 50 decibels would be the baseline. Tr. at 276-278, 287, 392-393; Comp. Exh. 11-13.

She selected baselines of 50 or 60 A-weighted decibels (*i.e.*, enabling her to measure sounds of 50 to 66 A-weighted decibels or 60 to 76 A-weighted decibels, respectively) because she wanted to record any sounds from the trucking terminal that exceeded certain of the Board's nighttime numeric sound limits, which, when A-weighted, equal 51 A-weighted decibels.³ Tr. at 277, 309.

By turning on the instrument, the user automatically causes the battery to be checked. Mrs. Cohen took measurements from her second floor master bedroom window, which faces the facility. She would open her window and hold the meter in the middle of the window and to the side of her body. Tr. at 274-277.

Mrs. Cohen took numerous measurements from April 17, 1996, to January 23, 1998. She noted the dates and times of the measurements. She measured for 10 or 15 second intervals and immediately wrote down the decibel readings that she observed on the meter's scale. She wrote down the highest decibel reading of the 10 or 15 second interval, but many times also included the lowest decibel reading within the same interval, reflecting the decibel change within the 10 or 15 second interval. She also often recorded the type of noise (*e.g.*, bang) and its source (*e.g.*, forklift). She noted if a noise came from a source other than the trucking terminal, such as an airplane. Following Mr. Zak's instructions, Mrs. Cohen later transcribed many of her readings onto checkmark survey data sheets that he provided. Tr. at 276-285, 298-304, 306-308, 310-311; Comp. Exh. 12, 13.

*10 For example, on August 16, 1996, Mrs. Cohen took a number of measurements at 10 second intervals between 4:24 a.m. and 4:34 a.m. During each of four separate 10 second intervals, she recorded bangs from forklifts entering and exiting trailers at 66 A-weighted decibels. Tr. at 308; Exh. 12 at 32. On April 26, 1996, she took numerous measurements at 10 second intervals between 5:05 a.m. and 5:20 a.m. During each of six separate 10 second intervals, she recorded the following changes in A-weighted decibel levels associated with bangs: (1) 52 to 64 decibels; (2) 52 to 64 decibels; (3) 52 to 66 decibels; (4) 52 to 62 decibels; (5) 52 to 66 decibels; and (6) 54 to 64 decibels. Exh. 12 at 7. The majority of Mrs. Cohen's sound measurements of the trucking terminal fall between 52 and 74 A-weighted decibels. Many of those measurements were taken between 10:00 p.m. and 7:00 a.m.⁴ Exh. 12.

At hearing, Mr. Zak calibrated Mrs. Cohen's sound level meter and found it accurate. He opined that this type of sound level meter's calibration does not vary significantly over time and that in all likelihood it was properly calibrated when Mrs. Cohen used it. Roger Harmon and Thomas Thunder (sound experts, as described below), both of Acoustic Associates, Ltd., and Mr.

Zak were present at hearing and heard Mrs. Cohen's testimony. All three appeared as witnesses for complainants. Each opined that the Radio Shack sound level meter provides reasonably accurate decibel level measurements and that the measuring techniques that Mrs. Cohen used would have produced reasonably accurate decibel level measurements of the sound that the trucking terminal generated. Tr. at 332-333, 341-342, 367-369, 393, 395-401.

Mr. Zak and Mr. Thunder opined that sound level changes of eight to 12 A-weighted decibels over 10 to 15 second intervals that Mrs. Cohen measured would interfere with (1) sleep; (2) normal conversation; (3) watching television; and (4) entertaining guests on a patio. Tr. at 369-372, 401-403.

Mr. Bergau also used a Radio Shack sound level meter to measure the sounds of the trucking facility. On April 30, 1996, and May 1, 1996, he took measurements from his open second floor bedroom window facing the facility. Mr. Bergau set the sound level meter on slow response with a range of either 60 or 70 decibels. He took measurements over 1 minute intervals. He recorded the readings from the meter on checkmark survey data sheets. Mr. Bergau received the data sheets from Mrs. Cohen, who had received them from Mr. Zak. Tr. at 103-114; Comp. Exh. 5, 6.

Mr. Bergau testified that some of the readings from the sound level meter were at 78 decibels, but none of the data sheets show a reading of 78 decibels. Tr. at 105; Comp. Exh. 6. On cross-examination, Mr. Bergau could not remember how he recorded the measurements on the data sheets. Tr. at 115. Complainants provided no evidence on whether Mr. Bergau set his sound level meter on A or C weighting when he took measurements or whether he recorded the highest reading during the 1 minute intervals. In addition, complainants' experts provided no opinion on whether Mr. Bergau properly took or recorded the sound measurements.

Sound Measurements of Acoustic Associates, Ltd.

*11 Roger Harmon of Acoustic Associates, Ltd., is an expert in sound measurement. Tr. at 321-325; Comp. Exh. 14. He has prior experience measuring truck and trailer noise. On November 26, 1996, in the Cohens' backyard, Mr. Harmon took measurements of sound that the Overland facility generated. He recorded sounds for two hours, from 2:00 a.m. to 4:00 a.m. He used a precision integrating sound level meter, a calibrator, and a digital audio tape recorder. Initially, he mounted the sound level meter and tape recorder on a tripod and calibrated the equipment. He then positioned the equipment in the Cohens' backyard, 15 feet from the wooden fence. After setting up the equipment, Mr. Harmon left the site. He returned to collect the equipment after the recording was complete. Tr. at 325-327, 339-341, 343-346; Comp. Exh. 16 at 1.

Because the recorder recorded the date and time on the tape, it would have been apparent if the tape had been stopped or replaced. Given the 15 foot distance from the sound measuring equipment to the fence, the approximately 8 to 10 foot height of the berm on which the fence sits, and the approximately 22 foot distance from the fence to the asphalt of the facility's west side, the sound measurements were made at least 25 feet from the Overland noise sources. At that measurement location, besides trucking terminal noise, in all likelihood only several types of sounds may occur at that time of the night and at that time of the year. These extraneous sounds may be caused by an airplane flying over or a vehicle traveling by on Northwest Highway. Mr. Harmon accounted for any sound reflection. Tr. at 327, 339-341, 343-346, 428-431; Comp. Exh. 16 at 1.

After recording, Mr. Harmon analyzed the data from the tape using a real time analyzer in an acoustics laboratory. This provided sound readings in decibels at different frequencies (hertz). Extraneous sounds, such as noise from an airplane flying over, were edited out of the tape. Mr. Harmon provided the resulting data to his colleague at Acoustic Associates, Ltd., Thomas Thunder, for review. Mr. Thunder also listened to the tape. They accounted for ambient or background noise. Mr. Harmon measured background noise between 2:15 a.m. and 2:55 a.m. when the trucking terminal generated little noise. Mr. Harmon, Mr. Thunder, and Mr. Zak opined that the sound measurement procedures were in accordance with Board regulations and American National Standards Institute (ANSI) protocols. Tr. at 328-330, 343-345, 347-348, 357-359, 362-363, 380-381, 383-385, 392; Comp. Exh. 16.

Mr. Thunder is an expert in sound measurement, sound control, and human response to noise. He has prior experience assessing and addressing noise from trucking facilities. Tr. at 350-356, 379-381; Comp. Exh. 15. Using the sound measurements of November 26, 1996, Mr. Thunder compared the trucking terminal noise, which was averaged logarithmically from 3:00 a.m. to 4:00 a.m., with the Board's nighttime numeric limits for sound emitted from "Class C land" to "Class A land." Mr. Thunder also compared this trucking terminal noise and the nighttime numeric limits when

A-weighted. Tr. at 359-363; Comp. Exh. 16.

*12 The trucking terminal noise exceeded the nighttime numeric limits at 1,000 and 2,000 hertz. The Board's limit at 1,000 hertz is 41 decibels, while the trucking terminal emitted sound at 43 decibels. The Board's limit at 2,000 hertz is 36 decibels, while the facility emitted sound at 39 decibels. The A-weighted decibel level of the trucking terminal noise for this one hour timeframe (50 decibels) was one A-weighted decibel below the nighttime numeric limits when they are A-weighted (51 decibels). Comp. Exh. 16, Fig. 4.

In addition, Mr. Harmon reviewed the tape from November 26, 1996, another time for impulsive sounds, again producing data for Mr. Thunder's review. Mr. Thunder opined that the sound measurement procedures were compliant with Board regulations and ANSI protocols for impulse noise. Tr. at 330-331, 364-365.

Mr. Thunder identified three impulses. The first impulse occurred at 3:04:54 a.m. and reached 61 A-weighted decibels. The second impulse occurred at 3:05:57 a.m. and also reached 61 A-weighted decibels. The third impulse occurred at 3:06:31 a.m. and reached 64 A-weighted decibels. In each instance, within a few seconds, the sound level went from below 50 decibels, up to the 61 or 64 decibel level, then back down to below 50 decibels. Tr. at 365; Comp. Exh. 17.

Noise Reduction

Citizen Efforts

Complainants' witnesses made phone calls to the trucking terminal when the facility was loud to request that Overland be quieter. These calls did not lead to any decrease in noise. Tr. at 26, 73, 177-178; Comp. Exh. 4.

Complainants' witnesses also met with Overland officials in May 1996 and May 1997. At the May 1996 meeting, Overland and the homeowners discussed building a fence and cushioning the dock plates to try to reduce noise levels. At the latter meeting, the homeowners suggested specific noise abatement measures, including building a soundproof fence, enclosing the loading dock, cushioning the dock plates, replacing the yard spotter, restricting hours of operation, and operating only on the east side of the building at night. Despite Overland's statements that it would try to reduce the noise levels, the noise problems persisted. Tr. at 26-31, 66, 98, 212-214.

Homeowners also contacted the Village of Palatine and the police about the noise from Overland. These efforts did not reduce the noise. Tr. at 27-28, 74-76, 77, 178, 214-215; Comp. Exh. 2, 3.

Abatement Measures

The parties introduced evidence on various measures to abate noise from the trucking terminal.

Airtight Barrier and Acoustically Absorptive Material. Airtight walls or barriers are commonly used to control sound. A properly constructed airtight, brick or wooden barrier at least 18 to 22 feet high and at least 1 inch thick around the northern, western, and southern perimeter of the facility would be effective in reducing sound levels emitted from the facility to the Charter Hall homes. Adding acoustically absorptive material to the Overland side of the western perimeter wall and to the west side of the facility building would reduce noise by reducing the echo effect between the two structures. These measures are economically reasonable and technically feasible. Overland could have implemented these measures several years ago. Tr. at 373, 375-376, 403-404, 411-413.

*13 Sound Containing Enclosure. Enclosures have been constructed around noise sources, such as trucking dock areas, to reduce sound levels. A properly constructed enclosure around Overland's west side loading dock area would reduce sound levels emitted from the facility to the Charter Hall homes. This measure is economically reasonable and technically feasible. Overland could have implemented this measure several years ago. Tr. at 373, 375-376, 404-405, 408-409, 413.

Padding or Hydraulically Cushioning the Dock Plates and Padding the Trailer Interiors. Mr. Thunder was unaware of any of these measures having been implemented anywhere. Mr. Zak ruled out each of these measures. When Overland placed carpeting and rubber under its dock plates, those materials were quickly shredded or created a safety hazard for the forklift

operator. The United States Post Office also failed when it attempted a similar solution for its loading docks. All of these measures would require high levels of maintenance and have questionable effectiveness in reducing sound levels. These measures are not technically practicable. Tr. at 373-374, 376, 407-408, 413-414.

Cease Many of the Activities on the West Side of the Facility. Overland requires the bays on the west side of its loading dock during both its a.m. and p.m. shifts to accommodate the loading and unloading of trailers. It is dark outside during substantial portions of each of the shifts. It is economically unreasonable to prohibit the use of west side of the loading dock outside of daylight hours. In addition, trucks or the yard spotter may need to hitch trailers involved in loading or unloading on the west side of the facility. Accordingly, it would not be practical to restrict all trailer hitching to the east side of the facility. Tr. at 497-498

Generally, Overland maintains a counter-clockwise traffic flow of trucks entering and exiting the facility. It does this for safety reasons. Tr. at 493-494, 503-504. In light of this and the finding above that the west side bays must remain available for Overland when it is dark outside, it is not technically practicable to prohibit trucks from entering and leaving the facility from its west side.

Overland parks most of its trailers on the west side of the facility. Parked trailers are not involved in loading or unloading. Overland has room on the east side of its facility to park additional trailers. The bang sound from hitching the trailers parked on the facility's west side to the trucks or yard spotter is a significant source of the facility's noise. The dragging sound that occurs when a trailer is improperly hitched is also troublesome for the residents. Restricting the parking of trailers to the east side of the facility would reduce impacts from these noise sources. This measure is economically reasonable and technically feasible. Overland could have implemented this measure several years ago. Tr. at 59-60, 83, 133-137, 414; Comp. Exh. 1; Comp. Grp. Exh. 1, Phot 1, 3, 4; Comp. Grp. Exh. 2, Phot 15, 20, 23.

DISCUSSION

*14 The complaint, as amended,⁶ alleges violations of (1) the Board's nighttime numeric sound limits and (2) the nuisance noise prohibitions of the Act and the Board's regulations. The Board discusses these provisions in turn.

Numeric Violation

The Board first discusses the applicable numeric sound limits, including respondents' argument that the trucking terminal comes within an exception to the nighttime sound limits. Second, the Board discusses the applicable sound measurement procedures. Finally, the Board determines whether complainants have established that respondents violated the applicable numeric limits.

Numeric Sound Limits

The Board has numeric sound limits for daytime hours and for nighttime hours. The numeric limits for daytime hours are less stringent than for nighttime hours. See 35 Ill Adm. Code 901.102(a) and (b). The nighttime numeric limits are set forth in Section 901.102(b), which provides as follows:

b) Except as elsewhere in this Part provided, no person shall cause or allow the emission of sound during nighttime hours from any property-line-noise-source located on any Class A, B or C land to any receiving Class A land which exceeds any allowable octave band sound pressure level specified in the following table, when measured at any point within such receiving Class A land, provided, however, that no measurement of sound pressure levels shall be made less than 25 feet from such property-line-noise-source.

Octave Band Center Frequency (Hertz)	Allowable Octave Band Sound Pressure Levels (dB) of Sound Emitted to any Receiving Class A Land from
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	Class C Land	Class B Land	Class A Land
31.5	69	63	63
63	67	61	61
125	62	55	55
250	54	47	47
500	47	40	40
1000	41	35	35
2000	36	30	30
4000	32	25	25
8000	32	25	25

*15 35 Ill. Adm. Code 901.102(b).⁷

Thus, this section prohibits the emission of sound from one property to another above certain decibel levels at certain frequencies (hertz). The applicable decibel limits are determined by the type of land on which the noise source is located. This prohibition applies only at night.

On November 26, 1996, from 3:00 a.m. to 4:00 a.m., Mr. Harmon measured sound emissions from the trucking terminal. He measured them from the Cohens' backyard at Charter Hall. During this time, Overland emitted sound equal to 43 decibels at 1,000 hertz and 39 decibels at 2,000 hertz. These exceed the Board's nighttime limits of 41 decibels at 1,000 hertz and 36 decibels at 2,000 hertz for sound emissions from Class C land to Class A land.

These exceedences took place during nighttime hours. "Nighttime hours" are defined as "10:00 p.m. to 7:00 a.m., local time." 35 Ill. Adm. Code 900.101. Overland's trucking terminal operation constitutes a **property-line-noise-source**. A "property-line-noise-source" is defined as follows:

any equipment or facility, or combination thereof, which operates within any land used as specified by 35 Ill. Adm. Code 901.101. Such equipment or facility, or combination thereof, must be capable of emitting sound beyond the **property line** of the land on which operated. 35 Ill. Adm. Code 900.101.

Overland emitted sound beyond its **property line** into the Cohens' backyard at Charter Hall. The Charter Hall property is residential and thus Class A land. See 35 Ill. Adm. Code 901.101(a), 901.Appendix B. Overland's noise sources are located on Class C land. The facility has a SLUCM Code designation of 4221 for "motor freight terminals." This is part of the larger SLUCM Code 422, categorized as "motor freight transportation." See 35 Ill. Adm. Code 901.Appendix B. Under Section 901.101(c), Class C land includes SLUCM Code 422. See 35 Ill. Adm. Code 901.101(c).

Overland argues that under the exception set forth in Section 901.107(e), the daytime limits, not the nighttime limits, apply to the trucking terminal during nighttime hours. That section reads as follows:

Section 901.102(b) [*i.e.*, nighttime limits] shall not apply to sound emitted from existing **property-line-noise-sources** during nighttime hours, provided, however, that sound emitted from such existing **property-line-noise-sources** shall be governed during nighttime hours by the limits specified in Section 901.102 [*i.e.*, daytime limits]. 35 Ill. Adm. Code 901.107(e).

An "existing **property-line-noise-source**" is defined as follows:

any **property-line-noise-source**, the construction or establishment of which commenced prior to August 10, 1973. For the purposes of this sub-section, any **property-line-noise-source** whose A, B or C land use classification changes, on or after August 10, 1973, shall not be considered an existing **property-line-noise-source**. 35 Ill. Adm. Code 900.101.

Construction or establishment of the trucking terminal commenced before August 10, 1973. However, the trucking terminal's land use classification changed from "C" to "U" when it was vacant for approximately six to nine months in 1995, between the operations of Yellow Freight and Overland. The "U" classification includes vacant nonresidential buildings. 35 Ill. Adm. Code 901. Appendix B, n. 2. Because the trucking terminal's land use classification changed after August 10, 1973, the facility does not fit within the definition of existing **property-line-noise-source**. Accordingly, respondents cannot avail themselves of the exception set forth in Section 901.107(e) and the facility is subject to the nighttime numeric sound limits.

Measurement Procedures

*16 Section 901.102(b) requires that the sound **measurements** be taken at least **25 feet** from the **property-line-noise-source**. Mr. Harmon's **measurements** satisfy this requirement. The **property-line-noise-source** is the trucking terminal operation. Mr. Harmon set up his **measuring** equipment **15 feet** from the wooden fence separating Charter Hall and the facility. The fence is on top of an approximately 8 to 10 foot tall berm. The distance from the fence to the asphalt of the trucking terminal is approximately **22 feet**. Accordingly, the **measurements** were taken at least **25 feet** from any of the Overland noise sources.

The Board's rules specify additional procedural requirements for **measurements** taken to determine compliance with Section 901.102(b). Section 900.103(b) provides as follows:

b) Procedures Applicable only to 35 Ill. Adm. Code 901

All **measurements** and all **measurement** procedures to determine whether emissions of sound comply with 35 Ill. Adm. Code 901 shall be in substantial conformity with ANSI §1.6-1967, ANSI §1.4-1971 -- Type I Precision, ANSI § 1.11-1966 and ANSI §1.13-1971 Field Method, and shall, with the exception of **measurements** to determine whether emissions of sound comply with 35 Ill. Adm. Code 901.109, be based on Leq averaging, as defined in 35 Ill. Adm. Code 900.101, using a reference time of one hour. All such **measurements** and **measurements** procedures shall correct or provide for the correction of such emissions for the presence of ambient noise as defined in ANSI §1.13-1971. 35 Ill. Adm. Code 900.103(b).

All three sound **measurement** experts, Mr. Harmon, Mr. Thunder, and Mr. Zak, testified that the sound **measurement**

procedures complied with Board regulations and ANSI protocols. The measurements were based on Leq averaging using a 1 hour reference time and were corrected for ambient or background noise.

Respondents alleged in their posthearing brief that Mr. Harmon failed to comply with certain measurement procedures under 35 Ill. Adm. Code 951. The Agency promulgated the Part 951 sound measurement procedures under Section 900.103(a). Part 951 requires, among other things, that the person taking sound measurements be present while measurements are being taken to look and listen for extraneous sound sources and varying wind conditions that may affect the data. See 35 Ill. Adm. Code 951.105(c)(7). Mr. Harmon left the site while the measurements were being taken. Accordingly, he did not comply with this provision of Part 951.

Determination of Violation

Complainants established that sound emissions from the trucking terminal into the Cohens' backyard exceeded applicable nighttime numeric sound limits on November 26, 1996. However, when these recordings were made, Mr. Harmon left the site, thereby failing to comply with one of the Part 951 measurement procedures.

In cases alleging violation of the numeric sound limits, the Board requires strict adherence to applicable measurement procedures, including the requirements of Part 951. See Discovery South Group, Ltd. v. Pollution Control Board, 275 Ill. App. 3d 547, 559, 656 N.E.2d 51, 59 (1st Dist. 1995) ("Strict adherence to sections 901.102 and 900.103 is only necessary when proving a violation of the Board's numeric standards."); Manarchy v. JJJ Associates, Inc. (July 18, 1996), PCB 95-73, slip op. at 10 (in discussing an alleged numeric violation, the Board stated that it "strictly adheres to the requirements listed in Part 951"). Given the noncompliance with Section 951.105(c)(7), the Board finds that complainants failed to establish a violation of the Board's numeric sound limits.

Nuisance Violation

*17 The Board first discusses the applicable law regarding nuisance noise. Second, the Board determines whether noise from the trucking terminal has interfered with the residents' enjoyment of life. Third, the Board determines whether any such interference was unreasonable. Finally, the Board determines whether respondents have violated the prohibitions on nuisance noise.

Applicable Law

Complainants allege that respondents have violated Section 24 of the Act and 35 Ill. Adm. Code 900.102. Section 24 provides that no person shall:

emit beyond the boundaries of his property any noise that unreasonably interferes with the enjoyment of life or with any lawful business or activity, so as to violate any regulation or standard adopted by the Board under this Act. 415 ILCS 5/24 (1996).

Section 900.102 of the Board's regulations states in relevant part that no person shall cause or allow the emission of sound beyond the boundaries of his property "so as to cause noise pollution in Illinois" 35 Ill. Adm. Code 900.102. "Noise pollution" is defined as "the emission of sound that unreasonably interferes with the enjoyment of life or with any lawful business or activity." 35 Ill. Adm. Code 900.101.

These provisions constitute a prohibition against "nuisance noise." Zivoli v. Prospect Dive and Sport Shop, Ltd. (March 14, 1991), PCB 89-205, slip op. at , 8. The Board considers Section 33(c) of the Act to determine if noise rises to the level of a nuisance, *i.e.*, the unreasonable interference with the enjoyment of life. See Hoffman v. City of Columbia (October 17, 1996), PCB 94-146, slip op. at 2. Section 33(c) reads as follows:

In making its orders and determinations, the Board shall take into consideration all the facts and circumstances bearing upon the reasonableness of the emissions, discharges, or deposits involved including, but not limited to:

1. the character and degree of injury to, or interference with the protection of the health, general welfare and physical property of the people;

2. the social and economic value of the pollution source;
3. the suitability or unsuitability of the pollution source to the area in which it is located, including the question of priority of location in the area involved;
4. the technical practicability and economic reasonableness of reducing or eliminating the emissions, discharges or deposits resulting from such pollution source; and
5. any subsequent compliance. 415 ILCS 5/33(c) (1996).

Interference with Enjoyment of Life

Respondents do not dispute that trucking terminal operations have generated noises that complainants' witnesses have heard at their residences. The question remains whether the noises interfered with the residents' enjoyment of life. "If there is no interference, no 'nuisance noise' violation is possible." Zivoli, PCB 89-205, slip op. at 9. Accordingly, a threshold issue in any nuisance noise enforcement proceeding is whether the sounds have caused an interference with the enjoyment of life. See Furlan v. University of Illinois School of Medicine (October 3, 1996), PCB 93-15, slip op. at 4. Sounds from a source must objectively affect enjoyment of life to constitute an interference. See Hoffman, PCB 94-146, slip op. at 16; Zivoli, PCB 89-205, slip op. at 9.

*18 The Board finds that noise from Overland's facility has interfered with the residents' enjoyment of life. The noise has disrupted their sleep and restricted their ability to use their patios or backyards. It requires them to close their windows and disrupts television watching and normal conversations. It also limits the residents' ability to entertain guests. The Board has held that such disruptions from noise constitute an interference with the enjoyment of life. See Manarchy, PCB 95-73, slip op. at 11 (sleeplessness from nightclub noise is interference); Hoffman, PCB 94-146, slip op. at 5-6, 17 (noise interfering with sleep and use of yard); Thomas v. Carry Companies of Illinois (August 5, 1993), PCB 91-195, slip op. at 13-15 (trucking operation noise impacts sleeping, watching television, and conversing).

Unreasonable Interference with Enjoyment of Life

The remaining issue is whether noise from the trucking terminal has unreasonably interfered with the residents' enjoyment of life. Whether an interference is unreasonable is determined by reference to the criteria set forth in Section 33(c) of the Act; however, complainants are not obligated to introduce evidence on each of the Section 33(c) factors. In addition, the Board need not find against respondents on each factor to find a violation. See Wells Manufacturing Company v. Pollution Control Board, 73 Ill. 2d 226, 233, 383 N.E.2d 148, 151 (1978); Processing and Books, Inc. v. Pollution Control Board, 64 Ill. 2d 68, 75-77, 351 N.E.2d 865, 869 (1976); Incinerator, Inc. v. Pollution Control Board, 59 Ill. 2d 290, 296, 319 N.E.2d 794, 797 (1974). The Board now considers each of the Section 33(c) factors.

The Character and Degree of Injury to, or Interference with the Protection of the Health, General Welfare and Physical Property of the People. In assessing the character and degree of interference that the trucking terminal noise caused, the standard applied by the Board is whether the noise "substantially and frequently interferes" with the enjoyment of life, "beyond minor or trifling annoyance or discomfort." Kvatsak v. St. Michael's Lutheran Church (August 30, 1990), PCB 89-182, slip op. at 9.

Testimony and Noise Logs. The noise from Overland has interfered with the lives of many residents. The disturbances occur almost every day and throughout Overland's a.m. and p.m. shifts, which run late into the night and start early in the morning. The trucking terminal noise has disrupted the residents' sleep and limited normal activities in and around their homes. The disruptions are severe and have been going on repeatedly since Overland's arrival in November 1995.

Sound Measurements. Both citizen and expert measurements of the trucking terminal sound levels corroborate the residents' testimony and noise logs on the character and degree of the interference.

Citizen Measurements. Mr. Bergau and Mrs. Cohen need not have followed all Board sound measurement requirements when they measured the Overland facility's sound levels. When sound level measurements are entered into evidence not to prove or disprove a numeric violation, but to substantiate or refute a nuisance noise claim, measurement procedures need not meet all Board requirements that apply in a case alleging a numeric violation. See *Discovery South Group*, 275 Ill. App. 3d. at 559, 656 N.E.2d at 59; *Scarpino v. Henry Pratt Company* (April 3, 1997), PCB 96-110, slip op. at 14; *Schranz v. Village of Villa Park* (December 14, 1994), PCB 93-161, slip op. at 13. However, the measurement procedures used still must be technically justified. Cf. *Hoffman*, PCB 94-146, slip op. at 6-7, 16 (in-window measurements accepted as evidence regarding alleged nuisance violation); *Dettlaff v. Boado* (July 1, 1993), PCB 92-26, slip op. at 7-9 (measurements not taken in compliance with Board regulations accepted as evidence regarding alleged nuisance noise).

*19 Three sound measurement experts opined that Mrs. Cohen's measurement procedures would produce reasonably accurate measurements of sound generated by the trucking terminal. The Board has relied on in-window measurements in nuisance noise cases. See *Scarpino*, PCB 96-110, slip op. at 14; *Hoffman*, PCB 94-146, slip op. at 6-7, 16. The Board finds that Mrs. Cohen's procedures were adequate for this case and that her measurements of the trucking terminal noise were reasonably accurate.

Mrs. Cohen measured sound from the trucking terminal in A-weighted decibels. A-weighting measurements attempt to compensate for the fact that generally a sound with a given decibel level at a higher frequency seems louder to the human ear than a sound with the same decibel level at a lower frequency. See *Noise Pollution Control Regulations* (July 31, 1973), R72-2, slip op. at 10-11. For a given sound measurement, decibels are either subtracted or added at various frequencies using a scale, then the weighted values for each frequency "are combined to give a single A weighted decibel level for the sound." *Id.* at 11.

The Board did not develop A-weighted levels for the Section 901.102 daytime and nighttime numeric sound limits in part because "the characteristics of all possible noise sources [are] so varied that the correlation between A weighted sound levels and subjective reaction does not always hold true." *Id.* at 26. Nevertheless, the Board acknowledged that A-weighted measurements "may be helpful in assessing, on a preliminary basis, a potential noise problem." *Id.* Accordingly, the Board finds the A-weighted sound levels relevant in this case. See *Scarpino*, PCB 96-110, slip op. at 16-17; *Dettlaff*, PCB 92-26, slip op. at 9.

For over 20 months, Mrs. Cohen took numerous measurements of the trucking terminal noise. Most of her measurements fall between 52 and 74 A-weighted decibels and many of those measurements were taken during nighttime hours (*i.e.*, between 10:00 p.m. and 7 a.m.). For sound emitted from Class C land to Class A land, the Board's nighttime numeric sound limits, which are expressed as different decibel limits at different frequencies, equal 51 decibels when they are A-weighted. Accordingly, many of Mrs. Cohen's nighttime measurements exceeded the Board's nighttime numeric sound limits when those limits are A-weighted.

A number of Mrs. Cohen's measurements showed changes in sound levels from the facility of 8 to 12 A-weighted decibels over 10 to 15 second intervals. Mr. Zak and Mr. Thunder opined that these sound level changes would interfere with sleep and normal activities in and around the home.

However, the Board gives no weight to Mr. Bergau's measurements for several reasons. For example, he could not remember how he recorded the measurements on his data sheets. There is nothing in the record on whether Mr. Bergau set his sound level meter on A or C weighting. Moreover, complainants' experts provided no opinion on whether Mr. Bergau followed proper procedures for sound measurements.

*20 *Expert Measurements.* Despite the noncompliance with one of the Part 951 measurement procedures (discussed above at pages 18-19), the Board finds Mr. Harmon's measurements reasonably reliable for several reasons. In all likelihood, there were only several types of extraneous sounds that may occur at that time of year in the middle of the night in that backyard. Mr. Harmon and Mr. Thunder, both of whom have experience with trucking operation noises, listened to the tape. Extraneous sounds were edited out of the tape. The tape would have revealed if it had been stopped or replaced. Moreover, all three sound experts opined that the measurement procedures complied with Board regulations and ANSI protocols. The record demonstrates noncompliance with only one provision of Part 951. Accordingly, while the measurements cannot be used to establish a numeric noise violation, the Board will consider the measurements in assessing the alleged nuisance noise

violation.⁸

The exceedences of the Section 901.102(b) nighttime limits that Mr. Harmon recorded on November 26, 1996, as discussed above, bear upon the character and degree of the interference. The nighttime limits were designed "to offer greater protection during sleeping hours" Noise Pollution Control Regulations, R 72-2, slip op. at 21.

In addition, Mr. Harmon's recording revealed three impulses occurring shortly after 3:00 a.m. While the A-weighted level of the full one hour (3:00 a.m. to 4:00 a.m.) recording was 50 A-weighted decibels, two of the impulses reached 61 A-weighted decibels, and the third impulse reached 64 A-weighted decibels. The Board's noise regulations have A-weighted numeric limits for impulsive sounds (sound pressure peak or peaks usually less than one second in duration, such as from a drop forge hammer or explosive blasting). See 35 Ill. Adm. Code 900.101 (definition) and 901.104 (limits). The Board noted in its original noise control rulemaking that impulsive sounds were not easily measured in the field at the various frequencies. However, the Board found that their levels, measured in A-weighted decibels, did appear to correlate sufficiently well for all types of impulsive sound emitters so that the frequencies were not required. See Noise Pollution Control Regulations, R72-2, slip op. at 18. Each of the three impulses that Mr. Harmon recorded exceeded 46 A-weighted decibels, which is the nighttime limit for impulsive sound emitted from Class C land to Class A land.⁹ See 35 Ill. Adm. Code 901.104.

Finding on this Factor. The Board finds that the character and degree of interference from the trucking terminal noise has been substantial and frequent, and weighs this Section 33(c) factor against respondents.

The Social and Economic Value of the Pollution Source. In assessing this factor, the Illinois Supreme Court has looked to the number of persons that the defendant employed and whether the defendant is an important supplier to a particular market. See Wells Manufacturing, 73 Ill. 2d at 235-236, 383 N.E.2d at 152. Similarly, the Board has looked to such factors as the number of employees at a facility and the total wages and taxes that a respondent paid. See Peter Arendovich v. Koppers Company (February 8, 1990), PCB 88-127, slip op. at 6.

*21 Overland employs 41 people at the facility. In 1997, Overland's payroll was just over one million dollars and it paid approximately \$102,000 in taxes. Its customers include a distributor of medical supplies. The Board finds that the facility has social and economic value and weighs this Section 33(c) factor in favor of Overland.

The Suitability or Unsuitability of the Pollution Source to the Area, including Priority of Location. The Board recognizes that the trucking terminal has priority of location. It was constructed in 1972, while Charter Hall was not constructed until 1991-1992. In addition, the residents were aware of the trucking terminal before buying their homes.

Nevertheless, priority of location is only one aspect of suitability and it is not necessarily determinative of the Board's finding under this Section 33(c) factor. See Oltman v. Cowan (November 21, 1996), PCB 96-185, slip op. at 3, 5. Moreover, the Illinois Supreme Court noted that:

industry cannot, of course, substantially increase its [] emissions and simultaneously rely on its priority of location in the area as a mitigating factor. This sort of changed circumstance would ... undermine the industry's priority-of-location argument. Wells Manufacturing, 73 Ill. 2d at 237, 383 N.E.2d at 152.

When Yellow Freight operated the trucking terminal, the noise it generated either did not disturb the residents or disturbed them much less frequently. Noise problems began for most of complainants' witnesses when Overland took over the trucking terminal. Overland uses more trucks than Yellow Freight did and Overland's noises occur more frequently.

The Board finds that the residents were on notice that their proximity to the trucking terminal may present some annoyances. Nevertheless, the annoyances here have been substantial and have resulted from the intensified operations under Overland. Moreover, Charter Hall and many of the residents preceded the arrival of Overland to this area. The Board finds that the trucking terminal, as Overland has operated it, is unsuitable to the area and weighs this factor against Overland.

The Technical Practicability and Economic Reasonableness of Reducing or Eliminating the Emissions Resulting from the Pollution Source. In considering this factor, the Board must determine whether technically practicable and economically reasonable means of reducing or eliminating noise emissions from the trucking terminal were readily available to

respondents. See Incinerator, Inc., 59 Ill. 2d at 298, 319 N.E.2d at 798; Sangamo Construction Company v. Pollution Control Board, 27 Ill. App. 3d 949, 954-955, 328 N.E.2d 571, 575 (4th Dist. 1975); Scarpino, PCB 96-110, slip op. at 20.

Several technically practicable and economically reasonable measures were readily available to reduce Overland's noise emissions. Overland failed to implement these measures, which include constructing an airtight perimeter barrier, using acoustically absorptive materials on walls, enclosing the west side loading dock area, and parking trailers on the east side of the facility. Overland could have implemented these measures several years ago. The Board weighs this factor against Overland.

*22 Any Subsequent Compliance. Under this factor, the Board must determine whether Overland has subsequently come into compliance with the requirements allegedly violated. See Manarchy, PCB 95-73, slip op. at 13. The noise problem was continuing as of the time of the hearing. The Board weighs this factor against Overland.

Determination of Violation

While the trucking terminal has social and economic value, its noise has caused substantial and frequent interference and not merely petty annoyance. Several technically practicable and economically reasonable measures were readily available to minimize Overland's noise emissions. Overland has failed to implement these measures and the noise problems were continuing as of the time of the hearing in this matter.

After considering the record in light of the Section 33(c) factors, the Board finds that respondents have emitted noise from the trucking terminal so as to unreasonably interfere with the residents' enjoyment of life. This unreasonable interference constitutes noise pollution in violation of Section 24 of the Act and Section 900.102 of the Board's regulations.

CONCLUSION

The Board finds that complainants failed to establish that noise from respondents' facility violated the Board's nighttime numeric sound limits. However, the Board does find that noise from the trucking terminal has unreasonably interfered with the residents' enjoyment of life in violation of Section 24 of the Act and 35 Ill. Adm. Code 900.102. To address appropriate remedies, including civil penalties, the Board orders this matter to hearing on an expedited basis, consistent with the Board's resources.

This opinion constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

1. The Board finds that complainants failed to establish that respondents violated the Board's nighttime numeric sound limits of 35 Ill. Adm. Code 901.102(b).
2. The Board finds that respondents have unreasonably interfered with the enjoyment of life in violation of the nuisance noise prohibitions of 415 ILCS 5/24 (1996) and 35 Ill. Adm. Code 900.102.
3. The Board orders this matter to hearing on an expedited basis, consistent with the Board's resources, to address appropriate remedies, including civil penalties.

IT IS SO ORDERED.

K.M. Hennessey

Footnotes

¹ The transcript of the hearing is cited as "Tr. at ___." Hearing exhibits are cited as follows: complainants' individual exhibits are

cited as "Comp. Exh. ___;" complainants' group exhibits are cited as "Comp. Grp. Exh. ___;" respondents' exhibits are cited as "Resp. Exh. ___;" and the joint exhibit is cited as "Joint Exh. ___."

2 For Mr. Bergau's log, if the entry on a given date notes two different times separated by a hyphen (*e.g.*, 3:15 a.m. - 5:00 a.m. on January 2, 1997) or a space (*e.g.*, 3:30 a.m. 4:00 a.m. on October 31, 1996), the Board counted this as one instance of being awakened by the trucking facility noise. If the log entry on a given date notes two different times separated by a comma (*e.g.*, 12:40 a.m., 4:00 a.m. on January 3, 1997) or a described activity (*e.g.*, 2:00 a.m. "loading" 11:45 p.m. on October 28, 1996), the Board counted this as two instances of being awakened by the noise of the trucking operation.

3 The Board discusses its numeric sound limits and A-weighting at pages 15-17, 21-22.

4 These are "nighttime hours" under the Board's regulations. See 35 Ill. Adm. Code 900.100.

5 Land is classified by its use as specified in 35 Ill. Adm. Code 901.101. The nighttime numeric limits are defined in terms of different decibels at different frequencies (hertz). See 35 Ill. Adm. Code 901.102(b).

6 On May 12, 1998, the hearing officer granted the parties' agreed motion to amend the complaint.

7 The abbreviation for decibel is "dB." See 35 Ill. Adm. Code 900.101.

8 The Board will similarly consider the impulsive sounds that Mr. Harmon recorded.

9 Complainants did not allege that respondents violated the impulsive sound limits of Section 901.104. Accordingly, the Board considers these exceedences only as corroborating evidence of nuisance noise.

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