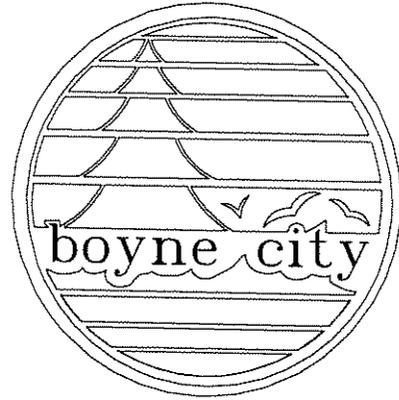


CITY OF BOYNE CITY



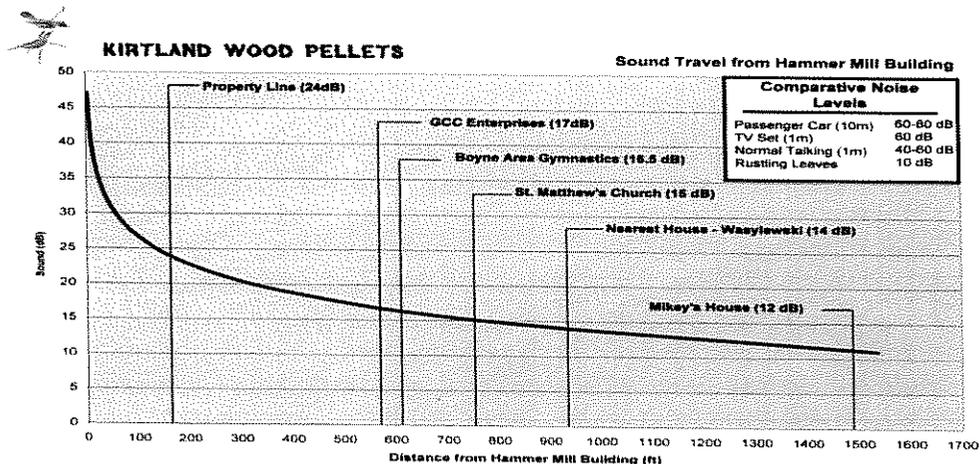
To: Chair Jane MacKenzie and fellow Planning Commissioners
From: Scott McPherson, Planning Director
Date: September 17, 2012
Subject: Kirtland Product Conditional Use Permit Review

BACKGROUND

In November of 2008 the Planning Commission reviewed the application from Kirtland Products LLC. for a conditional use and development plan approval to manufacture wood fuel pellets at 1 Altair Drive. At that meeting the Planning Commission decided three issues. The first issue was a finding that the production of wood pellets could be allowed as a conditional use in the Planned Industrial District (PID). In accordance with the requirements of Boyne City Zoning Ordinance (BCZO) section 14.30(O), a finding was made that the proposed use was similar to allowed uses in the district and the proposed use was classified as a conditional use. As a conditional use it is subject to a stricter level of review and the applicant needs to show that any potential adverse impacts of the use would be addressed and conditions may be attached to the approval to mitigate any adverse impacts. The Planning Commission then reviewed the application and the conditional use requirements of BCZO section 2.70 and made a determination that the use as proposed could meet the requirements for a conditional use provided the submittal and approval of a final development plan. The Planning Commission then reviewed the submitted preliminary development plan and approved the preliminary development plan with conditions. In November 2009 a final development plan was submitted to the Planning Commission and the plan was approved with conditions. In 2010 an application to amend the approved development plan was submitted and the proposed amendments to the plan were approved by the Planning Commission. On March 21, 2011 a zoning permit to construct the plant as per the approved site plan as amended was issued. The applications submitted by Kirtland Products and the minutes of the Planning Commission meetings for the November 17, 2008, November 16, 2009 and November 15, 2010 have been attached for your review.

DISCUSSION

When considering this application one of the primary concerns that the Planning Commission had about the proposal was the potential for noise. At the November 2008 meeting there was considerable discussion about the noise that could be produced by the facility and how it would be mitigated. Kirtland indicated that the loudest piece of equipment on site would be the hammer mill and that they would be able to mitigate the noise produced by the hammer mill in a manner as shown in the following graph:



During the explanation about noise and in response to questions from the Planning Commission, Kirtland representatives indicated that there was equipment in the Lexamar facility that produced noise at similar levels to what could be expected by their equipment and that the noise from their equipment could be mitigated by placing the equipment inside “de-coupled” buildings. To give the Planning Commission a relative comparison on the noise that could be expected from the plant Kirtland indicated that the noise produced by the plant “would be no louder than Lexamar” When questioned specifically about what the loudest piece of equipment on the site would be, Kirtland indicated that the back up signal on the loader would be the loudest. Based on these representations and assurances, the Planning Commission was satisfied that the noise produced by the plant could and would be mitigated and approved the preliminary development plan.

In the fall of 2009 Kirtland submitted a final development plan for review and approval. The plan was reviewed at the November 16, 2009 meeting of the Planning Commission. In regards to the mitigation of noise, the final development plan submitted to the Planning Commission by Kirtland indicated some changes to the sound abatement measures that were initially proposed in the preliminary plan. The proposed changes and methods for sound abatement were described by Kirtland representatives on page 12 of the Kirtland Products LLC, Zoning and Planning Proposal, November 16, 2009, and are as follows:

Landscaping / Sound Abatement

In our last proposal, the plan was to have most of the operating equipment outside, with just pelleting and packaging equipment inside. To address noise, we planned to construct decoupled wall buildings around all equipment exceeding 40 dB noise level. In the new plant design, we have placed all loud (over 40 dB) equipment inside the building.

The landscaping will address noise abatement through a berm on the South and West property lines. Since the existing contour of the ground provides an existing berm on most of these lines, an additional berm will be added on the SW corner (West Line) to bridge the gap. Trees will also be planted along the South property line to provide a more natural view from M-75. Though a mix of species is planned, White Pine will be the predominant species due to its rapid growth.

Based on the provided information, the Planning Commission determined that the noise would be mitigated and the site would be screened using the methods described in Kirtland’s application and final development plan was approved as proposed.

After starting production in the fall of 2011 it was quickly apparent that the noise produced by the plant exceeded the expected levels and Kirtland did not appear to be in compliance with the conditional use permit. The City received many complaints from surrounding citizens and while the majority of the complaints concerned the noise, complaints regarding the size of the plume, odor, smoke and dust were also received. Kirtland representatives quickly acknowledged the fact that the noise produced by the plant exceeded their expectations and implemented measures to reduce the noise with limited effect. In February of 2012 the citizens committee was formed and the EDC/LDFA agreed to provide funding for a consultant to review the noise and emission issues. At first the City sought a consultant that could analyze both the noise and emission issues. However, after receiving only a limited amount of interest in the RFP, and recognizing the fact that much of the emission testing would be duplicated later by testing required by the DEQ, it was determined that the tasks should be separated with the assessment of the noise completed first. While an emissions consultant has not been retained, the citizen committee did submit a list of questions to the DEQ and requested additional emission modeling be completed. The list of questions and answers and the additional modeling results have been attached for your review.

In response to the RFP addressing the noise only, Resource Systems Group (RSG) was hired to measure sound from the plant, identify the noise sources and make recommendations for mitigation. On July 9, 2012 the completed noise study was provided to the City. A copy of the study has been provided for your review.

The RSG study included short term and long term sound measurements taken at several locations around the City. Operational sound measurements were obtained on May 23rd when the plant was operating. To obtain background sound levels, measurements were taken on May 24th without the plant operating. It should be noted that Lexamar was in operation on May 24th at the time the background measurements were obtained. The RSG report shows that at all of the monitored locations within the City limits the noise levels were higher during operation of the Kirtland plant than the background sound levels. Depending on the location, the operational sound levels ranged from 5 to 13 dB higher than the background levels. The operational and background sound levels for each of the monitored locations are shown in figures 15-23 of the RSG report and are provided below:

Figure 15: Summary Map of the Short-term Monitoring Results

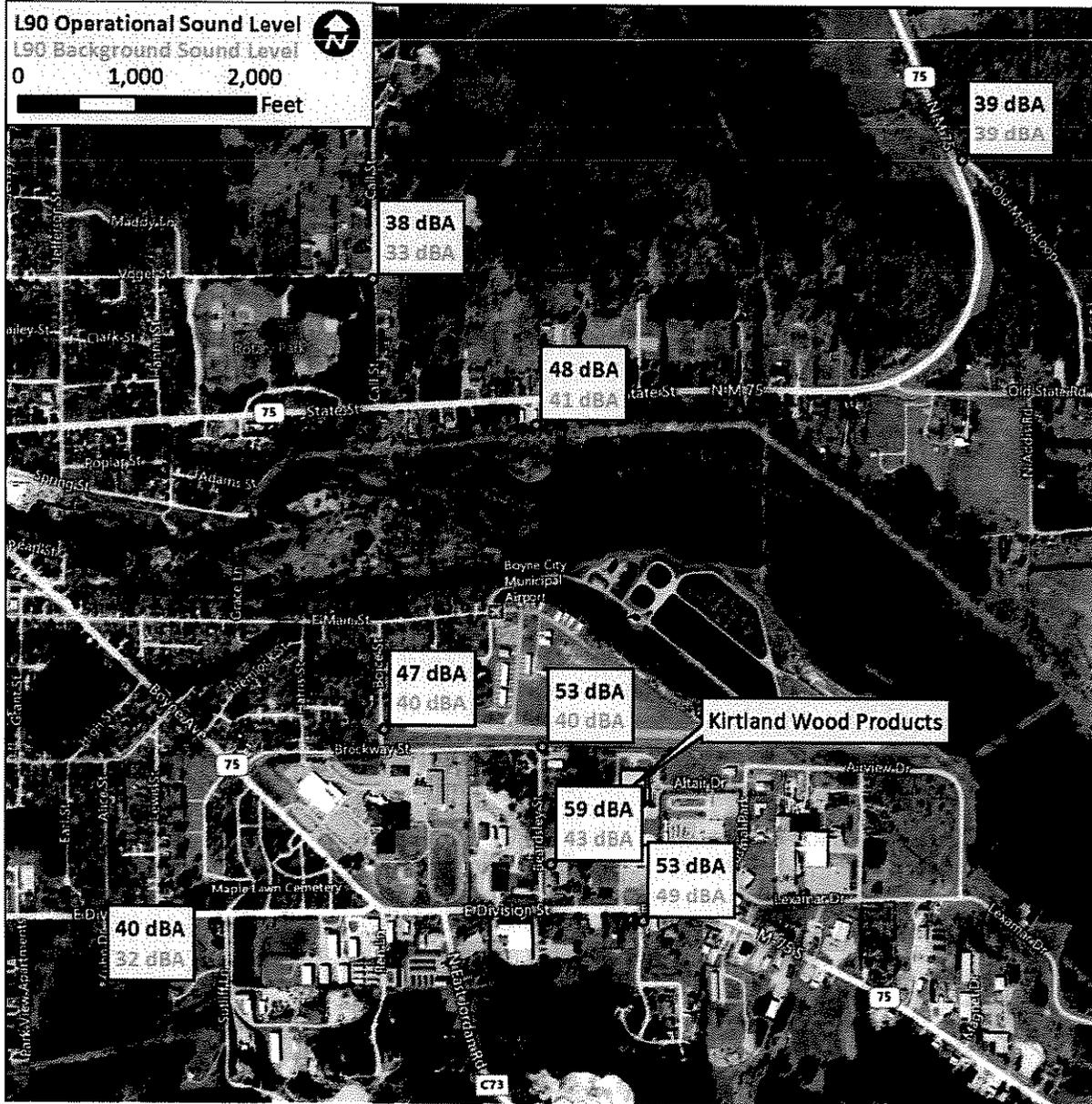


Figure 16: Operational & Background Sound Pressure Levels (L50, dB) for 1/3 Octave Bands at Boice Street

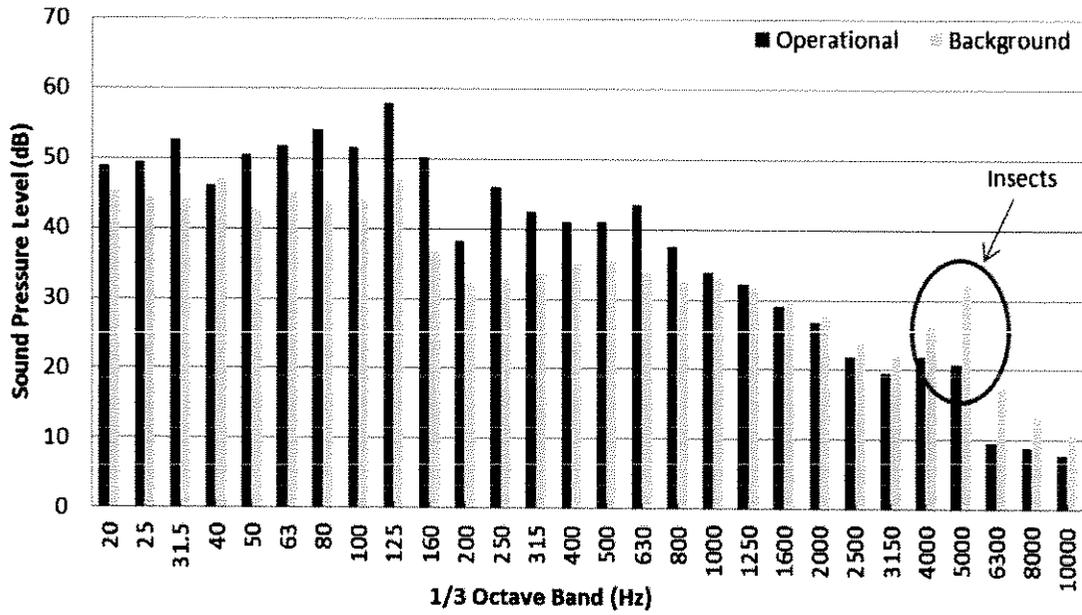


Figure 17: Operational & Background Sound Pressure Levels (L50, dB) for 1/3 Octave Bands at the Church on Beardsley Street

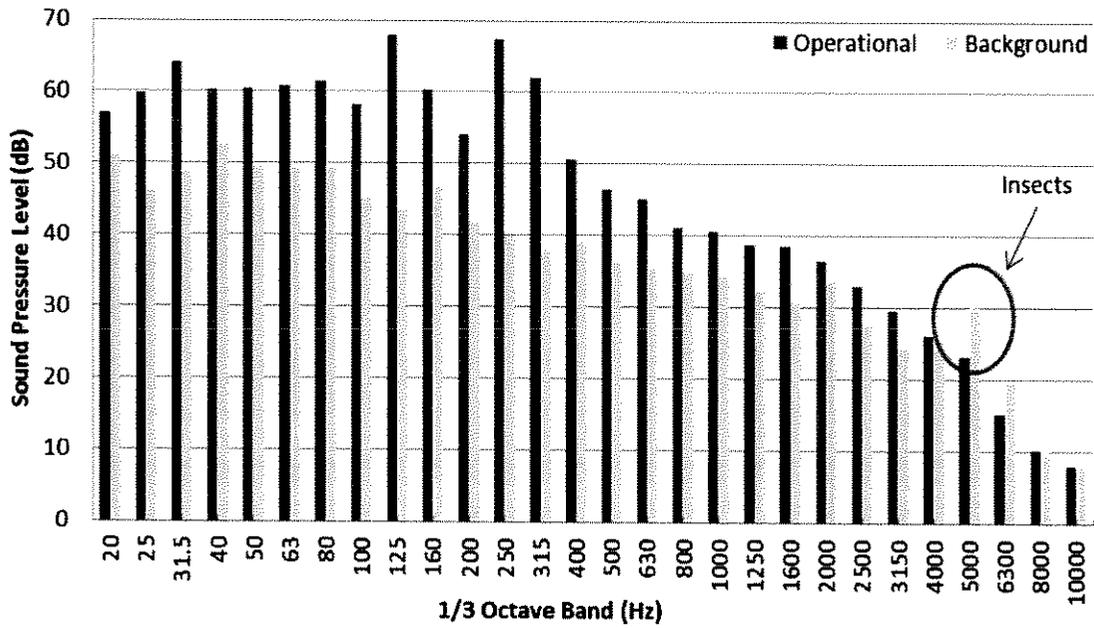


Figure 18: Operational & Background Sound Pressure Levels (L50, dB) for 1/3 Octave Bands at the North End of Beardsley Street

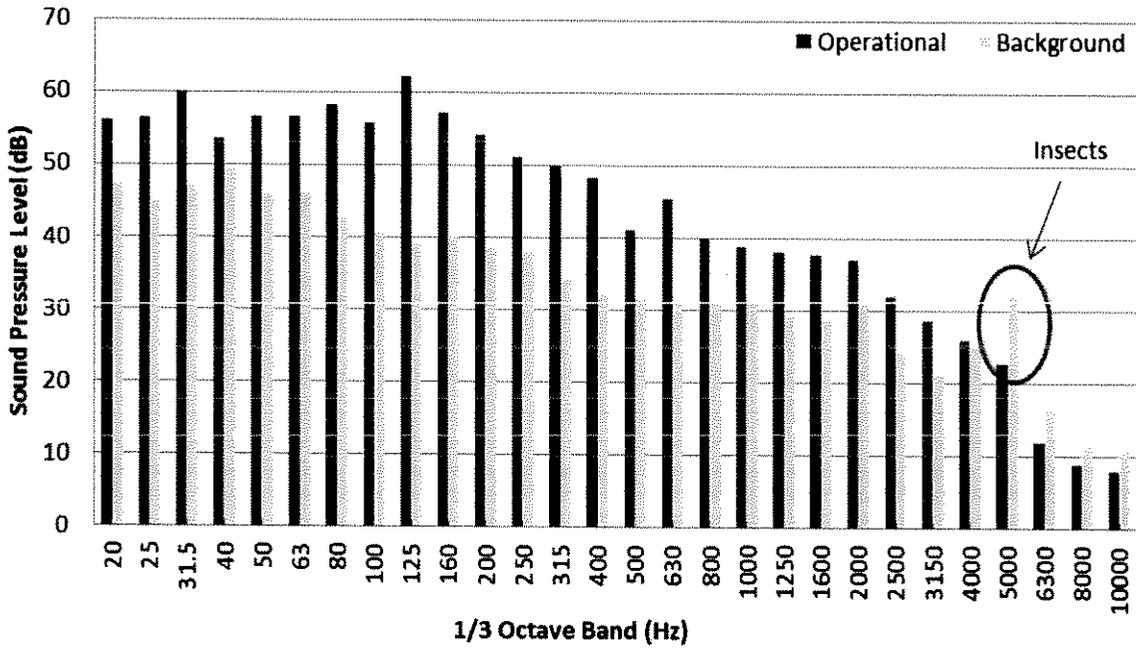


Figure 19: Operational & Background Sound Pressure Levels (L50, dB) for 1/3 Octave Bands at the Corner of Boyne Summit Road & East Division Street

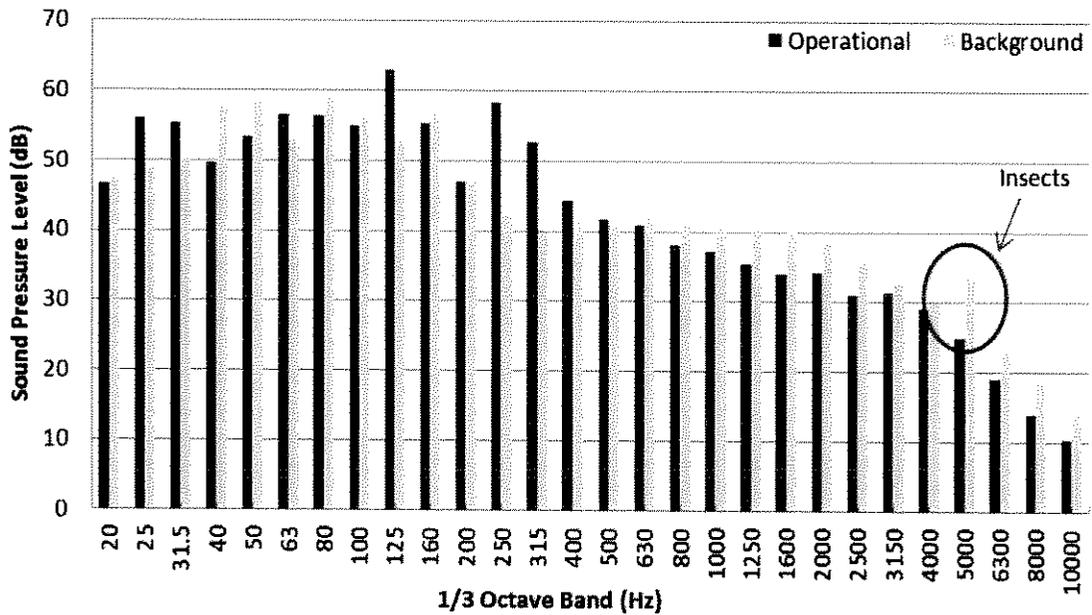


Figure 20: Operational & Background Sound Pressure Levels (L50, dB) for 1/3 Octave Bands at the Kuhn Residence at the Ene of Kuhn Drive

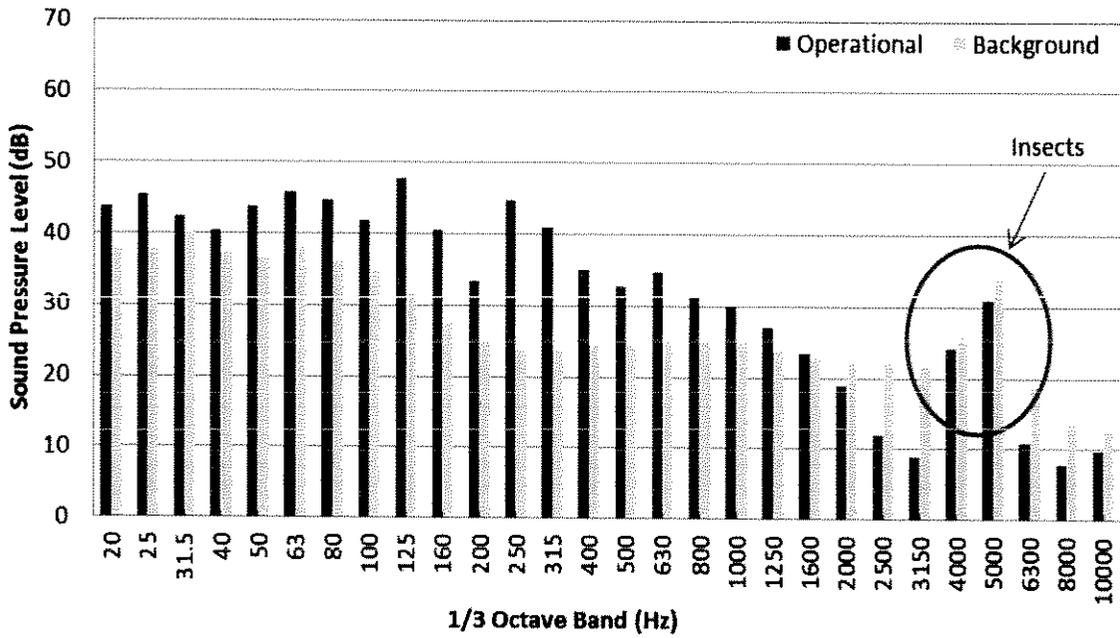


Figure 21: Operational & Background Sound Pressure Levels (L50, dB) for 1/3 Octave Bands at State Street Storage Units

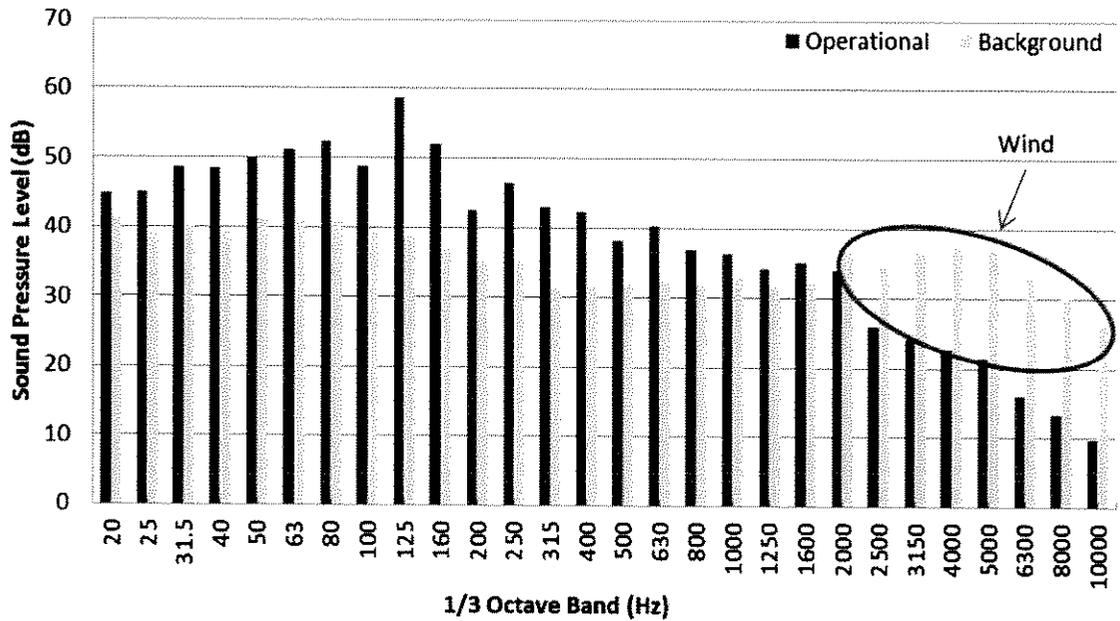


Figure 22: Operational & Background Sound Pressure Levels (L50, dB) for 1/3 Octave Bands at the Corner of Call Street & Vogel Street

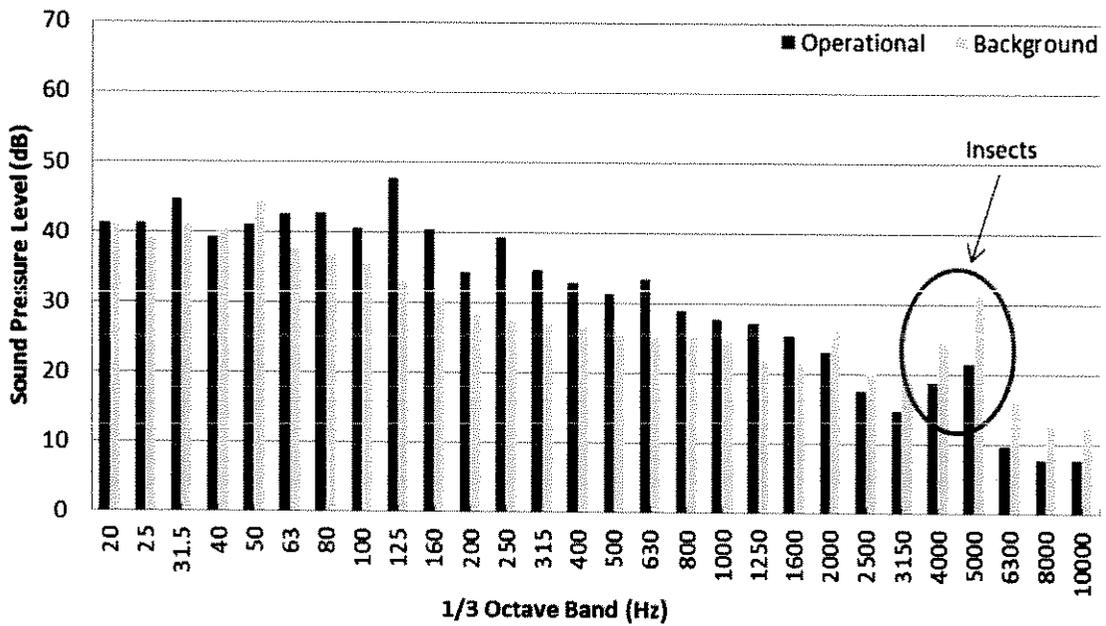
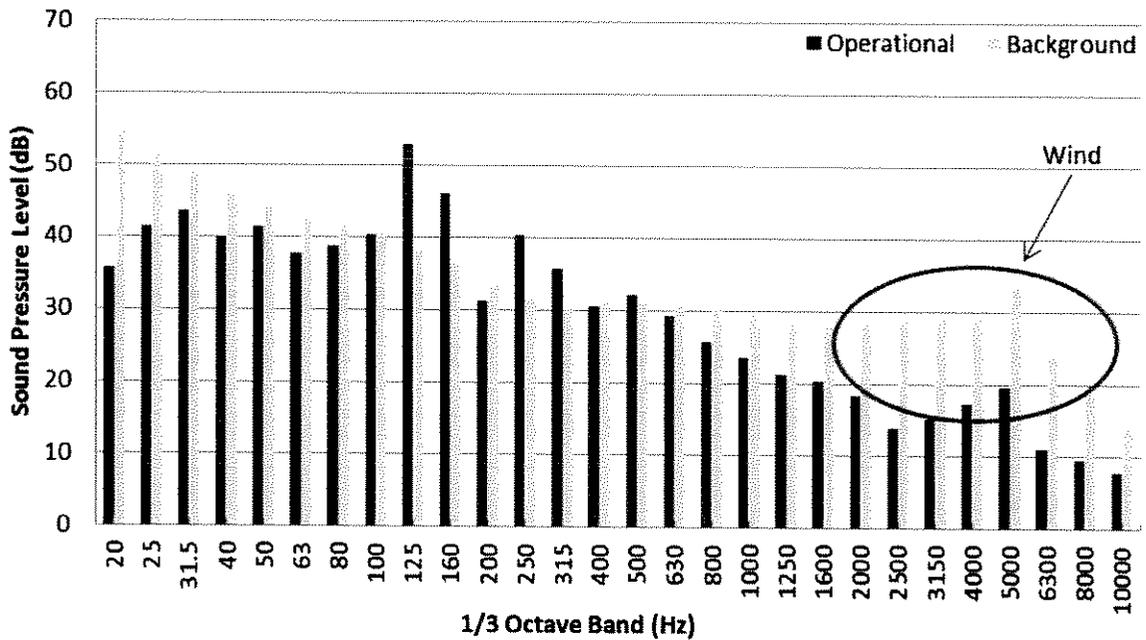


Figure 23: Operational & Background Sound Pressure Levels (L50, dB) for 1/3 Octave Bands at the Corner of Old M-75 Loop Road & M-75



In addition to the sound measurements taken in and around the City, the sound level for each piece of equipment was also measured by RSG. Sound measurements of the equipment showed that 7 pieces of outside equipment that have overall sound pressure levels above 40 dB. The table below shows each piece of outside equipment that has overall sound pressure levels above 40 dB:

Source	Overall Sound Level (dB)
Cooler Fan Model FC19	113.8
Hot Pellet Cyclone Fan Model FC13	111.1
Air Power Unit	110.1
Dry Hammer Mill Vacuum Pump	109.3
Cyclone Fan FC26	113.0
Baghouse Fan Model FC21	113.1
Dryer ID Fan	110.2

Source: RSG Noise Report Figure C1: Noise Emission Data from Kirtland Plant.

Enclosures were constructed around two pieces of equipment that are outside the building, Air Power Unit M-D5009 and Air Power Unit 6". Sound coming through the walls and roof of the enclosures was measured and for both pieces of equipment the sound coming through the enclosures exceeded 100 dB.

Consistent with the sound abatement measures contained in Kirtland's proposal and the approved development plan for the conditional use, the mitigation recommendations included in the RSG report indicated that all of the above noted equipment should be in a building. The report recommended that heavy concrete masonry structures be constructed around all of the above noted equipment. The RSG report also indicated that the two existing enclosures that contain the Air Power Unit M-D5009 and the Air Power Unit 6" were ineffective and recommended those structures be rebuilt.

PROCESS

As per section 2.70(G)(4) the conditional use for Kirtland Products is being referred back to the Planning Commission for review to make a determination on compliance with the conditional use permit. Section 2.70(G)(4) is as follows:

The Planning Director shall make periodic investigations of developments authorized by conditional use approval to determine continued compliance with all requirements imposed by the Planning Commission. Noncompliance with the requirements and conditions approved for the conditional use shall constitute grounds for the Planning Commission to terminate the approval following a public hearing. Such hearing shall be held in accordance with the procedures used for the original hearing as required by this Ordinance.

After investigation of the development as authorized by the conditional use approval for Kirtland Products, the conditional use is being referred back to the Planning Commission as per section 2.70(G)(4) for the following reasons:

Representations and information provided by Kirtland Products to the Planning Commission in regards to the impacts of the plant on which the approval of the conditional use permit was considered were incomplete and/or inaccurate;

Sound produced by the plant exceeds levels represented to the Planning Commission;

The sound abatement and landscaping measures as proposed by Kirtland and approved for the conditional use final site plan have not been completed as all equipment exceeding 40dB was not placed inside the building and landscaping as shown and described in the final approved development plan has not been installed.

Recommendation

The Planning Commission should review the record and make a determination if Kirtland Products is in compliance with the Conditional Use Permit.