

## CASE SUMMARY

Case #2011/1225

**Complainant:** Julia Musto  
16749 Brookhollow Drive  
Westfield, IN 46062

**Applicator:** Billy Lloyd  
**Business:** Green Scene, Inc.  
P.O. Box 248  
Fortville, IN 46060  
317-326-8888

Registered Technician  
Licensed Business

1. On July 14, 2011, I, Agent Andy Roth of the Office of Indiana State Chemist (OISC), performed an investigation at the above listed address in response to a claim of injury/damage to non-target trees possibly resulting from exposure to Imprelis Herbicide. I observed Norway and blue spruces with distorted tips and discolored needles; some had needle loss, especially on lower branches. A maple had distorted and discolored leaves. Austrian pines had some discolored needles but no visible distortion.
2. I photographed the site documenting the symptoms I observed:



Figure 1



Figure 2



Figure 3



Figure 4

3. I collected plant samples from Norway and blue spruces, Austrian pine and maple exhibiting symptoms and submitted them to the Plant & Pest Diagnostic Lab (PPDL) at Purdue for assessment.

4. I collected a composite foliage sample from Norway and blue spruces and a composite soil sample from the treated turf area for chemical analysis by the OISC Residue Lab.

*NOTE: A decision was made by OISC management to not analyze the environmental samples in this case. That decision was based on: 1) the large number of similar environmental samples already analyzed that had produced representative results consistent with the presence of visible exposure symptoms; 2) the expertise developed by OISC investigators through repetition to identify Imprelis exposure symptoms without chemical confirmation; and 3) the large number of similar cases being investigated by OISC at the same time.*

5. The report from the PPDL for the samples submitted states, "Maple: The sample had both gloomy scale, (*Melanaspis tenebricosa* - Comstock) and oystershell scale (*Lepidosaphes ulmi*). Gloomy scale has 1 generation a year and overwinters as mated females. A dormant oil application should reduce the gloomy scale (the primary problem) here. Please refer to the attached publication for management recommendations.

<http://extension.entm.purdue.edu/publications/E-29.pdf>

*There was some leaf distortion and yellowing of growing tips. These symptoms may be caused by nutritional problems, poor growing conditions, glyphosate injury or root uptake of a growth-regulator type herbicide. Austrian Pine: There was some minor needlecast disease present but no symptoms of herbicide injury. Spruce: One or more spruce trees in the photos showed distortion and twisting of the tops consistent with symptoms that are associated with injury caused by synthetic auxin (growth regulator type) herbicides. Typical symptoms caused by these herbicides can include epinasty (twisting and curving) of the leaves or needles, shoot and shoot tip; leaf cupping which can be upward or downward, and in extreme cases, new leaves can be irregular in size and shape (usually smaller than normal) and have abnormal leaf margins. The physical spruce sample showed no diseases but spruce spider mite eggs were present. The photos of many of the blue spruce trees on the property suggest needlecast disease and mites may have caused extensive needle loss and death of lower branches over the last few years."*

6. According to application information collected from Green Scene, Billy Lloyd applied Imprelis Herbicide (EPA Reg. No. 352-793) to the property on April 18, 2011, at a rate of 0.10 oz /1,000 square feet using hose-end equipment.



Andrew R. Roth  
Pesticide Investigator

Date: November 4, 2011

**Disposition:** No violation of the Indiana Pesticide Use and Application Law was documented against the pesticide applicator. Effective September 15, 2011, the Indiana registration for Imprelis Herbicide, EPA Reg. #352-793, was cancelled because it was determined by OISC that the product is "misbranded" (it bears label directions that are inadequate to prevent unreasonable adverse effects to non-target vegetation).



George N. Saxton  
Compliance Officer

Final Date: November 18, 2011