CASE SUMMARY

Case #2011/1340

Complainant: University Park Veterinary Hospital

310 University Drive Granger, IN 46530 574-277-9900

Applicator: Tom McGuin

McGuin's Pro Lawn Care 11341 Edison Road Osceola, IN 46561 574-276-7306 Certified Applicator Licensed Business

- 1. On July 26, 2011, I, Agent Joe Becovitz of the Office of Indiana State Chemist (OISC), performed an investigation at University Park Veterinary Hospital in response to a claim of injury/damage to non-target trees and shrubs possibly resulting from exposure to the herbicide Imprelis. I observed the following during my on-site investigation:
 - a) Spruce and fir trees had new growth that was twisted and browned. Some of the spruce and fir trees had partially defoliated beyond the new growth (see Figures 1 thru 4).
 - b) A tulip poplar and a paulownia tree had new growth that was cupped and curled (see Figures 5 thru 8).
 - c) Ash trees at the site had been injured by emerald ash borer (see Figures 9 and 10).
- 2. I photographed the site documenting the symptoms I observed:



Figure 1-spruce tree



Figure 2-spruce tree close up



- 3. I collected the following vegetation samples from visibly impacted non-target vegetation, as described in paragraph #1, for examination by the Plant & Pest Diagnostic Lab (PPDL) at Purdue:
 - a) Spruce
 - b) Fir
 - c) Tulip poplar
 - d) Paulownia
- 4. I collected the following environmental samples for chemical analysis by the OISC Residue Lab:
 - a) Paulownia foliage
 - b) Soil composite from treated turf area
- 5. The report from the PPDL for the samples submitted indicates, "Tulip poplar and Paulowina showed severe distortion and curling of leaves. Tip dieback, discoloration and twisting of needles was found on the Douglas fir, blue spruce and bald cypress samples. There was no evidence of significant mite or insect injury or disease on the samples submitted. The samples (and pictures) submitted show 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. When injury results in new shoot dieback in conifers there will be no regrowth this season, and with certain species, such as Norway spruce, the entire tree can die."
- 6. According to the report from the OISC Residue Lab, the following levels of aminocyclopyrachlor (active ingredient in Imprelis Herbicide) were found in the samples referenced in item #4:

a) Paulownia foliage

3.4 PPB

b) Soil composite from treated turf area

1.6 PPB

BDL=Below Detection Limits

7. According to the application information collected from the applicator, Imprelis Herbicide (EPA Reg. No. 352-793) was applied on April 29, 2011, at the rate of 4.5 oz /acre using ride-on, ground application equipment.

eph D. Becovitz

Pesticide Investigator

Date: September 19, 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).

Compliance Officer

Final Date: October 11, 2011