CASE SUMMARY

Case #2011/1151

Complainant: Lee Clouse — Property Manager
HDG Mansur Communities, Inc.
10800 Club Point
Fishers, IN 46037
317-845-9300
Avalon of Fishers

Applicator: Hittle Landscaping
17778 Sun Park Drive
Westfield, IN 46074
317-896-5697

1. On July 8, 2011, Agent George Saxton, Agent Matt Pearson, and I, all of the Office of Indiana State Chemist (OISC), performed an investigation at the common area of the Avalon of Fishers. The investigation was in response to a claim of injury/damage to non-target trees and shrubs possibly resulting from exposure to the herbicide Imprelis. A Notice of Inspection was issued to Lee Clouse, the area community manager. I observed the following on the spruce trees during my on-site investigation:
   a) Browning at the tips
   b) Curling at the top
   c) Spiraling of dead areas
   d) Entire branch dieback

   I observed the following on the willow trees during my on-site investigation:
   a) Browning of leaves
   b) Curling of leaves

2. I took the following photos depicting injured/damaged vegetation:


Fig 1: Spruce trees from the side


Fig 2: Spruce trees zoomed out

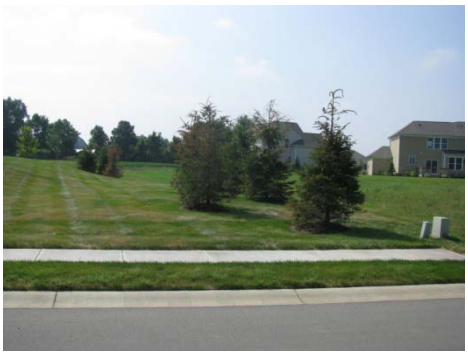

Fig 3: Tops curled

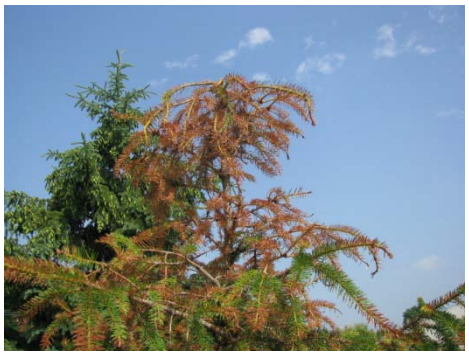

Fig 4: Browning

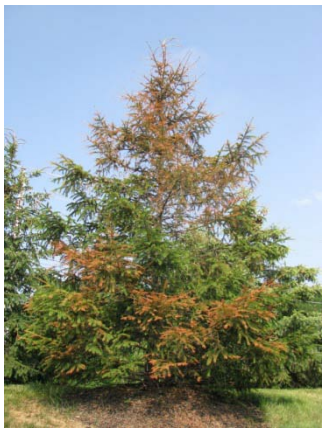

Fig 5: Spiraling & browning

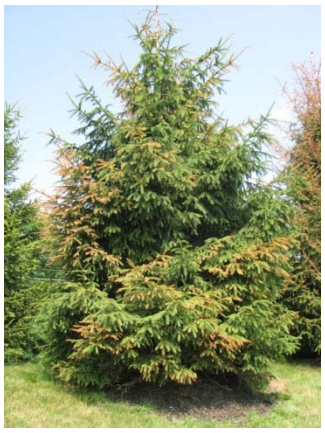

Fig 6: Browning tips

Fig 7: Willows

Fig 8: Willow (browning &curling)

3. I collected the following vegetation samples from visibly impacted non-target vegetation for examination by the Purdue Plant Pest Diagnostic Laboratory (PPDL).
    a) Spruce
    b) Willow

4. At the site, I collected the following environmental samples for chemical analysis by the OISC Residue Laboratory:
    a) Composite soil from target treatment area (lawn)
    b) Composite soil from within the drip line of the spruce trees
    c) Visibly impacted vegetation from spruce trees

5. The PPDL report stated the following:

   "Spruce: The physical sample showed no evidence of significant disease, mites or insect injury. The branch submitted had death of last year's needles, living buds but no twisting. The spruce pictures submitted show twisting symptoms that may be 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. However, many of the dieback symptoms may have multiple causes, including drought stress injury from the dry summer and fall of 2010.

   Willow: The physical sample had several typical fungal cankers and dieback we see frequently on willow. Most of the symptoms present are likely due to the fungal infections. The pictures of the willow showed fairly extensive dieback, perhaps more than would be expected from fungal cankers. Fungal dieback/canker can't be ruled out without closer examination of the tree(s) and further isolations to check for a fungal cause."
   Tom Creswell
   Director, Plant and Pest Diagnostic Lab

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) Composite soil from target treatment area: 3.2 parts per billion
   b) Composite soil from within the drip line of the spruce trees: 0.99 parts per billion
   c) Visibly impacted vegetation from spruce trees: 63 parts per billion

7. According to the application information collected from the applicator, Imprelis Herbicide (EPA Reg. No. 352-793) was applied at the rate of 4.5 fluid ounces per acre using a ride on sprayer; no application was made to the soil within the drip line of any of the evergreen trees; no application was made directly to any exposed roots of any trees or ornamentals.

Elizabeth C. Carter
Pesticide Investigator

Date: August 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: September 19, 2011