CASE SUMMARY

Case #2011/1117

Complainant: Jack Hart
Arbor Trace Golf Club
2500 E. 550 N.
Marion, IN 46552
765-662-8236

Applicator: Jack Hart
Arbor Trace Golf Club
2500 E. 550 N.
Marion, IN 46552
765-662-8236

1. On June 29, 2001, I, Agent Jay Kelleyof the Office of Indiana State Chemist (OISC), performed an investigation at the complainant's property 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 Jack Hart.I observed the following during my on-site investigation:
   a) Tops of spruce trees were curled (see figure #1).
   b) Needles "balled up" and brown on tips of candles (see figures #2 & #3).
   c) Spruce showing areas of browning as it spirals up the tree (see figure #4).

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


Figure #1


Figure #2


Figure #3


Figure #4

3. I collected the following vegetation samples from visibly impacted non-target vegetation as described in paragraph #1 for examination by the Purdue Plant Pest Diagnostic Laboratory (PPDL):
   a) Spruce

4. I collected the following environmental samples for chemical analysis by the OISC Residue Laboratory:
   a) Vegetation from golf course (spruce)
   b) Composite soil sample from golf course
   c) Control soil

5. According to a report from the PPDL, "*No infectious disease was found to be associated with the dieback and distortion observed on spruce samples submitted The sample (and pictures) submitted show symptoms that are typically found to 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. "*

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) Vegetation from golf course *47PPB*
    b) Composite soil sample from golf course *4.5 PPB*
    c) Control soil *BDL*

    PPB=Parts Per Billion BDL=Below Detection Limits

7. According to the application information collected from the applicator Imprelis Herbicide (EPA Reg. No. 352-793) was applied on May 9th-14th, 2011, at the rate of4.5oz /acreusing hand held ground sprayequipment; no application was made to the soil within the drip line of any of the trees or ornamentals; no application was made directly to any exposed roots of any trees or ornamentals.

Paul J. Kelley III

Paul J. Kelley Date: November 9, 2011
Pesticide Investigator

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 Final Date: November 22, 2011
Compliance Officer