CASE SUMMARY

Case #2011/1097

Applicator: Merle Strong Certified Applicator
Business: Meadowbrook Golf Course
3429 S. Madison Ave.
Anderson, IN 46013
765-644-9754

1. On June 24, 2011, I, Agent Andy Roth of the Office of Indiana State Chemist (OISC), performed an investigation at the above listed golf course in response to a claim of injury/damage to non-target trees and shrubs possibly resulting from exposure to Imprelis Herbicide. Owner and Head Professional, Merle Strong, reported he had removed about 50 trees that were dead or dying this year; he estimated another 70 show symptoms. On the course, I observed a variety of evergreen species, including Norway and blue spruce, white pine and arborvitae in varying stages of decline with distorted tips, discolored needles, tip dieback and needle loss. Some maples also had chlorotic leaves with scorched leaf edges.

2. I photographed the site documenting the symptoms I observed:

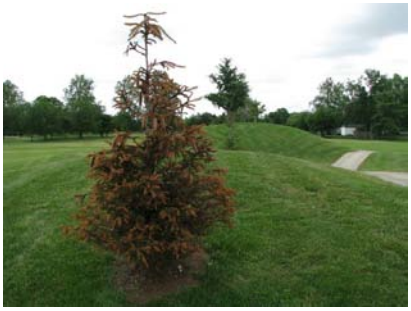
Figure 1


Figure 2


Figure 3

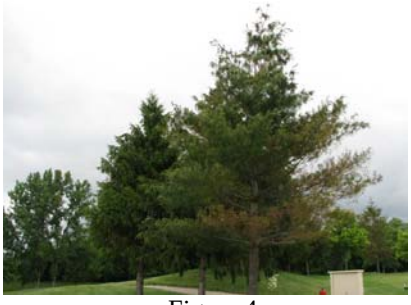
Figure 4


Figure 5

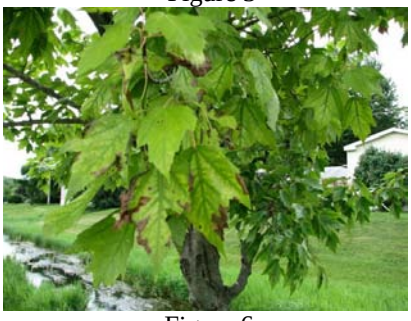
Figure 6

3. I collected plant samples from Norway and blue spruce, white pine, arborvitae and red maple which were exhibiting symptoms and submitted them to the Plant & Pest Diagnostic Lab (PPDL) at Purdue for assessment.

4. Environmental samples were collected for chemical analysis by the OISC Residue Lab. Specifically, I collected Norway spruce foliage and a composite soil sample from the treated turf area (rough).

   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, "*The Spruce, Pine and Arborvitae 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. The red maple has symptoms of iron chlorosis, leaf scorch associated with cultural and environmental stress; and the photo show several cankers on the branches that are likely the result of fungal infection. We can't rule out growth regulator type herbicide injury but these other factors may be causing many of the symptoms present on the sample."*

6. According to Mr. Strong, Imprelis Herbicide (EPA Reg. No. 352-793) was applied during the first week of November 2010. Specifically, Mr. Strong sprayed with a boom sprayer at a rate of 3.0oz /acre on November 1, 2, 3, and 6; Alex Thomason and Joel Salazar sprayed on November 2 with backpack sprayers at a rate of 4.0oz/acre.

Andrew R. Roth
Pesticide Investigator

Date: October 27, 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 21, 2011