Two Children Killed in Utah Fumigation Incident: Department of Agriculture Files Notice of Violation and Hearing

April 2010 - Layton, Utah

The Utah Department of Agriculture and Food’s (UDAf) Division of Plant Industry has filed multiple charges of violations of the Utah Pesticide Control Act against Bugman Pest and Lawn Inc. of Bountiful, Utah, and employee Cole Nocks associated with the Feb. 5, 2010, application of the pesticide Fumitoxin (aluminum phosphide) at the residence of Nathan and Brenda Toone of Layton, Utah.

In addition to the Layton incident, investigators discovered additional violations of the Pesticide Act by the company and other employees. The UDAf seeks to revoke Nocks’ applicator license and issued him a $27,000 fine. The department seeks to fine Bugman Pest and Lawn Inc. $32,000. Under law, the UDAf is only allowed to file civil penalties.

Charges against applicator Cole Nocks for the Layton incident:

Investigators determined that on Feb. 5, 2010, applicator Cole Nocks operated in a faulty, careless or negligent manner by misapplying the highly toxic and restricted-use pesticide Fumitoxin. Nocks’ improper application allowed the pesticide to run off or drift from the target area, causing human harm, as high levels of phosphine gas were detected in the Toone residence. He failed to follow label directions and federal law by applying large amounts of Fumitoxin pellets in several locations that were within a required 15-foot buffer zone of the residence. He did not have a Fumigation Management Plan, which would have required him to provide the Toones with label information and an MSDS (materials safety data sheet), and require him to return in one or two days to re-inspect the fumigated area.

At the time of the application, Fumitoxin was restricted from use within 15 feet of any residence.

The Utah Medical Examiner’s Office determined that two children who died at the Toone residence had elevated levels of phosphorous and lung damage associated with inhaling a harmful substance that appears consistent with the above information.

Specific charges:

- “Operated in a faulty, careless or negligent manner”
- “Refused or neglected to keep and maintain records or make reports as required”
- “Used, or caused to be used, any pesticide in a manner inconsistent with its labeling or rules”
- “To allow an application of pesticide to run off, or drift from the target area to cause plant, animal, human or property damage”

The charges in the Layton case carry a maximum fine of $22,000. Plant Industry seeks to revoke Nocks’ applicator license. Nocks is required to attend an administrative hearing at the Utah Department of Agriculture and Food to answer the charges.

Charges against Bugman Pest and Lawn Inc. for the Layton incident:

- Used or caused to be used any pesticide in a manner inconsistent with its labeling or rules

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The cover story in this issue of PQ soberly outlines only the tip of the iceberg that resulted from an applicator not following the 15-foot buffer zone restriction around inhabited structures as called for in the Fumitoxin label. Two children are dead, a family is shattered, a business is imperiled, and an applicator who was only trying to keep rodents out of a home now has to deal with all the what ifs of being at the center of a terrible tragedy.

Spending a few moments moralizing about the importance of reading and following the label would be easy, but I’m not going to. I think more importantly, we need to keep the people who have suffered because of this accident in our thoughts and prayers.

We also need to understand that when an incident of this proportion occurs, all applicators inevitably will face consequences.

The Environmental Protection Agency’s decision to further restrict the use of this pesticide means that every user will have to carry an additional burden.

Finally, the fact that we do not have incidents like this on a routine basis in this country means that most applicators take their responsibilities very seriously. That’s something to be pleased about, but it is still cold comfort for the folks in Utah. So please, take a moment and reflect a bit, and “let’s be careful out there.”

National Pollution Discharge Elimination System Permit Comments

For several issues, I’ve been chronicling the EPA’s efforts to craft a National Pollution Discharge Elimination System (NPDES) permit to be in compliance with a 2009 federal court ruling. Essentially under that ruling, pesticides, when applied in certain circumstances, could be considered pollutants under the Clean Water Act and thus would need to be covered under an NPDES permit.

In June, the EPA released its draft permit for public comment. In this issue of PQ, you will find three out of about 900-plus comments that the EPA received. All are required by federal law to be read and considered before the EPA can release the final version, which then will become regulatory law. If you want to read more of these comments, you can go to www.regulations.gov/search/Regs/home.html#home. Search for comments with the following docket number: EPA-HQ-OW-2010-0257.

To read the permit (58 pages) or to read the factsheet that explains the permit (116 pages), you can go to the EPA’s website at http://cfpub.epa.gov/npdes/home.cfm?program_id=410.

The 2010-11 Training Schedule

At the time of this writing, we are working on our training schedule for this next season. We will post it online no later than Oct. 15. We also will publish it in the October issue of PQ. Finally, for those whose certificates are set to expire on April 1, 2011, we will be sending the schedule with your notice of expiration in the second half of October.

All the best,
Andrew A. Thostenson, Pesticide Program Specialist

Utah Fumigation Incident

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• Applying Fumitoxin without the required Fumigation Management Plan

“This is a tragic and unfortunate event for the Toone family,” said Pesticide Program Manager Clark Burgess. “I believe this investigation will help other pesticide companies, as well as Utah consumers, understand the importance of reading and following the warnings and instructions on pesticide labels.

“We believe this tragedy could have been prevented if the company and applicator in this case understood this important concept,” Burgess added.

Additional Charges

In the course of the Layton investigation, Plant Industry investigators discovered numerous additional violations of the Utah Pesticide Control Act by Bugman Pest and Lawn Inc. and several of its employees dating back to April 2009. The following charges include the Layton incident as well as several hundred other pesticide applications at locations throughout the Wasatch Front:

- “Neglecting or, after notice, refusing to comply with the provision of the Pesticide Act”
- “Refusing or neglected to keep and maintain required records”
- “Used, or caused to be used any pesticide in a manner inconsistent with its labeling”
- Investigators found the following:
  - More than 3,000 records violations including failing to identify product used and not documenting the rate or amount of product applied. Most of the violations were not health threatening.
Center for Biological Diversity Weighs in on EPA’s Draft NPDES Permits

Editor’s note: The following is the opening paragraph and the concluding remarks by the Center for Biological Diversity (CBD). Its entire public comment was 44 pages long and focused primarily on the negative consequences of pesticides on endangered species. What follows is the web link to the actual comment:

www.regulations.gov/search/Regs/home.html#documentDetail?R=0900006480b1a86b

Clearly, the CBD believes the proposed permit is not sufficient to adequately protect threatened and endangered species.

Thank you for the opportunity to provide you with comments regarding the Environmental Protection Agency’s (“EPA”) draft proposed National Pollution Discharge Elimination System (“NPDES”) General Permit for Point Source Discharges From the Application of Pesticides.

The Center for Biological Diversity (“the Center”) is a non-profit, public interest corporation with over 260,000 members and on-line activists, and offices in San Francisco, California and elsewhere throughout the United States. The Center and its members are dedicated to protecting diverse native species and habitats through science, policy, education, and environmental law. Recognizing that pesticides are one of the foremost threats to the earth’s environment, biodiversity, and public health, the Center works to prevent and reduce the use of harmful pesticides and to promote sound conservation strategies.

IV. CONCLUSION

The EPA can better protect imperiled species and the waters of the United States by addressing the following issues in its final general NPDES permit:

• pesticide discharges should not be permitted to 303(d) listed waterways that are impaired for any reason

• pesticide discharges should not be permitted to outstanding national resources waters or waters in regions designated as Areas of Critical Environmental Concern

• the permit should address all pesticides application activities that result in a discharge to waters of the United States

• the EPA should develop national recommended water quality criteria for pesticides covered by the permit

• applicators covered by the permit should be required to engage in water quality monitoring and reporting

• the EPA should re-evaluate its threshold for NOI-applicators to, at the very least, include applicators whose discharge will impact endangered or threatened species

• the EPA should expand protections to covered other recognized imperiled species such as Candidate species and state-level protected species
North Dakota Department of Agriculture

Comments on NPDES

Editor’s note: The following comment was submitted to the Environmental Protection Agency on behalf of North Dakota Agricultural Commissioner Doug Goering.

I thank you for the opportunity to comment on the document “Pesticide General Permit (PGP) for Point Source Discharges to Waters of the United States from the Application of Pesticides” posted on docket EPA-HQ-OW-2010-0257. Please consider these comments as the Agency finalizes its NPDES general permit for pesticide users.

The North Dakota Department of Agriculture is the lead pesticide regulatory agency in North Dakota, working with EPA as a co-regulator to regulate the sale, distribution, storage, and use of pesticides. The Department is also an advocate for North Dakota farmers and ranchers and the rural community. We also work with county weed control associations to manage noxious weeds in the state using chemical and non-chemical management strategies. Therefore, we have extensive knowledge of how pesticides are distributed and used in the state, as well as expertise in bringing the public into compliance with pesticide-related laws and regulations.

I understand that EPA’s PGP will only apply to those five U.S. states that do not have delegated NPDES permitting authority, along with tribal lands and U.S. territories. However, I also realize that many states will be using the federal permit as a template as they develop their state-specific permits. Therefore, it is critical that EPA develops a workable permit document that meets the needs of the CWA and Court, without creating unnecessary burden to pesticide users and regulators.

First and foremost, it is my opinion that pesticides are adequately regulated under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and use of pesticide on, in, or near water should not result in a risk of unreasonable adverse effects to human health or the environment as long as users comply with provisions of FIFRA. This being said, EPA has a court-mandated deadline to vacate its 2006 rule that exempted certain pesticide applications from the NPDES permitting provisions of the Clean Water Act (CWA).

Because pesticides are adequately regulated under FIFRA, additional regulation under the NPDES permitting of the CWA will have minimum effect on further mitigating risk of aquatic pesticides to surface water resources. Instead, the permit requirements will grow government and increase regulatory burdens and costs to pesticide users without significant real-world benefits. Therefore, I encourage EPA to draft a PGP that only contains the minimum provisions of an NPDES permit as required in the CWA and corresponding regulations. This would include eliminating optional provisions of NPDES permits and requiring minimal reporting and record-keeping.

I offer the following comments on the draft PGP:

1. The PGP is limited to four pesticide use patterns in which pesticides are applied to directly in or on water (a. mosquito and other flying insect pest control, b. aquatic weed and algae control, c. aquatic nuisance animal control, and d. forest canopy pest control). The PGP excludes agricultural and other terrestrial pesticide uses near water. This scope of activities is appropriate and the four use patterns covered under the PGP are well defined.

2. The draft PGP is written as a highly-technical, regulatory document. To improve understanding and compliance by pesticide users, the draft PGP needs to be reworded to plain, easy to understand language.

3. The PGP contains thresholds above which a pesticide user would be required to submit a Notice of Intent (NOI) to the permitting agency. These thresholds are relatively low, meaning that the majority of users will be covered under the NOI requirements. I urge the EPA to either eliminate the NOI requirements completely (as they are an optional provision of an NPDES permit) or raise the acreage thresholds five to ten fold.

4. The definition of “waters of the United States” is extremely broad. North Dakota resides in the northern Great Plains and contains countless numbers of small, seasonal wetlands commonly called prairie potholes. These small wetlands, ranging in size from a fraction of an acre to several acres, are seasonal in nature, appearing and disappearing depending on seasons and amounts of precipitation. Waterfowl hunters, bird watchers, and other recreationists flock to North Dakota from all over the country to utilize these seasonal...
wetlands, and it could be argued that they fall under the definition of “waters of the United States” found in the PGP (see page 38, section (c)(1) of the definition). This could dramatically affect the number of permitted entities and the number of jurisdictional waters. Therefore, I urge EPA to significantly narrow the definition to only cover “navigable” waters.

5. The record-keeping provisions in the PGP are extensive. Furthermore, many of the requirements are duplicative since certain types of pesticide application records are already required under FIFRA and 40 CFR Part 170. I urge EPA to reduce the record-keeping requirements to reduce the burden to pesticide users as much as allowed by the CWA. I also urge EPA to not require record-keeping provisions beyond those required by 40 CFR Part 170. That way, pesticide users could maintain one set of pesticide application records and simultaneously comply with both FIFRA and the PGP.

6. The vast majority of NPDES permits for aquatic pesticide users will be issued by the 45 states that have been delegated permitting authority. I urge EPA to respect the regulatory authority and expertise of those state environmental agencies and allow them to modify the PGP as required to meet their needs and reflect local pesticide use patterns. This includes allowing state agencies to not only adopt PGPs that are more stringent as EPA’s, but also allowing states to eliminate certain provisions of the federal PGP if a state sees the need to do so.

7. The technology-based effluent limits section in the PGP contains requirements for pesticide users to adopt and document integrated pest management (IPM) practices. IPM is a science-based strategy to manage pesticides using chemical, physical, and biological methods, and many users have adopted IPM as a routine way of doing business. However, defining IPM is relatively subjective, and it will be difficult or impossible for a CWA regulator to objectively determine whether a pest management program is adequately “integrated”.

Furthermore, many pesticide treatments occur under contract between a landowner and a commercial applicator, and the IPM provisions do not easily fit into this model. For example, a landowner will be unable to verify whether a commercial applicator’s sprayer is calibrated and in good working order. At the same time, a commercial applicator is solely in the pesticide application business, and he or she will be unable to verify whether the landowner adequately tried non-chemical pest management strategies.

As a result, I recommend that EPA remove the IPM provisions from the PGP. As an alternative, EPA could consider limiting who can use pesticides under the permit more than how those pesticides can be used. All states administer a pesticide certification program in which certain pesticide applicators are certified and deemed competent to use pesticides or to use them in commercial settings.

I thank you for this opportunity to comment on EPA’s PGP pesticide users. Please contact me at (701) 328-4754 or goehring@nd.gov with any questions or concerns.

NDWCA Speaks Out on the Draft NPDES Permit

Editor’s Note: What follows is the public comment that the North Dakota Weed Control Association submitted to the EPA.

I am Stanley Wolf, President of the North Dakota Weed Control Association and Weed Control Officer for Cass County, North Dakota. This response represents the views of the NDWCA. In reading through this permit draft we have several questions and concerns regarding lands that require a permit, control of financing and control of decision within a treatment management area, and size of threshold areas just to name a few. This proposal as it stands now does not contain crucial information to clarify our questions and issues. This proposed permit could radically alter noxious weed control programs in the state of North Dakota due to the vagueness of the descriptions and the expected documentation for the Notice of Intent and subsequent site monitoring.

The NDWCA membership consists of 59 county and city weed control districts in the state of North Dakota. Each weed control district is mandated by state statute to control noxious and troublesome weeds on road rights of way. Each weed control district also oversees noxious weed control on all public and private lands within their respective districts by encouraging and working with the private and public landowners continued
to control noxious weeds on their property. As per state statute all landowners are required to control noxious weeds on their property. All of the weed control districts have authority to issue weed control orders to property owners. Most districts provide partial reimbursement of control costs through a self-funded or state-funded landowner assistance program. We understand that we cannot turn the clock back regarding the Sixth Circuit Court’s decision requiring a NPDES permit for discharging in water; however, the Association members have several questions and concerns (listed below) that are not clearly defined in either the permit or fact sheet. If our interpretation of the permit draft and fact sheet is correct, noxious weed control conducted by the weed control districts will be severely curtailed.

Permit needed or exempt: As stated above the noxious weed control districts’ main treatment areas are the road rights of way. Since this is publicly owned land, will these areas be exempted similar to agricultural production lands or will the weed control districts need to apply for a NPDES permit?

Treatment management area (TMA): North Dakota is situated in the center of the Prairie Pothole Region where numerous water holding potholes dot each square mile of land. The road ditches are designed to channel storm runoff away from the road surface and discharge into either a pothole, drain or stream; how do we determine if a particular road ditch will or will not have unavoidable discharge to waters of the U.S.? Will we need a blanket permit for the entire county?

The counties in North Dakota can be as large as 2300 square miles. If we cannot secure a permit for the entire county then how do we address the following situations:

- **Control over financing** – many of the weed control districts provide private landowners partial reimbursement of control costs. These lands are typically not identified until after the landowner applies for the reimbursement during or after the growing/control season.

- **Control over the decision** – the weed control district can order a landowner to control noxious weeds on his property. These lands are identified during the growing season.

- **Applicators** – Many of the private landowners apply the pesticides themselves, they are not “contracted or hired” by the weed management district. How is this to be managed as a permit holder if the applicator is to be contracted or hired? If we have to “hire” private landowners, we as a government agency will require proof of insurance and applicator certification. This will put the weed control district into a regulatory capacity, which is not our scope of operation. Since these lands are under private ownership and the landowner does the weed control application on his own, not under contract with the weed control district; who secures the NPDES permit, the landowner or the weed control district? If the weed control district is required to own the permit and the private landowner applies a pesticide and has an adverse incident, is the weed control district held liable?

**Threshold levels:** What was your scientific basis for choosing the stated threshold levels? All of the county weed control districts will exceed the thresholds just for controlling weeds in road rights-of-way. Typically most of our pesticide applications are spot sprayed, in that a pesticide is applied only on the infested area, 25% to 50% of the acreage in the road right of way. Since the application is intermittent but can be in close proximity to each other, within 25 feet or less, how do we calculate the treated area? Acreages of road rights-of-way can exceed 30,000 acres in some districts. Also, some districts provide landowner assistance for 30,000 plus acres. The present threshold acres are much too low or every weed control district will need to file a NOI.

**Baseline water quality data:** Most of the waters in North Dakota do not have a water quality baseline. North Dakota has conducted a water quality study which encompassed major flowing rivers but did not include any potholes or small lakes. What happens if there is no baseline data for potholes or small streams within a weed district’s TMA? Will the permit be denied?

**Denial of a permit:** What is the process and how long will the process take to correct or reinstate a permit? Will this be done within a couple of days or will it drag on for months? If we lose a spray control season the infestations can grow much more difficult and costly to control.

**Site monitoring:** Many of the herbicides used for noxious and troublesome weed control are the same used on crop and rangeland or have the same active ingredient.
How can one determine if the residue came from noxious weed control in the road right of way or from the adjoining crop or rangeland? Also, many of the herbicides used have soil residual activity in that the herbicide controls seedlings that sprout up in the fall or the next spring. How do we determine when an herbicide reaches a degraded level that is below its activity level in the soil and will this extended residual be allowed within the scope of the permit? I have posed this question to our herbicide companies. Also there is the issue of residential homeowners within cities that apply pesticides on their property. 2,4-D, a herbicide used in noxious weed control, is readily available over the counter for homeowner application. How do we account for and differentiate residential lawn residue runoff from noxious weed control efforts?

**Following pesticide label directions:**
Some of our herbicides allow us to spray up to or near the water’s edge or into a dry intermediate ditch. If we are following the label directions and a rain event washes residue into water, what are the ramifications?

**Cost of permit and compliance:**
Nowhere in the draft is the issue of cost addressed. The districts are currently working on their budgets for FY2011. With no known costs estimates how can we budget for permit application and compliance? The weed control districts are public programs and work on limited funds. Many of the districts cannot absorb additional costs, especially unbudgeted and unfunded mandates. Any additional costs due to the permit and compliance will take away from our noxious weed control efforts. Private and public landowners look to effective noxious weed control programs to protect their property from invasive weeds.

In summary, the weed control district weed officers and applicators must be certified by the state of North Dakota in order to conduct noxious weed control activities. We are trained under the rules of FIFRA. We understand FIFRA and know how to read and follow the pesticide label. We understand that application of the pesticide must be conducted in accordance with the statements on the label as the label is the law. The pesticide industry is highly regulated, from manufacture, sales, distribution to application.

The statements on the label are approved by the EPA with scientific data supplied by the pesticide manufacturer and outside research. When used as per label directions the products are generally safe to the operator, environment and to the general public. With all of this regulation, why do we need a permit to conduct already approved applications?

This draft proposal is very difficult to read and follow in and of itself. It appears that the draft is written only for professionals trained in the Clean Water Act and subsequent permits. Clarification of the definitions in your draft is needed with clear language describing what is expected for the permit holder.

The above questions and concerns need to be addressed and answered prior to implementation of the NPDES permit and NOI process.

If all road rights of way will need a NPDES permit and a NOI, I feel that many of the weed control districts will alter their weed control programs. Unless there are clear descriptions and definitions regarding “control of financing” and “control of decision” on the treatment area the successful landowners’ assistance programs may be dropped.

The unknown cost of applying for the permit, writing up a NOI and subsequent monitoring of the applications sites may be more than what the weed control districts can bear.

Mowing would be an option to maintain compliance with the North Dakota Noxious Weed Law; however, mowing will not control the spread of noxious weeds as most noxious weed species spread through root expansion. Weeds deemed to be noxious are injurious to public health, crops, livestock, land, or other property. The presence of noxious weeds in cropland, rangeland, wildlife habitat and recreational areas cost North Dakotans millions of dollars each year in expenses and crop production losses.

The presence of noxious weeds also reduces rural and urban land values and the state’s tax revenues. We request that either noxious weed control programs get an exemption from needing a permit or at least greatly increase the threshold levels within the treatment management areas so we can conduct our required weed control programs.

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**Need help with pesticide certification or general pesticide use issues?**

**Contact:**
NDSU Pesticide Training and Certification Program  
NDSU Dept. 7060  
205 Walster Hall, P.O. Box 6050  
Fargo, ND 58108-6050 USA  
Phone: (701) 231-7180  
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EPA Announces Additional Restrictions on Phosphine Fumigants to Reduce Risks to Children

Editor’s note: In response to the tragic death of two Utah girls, the Environmental Protection Agency announced on April 7, 2010, new restrictions on the use of phosphine fumigants. The complete list of new restrictions will be published in the October issue of PQ.

The U.S. Environmental Protection Agency is requiring new restrictions on aluminum and magnesium phosphide products to better protect people, especially children, from dangerous exposures. The new restrictions prohibit all uses of the products around residential areas, increase buffer zones for treatment from 15 to 100 feet around nonresidential buildings that could be occupied by people or animals, and create more protective product labeling.

These actions are part of Administrator Lisa P. Jackson’s comprehensive effort to strengthen the agency’s chemical management program and assure the safety of chemicals.

“Phosphine fumigants are poisons and must be kept away from where our children live,” said Steve Owens, assistant administrator of EPA’s Office of Prevention, Pesticides and Toxic Substances. “These new safeguards prohibit the use of these toxic pesticides near homes and impose restrictions to protect our families from exposure to them.”

Aluminum and magnesium phosphide fumigants are used primarily to control insects in stored grain and other agricultural commodities. They also are used to control burrowing rodents in outdoor agricultural and other nondomestic areas. The fumigants are restricted to use by specially trained pesticide applicators and in only narrow circumstances.

The EPA is expediting approval of the new labels to reduce the potential for accidental poisonings. The primary manufacturer is voluntarily implementing the changes. The EPA will apply these changes to all aluminum and magnesium phosphide products.

For more information about aluminum and magnesium phosphide, go to the website at www.epa.gov/oppsrd1/reregistration/alphosphide/.