

**Summer 2005**

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Upcoming Events

August

*Annual Summer Seminar
August 5-6, 2005
Hilton Oceanfront Resort
Hilton Head Island, SC
<http://www.iclega.org>*

Methamphetamine: Issues In Environmental Law And Management

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Crank. Crystal. Crystal meth. Ice. Speed. Glass. Tweak. These are just some of the street names for methamphetamine. As the illegal manufacture and use of methamphetamine (meth) continues to spread across the country, the true social, environmental, and legal costs of addressing the cleanup of clandestine methamphetamine laboratories are being discovered.

Methamphetamine is an addictive stimulant that may cause aggression, delusions, heart attack, paranoia, or even death among users. Meth comes in powder, pill, and crystal forms, and can be snorted, ingested, injected, and smoked. Meth use is often associated with the young adult club scene or "rave parties," the homosexual population, homeless and runaway youth, and occupations where long hours and mental and physical endurance are demanded.¹ Users tell of euphoric feelings, heightened sexual energy, and invincibility.

Once largely confined to the west coast, meth production has been steadily making its way across the country. Recent statistics published by the U.S. Drug Enforcement Administration (DEA) indicate that clandestine methamphetamine laboratories can be found anywhere and are encountered almost daily by law enforcement.² The Minnesota Bureau of Criminal Apprehension estimates there are as many as 10,000 meth labs in Minnesota.³ Clandestine labs are ubiquitous in the southeastern United States. For example, the State of Tennessee has shown a nearly 400% increase in the number of lab seizures in the last five years.⁴ Elsewhere in the southeast, Georgia, Alabama, Kentucky, South Carolina, and North Carolina have all reported significant increases in total annual methamphetamine lab seizures over the last five years.⁵ Such seizures have a significant economic impact on the drug trade considering the average cost for methamphetamine can be as high as \$21,000 per pound in the southeastern U.S.⁶

Methamphetamine Production

Clandestine methamphetamine labs fall into two general categories: small-time labs, referred to as "mom and pop" or "Beavis and Butthead" labs, which produce small amounts of meth primarily for personal consumption,

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Message From the Chair

Jeff Dehner

Greetings and best wishes for a fun-filled and prosperous summer. We hope you find this Summer, 2005 edition of our newsletter to be informative and relevant to your practice. We have many fine articles for your consideration which represent a wide spectrum of topics and issues. Many thanks to the authors and to our esteemed editor, Ms. Andrea Rimer.

The Section has enjoyed an eventful and productive year so far. I would like to thank the Administrative Law and Government Attorneys Sections for co-presenting the reception for Georgia DNR Commissioner Noel Holcomb earlier this Spring. Commissioner Holcomb delivered some interesting remarks and then graciously circulated through the crowd, meeting attendees and answering questions. Many thanks to Troutman Sanders LLP for hosting this fine event. Also, by the time this edition of the newsletter reaches you, the Section will have hosted a "2005 Legislative Roundup" brown bag presentation featuring the Hon. Lois Oakley, Terry DeMeo King, and John Walden. Thanks in advance to John Spinrad and Arnall Golden Gregory LLP for planning and providing a venue for this event.

In addition to the foregoing, the Section Board has been busy preparing for the annual Summer Seminar at the Hilton Oceanfront Resort, Hilton Head, scheduled for August 5th & 6th. Hilton Head is a beautiful setting (and only a short four-hour drive from the Atlanta area), so we are anticipating a great turnout this year. The seminar offers Section members a unique opportunity to catch up on recent developments in environmental law and to spend some informal time socializing with colleagues from throughout the State. We have an excellent program planned for this year and I look forward to seeing many of you there.

In the meantime, please call me or any of the other Section officers if you have any questions or suggestions regarding this year's agenda. We appreciate your participation in the Section. ♦

METHAMPHETAMINE: ISSUES IN ENVIRONMENTAL LAW AND MANAGEMENT

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and "super labs," which are found mainly in California and the southwest and produce ten or more pounds of methamphetamine each day. In February 2005, Georgia law enforcement agents busted the State's first super lab, seizing over 60 pounds of meth worth \$2.8 million from a Cobb County home.⁷ Regardless of the size of the methamphetamine production operation, meth labs almost always follow one of two primary chemical processes that produce meth: the red phosphorous/iodine method, or the ammonia method. These methods are constantly being refined, and new methods are being developed that include the manufacture of meth in a single container known as the "one pot method." All methods involve the mixing of dangerous and toxic chemicals, various steps of extraction, periods of heating of chemicals, and eventual precipitation and drying of the final product.

Clandestine methamphetamine labs are easily stocked, set up, and moved as the equipment used to make methamphetamine is readily available in stores. Laboratories can be set up on kitchen tables, countertops, automobile trunks, in motel bathrooms, and even ice fishing houses. Common ingredients used in the production of methamphetamine are also readily available, inexpensive, and, by their nature, toxic or deadly on their own, let alone when mixed with other hazardous chemicals. Commonly used ingredients include:

- Pseudoephedrine (commonly found in over-the-counter cold medicine)
- Ether
- Denatured alcohol
- Lantern fuel
- Acetone
- Paint thinner
- Kerosene
- Muriatic acid (battery acid)
- Lithium
- Brake cleaner
- Iodine
- Lye⁸

Instructions for making methamphetamine can be found easily on the Internet.⁹ Basically, the manu-

facturing process consists of the chemical reduction of pseudoephedrine, a common decongestant, to methamphetamine. The process of reducing the pseudoephedrine is relatively simple, involving several steps and the use of various materials containing ammonia, phosphorous and/or iodine (depending upon the chosen method), mixed with strong caustics, solvents and reactive metals to strip a hydroxyl group from the pseudoephedrine molecule. Once the reaction has taken place, the result is dissolved methamphetamine held in solution. In order to obtain the methamphetamine from the solution, an acid gas, such as hydrochloric (muriatic) acid, is bubbled through the mixture, causing the methamphetamine to fall out, or precipitate to the bottom of the container. Once the methamphetamine has precipitated out of the solution, the mixture is filtered and dried – often through heating. If the methamphetamine is later redissolved into alcohol or acetone which is then allowed to evaporate off, this highly-concentrated and far more potent product is then referred to as “ice.”

Environmental Issues

Environmental problems arise from the haphazard use and disposal of the ingredients used to make methamphetamine. In addition to the ingredients listed above, ingredients include such bad actors as hexane, methanol, toluene, and xylene. Corrosives and irritants such as anhydrous ammonia, hydrochloric acid, phosphene, lye, and drain cleaner are used in production, as are lithium, red and yellow phosphorous, and sodium metal. The common ingredients listed above and their toxic combinations are often poured down drains or wells or dumped onto the ground in backyards, along roadways, in ditches, and in parks and greenspace. At larger methamphetamine “super labs,” barrels of chemicals have been found as vast quantities of essential ingredients are used to increase daily production. Environmental problems are compounded by the fact that for every pound of meth produced, approximately six pounds of hazardous waste are generated.¹⁰ Improper disposal can result in contaminated soil and groundwater.

Meth fabrication also impacts indoor environmental quality as interiors of homes and other manufacturing sites become contaminated. Residue generated

during the cooking process settles on all surfaces, and furniture, walls, and clothing must be decontaminated or thrown away. If not properly decontaminated the remaining contamination can present exposure problems for future residents, and can be especially harmful to small children who come in contact with contaminated carpets or play on contaminated furniture.¹¹

Cleanup of meth labs is dangerous and expensive. Currently, cleanup procedures and cleanup levels are regulated on a state-by-state basis, although not all states have enacted legislation. Hazardous materials cleanup teams and first responders wear Level B protective suits (full-body protective clothing and respirators), and the processes and chemicals used during cooking increase the risk of fires, explosions, and toxic exposures during lab dismantlement. The cost to clean a large home can run up to \$10,000,¹² and typically includes only the cost of removing the hazardous wastes and disassembling the laboratory. Decontaminating the interior surfaces and furnishings of a lab can push cleanup costs even higher. Costs for remediating super labs can run more than \$100,000. In addition to the removal of stockpiles of hazardous chemicals, first responders to the site may also encounter biohazards such as syringes and blood-contaminated materials, and explosive booby-traps.¹³ A complete cleanup of a methamphetamine laboratory should also include decontamination or replacement of porous surfaces, contaminated ductwork, and plumbing systems, if contamination is indicated, which adds to the cleanup costs.

Legal Issues

Emerging legal issues associated with methamphetamine production and the cleanup of seized laboratories include determining who pays for the cost of cleanup, the impact of such toxic sites on real estate transactions, and the potential for homeowners and occupants to be exposed to the toxic chemicals associated with methamphetamine production. An indicator of the emphasis being placed upon the meth issue is the introduction by the 109th U.S. Congress of 20 legislative bills addressing methamphetamine abuse, manufacture, and laboratory cleanup.¹⁴ Issues of disclosure and cleanup costs are becoming significant as former meth labs are returned to public use.

Turning Brownfields Into Green: Georgia's Tax Incentives For Brownfields Development

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In recent years, there has been an increasing interest in providing incentives to redevelop brownfields and bring such properties into productive use. Brownfields typically are considered abandoned, idle or underused property where expansion or redevelopment is complicated by real or perceived contamination. Brownfield sites include abandoned factories and other industrial facilities, gasoline stations, oil storage facilities, dry cleaning stores, and other businesses that formerly dealt with polluting substances. Concerns with liability, the time and cost of cleanup, and the reluctance to invest in older urban areas made these sites difficult to redevelop. In 2002, the Georgia General Assembly addressed some of these concerns by passing the Georgia Hazardous Site Reuse and Redevelopment Act ("HSRRA"). See O.C.G.A. 12-8-201 et. seq.

Under Georgia law, purchasers of brownfields property may become strictly liable for releases of hazardous substances on their property, regardless of whether they caused or contributed to the release. O.C.G.A. § 12-8-96.1. In 2002, to encourage redevelopment and productive use of brownfields property, the Georgia General Assembly enacted HSRRA, which provides liability protection to prospective purchasers of brownfields property. Under HSRRA, a qualifying prospective purchaser may obtain a limitation of liability for preexisting releases of hazardous substances on the brownfields property by submitting to the Georgia Environmental Protection Division ("EPD") either a Compliance Status Report demonstrating that the property is in compliance with applicable standards, or a Corrective Action Plan outlining how the prospective purchaser will remediate contaminated soil and source material. Upon approval of the prospective purchaser's Compliance Status Report or Corrective Action Plan, the prospective purchaser is protected from liability to the state for costs related to groundwater contamination

and from third-party claims arising from the preexisting contamination. In the most recent legislative session, the protections of HSRRA were extended to releases of petroleum products and were also made available retroactively to owners of brownfields property who purchased the property after July 1, 2002 and before July 1, 2005, provided an application is made by January 1, 2006. See S.B. 277.

A little-known benefit available to participants under the Georgia brownfields program are property tax incentives, which are available for recovery of cleanup costs incurred in pursuit of obtaining the limitation of liability under HSRRA. In November 2002, a constitutional amendment was approved, allowing the General Assembly to pass legislation creating a tax incentive for redevelopment and cleanup of brownfields sites in the state of Georgia. In 2003, the General Assembly amended the tax code to provide for preferential assessment of contaminated property that has received a limitation of liability under HSRRA. See O.C.G.A. § 48-5-7.6. The preferential assessment freezes the ad valorem value of the property for a period of ten years or until the HSRRA costs have been recovered through tax savings, whichever occurs first.

Preferential tax treatment for cleanup of brownfields property may be sought after EPD has approved the prospective purchaser's Compliance Status Report or Corrective Action Plan and issued a certificate of limitation of liability to the prospective purchaser. O.C.G.A. § 48-5-7.6(a)(1)(B) and (C). After issuance of the limitation of liability, the prospective purchaser may submit its "eligible" investigation and corrective action costs to EPD for "certification." EPD then reviews the costs submitted by the applicant for accuracy and approves or denies the costs. O.C.G.A. § 48-5-7.6(j). Eligible costs may be submitted for certification only once for each assessment or remediation undertaken under HSRRA. *Id.* The certification of costs is a decision of the Director, which may be appealed like any other final action of the Director. *Id.*

"Eligible brownfields costs" basically are costs "directly related" to the receipt of the limitation of liability under HSRRA. O.C.G.A. § 48-5-7.6(a)(B). However, certain costs are deemed to be "ineligible costs" such as the purchase or routine maintenance of equipment (unless

the applicant can demonstrate that the purchase was directly related to the receipt of a limitation of liability), employee salaries and expenses, legal expenses, purchases of property, construction costs, costs associated with maintaining institutional controls and financial assurance after EPD's certification of costs. O.C.G.A. § 48-5-7.6(a)(4).

The property owner may submit an application to the appropriate county board of tax assessors requesting preferential tax status upon receipt of the certification of eligible costs from EPD. O.C.G.A. § 48-5-7.6(c). The county board of tax assessors must determine if the property owner has complied with the statutory provisions granting preferential status and, if so, the county board of tax assessors is required to grant preferential assessment to the property. The applicant must be notified of this determination within 90 days after receiving the application. Failure to timely make a determination and notify the applicant of the determination within 90 days is deemed an approval of the application. The denial of an application may be appealed in the same manner as other property tax appeals.

If preferential assessment is granted, the county board of tax assessors is required to freeze the property's fair market value at its "contaminated" value (i.e., value of the parcel at the time that the original application was made to EPD under HSRRA) or the acquisition cost of the property, whichever is less. O.C.G.A. § 48-5-7.6(d)(3). The property is then taxed at this lesser fair market value for up to ten years or until the property owner has saved as much in taxes as he/she spent on site investigation and remediation in pursuit of obtaining HSRRA's limitation of liability. The brownfields property is immediately eligible for preferential assessment. O.C.G.A. § 48-5-7.6(d)(1). For purposes of determining the years of eligibility for preferential assessment, the tax year following the year in which the certification of eligible costs was filed with county board of tax assessors shall be counted as the first year of eligibility. *Id.* A property owner receiving preferential tax treatment is required to submit an annual affidavit to the relevant taxing authorities that includes the amount of eligible costs remaining and the number of years the property has received preferential assessment. O.C.G.A. § 48-5-7.6(f).

A brownfields property may continue to receive preferential tax treatment even if the property is transferred or leased, provided the transferee or lessee is an entity required to pay ad valorem tax on the brownfields property, the transferee or lessee complies with the applicable brownfields tax provisions, the transferee or lessee continues any and all activities required for continuation of the limitation of liability under HSRRA and the transferee/lessee and transferor/lessor notify the local taxing authority of the transfer no later than 90 days following date of transfer. O.C.G.A. § 48-5-7.6(g).

Further, a brownfields property may be subdivided and continue to receive preferential tax treatment. O.C.G.A. § 48-5-7.6(h). As with leased property, the transferee must continue to comply with the applicable brownfields tax provisions and continue any required activities for continuation of the limitation of liability. Further, along with the 90-day notice of the transfer to the local taxing authority, the transferor and transferee must jointly submit a sworn affidavit to the local taxing authority stating the eligible brownfields cost being transferred to the subdivided property.

As can be seen, this little-known benefit connected with the purchase of brownfields property has the potential to provide huge benefits. Impediments thus far to implementation appear to be the local taxing authority's unfamiliarity with this law. According to Madeline Kellam with EPD's Brownfields program, to date EPD has "certified" eligible costs for only one application, which was submitted to a county to take advantage of this brownfields tax incentive. Due to the county's unfamiliarity with this incentive, this application stalled. EPD is evaluating how best to work with the counties to increase their familiarity with the brownfields tax incentive law. EPD is planning in the next upcoming months to assist counties with development of a standard form to be utilized as a brownfields tax application. Once this program becomes more familiar to the local governments, utilization of the law should become more widespread and further enhance the benefits of brownfields development in Georgia. ♦

Changes, Complications (And Lawsuits) With Georgia's New NPDES Industrial Stormwater Requirements

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Recent changes in the General National Pollutant Discharge Elimination System (NPDES) industrial storm-water permit are being implemented in Georgia. These changes require that industries monitor stormwater runoff from their properties and ensure that the runoff is not carrying contaminants into rivers and lakes. The program, which Georgia Environmental Protection Division (EPD) estimates currently includes approximately 4,000 facilities out of the 8,000 to 10,000 facilities across the State that should be enrolled, is significantly more complicated than the previous permitting requirements. To further complicate the issues, the new permit is mired in lawsuits, preventing its implementation and throwing numerous industries into immediate non-compliance.

Background

In 2003, Georgia's existing NPDES Industrial Stormwater Permit expired. By statute, facilities already enrolled (and in compliance with the permit) were allowed to continue discharging storm water while the new permit was drafted and finalized. Two significant drafts of the new permit were issued, in late 2004 and in March 2005. The latter draft was scheduled to go into effect in early June 2005. The new general permit is a significant revision of the older permit, requiring extensive new monitoring and reporting activities. Numerous facilities and industries that previously were either exempt or not required to monitor their storm-water discharges are now subject to compliance. With some notable exceptions, facilities that have the potential to discharge chemical- or waste-affected storm water during a storm event are subject to the new industrial storm-water regulations.

New Monitoring Requirements

Under the new requirements, facilities must prepare more detailed Storm Water Pollution Prevention Plans (SWPPPs) than were previously required. In addition, depending on where the facility is located, it may be required to perform two years of monthly analytical testing of storm water. Depending on the results of those sampling events, a more stringent SWPPP may be required along with another year of monthly monitoring. Whether monitoring is required is based on Georgia's 303(d) impaired stream

segment list, which outlines specific creeks and streams that require special attention. Exactly what is monitored and what discharge concentrations are acceptable are also major points of contention. Fecal coliform, for which monitoring will be required at certain sites under the currently proposed permit, has no numeric discharge standards but will rather be evaluated on a "case-by-case" basis. There are concerns, as well as lawsuits, claiming that not enforcing the discharge standard will allow discharges to exceed the standard protective of rivers and lakes.

State of (Non-) Compliance

Policing and reporting requirements under the revised permit have not significantly changed from the previous permit. Consequently, it will still be difficult to ensure that facilities are complying with the permit. Most facilities will not be required to submit reports to the EPD, but rather to maintain them on their premises. This continues to be a point of contention with environmental interest groups, who complain there is effectively no policing of industries subject to the permitting requirements. A review of eleven randomly selected sites (which, based on their size and industrial activities, should have been permitted under the program) indicated that in every case, the facilities failed in one or more critical aspects of compliance. Deficiencies ranged from failure to enter into the program, to inadequate monitoring of monitor storm water, to failure to keep documents current as required by the permit.

Next Steps

The new requirements are expected to complicate an already difficult-to-implement program. The EPD department tasked with ensuring compliance is critically understaffed for the number of facilities that are and should be involved in the program. Although the current administration of this program is fairly loose, there may be significant fines associated with non-compliance and it is in the industries' interests to comply with the program. Environmental interest groups, in particular, have begun independently reviewing files to ensure industry compliance. Unless there is more participation by regulated industries and more regulatory education and follow-up, the likelihood for success in protecting Georgia's rivers and streams from industrial storm-water discharges will not be fully realized. ♦

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Environmental Site Investigation: Traps For The Unwary

Mark Mitchell
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The Hazardous Sites Reuse and Redevelopment Act (“HSRRA” or “Georgia Brownfields”) and federal brownfields protections have created incentives for prospective purchasers in Georgia, and have increasingly led to transactions on properties which in the past appeared to be problematic for redevelopment. However, site investigation activities associated with such transactions can trigger notification requirements under the Hazardous Sites Response Act (HSRA) or other regulatory programs within the State of Georgia. As a result, the type and quality of data generated during an environmental site investigation can be a critical component in any transaction, including those involving applications under the Brownfields Program. Environmental professionals should be expected to have a clear understanding of the process and be conscious that the information gathered will meet the objectives of the investigation. The following are a few issues that an environmental professional should be aware of during an investigation at these sites.

Preliminary Investigation Activities

Several issues must be addressed by the environmental professional in the preliminary stages of an investigation. Some of these issues include 1) the Constituents of Concern, 2) potential background constituents and 3) proper sample collection procedures .

Constituents of Concern

During the development of a scope of work for a site investigation, the environmental professional should have a thorough understanding of the constituents of concern (COCs). With this information, the laboratory analysis methods can be selected that reflect this knowledge. In most cases, there is no need to submit samples for analysis by methods that do not include the

COCs. In the past, the rationale for the inclusion of many analysis methods was that some unknown impact could be present that would adversely affect a property. However, this approach can increase site investigation costs and lead to complications that have nothing to do with a release at the subject property. For example, many consulting firms request a complete analysis of Semi-volatile Organics (SVOCs) using both the Base Neutral and Acid Extractable methods even though the compound(s) of interest may be in only one of those two methods. The base-neutral method includes bis-2 ethylhexyl phthalate which is a compound used in the manufacture of most plastics including PVC pipe. This compound is also on the list of compounds for listing under the Hazardous Sites Response Act (HSRA). In some cases, improper monitoring well installation can lead to an erroneous result for bis-2 ethylhexyl phthalate in groundwater and, unless recognized, could lead to notification under HSRA for this compound. Explaining that the detection of this compound is result of poor well installation can lead to project delays, and increased project costs.

Background Constituents

An understanding of the local geology is necessary prior to the implementation of a site investigation. In particular, the type of rock present in the local area will provide an indication of the type of background constituents that will be expected at the property. In the State of Georgia many constituents occur naturally based on the local rock type. These constituents include arsenic, barium, cadmium, chromium, lead, and mercury. As a result, if the investigation is focused on a facility which used metals in its operations, such as a former zinc galvanizing facility, groundwater sampling results could include detectable levels of other metals in the analysis suite. Unless an understanding of natural background concentrations is known, notification may improperly be made for a constituent that occurs naturally at the property.

Sample Collection Procedures

Based on knowledge of the COCs, specific sample collection procedures must be employed that maximize the collection of a representative sample. This is true for both soil and groundwater samples.

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For soils, the type of COCs will drive how a sample is handled prior to submittal to the laboratory. For example, if the COCs include an analysis of metals, stainless steel or plastic spoons and bowls should be utilized in sample preparation. However, if the COCs include SVOCs or volatile organic compounds (VOCs), plastic materials should not be used in preparation of these samples. Each of these situations can lead to “false” positive results based on poor sample preparation.

For groundwater, many COCs are not very soluble in water and their presence in groundwater is unusual. For example, many metals and polychlorinated biphenyls are practically insoluble in water and in most cases should not be expected in groundwater analysis results. However, improper well construction and poor sampling procedures can lead to significant amounts of sediment in groundwater samples submitted for laboratory analysis. In this case, the potential exists for a constituent present in soil to be reported in groundwater. As a result, a perceived notification obligation for groundwater is considered necessary where none actually exists.

Data Evaluation

After data collection, several issues must be considered to avoid common mistakes with the evaluation of laboratory results. In particular, the proper reporting of constituents and laboratory artifacts are of special interest during data validation.

Laboratory Reporting Limits

Proper reporting of constituents has become a growing problem in the environmental industry. Although the EPA has very strict guidelines about minimum reporting limits, some laboratories have begun to report a lower limit. This trend is in spite of the fact that those reporting limits were developed in an effort eliminate “false positive” results from the laboratory. This improper reporting can lead to, at a minimum, a perceived notification obligation for those constituents. This is especially true if the notification obligation is the reporting limit. The environmental professional should have the ability to review the lab report to make sure that 1) the reporting

limits are consistent with EPA guidelines and 2) that there are no inconsistencies in the laboratory’s quality control samples.

Laboratory Artifacts

Laboratory artifacts are also a concern in the evaluation and reporting of laboratory results. A laboratory artifact is the result of the detection of a chemical compound in environmental samples that are the result of the routine operation of the laboratory. Many of these compounds are listed as regulated substances that require notification under certain circumstances. These compounds include but are not limited to acetone, methylene chloride, 2-butanone and phthalates. If the laboratory does not identify these compounds as artifacts, the compounds will be listed on the laboratory report and result in a perceived notification obligation. Again, the environmental professional should have the ability to review the lab report to make sure that none of the reported compounds are the result of a laboratory artifact. Communication with the laboratory on these issues usually leads to proper presentation of the data.

Conclusion

There are many details that the environmental professional should be considering during the implementation of an environmental site investigation. Each of the issues discussed in this article, if handled improperly, can lead to complications to the process or unnecessary listing of sites, and can result in unnecessary delays and increased project costs.

Attorney awareness of these issues will lead to clear communication and the confidence that the investigation will be conducted in a competent and professional manner. ♦

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Stream Mitigation - Natural Channel Design

*By David Huetter
United Consulting*

Over the past few years, environmental regulations have changed, with a move from strictly wetland permitting and mitigation, to acknowledgement and special attention to stream systems. Just a few years ago, there were no requirements for evaluating stream disturbance separate from wetland disturbance when applying for a permit from the U.S. Army Corps of Engineers (USACE). Now, not only does the USACE require detailed evaluation of stream impacts from development, but in recent years the Georgia Environmental Protection Division (EPD) procedures for obtaining a variance permit for encroachment on streams and stream buffers have made it nearly impossible to obtain approval for development to encroach on these areas.

With the passage of Senate Bill 460 (SB460) in April of 2004 by the Georgia General Assembly, it appears there may be some relief for developers from the constraints of the recent EPD procedures. This relief, however, comes at a price, which is to provide appropriate mitigation to offset any stream and buffer encroachment. Although some of the mitigation requirements will be consistent with those required by the USACE, there may be additional mitigation and water quality requirements mandated by the EPD under this statute. These new Buffer Variance Procedures and Criteria rules (O.C.G.A. 391-3-7.05), as mandated by SB 460, became effective in January 2005. Some of the changes include modified definitions, additional criteria to qualify for variance review, and a requirement to document that a project will maintain or improve water quality.

One item that has been expanded in the review process and which is already required by the USACE for stream mitigation, is the proper design and implementation of any stream mitigation or stabilization project. The current Savannah District USACE regulations concerning mitigation are outlined in the Standard Operating Procedure for Calculating Mitigation Credits (SOP). This document is applicable for all of Georgia and provides the

basis for calculating the number of wetland and/or stream credits that may be necessary for impacts from a development project, as well as a means of calculating credits that can be generated from a proposed mitigation plan. An important change to this document in recent years has been the separation of stream and wetland impacts and the expansion of the requirements for conducting stream mitigation. Several stream mitigation options are allowed, and range from restoration of a degraded stream segment to improvement of riparian habitat along a stream.

The Savannah District USACE, with input from EPD, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and others, have formulated a series of worksheets to assess stream conditions and calculate credits. More specifically, the worksheets require an evaluation of the pattern, profile, and dimensions of a stream system, with a push towards 'natural channel design'. Many of the concepts of this natural channel design have been developed by former professor and hydrologist Dr. Luna Leopold and Dr. Dave Rosgen of Wildland Hydrology in Colorado, who have evaluated the morphological characteristics of stream systems through extensive field research, data collection, and practical field application. Dr. Rosgen has developed a stream classification system, which has, in part, been adopted by the Savannah District USACE for use with the SOP. The SOP requires the applicant to provide a classification of each stream reach using the Rosgen method. This classification system requires an understanding and evaluation of stream features including, bankfull width/depth, channel slope, sinuosity, entrenchment ratio, substrate, and other bed features. Although the Rosgen approach has been criticized by some, it has been embraced by the regulators in Georgia.

The basis of the Rosgen approach is to evaluate a stream system to determine the proper width/depth ratio of the stream so that the stream is able to move the necessary sediment load while not aggrading or degrading, thus maintaining a stable stream system (Rosgen, 1996). If the channel is too narrow and deep (as with an entrenched stream), the stream continues to degrade and erode the stream bed and banks. If a channel is too wide and shallow (as with a trapezoidal or channelized stream), the velocity of the water slows, thus resulting in an inability to move the sediment load, and aggradation of the stream occurs. Aggradation occurs as a result of the deposition of

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sediment within the stream channel and can reduce or even eliminate flow within the channel. The natural tendency of most streams is to maintain or create meanders. When a stream is too wide and shallow, deposition will often occur, forming point bars and shifting the central flow of water within the channel. This shift can further accelerate bank erosion by increasing the velocity of water flow against the stream bank and increasing bank scour.

With this in mind, the creation of a wide, trapezoidal channel and extensive use of gabions, rip-rap, or check dams is no longer the preferred method in the stabilization or restoration of a stream. The process of stream restoration should include design of the stream with proper bed features such as riffles and pools to provide aquatic habitat. Restoration may include the use of root wads, specially placed stone structure, and willow stakes. A stream restoration project may also include creating new meanders, excavating pools, and installing structures to maintain the stability of the channel. In addition, there will generally be a requirement for establishment or maintenance of a riparian buffer along the stream to help maintain the stability of the channel. The planting or maintenance of deep-rooted vegetation along a stream helps to hold the soil along the channel and reduce erosion of the channel.

With the on-going changes to environmental regulatory requirements, a proper understanding of the dynamics and morphology of stream systems will be necessary to navigate through the permitting processes. These techniques are currently being used by some consultants to restore degraded stream systems and to establish mitigation banks. The establishment of these mitigation banks will provide benefits to our aquatic resources, while also providing the necessary credits for the development community.

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METHAMPHETAMINE: ISSUES IN ENVIRONMENTAL LAW AND MANAGEMENT

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There is limited information on how courts view the environmental implications of meth labs. However, as the problem grows, we can expect to see cases work their way through the legal system as federal and state environmental laws come into play. In reality, however, federal environmental laws may have greater application to super labs, while having little effect on cleanups of mom and pop meth labs.

The application of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or Superfund)¹⁵ to the cleanup of methamphetamine laboratories is a developing area of law, but the application is readily apparent when dealing with the release or disposal of hazardous substances and the contamination of property. Many of the chemicals used in meth production meet the definition of a hazardous substance, not only under CERCLA,¹⁶ but other federal environmental regulations as well. CERCLA's definition of a release of hazardous substances includes pouring, dumping or "disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance),"¹⁷ and any building, structure, or ditch could qualify as a facility falling under CERCLA's regulatory purview.¹⁸ In fact, almost every place where a hazardous substance can be found could be considered a facility.¹⁹ Since homes, apartments, and motel rooms are often rented for short periods of time as meth labs, this leaves property owners, landlords, and other business operators at risk of having to pay cleanup costs after labs are seized or after the operations move on to stay ahead of law enforcement.²⁰

As more meth labs are dismantled and property owners are increasingly at risk for cleanup costs, we may see a similar situation as occurred when the more "traditional" hazardous waste sites were created – the abandonment of property as owners are unable to afford or refuse to acknowledge responsibility for cleanup. Lenders may find themselves holding mortgages on properties that are contaminated by previous methamphetamine production. Cities and counties may also find an increase

in the number of properties owing back taxes as a result of abandonment, and they may be hesitant to file liens or condemn properties for fear of assuming unwanted liability. Although no court cases have addressed the issue, it is reasonable to expect that banks and similar entities will invoke many of the same defenses used in limiting their liability under previous CERCLA-like claims. This will leave state and local governments to foot the bill for cleanup costs, as CERCLA may only cover assessment and emergency removal actions at non-Superfund sites. But all may not be lost for municipalities struggling to pay for remediation of meth labs. The U.S. Environmental Protection Agency's Local Governments Reimbursement Program may provide up to \$25,000 in financial assistance to state and local governments that respond to releases or threatened releases of hazardous substances as designated under CERCLA.²¹ Although not usually directly involved with cleanup operations, the U.S. EPA is actively involved in the collection of soil samples during the cleanup of the super lab bust in Cobb County, primarily because of the potentially large amount of contaminants; however, EPA is not planning to collect samples or do any testing inside the home.²²

Application of the Resource Conservation and Recovery Act (RCRA)²³ to the methamphetamine situation has primarily been in the area of prosecuting meth lab operators under provisions regulating the use and disposal of hazardous wastes,²⁴ and for enhancing the criminal sentencing of individuals convicted of manufacturing methamphetamine.²⁵ Of significance to individuals who face RCRA enforcement is that RCRA's knowledge requirement of §6928(d) does not require that a defendant know the materials at issue were identified or listed as hazardous materials under RCRA.²⁶ The government must prove only that the defendant knew the material was hazardous in that it could cause harm to persons or the environment.²⁷ It is likely that a meth cook will have some awareness of the potential for the ingredients he is working with to cause potential harm to himself or others. RCRA also provides for legal action to be brought by government²⁸ or citizens²⁹ against violators for recovery of cleanup costs, but the likelihood of success against meth lab operators of any size is slim.³⁰

Real Estate Transactions

Some states have enacted legislation addressing the serious environmental and health risks associated with former meth labs and their impact on the sale of real estate. Some counties in Minnesota are imposing laws on property owners for the cost of cleaning up meth labs, and in 2004 the state proposed legislation which would have:

- Required restitution to public agencies or property owners who participated in responding to meth lab explosions from persons convicted of the manufacture or attempted manufacture of meth,
- Prohibited a former meth lab property from being occupied, rented, sold, or used until an assessment and remediation are complete. Real estate brokers would have been required to disclose contamination to prospective purchasers, and the registrar of motor vehicles proposed to require cars contaminated by meth to have "Hazardous Waste Contaminated Vehicle" written on the certificate of title.³¹

Disclosure of certain environmental problems in real estate transactions has become routine, with requirements for the disclosure of the presence of lead-based paint, and requests for disclosure or recording of environmental liens, use and disposal of hazardous wastes on site, and the presence of asbestos-containing materials and mold. Particularly in areas of the country where the meth production problem is acute, we may see more instances of disclosure requirements related to past meth production on a property. Missouri statutes currently require the disclosure of previous production of meth on any property to be rented or sold.³² King County, Washington has posted a 16-page list of meth lab addresses and the cleanup status of each property.³³ In the future, "meth letters" may become as routine a part of residential closing documents as termite letters.

As a result of the increasing number of clandestine meth labs discovered, it is evident that conducting due diligence prior to a property purchase should extend beyond the traditional Phase I environmental site assessment. A thorough site investigation should now explore the possibility that a meth lab was operating

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on the subject property. While a Phase I assessment of residential property is not customarily done, the likelihood that developers may encounter a clandestine meth laboratory when converting a rural, multi-acre, single dwelling property into a multi-home and mixed use development is becoming more real. In August 2004, EPA issued a proposed rule for conducting all appropriate inquiries (AAI) as required under Sections 101(35)(B)(ii) and (iii) of CERCLA.³⁴ AAI is conducted by purchasers of property that will be used for commercial purposes, including properties that may once have been meth labs, such as hotels, apartments, storage units, and warehouses. As part of the AAI process, a review of federal, state, and local government records is required, and in Georgia, at least one former methamphetamine site appears on the CERCLIS database.³⁵ Failure to conduct AAI may result in a purchaser's loss of liability protection as a bona fide prospective purchaser, innocent landowner, or contiguous property owner. The proposed rules would also carry over to recipients of EPA brownfield grants. EPA has made provisions in its brownfield assessment pilot program for the inclusion of former meth labs, and recently awarded Public Health Seattle and King County, Washington \$200,000 to assess and cleanup approximately 200 methamphetamine drug labs over a two-year period.³⁶

Action in Georgia

The 2005 legislative session in Georgia saw activity on several fronts relating to methamphetamine production. Several bills were drafted and sent through committees, with the emphasis of many of the bills on regulating the sale and distribution of the precursor drugs and ingredients of methamphetamine, and the education of the public on the dangers of methamphetamine use.³⁷ Georgia has not yet specifically addressed the issue of cleanup costs and responsibility.

On April 19, 2005 Governor Perdue signed into law House Bill 216. While not addressing cleanup responsibility and costs, the bill will make the purchase of pseudoephedrine in large amounts more difficult.

Hopefully, this action will curtail the ease with which this essential methamphetamine ingredient is purchased, and result in a reduction of the number of meth labs created and abandoned.

Georgia's hazardous waste laws are similar to federal laws. Georgia's Hazardous Waste Management Act provides the foundation for addressing management and disposal of wastes used in meth labs and penalties for unlawful handling of meth lab wastes. The Hazardous Site Response Act³⁸ addresses liability for cleanup, and holds a person who has "contributed or who is contributing to a release"³⁹ including an owner of a facility,⁴⁰ jointly, severally, and strictly liable to the State for site cleanup costs.⁴¹ The Act also establishes provisions for limiting liability through basic innocent landowner and all appropriate inquiry investigations.⁴² The State's Hazardous Site Inventory⁴³ will be one source for information when performing due diligence as a subsequent purchaser of property.⁴⁴

Although statistics presented above show meth lab seizures increasing in Georgia, the State suffers from problems common among all states grappling with relatively new issues: the Environmental Protection Division has limited financial and personnel resources and is unable to respond to the growing number of requests for assistance following meth lab busts.⁴⁵ Furthermore, a significant impediment to identifying the true magnitude of the impacts of meth production is the lack of sampling data that can confirm or deny the existence of an environmental problem.⁴⁶ However, one of the most significant factors limiting EPD's ability to respond effectively to meth lab cleanups is the absence of authoritative health-based cleanup levels and sampling protocol for meth lab contaminants in non-environmental media that can be used to determine when structures are safe for human exposure.⁴⁷

Conclusion

The proliferation of clandestine methamphetamine labs is creating social, environmental, and legal problems that are being addressed on federal, state,

and local levels. Efforts to curtail the availability of key ingredients in meth production are meeting with some success. As more labs are discovered and dismantled, the application of environmental laws to cleanup issues and property transfer will continue to evolve. ♦

Endnotes:

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The views expressed in this article reflect those of the authors alone and do not necessarily reflect the views of the Georgia Tech Research Institute. The authors would like to thank Tim Cash of the Georgia Environmental Protection Division for helpful input to the document.

- ¹ Partnership for a Drug-Free America, Meth Alert (visited Dec. 22, 2004) www.drugfreeamerica.org/Templates/Methamphetamine_Alert.asp.
- ² Facing the Methamphetamine Problem in America, 2003: Before the Subcomm. on Criminal Justice, Drug Policy, and Human Resources of the House Comm. on Government Reform, 107th Cong. (2003) (statement of Rogelio E. Guevara, Chief of Operations, Drug Enforcement Administration) (visited March 23, 2005) <http://www.usdoj.gov/dea/pubs/cngrtest/ct071803.htm>.
- ³ David Knutson, League of Minnesota Cities to Address Municipal Challenges Posed by Methamphetamine Use, Legal Ledger (St. Paul, MN), June 14, 2004.
- ⁴ The Governor's Task Force on Methamphetamine Abuse, State of Tennessee, September 1, 2004, p. 1.
- ⁵ U.S. DEA, State Facts Sheets (visited April 27, 2005)

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- ⁶ U.S. DEA, Drug Trafficking in the United States, (visited March 23, 2005) http://www.usdoj.gov/dea/concern/drug_trafficking.html.
- ⁷ Don Plummer, Feds Raid Meth Super Lab at Smyrna Home, Atlanta Journal-Constitution, (visited Feb. 15, 2005) <http://www.ajc.com/metro/content/metro/cobb/0205/15methbust.html>.
- ⁸ Partnership for a Drug-Free America, supra note 1.
- ⁹ A Google™ search for "Making Methamphetamine" returned over half-a-million results. A search for "methamphetamine recipes" returned over 70,000 results.
- ¹⁰ National Drug Intelligence Center, Georgia Drug Threat Assessment, April 2003, (visited March 25, 2005) <http://www.usdoj.gov/ndic/pubs3/3669/meth.htm>.
- ¹¹ John Toon, Hazardous Epidemic, Research Horizons, Winter 2005, at 37, available at <http://gtresearchnews.gatech.edu/newsrelease/meth-training.htm>.
- ¹² Id.
- ¹³ Id.
- ¹⁴ See, Cleanup, Learn, Educate, Abolish, Neutralize, and Undermine Production (CLEAN-UP) of Methamphetamines Act, H.R. 13, 109th Cong. This Act would provide grant money to several federal agencies and local law enforcement to address methamphetamine production and cleanup. The Act would also authorize funding for the U.S. Environmental Protection Agency to study the environmental impacts of meth laboratories. See also Methamphetamine Remediation Research Act of 2005, H.R. 798, 109th Cong. This Act would require the U.S. EPA to establish voluntary guidelines for the remediation of meth labs, establish a research program on exposures to meth ingredients, and would require the National Academy of Sciences to research impacts of meth labs on building occupants, especially children, and first responders.
- ¹⁵ 42 U.S.C. §§ 9601 et seq.

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- ¹⁶ Id. at § 9601(14).
- ¹⁷ Id. at § 9601(22).
- ¹⁸ Id. at § 9601(9).
- ¹⁹ T&E Industries, Inc. v. Safety Light Corp., 680 F. Supp. 698, 708 (D.N.J. 1988).
- ²⁰ 42 U.S.C. § 9607(a)(2).
- ²¹ U.S. EPA, Local Governments Reimbursement Program (visited April 19, 2005) <http://www.epa.gov/superfund/programs/er/lgr/index.htm>.
- ²² Don Plummer, EPA to Test Cobb Meth Home, Atlanta Journal-Constitution, March 10, 2005, (visited March 10, 2005) <http://www.ajc.com/metro/content/metro/cobb/0305/10methlab.html>.
- ²³ 42 U.S.C. §§ 6901 et seq. (1976).
- ²⁴ Id. at § 6903(5). Many of the ingredients used to make methamphetamine meet RCRA's definition of hazardous waste.
- ²⁵ See, e.g., United States v. MacDonald, 339 F.3d 1080 (9th Cir. 2003) The Ninth Circuit upheld a lower court's ruling enhancing the prison sentence of a man convicted of conspiracy to manufacture methamphetamine. The Ninth Circuit agreed that U.S. Sentencing Guidelines require courts to enhance a sentence if the crime involved an unlawful discharge, emission, or release of a hazardous substance into the environment as covered in section 3008(d) of RCRA.
- ²⁶ United States v. Self, 2 F.3d 1071, 1091 (10th Cir. 1993).
- ²⁷ Id.
- ²⁸ 42 U.S.C. §6928(e).
- ²⁹ Id. at § 6972(a).
- ³⁰ Anna S. Vogt, Comment, The Mess Left Behind: Regulating the Cleanup of Former Methamphetamine Laboratories, 38 Idaho L. Rev. 251, 266 (2001).
- ³¹ Ember Reichgott Junge, Omnibus Crime Bills Take Shape at Capitol, The Minnesota Lawyer (Minneapolis, MN) April 12, 2004.
- ³² Mo. Rev. Stat. § 442.606 (2004).
- ³³ Status of Illegal Drug Labs in King County, (visited April 27, 2005) <http://www.metrokc.gov/health/methlabs/meth-cleanup-reports.pdf>.
- ³⁴ Standards and Practices for All Appropriate Inquiries, 69 Fed. Reg. 165 (1994) (to be codified at 40 C.F.R. pt. 312) proposed Aug. 26, 2004.
- ³⁵ This site is the Butner Road Methamphetamine Site, Atlanta, Fulton County, GA. CERCLIS ID number 0406843, discovered August 7, 1998.
- ³⁶ U.S. EPA, Brownfields 2004 Grant Fact Sheet, Public Health Seattle and King County, WA. EPA-560-F-04-086, June 2004, available at <http://www.epa.gov/brownfields/04grants/seattle.pdf>.
- ³⁷ These bills included House Bills 19, 45, 216, and 686.
- ³⁸ O.C.G.A. §§ 12-8-90 et seq.(2002).
- ³⁹ Id. at § 12-8-92(9).
- ⁴⁰ Id. at § 12-8-92(9)(A) and (B).
- ⁴¹ Id. at § 12-8-96.1(a).
- ⁴² Id. at § 12-8-96.1(d)(1),(2). See also § 12-8-205 of the Hazardous Site Reuse and Redevelopment Act for application of liability limitations to prospective purchasers of brownfield properties that were once meth labs.
- ⁴³ Id. at § 12-8-97.
- ⁴⁴ Id. at § 12-8-96.3.
- ⁴⁵ Personal communication with Tim Cash, Program Manager, Hazardous Site Response Program, Georgia Environmental Protection Division (April 29, 2005).
- ⁴⁶ Id.
- ⁴⁷ Id. (May 11, 2005).

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