HTIS
Hazardous Technical Information Services
BULLETIN
Vol. 20, No. 3 May – June 2010

New Requirements for Marine Pollutants

By Muhammad Hanif, Chemist, HTIS

The 2008 edition of the International Maritime Dangerous Goods (IMDG) Code, incorporating Amendment 34-08 (Amdt. 34-08), became mandatory on January 2, 2010. The new regulations regarding the classification, offering for transportation, and transporting of marine pollutants are extremely complex and may require some knowledge of marine biology and toxicology. Amdt. 34-08 introduces an entirely new concept on the classification of substances defined as Marine Pollutants, subject to the provisions of Annex III of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), as amended. One of the most significant changes in the IMDG Code is the new criteria for marine pollutants. The IMDG Code (Amdt. 34-08) provisions applicable to marine pollutants are found at Part 2, Chapter 2.10, while the criteria for classification of these substances are now found at the modified Chapter 2.9.

In previous years, a substance or mixture was regulated as a marine pollutant if it contained 10% (1% in the case of severe marine pollutants) or more of any chemical(s) which had been specifically designated by the International Maritime Organization (IMO) as dangerous to the aquatic environment. Under the new rule, marine pollutant classification is based on characteristics and/or testing of materials. To understand the basic differences between the previous marine pollutant classification system and the new system, it is advantageous to review the provisions of Chapter 2.10 of IMDG Code Amdt. 33-06, that were authorized for continued use until January 1, 2010. Per the Amdt. 33-06 definition at 2.10.1, "Marine pollutants mean substances that, because of their potential to bioaccumulate in seafood or because of their high toxicity to aquatic life, are subject to the provisions of Annex III of MARPOL 73/78, as amended." The substances (marine pollutants (MP)) were identified within Amdt. 33-06 in the alphabetical INDEX under the column headed MP by means of the letter **"P"** to indicate a substance, material, or article known to be a marine pollutant, the letters **"PP"** for a substance, material, or article known to be severe marine pollutant, and the symbol **"•"** to indicate that a **N.O.S.** entry, because of its Not Otherwise Specified (N.O.S.) ingredients, might contain a substance or material which could have the potential to be a marine pollutant. These letters and symbols also appeared as entries in the Dangerous Goods (DG) List at Column (4), serving the same purpose to

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identify those substances, materials or articles identified within the comprehensive list of identified marine pollutants. This list is updated annually and circulated to all IMO Member States.

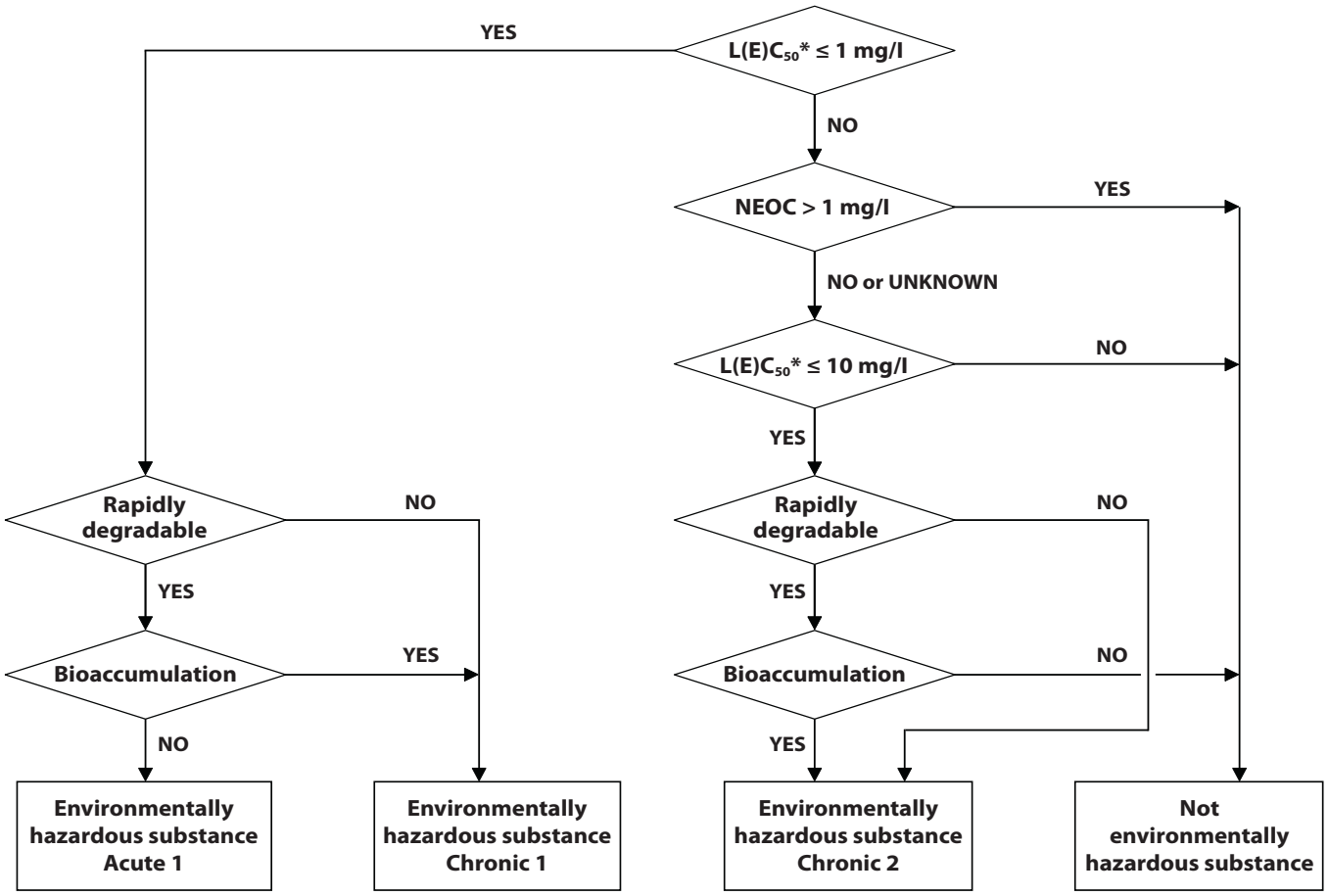
Prior to January 1, 2010, a shipper, including the Department of Defense (DoD) personnel, preparing hazardous material shipments for waters could simply consult these reference lists to determine if their shipment was regulated as a marine pollutant. In addition, if the contents of the shipment included a solution, mixture, or isomer of a known marine pollutant in a concentration of 10% or more of the total contents of the package, that shipment would meet the definition of a marine pollutant, and would be subject to the provisions of the IMDG Code applicable to marine pollutants. If the contents of the shipment included a solution, mixture, or isomer of a known severe marine pollutant in a concentration of 1% or more of the total contents of the package, that shipment would meet the definition of a severe marine pollutant, and would be subject to such provisions. A carrier, forwarder, or secondary shipper could also check for compliance with the marine pollutant provisions of the Code by simply referencing the INDEX or the DG LIST to determine if the symbols applied to the entry for the proper shipping name or the technical name listed in association with an N.O.S. proper shipping name.

The IMO uses the UN Model regulations as the basis for the regulatory requirements in the IMDG Code, and has included the requirements of the 15th revised Edition in the provisions of Amdt. 34-08. Consequently, the criteria for classification of these substances are now found at Chapter 2.9 of the Code, which has undergone significant modification:

- **Note 1** within that chapter states, "For the purpose of this Code, the environmentally hazardous substances (aquatic environment) criteria contained in this chapter apply to the classification of marine pollutants."
- **Note 2** states, "Although the environmentally hazardous substances (aquatic environment) criteria apply to all hazard classes (see 2.10.2.3 and 2.10.2.5), the criteria have been included in this chapter."

In other words, substances, materials or articles which may meet the definition of another hazard class, such as flammable liquid, toxic, or corrosive, are also included within the provisions of chapter 2.9 if they also meet the defining criteria for marine pollutants within section 2.9.3.

As of January 2, 2010, the Amdt. 34-08 provisions for classification of mixtures and solutions are no longer based on percentages



* Lowest value of 96-hour LC50, 48-hour EC50 or 72-hour ErC50, as appropriate.

(10% of a P or 1% of a PP). The actual mixture or solution can be subjected to the testing for acute and chronic toxicity and assigned to the category based on the test results. Section 2.9.3 – Environmentally hazardous substances (aquatic environment), now provides the definitions and the classification criteria that must be used to determine if the substance, material or article is a marine pollutant. Environmentally hazardous substances include, among other things, liquid or solid substance pollutants to the aquatic environment, and solutions and mixtures of such substances, e.g., preparations and wastes. The classification procedures are intended to apply to substances and mixtures; however, it also takes into account that metals or poorly soluble inorganic compounds may also pollute, and the guidance found in Annex 10 of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) should also be used.

The classification flowchart on page 2 (included in Section 2.9.3) outlines the process to be followed when assigning a substance, material or article to "Environmentally hazardous substance Acute 1", or "Environmentally hazardous substance Chronic 1" or, "Environmentally hazardous substance Chronic 2" or making the determination that it is not an environmentally hazardous substance, and therefore not defined as a marine pollutant.

Under the new rules, classifying a substance or mixture as a marine pollutant is based on characteristics rather than constituents. The regulations at Section 2.9.3 permit the use of a three tiered approach to classifying mixtures or solutions as marine pollutants. The first tier is to classify based on actually testing the substances and applying the category at 2.9.3.3. The substances shall be classified as "environmentally hazard substances (aquatic environment)" if they satisfy the criteria for Acute 1, Chronic 1 or Chronic 2" according to the tables at 2.9.3.3.1.

The second tier is to apply the "bridging principles" (at 2.9.3.4.4) where the data on the complete mixture may not be available; however, there are sufficient data available on the ingredients or on similar mixtures of tested materials to enable one to adequately characterize the mixture based on equivalence without actually testing further thus sparing the use of test animals or fish. The bridging principles include assumptions made after dilution, or for comparison of similar batches of previously tested mixtures, or classification based on the most severe classification criteria for ingredients in concentrations, or for interpolation based on classification of toxicologically active ingredients of known concentrations, or for substantially similar mixtures that include a common ingredient as a marine pollutant that has been tested when mixed in the same concentration with other ingredients may be assigned to the same category with an expectation that the resultant similar mixture would not cause a change in the aquatic toxicity.

The third tier is the "summation method" (at 2.9.3.4.5) that basically provides that the most severe classification of an ingredient takes precedence over a less severe classification. Section 2.9.3.4.6 explains the precedence procedure for assigning the overriding classification criteria including multiplication factors based on the degree of toxicity of the ingredients.

The INDEX and the Dangerous Goods List of IMDG Code Amdt. 34-08 provide an indication of those substances, materials or articles known to be marine pollutants. However, the list is no longer considered to be an exhaustive one, but merely indicative. Section 2.10.2.5 requires that when a substance, material or article possesses properties that meet the criteria of a marine pollutant, but is not identified in the IMDG Code as a marine pollutant, the substance, material or article must be transported as a marine pollutant in accordance with the IMDG Code. If a material that is identified as a marine pollutant in the Code is found to no longer meet the defining criteria as a marine pollutant, the competent authority (CA) may issue an approval which states that the substance, material or article is no longer subject to the marine pollutant provisions of the IMDG Code. **In other words, the shipper is always responsible for determining if the substance, material or article is or is not a marine pollutant under the classification criteria of Chapter 2.9, whether or not it is identified as a marine pollutant in the Index or in the DG list.**

Any substance, material or article that does not meet the definition of any other hazard class, but meets the criteria at Chapter 2.9.3 shall be designated and described as either:

- "UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S." or
- "UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S." and shall be assigned to Packing Group III.

The marine pollutant marking has also been modified. The marking requirements for marine pollutants are found in section 5.2.1.6, and include requirements for location near proper shipping name and the UN number, and must meet the visibility and display requirements for all other markings. The exceptions to the package marking requirements for marine pollutants in single packagings or combination packagings containing inner packagings of 5 liters or less for liquids or 5 kg or less for solids is still authorized. The new marking has a similar symbol, but is now a square-on-point (diamond) instead of an isosceles triangle. The new diamond shaped "fish and tree" marine pollutant marking depicting a dead fish under a dead tree as illustrated above is at section 5.2.1.6.3. The new marking became mandatory on January 2, 2010, for international shipments by ocean.

For transportation within the United States, one may continue to use the list of regular and severe marine pollutants in Appendix B to 49 CFR 172.101, instead of the analytical criteria.

In summary, the **shipper is responsible** for determining the classification and category of environmentally hazardous substances (aquatic environment) that are to be identified and transported as marine pollutants according to the provisions of the IMDG Code. If there is any reason to suspect that a

currently listed marine pollutant no longer meets the defining criteria in 2.9.3 of Amdt. 34-08, the shipper has an opportunity, perhaps even an obligation, to perform the testing prescribed by the OECD as set out in Section 2.9.3, and if the results indicate that it does not meet the defining criteria for a marine pollutant, to comply with Section 2.10.2.6 by providing the resultant test data to the competent authority. While the laboratory procedures may be expensive, the relief from regulatory requirements for shipping a marine pollutant may offset the expense particularly for those substances, materials, or articles that do not meet the definition of any other hazard class.

Any questions regarding this guidance document should be addressed to the competent authority at the:

- **United States Coast Guard**
  Hazardous Materials Standards Division (CG-3PSO-3)
  2100 Second Street, S.W.
  Washington, D.C. 20593-0001

  PH: 202.372.1420 / 1426

  FAX: 202.372.1926

References:

1. International maritime Dangerous Goods Code, Amendment 34-08, Volumes 1 and 2, 2008;

2. International maritime Dangerous Goods Code, Amendment 33-06, Volumes 1 and 2, 2006; and,

3. A Layman's Guide to Understanding the Principles of Classifying Marine Pollutants Under the Provisions of IMDG Amendment 34-08, John V. Currie, the council on Safe Transportation of hazardous Articles, January 07, 2009.

News From DoT

Shipping Hazardous Waste in Small or Excepted Quantities

— Solution to a Customer Query

By Philip Saunders, Chemical Engineer, HTIS

When transporting hazardous wastes within the United States, the shipper must comply with applicable regulations promulgated by both the Department of Transportation (DOT) and the Environmental Protection Agency (EPA). A recent HTIS inquiry led us to investigate whether hazardous wastes may be transported as a small or excepted quantity. In turn, this led us to research how shipping small or excepted quantities of hazardous waste would affect the various shipping document requirements found in DOT and EPA regulations.

Over the last two years, the DOT Pipeline and Hazardous Materials Safety Administration (PHMSA) changed their regulations regarding the transportation of small quantities of hazardous materials to harmonize them with similar regulations found in the International Air Transportation Association (IATA) hazardous materials regulations and the International Maritime Dangerous Good (IMDG) Code. In particular, they modified 49 CFR Section 173.4, which used to cover transportation of small quantities of hazardous materials by any mode. Section 173.4 is essentially the same as before, but it now applies only to transportation by highway or rail. Here, small quantities may be transported as an unregulated material by these modes as long as the packaging requirements of the section are met including the package bearing the statement '**This package conforms to 49 CFR 173.4 for domestic highway or rail transport only**.'

The first new section that DOT created, 49 CFR 173.4a, incorporates regulations that are roughly equivalent to the excepted quantity exceptions found in IMDG Chapter 3.5 and IATA Section 2.7. All three require that packages containing excepted quantities of hazardous materials bear the '**Excepted Quantity**' label. The second new section, 49 CFR 173.4b, covers even smaller quantities of hazardous materials (up to 1 g or 1 ml), especially when contained within a manufactured article. When shipping a hazardous material according to this section, there is no marking or labeling requirement.

Both DOT and the EPA have requirements for documentation to accompany shipments of the hazardous materials that those agencies regulate. In 49 CFR Part 262 Subpart B, the EPA requires a Uniform Hazardous Waste Manifest (U.S. EPA Form 8700-22), as shown in the Appendix to Part 262, to accompany shipments of hazardous wastes. There are exceptions from the requirement for a manifest, but they do not depend on the quantity of waste contained in the shipment or the mode of that shipment.

On the other hand, DOT shipping paper requirements do vary depending on the quantity and exception used as well as the mode of transportation. When transporting small quantities of a hazardous material by highway or rail according to 49 CFR 173.4 or 173.4a, DOT does not require a shipping paper to accompany that material. In addition, when transporting an excepted quantity of a hazardous material according to 173.4a, DOT always requires a shipping paper when transporting it by vessel, but only requires a shipping paper for transport by air if one already accompanies the shipment. In either case, the shipping document is to bear the statement '**Dangerous Goods in Excepted Quantities**'. When transporting a hazardous material according to 173.4b, DOT does not require a shipping paper regardless of the mode of transport.

When we began our investigation, we wanted to determine if hazardous wastes may be shipped as a small or excepted quantity. One of the first things we noticed is that 173.4, 173.4a, and 173.4b do not explicitly exclude hazardous waste

from materials authorized to take the small quantity exception. In fact, in Interpretation #03-0142, PHMSA indicates that any exception that is authorized for a particular hazardous material may also be applied when that material has been declared to be a waste. DOT does simplify things a little by allowing the waste manifest required by the EPA to satisfy the DOT shipping paper requirements.

Finally, one other complication that we noticed during our research is that, **on the EPA hazardous waste manifest, field 9b requires the "U.S. DOT Description (including the Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))**". Since the EPA does not have an exception for the manifest based on the quantity of waste, this information would be required on the form in cases where the waste would not be considered to be a regulated hazardous material with a hazard class, UN number, etc. In order to resolve this apparent discrepancy, we contacted the PHMSA Hazardous Materials Information Center (1-800-HMR-4922). We were advised that in situations such as this, the manifest should be filled out with the shipping description that would be used to ship larger, regulated quantities of that hazardous waste. When shipping by air or vessel, the statement 'Dangerous Goods in Excepted Quantities' may also be included before that full shipping description in order to comply with 173.4a.

References:

1. PHMSA Interpretation #03-0142, Oct 6, 2004;

2. 40 CFR, Section 262, Subpart B; and,

3. U.S. EPA Form 8700-22, "Uniform Hazardous Waste Manifest"; and,

4. 49 CFR, Sections 173.4-4b.

News From EPA

The Green Cleaning P2 Calculator

By Abdul H. Khalid, Chemical Engineer, HTIS

The U. S. Environmental Protection Agency (EPA) has developed an electronic tool that environmental, health, and safety personnel or other interested parties can utilize to make calculations and forecast environmental benefits from purchasing green products.

"The Green Cleaning Pollution Prevention Calculator quantifies the projected environmental benefits of purchasing and using "green" janitorial services and products. It is designed to forecast the environmental benefits of reducing chemical use by doing some or all pollution prevention measures typically involved in the routine interior cleaning of an office building. This tool also enables users to identify which green cleaning measures will have the greatest impact in reducing their use of hazardous chemicals and in preventing pollution."

"The Calculator's output applies only to standard office cleaning products and practices. It does not apply to other building maintenance issues, such as equipment maintenance, pest control, or landscaping activities." This tool also enables users to identify which green cleaning measures will have the greatest impact in reducing their use of hazardous chemicals and in preventing pollution.

Green cleaning is a new approach to janitorial services that offers better environmental performance and improved worker health and safety, while retaining the same sanitation quality as traditional, more chemical-intensive methods. When green cleaning practices are correctly employed, no "cleaning power" is sacrificed and no personnel handling those cleaning products are at risk to adverse health effects.

Janitorial products can cause harm to the environment during their use if they are poured down drains with their vapors possibly circulating through the ventilation systems, or disposed of outdoors. Environmental damage can also occur during the development, manufacture, and transport of these products. Possible environmental consequences of janitorial product use include:

- Air Pollution;
- Bioaccumulation of toxic substances in plants and animals;
- Endocrine disruption in wildlife, which affects reproductive ability;
- Ozone depletion; and,
- Water Pollution.

Green cleaning can help to reduce many of these health and environmental hazards if janitorial products are utilized properly and efficiently.

For further information on EPA's green cleaning products and other related information, DoD personnel can contact:

- **Mr. Jim Darr**

  PH: 202.564.8841

  eMail: darr.james@epa.gov

Reference:

1.Green Cleaning Pollution Prevention, website at: http://www.fedcenter.gov/janitor; and,

2. EPA Pollution Prevention (P2) Tools, website at: http://www.epa.gov/p2/tools/p2tools.htm.

EPA's TSCA Chemical Inventory Available Free of Charge

By Ariel Rosa, Environmental Protection Specialist, HTIS

The EPA announced that it is providing web access, free of charge, for the first time to the Toxic Substances Control Act (TSCA) Chemical Substance Inventory. This inventory contains a consolidated list of thousands of industrial chemicals maintained by the agency. The EPA is also making this information available on Data.Gov, a website developed by the Obama Administration to provide public access to important government information. This action represents another step to increase the transparency of chemical information while continuing to push for legislative reform of the 30 year old TSCA law.

"Increasing the public's access to information on chemicals is one of Administrator Jackson's top priorities," said Steve Owens, assistant administrator for EPA's Office of Prevention, Pesticides and Toxic Substances. "The American people are entitled to easily accessible information on chemicals, and today's action is part of a series of ongoing steps that the EPA is taking to empower the public with this important information."

Until now, the consolidated public portion of the TSCA Inventory has only been available by purchase from the National Technical Reports Library or other databases. By adding the consolidated TSCA Inventory to the Agency's website and to Data.Gov, the EPA is making this information readily available to the public at no cost.

Currently, there are more than 84,000 chemicals manufactured, used, or imported in the U.S. listed on the TSCA Inventory. However, the EPA is unable to publicly identify nearly 17,000 of these chemicals because the chemicals have been claimed as confidential business information under TSCA by the manufacturers. Under Administrator Jackson's leadership, the EPA has already begun a series of aggressive steps to provide greater transparency on chemical risk information, including an announcement in January that signaled the EPA's intent to reduce a certain type of confidentiality claim, or Confidential Business Information (CBI) claim, on the identity of chemicals.

In the coming months, the EPA will take further steps to increase transparency and make more information available to the public, including adding TSCA facility information, and the list of chemicals manufactured to the Facility Registry System (FRS). FRS is an integrated database that provides the public with easier access to the EPA's environmental information and better tools for cross-media environmental analysis. The addition of TSCA facility and chemical databases to FRS will provide the public with information on the facilities in their communities using industrial chemicals.

Reference:
http://www.epa.gov/oppt/newchems/pubs/invntory.htm

Common Errors to Avoid in EPCRA Reporting
— Reporting Deadlines Approaching

Reprint from CURRENTS,
the Navy's Environmental Magazine, Winter 2010 edition

The Emergency Planning and Community Right-to-Know Act (EPCRA) reporting deadlines are fast approaching, and now is the time for installations to begin preparations for calendar year (CY) 2009 reporting requirements. As a result of errors in prior reporting, Navy installations now face greater scrutiny from the Navy, Department of Defense (DoD), the public and the U.S. Environmental Protection Agency (EPA) on the information they report.

Reviews of submitted reports and forms often find issues with overlooked or misunderstood sections of EPCRA, especially Sections 302 and 311, or poorly documented application of exemptions (e.g., batteries under Section 312). Navy personnel should understand all EPCRA reporting requirements and be familiar with DoD and Navy policy. Accurate reporting and concise documentation may avoid compliance issues in the future.

EPCRA Hot Topics & Common Errors

A review of Toxic Release Inventory (TRI) submissions identified the following hot topics and common errors in EPCRA reporting which require additional attention when preparing EPCRA reporting submissions:

1. Batteries

Batteries exempted under Sections 312/313 as consumer products are NOT exempt from Section 302 reporting as there is no consumer product exemption under Section 302. Therefore, sulfuric acid in batteries must be included in a threshold planning quantity calculation to determine if reporting under Section 302 is required.

2. Section 311 Updates

Although Section 311 reporting is a one-time submission, increases in the amounts of hazardous chemicals present at the installation or new chemicals exceeding thresholds may require an update of the Section 311 submittal. At a minimum, installations can compare their most recent Section 311 submittal to their Tier II report when completed for CY 2009. Since the same hazardous chemicals are reported under Section 311 and 312, the submittals should match. If the Section 311 submittal is missing a hazardous chemical reported on the Tier II, then an update is required.

3. Non-hazardous Wastes

Non-hazardous wastes such as used oil in tanks and wastes stored on-site prior to being sent off-site are often overlooked in Section 311 and 312 compliance efforts. Non-hazardous wastes may require Material Safety Data Sheets (MSDS) under the Occupational Safety and Health Act (OSHA) and would be considered hazardous chemicals

under Sections 311 and 312. Only hazardous wastes are excluded from the OSHA MSDS requirements. Work with your safety organization to determine if an MSDS is required.

4. Ranges

Ranges that are adjacent to, contiguous with, or wholly encompassed by a facility are considered part of the facility for purposes of Section 313 and are included in facility Section 313 threshold determinations. For example, if a facility has an adjacent outdoor small arms range that uses lead in munitions fired, and the facility also uses lead in non-exempt equipment maintenance activities, the threshold determination for lead is based on the lead from the non-range activities PLUS the lead used in the range activities because it is all part of a single facility. If reporting is triggered, two Form Rs must be prepared for toxic chemicals that are released from both the installation (non-range) and range activities. One Form R would be completed for lead where the facility name is given to include the installation (or non-range activities) and a second Form R would be completed where the facility name is given to include ranges (or range activities). In both cases, the Form R would identify the report as being for "Part of the facility" and for "A federal facility" in Part I, Section 4.2.

5. Reporting Releases of Exempt Toxic Chemicals

Once a toxic chemical is exempted from Section 313, it is exempt from BOTH threshold calculations and release estimates even if the toxic chemical triggers reporting based on other nonexempt activities at the installation. For example, batteries exempted under motor vehicle maintenance or as an article are not included in threshold calculations AND are not reported on the Form R (e.g., do not report a transfer offsite for recycling) if reporting is triggered for a toxic chemical in the battery. As another example, and must be estimated and included on Form R if reporting is triggered.

6. Certifying Official

The Certifying Official should establish his/her own account (i.e., username and password) in Toxics Release Inventory-Made Easy (TRIMEweb) as soon as possible. Once the account is established, the person entering the Form Rs for the installation must enter the name and e-mail address for the Certifying Official. TRI-MEweb will then post a message to the Certifying Official within their TRI-MEweb mailbox notifying them that they have been nominated and that they must complete and mail an enclosed certification form to EPA. The Certifying Official is the only person that will receive this message. The Certifying Official must print and review the provided form, sign the form, and mail it to EPA at the provided address. Once received by EPA, the amount of fuel issued to non-transient motor vehicles is exempt; therefore, the releases from these fuel transfers to the vehicles are also exempt. In contrast, fuel issued to nonmotor vehicle Aerospace Ground Equipment (AGE) is otherwise used; therefore, these releases from these fuel transfers to AGE are also NOT exempt original signature is maintained on file and the Certifying Official status is shown as APPROVED within TRIMEweb. Once the Certifying Official is approved in TRI-MEweb, the Form Rs may be submitted. The Certifying Official and Technical Contact will receive an e-mail that the Form Rs are ready for certification. The Form Rs are not considered submitted until they are certified. The only time to wait to establish a Certifying Official is when a change in personnel is anticipated prior to the reporting deadline. The closer to the reporting deadline, the longer it may take for approval to be granted due to the volume of requests.

7. Transient Fuels

The term 'transient' means one thing under Section 313 (a vehicle at the installation for fueling purposes only; does not include vehicles for any other mission-related purposes such as training, supplies, or troop deployment) and another thing to Fuels personnel (any vehicle not based at the installation). Fuel amounts provided for mission-related activities versus gas-n-go stops should be clearly documented.

EPCRA Training Opportunities & Resources

The Naval Civil Engineer Corps Officers School (CECOS) conducted refresher courses on EPCRA Sections 311/312 (on 7 January 2010 and 14 January 2010) and held EPCRA Section 313 refresher courses (on 10–11 March 2010 and 17–18 March 2010). Additional EPCRA resources include the Navy's EPCRA Helpline (NavyEPCRA@urscorp.com) which is staffed by the CECOS Navy EPCRA training instructors from URS Corporation. EPCRA questions may be emailed to the helpline and a response or request for more information or discussion will be sent by the next business day. The Navy also maintains an EPCRA email list used by the Chief of Naval Operations to distribute EPCRA information such as announcements and reporting deadline reminders. To join, Navy personnel should send an email to NavyEPCRA@urscorp.com with 'Navy EPCRA e-mail list' in the subject line.

Calculation Manual Revamped

The Navy is updating the EPCRA Calculation Manual to provide guidance in developing information/calculations required for EPCRA reporting for several common activities to Navy installations (e.g., batteries, nitrates). The update is expected in time for CY 2009 EPCRA reporting. The calculation manual will serve as a companion guide to "Getting Started with The Emergency Planning and Community Right-to-Know Act (EPCRA)" which can be obtained by contacting the Navy EPCRA Helpline at NavyEPCRA@urscorp.com.

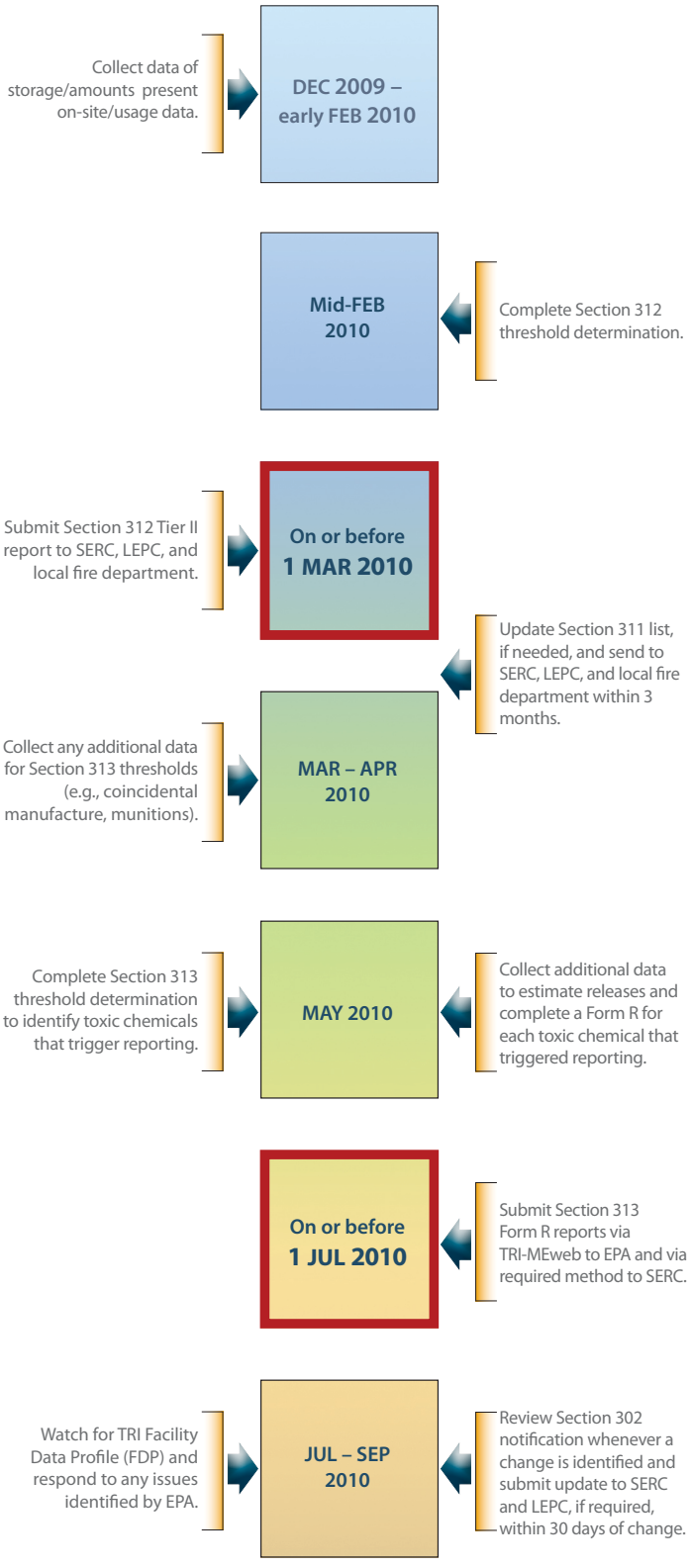
For additional information, contact:

- **Lisa Lambrecht**
  Chief of Naval Operations —
  Environmental Readiness Division

  PH: 703.602.5334 or
  DSN: 332.5334

  eMail: lisa.lambrecht.ctr@navy.mil; or,

RY 2010 EPCRA REPORTING TIMELINE



** Compile and complete all EPCRA documentation for the reporting year as soon as practicable following submittals.*

- **Anita Firestine**
  URS Corporation

  PH: 610.873.7133

  eMail: anita_firestine@urscorp.com

Reference: http://www.enviro-navair.navy.mil/currents/winter2010/Win10_Errors_EPCRA_Reporting.pdf.

EPA's New Policy on TSCA Section 8(e) — Confidentiality of Chemicals & Risk Information

By Abdul H. Khalid, Chemical Engineer, HTIS

Recently, the Environmental Protection Agency (EPA) announced its new policy on confidentiality claims by manufacturers that are related to the identification of dangerous chemicals under the Toxic Substances Control Act (TSCA).

In a January 2010, news release, Lisa P. Jackson, the EPA administrator, made a commitment to update the TSCA Section 8 (e), thereby, increasing the public's access to information on chemicals as a part of continued comprehensive reform of toxic substances rules and regulations. Under the new policy, certain types of **confidentiality claims, on the identity of chemicals by the manufacturer, will no longer be accepted by the EPA, without their current and more health and safety information, as well as, potential risks posed by the chemicals.** The EPA believes that this action was necessary because the safety and health aspects of chemicals and their related risk to the public's health and the environment section of the existing 1976 TSCA needed to be updated.

On the assurance of the safety of chemicals and the agency's top priorities, Steve Owens, assistant administrator for EPA's Office of Prevention, Pesticides and Toxic Substances said, "The American people are entitled to transparent, accessible information on chemicals that may pose a risk to their health or the environment. We will continue taking steps that increase transparency and assure the safety of chemicals in our products, our environment and our bodies."

TSCA Section 8(e) requires U.S. chemical manufacturers, importers, processors, and distributors to notify the EPA immediately after obtaining information on any of their chemical substances or mixtures that reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment. TSCA Section 8(e) notices should be submitted within 30 calendar days after obtaining information that a substance or mixture presents a substantial risk.

On January 21, 2010, the EPA published a notice in the Federal Register related to the EPA's new general practice of reviewing submission under TSCA Section 8(e) for CBI claims of chemi-

cal identities listed on the public portion of the TSCA chemical substances inventory. The EPA believes this new general practice will make more health and safety information available to the public, and would support an important part of the Agency's mission. The full text of this notice is available at: http://edocket.access.gpo.gov/2010/2010-1105.htm .

For further information on the new policy, DoD personnel can visit the following EPA's websites:

- TSCA 8 (e) Notices at: http://www.epa.gov/oppt/tsca8e/
- EPA's principles for comprehensive TSCA reform: http://www.epa.gov/oppt/existingchemicals/pubs/principles.html
- Confidential Business Information (CBI) at: http://www.epa.gov/oppt/tsca8e/pubs/confidentialbusinessinformation.html

For more information on notices, contact:

- **Dale Kemery**
  PH: 202.564.7839 / 4355
  eMail: kemery.dale@epa.gov; or,
- **Enesta Jones**
  PH: 202.564.7873 / 4355
  eMail: jones.enesta@epa.gov

For technical information, contact:

- **Scott M. Sherlock**
  EPA, Environmental Assistance Division
  Office of Pollution Prevention and Toxics
  Washington, D.C.

  PH: 202.564.8257
  eMail: sherlock.scott@epa.gov

References:

1. Federal Register, January 21, 2010, Vol. 75, No. 13, pages-3462-3463; and,

2. EPA News Release, January 21, 2010, "EPA Increases Transparency on Chemical Risk Information: Action part of continued comprehensive reform of toxic substance laws".

News From OSHA

Reducing Exposure to Lead and Noise at Indoor Firing Ranges

By Beverly Howell, Industrial Hygienist, HTIS

Workers and users of indoor firing ranges may be exposed to hazardous levels of lead and noise. Indoor ranges have been built and used by the Department of Defense in order to support training strategies for attaining marksmanship goals in support of operational readiness objectives. A "Workplace Solutions" document prepared by The National Institute for Occupational Safety and Health (NIOSH) has incorporated steps for workers and users to utilize in order to reduce exposures. A companion document for employers and range operators titled "**Preventing Occupational Exposures to Lead and Noise at Indoor Firing Range**" was published in April 2009 and introduced in the Jul-Aug 2009 HTIS bulletin.

It is estimated that more than 1 million Federal, State, and local law enforcement officers work in the United States, according to the Bureau of Justice Statistics. Indoor firing ranges are ideal because of the controlled atmosphere for practicing. In addition to the law enforcement personnel, more than 20 million recreational users (active target shooters) practice at indoor ranges. Within the United States, there are an estimated 16,000 to 18,000 firing ranges that are currently operational.

The current document focuses on two case studies,

1. Lead exposure of school rifle teams; and,
2. Noise exposures of federal and local law enforcement officers.

Health problems associated with lead exposure and hearing loss are particularly common among employees and instructors according to studies conducted at firing ranges. Lead exposure occurs mainly through the inhalation of lead fumes or ingestion (e.g., eating or drinking with contaminated hands) and noise from the discharging of weapons. Below are the Workplace Solutions recommendations:

Workers and shooters at firing ranges should take the following steps to protect themselves:

- **Take training, follow safe work practices, and participate in health monitoring programs.**
- **Use personal protective equipment (PPE):**
  ☑ Use double hearing protection (earplugs and earmuffs).
  ☑ Wear respirators and full protective outer clothing for maintenance activities that involve close contact with lead dust or spent bullets.
  ☑ Wear gloves and eye protection when using chemicals to clean weapons or firing range surfaces.
- **Practice good hygiene:**
  ☑ Wash hands, arms, and face before eating, drinking, smoking, or contact with others.
  ☑ Change clothes and shoes before leaving the facility.
  ☑ Wash clothes used at the firing range separately from family's clothes.
- **Report symptoms to your employer and get medical attention when needed:**
  ☑ Common health effects of lead poisoning in adults include reproductive effects, nausea, diarrhea, vomiting, poor appetite, weight loss, anemia, fatigue or hyperactivity, headaches, stomach pain, and kidney problems.

☑ If you suspect you have been exposed to lead, even if you have no symptoms, get your blood lead level tested.
☑ Exposure to high noise levels can cause hearing loss, tinnitus (ringing in the ear), stress, high blood pressure, fatigue, and gastro-intestinal problems.

Employers should take the following steps to protect workers and shooters at firing ranges:

- **Provide workers and shooters with training and information about hazards:**
  ☑ Inform pregnant workers and shooters about possible risks to the fetus.
  ☑ Ensure that workers are aware of symptoms that may indicate a health problem.
  ☑ Tell workers about participating in medical surveillance programs and getting blood lead levels tested, even if they don't show symptoms.

- **Establish effective engineering and administrative controls:**
  ☑ Install an effective supply air and exhaust ventilation system.
  ☑ Maintain and replace air filters regularly.
  ☑ Apply appropriate noise control measures to limit noise inside the range and in nearby areas.
  ☑ Keep the firing range and other workplace areas clean using proper cleaning procedures such as wet sweeping and HEPA vacuuming of surfaces.
  ☑ Provide workers with lockers and places to wash to avoid take-home contamination.
  ☑ Limit length of time that workers and shooters use the firing range: rotate assignments and provide quiet, clean, break areas.

- **Provide workers with protective equipment:**
  ☑ Provide hearing protection devices such as earplugs and earmuffs.
  ☑ Provide skin protection, eye protection, and NIOSH-approved respirators for workers who clean lead-contaminated areas.
  ☑ Provide floor mats, knee pads, and shoe covers to limit transfer of lead to clothing.

- **Review OSHA requirements for medical monitoring for lead (29 CFR 1910.1025(j)) and noise (29 CFR 1910.95(d)(e)(g)(h)).**

Reference: Workplace Solutions, NIOSH Publication No. 2010-113: "Reducing Exposure to Lead and Noise at Indoor Firing Ranges".

OSHA eTool Protecting the Safety of Electric Power Workers

By Ariel Rosa, Environmental Protection Specialist, HTIS

Approximately 80 workers die from electric shock each year while working with electrical equipment or related utility operations. Recent deaths have illustrated the dangers of working with electric power. A worker installing decorative lights on a tree was electrocuted after touching a high-powered overhead electrical line. Another worker was electrocuted after contacting an overhead high-voltage line with a portable light tower while working at a water main repair site.

To help prevent such deaths, the Occupational Safety and Health Administration (OSHA) recently published the "Electric Power Generation, Transmission and Distribution Standard" eTool.

"We cannot allow these tragedies to continue," said David Michaels, Assistant Secretary of Labor for OSHA. "This eTool informs employers of their obligation to protect electrical workers from serious injuries and death, and also lets workers know the preventive steps their employers must take to assure worker safety."

The eTool addresses OSHA's standard 1910.269 Electric Power Generation, Transmission, and Distribution and explains preventive measures for protecting workers' safety and health such as providing personal protective equipment, using lockout/tagout procedures to prevent startup of energized equipment and following safety requirements when working on or near power lines.

OSHA's eTools are stand-alone, interactive Web-based training tools on occupational safety and health topics that include modules for answering questions and providing advice on how OSHA regulations apply to users' worksites.

Reference:
OSHA's eTools Web Page:
http://www.osha.gov/SLTC/etools/electric_power/index.html

Safety and Health Information Bulletins on Workplace Products Certification and Mechanical Power Presses

By Beverly Howell, Industrial Hygienist, HTIS

Safety and Health Information Bulletins (SHIBs) are just one tool the Occupational Safety and Health Administration (OSHA) uses to inform internal staff and the public of significant occupational safety and health issues concerning hazard recognition, evaluation, and control in the workplace and at emergency response sites. This Safety and Health Information Bulletin is not a standard or regulation, and it creates no new legal obligations. The Bulletin is advisory in nature, informational in content, and is intended to assist employers in providing a safe and healthful workplace. In March 2010, OSHA issued the following two SHIBs:

Certification of Workplace Products by Nationally Recognized Testing Laboratories (NRTL)

- The purpose of the above SHIB is to:

☑ Identify specific OSHA requirements for product approval by NRTLs;
☑ Understand OSHA's process for recognizing NRTLs and the NRTL product-approval process;
☑ Understand potentially serious hazards caused by products that are not approved (i.e., noncompliant products); and
☑ Recognize products that are not approved and factors that can cause noncompliance with the approval requirements.

A number of OSHA standards contain requirements for "approval" of specific products by an NRTL. The approval process generally consists of **testing and certification** of a product by a NRTL. Use of non-approved, counterfeit, improperly approved or modified products can potentially expose workers to serious hazards. To understand the significance of the testing and certification process the above SHIB in its entirety can be reviewed/accessed at: https://www.osha.gov/dts/shib/shib021610.html .

Hazards Associated with the "Unintended (Double) Cycling" of Mechanical Power Presses.

- The purpose of this SHIB is to:
  ☑ Inform employers and workers that unless a press control circuit is control reliable, unintended cycling may occur when a safety device and/or control component is improperly installed or fails.
  ☑ Raise awareness that it is important to verify that the safety systems of mechanical power presses are functioning properly.
  ☑ Stress that it is important to train operators and maintenance personnel on safe operating procedures.
  ☑ Identify the requirements in OSHA's mechanical power presses standard that address safeguarding the point of operation, component failure and safety system reliability.

The most common type of injury associated with mechanical power presses is amputation. This SHIB describes an accident involving an amputation that occurred when the press double cycled. The operator was injured when he placed his hand in the point of operation area and the presence sensing device (PSD) failed. Within the Department of Defense mechanical presses are used as a demilitarization tool and by industrial plant equipment personnel. Recommendations to reduce the risk of amputation hazards are documented in the full document at https://www.osha.gov/dts/shib/shib020210.html .

References:

1. U. S. Department of Labor, Occupational Safety and Health Administration Directorate of Technical Support and Emergency Management, Office of Science and Technology Assessment, Certification of Workplace Products by Nationally Recognized Testing Laboratories, SHIB 02-16-2010; and,

2. U. S. Department of Labor, Occupational Safety and Health Administration Directorate of Technical Support and Emergency Management, Office of Science and Technology Assessment, Hazards Associated with the "Unintended (Double) Cycling" of Mechanical Power Presses, SHIB 02-02-2010.

Other News

DHS Updates on Technology Transfer Program

By Abdul H. Khalid, Chemical Engineer, HTIS

"Cell-All" is a smell phone that provides an alert when suspicious hazardous substances, chemical leaks or chemical attacks are encountered.

The Homeland Security Department (DHS)'s Science and Technology (S&T) Directorate announced the development of a device to equip a cell phone with a sensor that would be able to detect the presence of some dangerous chemicals and warn of chemical leaks or chemical attacks. Your cell phone then will become a "smell phone" called "Cell-All" to warn of chemical leaks and chemical threat. In case a chemical threat breaks out at places such as malls, subways, and offices, this "Cell-All" would alert the authorities automatically.

According to the program manager, Stephen Dennis of DHS, the agency's goal is to create a lightweight, cost-effective, power-efficient device to warn when there are chemical leak problems or when a chemical threat breaks out. This device will be like an antivirus software, bidding its time in the background and springing to life when it spies suspicious activity. The "Cell-All" regularly sniffs the surrounding air for certain volatile chemical compounds.

When a threat is sensed, a virtual "ah-choo!" ensues in one of two ways. For personal safety issues such as a chlorine gas leak, a warning is sounded; the user can choose a vibration, noise, text message, or phone call. For catastrophes such as a sarin gas attack, details including time, location, and the compound are phoned home to an emergency operations center.

Under the cooperative research and development agreements, four cell phone manufacturers: Qualcomm, LG, Apple, and Samsung have agreed to and are involved in this effort. These written agreements, which bring together a private company and a government agency for a specific project, often accelerate the commercialization of technology developed for government purposes. As a result, Dennis hopes to have 40 prototypes in about a year, the first of which will sniff out carbon monoxide and fire.

For further information on this news, DoD interested personnel can visit DHS website at:
http://www.dhs.gov/files/programs/gc_1268073038372.shtm.

For Homeland Security Technology Transfer Mechanisms, visit:
http://www.dhs.gov/xabout/structure/gc_1264625623653.shtm.

Reference: "Cell-All: Super Smartphones Sniffout Suspicious Substances", DHS website at: http://www.dhs.gov/files/programs/gc_1268073038372.shtm.

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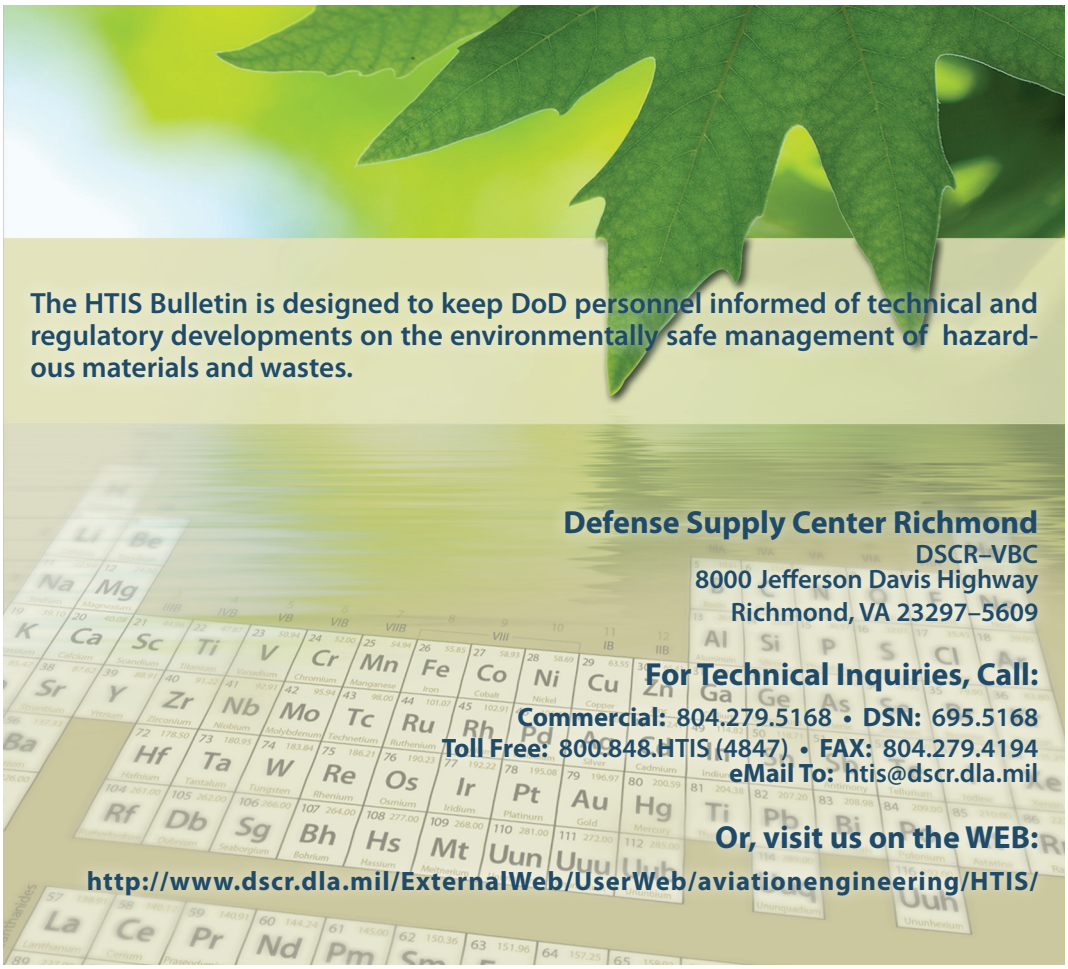

The HTIS Bulletin is designed to keep DoD personnel informed of technical and regulatory developments on the environmentally safe management of hazardous materials and wastes.

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