JULY 1, 2018

INTERAGENCY COMMITTEE ON CHEMICAL MANAGEMENT

EXECUTIVE ORDER NO. 13-17

REPORT TO THE GOVERNOR

WALKE, PETER

Table of Contents

Executive Summary 2
I. Introduction 4
II. Overview of the Current State 6
A. The Current State of Chemical Reporting and Recordkeeping in Vermont 6
B. The Current State of Chemical Management Coordination Across State Agencies ... 8
C. The Current State of the Toxics Use Reduction Act 8
III. Recommendations to the Governor 9
A. Creation of a Centralized Electronic Reporting System and Inventory (CERSI) 9
B. Establishment of a Review Framework for Evaluating Necessary Changes to State Chemical Reporting and Recordkeeping and Coordinating Chemical Management Actions Across State Agencies 20
C. Improve the Effectiveness of the Toxics Use Reduction and Hazardous Waste Reduction Act 24
IV. Final Thoughts 30
Appendices 31

Executive Summary

In June 2016, at the direction of the Vermont General Assembly, the Agency of Natural Resources (ANR) convened a working group to develop recommendations related to regulation of chemicals of emerging concern, increasing the State's ability to prevent citizen exposure to harmful chemicals, and increasing public access to chemical information. The Act 154 Working Group's Report, submitted to the General Assembly in January 2017, recommended, among other things, establishment of an interagency committee to improve coordination among involved regulatory agencies, creation of a central electronic reporting system to assist businesses with compliance and provide state agencies and the public access to chemical information, the amendment of existing requirements to ensure state agencies have complete chemical inventory information, and strengthening of the Toxic Use Reduction and Hazardous Waste Reduction Act (TURA).

On August 7, 2017, Governor Scott issued Executive Order No. 13-17, which directed the creation of an Interagency Committee on Chemical Management (ICCM). Composed of representatives from various State Agencies and Departments, its tasks were to make initial recommendations to the Governor, after consultation with a citizen advisory panel, as to how the State should establish a centralized or unified electronic reporting system, amend existing recordkeeping and reporting requirements to ensure sufficient chemical inventory reporting, and strengthen TURA. The ICCM also convened a Citizen Advisory Panel (CAP) as directed by the Executive Order to provide input and expertise to the ICCM. The ICCM conducted a review of the current state of Vermont's chemical reporting and recordkeeping requirements, potential amendments to improve the state's ability to assess health and environmental risk from chemical use, and TURA. The ICCM's review revealed wide variability, overlap, and gaps in current reporting and recordkeeping processes and publicly available information, avenues to improve assessment of human health and environmental risk from chemicals, and opportunities to strengthen TURA. The ICCM and CAP's worked resulted in a series of recommendations, all of which gained consensus by the ICCM members. Executive Order Section III.A. directs the ICCM to make initial recommendations to the Governor on or before July 1, 2018. The ICCM makes the following recommendations in this Report:

A. Creation of a Centralized Electronic Reporting System and Inventory (CERSI). This recommendation would create a central, unified location for electronically reporting, analyzing, and accessing information related to chemical management and use in the State. The system would make chemical reporting simpler by creating a "one-stop-shop" reporting portal for the regulated community (reporting entities), and would make the collected information available to State regulators and to the public with appropriate access and security filters. The system would allow for a more comprehensive understanding of chemical use and management activities occurring in the State. Functionally, CERSI would guide the reporting entity to the appropriate reporting forms by presenting the customer with an initial series of questions and choices to determine what information they need to report. The system would have a single log-in and account management for State chemical reporting by the regulated business customer. The system would provide online reporting forms including electronic signature, document upload capability, and payment processing where fees are collected. Once information is

submitted, this system would provide an administrative console to allow state administrators the ability to monitor, manage and review data before it is uploaded to local Agency databases. Data can then be extracted, transformed, and loaded from local agency databases to a central data warehouse which will allow regulators and the public to view chemical reporting activities and information across the state. The system would also include a website that provides the state, via role-based access through an internal-facing portal, the ability to query chemical reporting activities and search activities via a map interface and a website that provides the public, via a public-facing portal, with the ability to query chemical reporting activities including the ability to search activities via a map interface.

B. **Establishment of a review framework for evaluating necessary changes to state chemical reporting and recordkeeping, and coordinating chemical management actions across state agencies.** This recommendation would establish a framework for State review, coordination, and analysis of risks to human health and the environment posed by a chemical, class of chemicals, or grouping of chemicals. Under the proposed process, an Agency or Department would propose that the ICCM review the current applicable recordkeeping and reporting requirements pertaining to a chemical, class or grouping of chemicals. The ICCM would then engage a technical team and citizen advisory panel to provide input and assistance in its review, culminating in the ICCM providing recommendations to the affected regulatory entities. This process is intended to align state oversight and ensure coordination of chemical management across state government.

C. **Improvement of the Toxics Use Reduction and Hazardous Waste Reduction Act (TURA).** Under this recommendation, the effectiveness of pollution prevention and toxics use reduction planning efforts under TURA would be improved by updating the list of chemicals and threshold amounts required to be reported under current law to include the Toxics Release Inventory List, regulated Hazardous Wastes, and the list of Chemicals of High Concern to Children. This update would also include a subset of chemicals with lower thresholds (i.e., Persistent Bioaccumulative Toxic chemicals – identified in the Toxics Release Inventory chemical list with lower thresholds). Reporting requirements would also be amended to include entities with less than 10 full-time employees onsite at a Vermont facility but 500 or more corporate employees total. Other improvements include providing additional staff resources to implement the improved regulatory program, additional training for planners, creation of an electronic database and electronic reporting, and allowance of alternative resource or environmental impact planning.

I. Introduction

In June 2016 at the direction of the Vermont General Assembly, the Agency of Natural Resources (ANR) convened a working group to develop recommendations related to regulation of chemicals of emerging concern, increasing the State's ability to prevent citizen exposure to harmful chemicals, and increasing public access to chemical information. The Act 154 Working Group's Report, submitted to the General Assembly in January 2017, recommended, among other things, establishment of an interagency committee to improve coordination among involved regulatory agencies, creation of a central electronic reporting system to assist businesses with compliance and provide state agencies and the public access to chemical information, the amendment of existing requirements to ensure state agencies have complete chemical inventory information, and strengthening of the Toxic Use Reduction and Hazardous Waste Reduction Act (TURA).

On August 7, 2017, Governor Scott issued Executive Order No. 13-17 (EO), which directed the creation of an Interagency Committee on Chemical Management (ICCM). The ICCM consisted of a representative from the Agency of Natural Resources; Agency of Agriculture, Food, and Markets; Department of Health; Department of Labor; Agency of Commerce and Community Development; and Agency of Digital Services. The ICCM's tasks were to make initial recommendations to the Governor, after consultation with a citizen advisory panel, as to how the State should establish a centralized or unified electronic reporting system, amend existing recordkeeping and reporting requirements to ensure sufficient chemical inventory reporting, and strengthen TURA. The EO directs the ICCM to submit its initial recommendations on or before July 1, 2018. The ICCM convened a Citizen Advisory Panel (CAP) as directed by the Executive Order to provide input and expertise to the ICCM. The CAP consists of a broad range of private, public, and academic organizations and individuals.

The ICCM convened its first meeting on September 27, 2017, and met monthly thereafter. It also established several subgroups which met during this time period to work on various tasks and activities to further the ICCM's work. The ICCM began with a review of the current state of chemical use and management regulation in the State, and used that analysis to inform its recommendations. The Act 154 Chemical Use Working Group's January 13, 2017 Report informed a general review as to the deficiencies and gaps in the current legal framework and policies as they relate to chemical reporting, chemical management, cleanup and remediation, and civil remedies, and specifically highlighted gaps in the current regulatory regime that result in a lack of information about the chemicals being used and/or managed in Vermont. Based on the charge of the Executive Order, the ICCM further reviewed the current state pertaining to chemical reporting and recordkeeping requirements to inform its recommendations on a centralized electronic reporting system. The ICCM developed an inventory of State regulatory programs that collect information related to, and/or require reporting and recordkeeping of, chemical use throughout the State. Thirty one (31) programs were identified. Each of the state entities responsible for administering these programs then provided an overview of their respective programs. The ICCM also evaluated the scope of existing chemical reporting and recordkeeping by looking at types, thresholds, entities and amounts of chemicals subject to recordkeeping and reporting, which helped to facilitate an evaluation of the consistency of coordination of chemical management actions across state agencies. The ICCM also reviewed TURA by examining its current state with respect to types, thresholds, entities and amounts of

chemicals subject to reporting and planning. The current state of these programs as they relate to the EO mandates is discussed more fully in Section II.

After its initial analysis of the current state the ICCM then engaged in a series of meetings and activities utilizing subgroups made up of ICCM members and additional technical staff from the various State entities to develop initial draft recommendations. The CAP, other interested parties, and the ICCM then reviewed, discussed, and commented on the output of the subgroups and preliminary draft recommendations. Following receipt of comments, the ICCM developed its recommendations into a draft report, which the CAP and other interested parties also commented on. After review and consideration of those comments, the ICCM finalized its recommendations. Those recommendations are included and explained fully in this report.

Throughout this process, the ICCM agreed to make decisions on its recommendations by seeking consensus, or general agreement, and where it could not, a majority vote would be utilized with opposing positions memorialized. Section III contains the ICCM's recommendations to the Governor, all of which represent consensus of the ICCM members. These recommendations address how to: 1) create a centralized electronic reporting system; 2) create a review framework for evaluating necessary changes to State chemical reporting and recordkeeping and coordinating chemical management actions across state agencies; and 3) strengthen TURA. The report describes the processes the ICCM used to develop these respective recommendations, and where applicable, a process for implementing them. The Appendices that follow the recommendations contains background documents and supporting information as follows:

- **Appendix A** contains a copy of Executive Order No. 13-17.

- **Appendix B** contains a list of ICCM Members, CAP Members, and other staff and individuals who attended meetings, participated in discussions, and submitted comments.

- **Appendix C** contains a pdf version of the ICCM's Master Matrix. The ICCM compiled this early in the course of its work to help understand the current state of chemical requirements and to inform the ICCM's ultimate recommendations. Due to its size, the Matrix is not viewable in hard copy, but can be viewed fully in its electronic version by enlarging or zooming in on the text. In addition, a link to the document, which has been placed on the ICCM's website, is included in the Appendix.

- **Appendix D** contains the Implementation Plan for the electronic reporting system which a subgroup of ICCM members and support staff developed during the course of a Lean Event.

- **Appendix E** contains a diagram of the Chemical Reporting System Architecture. This is a visual representation of the system.

- **Appendix F** contains the TURA Subgroup's Recommendation Matrix, which the subgroup created as part of its facilitated discussions to inform the ICCM's recommendations.

- **Appendix G** contains the comments from the CAP and other interested parties on the draft Report.

The ICCM also maintained a website throughout this process. Relevant information about the ICCM and its work on EO 13-17 can be found at: **http://anr.vermont.gov/about/special-topics/chemical-management-committee**

II. Overview of the Current State

A. The Current State of Chemical Reporting and Recordkeeping in Vermont

During the winter and spring of 2016, the State discovered widespread contamination—approximately 310 homes affected—of private drinking water supplies with perfluorooctanoic acid (PFOA) in Bennington County. PFOA and similar compounds (called perfluorinated compounds, or "PFCs") are chemicals of emerging concern, which means that they are substances that historically have not been regularly monitored or thoroughly evaluated for risks, but have the potential to enter the environment and cause adverse health impacts. PFOA is one of thousands of chemicals on the Toxic Substances Control Act (TSCA) Chemical Substance Inventory that has the potential to enter the air, groundwater, soils and surface water and pose a threat to human health and the environment.

The discovery of PFOA contamination in Bennington County revealed that the State does not have sufficient information—use, volume, location and toxicity—about many chemicals present and/or used in the State. Although users, manufacturers, and distributors of chemicals are subject to a myriad of federal and state recordkeeping and reporting requirements, a complete chemical inventory is not available in a single database that is easily accessible by state agencies and the public. Without adequate information about what chemicals are present and/or used within the State, the State's ability to consider appropriate regulations or restrictions on the use of such chemicals can be restricted. Additionally, without a good understanding of who is managing certain chemicals and where chemicals are being used, the State's ability to respond to emergency situations involving such chemical use can be significantly limited

Section III.A.(2) of the EO tasked the ICCM with recommending how the State should establish a centralized or unified electronic reporting system to enable a better understanding of what chemicals are being managed in the State, and to facilitate compliance by businesses and other entities with chemical reporting and other associated regulatory requirements. The ICCM began this task by examining the current state of chemical reporting and recordkeeping to inform its recommendations. Currently, there are thirty one (31) state regulatory programs engaged in administering their own chemical reporting and recordkeeping programs. The preliminary review work of the ICCM revealed variability as the overarching theme of chemical reporting and recordkeeping. This variability begins with the regulated entity at the initial stage of chemical reporting.

The regulated entity when creating and updating its own inventory records is challenged with identifying chemicals and keeping appropriate records for reporting purposes. With respect to chemical identification and inventories, there is inconsistency in chemical and chemical mixture naming conventions throughout different state programs, resulting in inconsistent chemical

identifiers. In addition, the scope of existing exemptions from state reporting requirements, current state inventories, and records do not capture a complete picture of all chemicals being used or managed in the State. The current reporting requirements and the need to keep track of changing requirements can also be confusing and difficult for small businesses, particularly for new businesses. The internal format of records that the regulated entities use may vary, and that information is not always updated in real time, all of which lead to reporting challenges.

Once an entity seeks to report its inventory information to the appropriate regulatory agency, it may have to do so through variable formats such as paper or hard copy to electronic submissions. In addition, the criteria, format and contents of the reporting forms, and need for supporting documentation vary greatly depending on the requirements of the reporting program. Depending on the scope of an entity's activities, that entity may be required to deal with multiple contacts within and across an agency or multiple agencies. If the regulated entity is required to pay a fee, methods of submission vary from physical submittal to electronic payment, with variability in issuing refunds.

Once the regulatory program receives the reported information, data entry, scanning, and uploading of documents occurs manually for some, but not all, programs. Each of those programs utilizes its own separate tracking system or database representing a myriad of internally-created systems using a variety of technology platforms or vendor-provided systems. There are limited state resources to perform receipt and entry functions. Only one electronic database (Tier II) populates another database.

The review and QA/QC of reported chemical information is also variable. Regulatory programs employ different methods to address deficient information, and in some programs, review of entries occurs multiple times by different staff. In addition, there are limited resources with technical expertise to conduct these reviews and meaningful analysis of chemical use, or more importantly, any potential risks posed to Vermonters by such use. This affects the quality and usefulness of data and information that is available to the public.

Once collected by the State, chemical information is often not proactively made available for easy public inspection, resulting in the need for the public to request that information from the appropriate regulatory program(s). Production of information to the public is often in variable formats, and required reports may not present data in a useful manner or format. Confidential or trade secret information has to be managed and withheld from public review, as well as information that impacts public safety and security. External users (regulated entities, the public, and/or other stakeholders) may not know what agency or program to contact for information, there are variable timelines for production and availability of documents after QA/QC, and limited resources to respond to information requests. There are also constraints to changes in format of data due to federal requirements or third party vendor specifications. Appendix C contains a matrix compiled by the ICCM which helped to inform this review and assessment of the current state of chemical reporting and recordkeeping. The 3-day Lean Event discussed more fully below also informed this assessment.

In sum, currently chemical reporting and recordkeeping can be inconsistent and confusing, and does not capture a complete picture of chemical use and management in the State. Although users, manufacturers, and distributors of chemicals are subject to a myriad of federal and state recordkeeping and reporting requirements, complete chemical inventory information is not available in one database that is easily accessible by the regulated community, state agencies, and the public.

B. The Current State of Chemical Management Coordination Across State Agencies

Section III.A.(3) of the EO tasked the ICCM with recommending necessary changes to chemical recordkeeping and reporting requirements to facilitate assessment of risks to human health and the environment, as well as regulatory or legislative changes needed to ensure that Vermont is proactively managing chemicals, both those currently regulated and emerging contaminants.

The ICCM utilized its review of the current state of chemical reporting and recordkeeping to inform its recommendations, included in Appendix C, and the work of the subgroup of ICCM members and support staff within the context of the Lean Event. That preliminary review work of the ICCM revealed variability as the overarching theme in all aspects of chemical reporting and recordkeeping. Regulatory programs that administer chemical recordkeeping and reporting requirements often have overlapping and/or related authorities and requirements, but largely operate independently, with few programs coordinating across agencies. As discussed above, this lack of coordination creates duplication and inconsistency within the current state of chemical reporting and recordkeeping. There is currently no established process or single entity that ensures the coordinated management of chemicals across State government.

C. The Current State of the Toxics Use Reduction Act

Section III.A.(4) of the EO tasked the ICCM with recommendations to improve TURA's effectiveness. To inform its recommendations, the ICCM utilized a review of the chemicals currently subject to TURA and their threshold amounts, the entities responsible for reporting, reduction planning requirements, current staffing levels, and program administration. The Act 154 Chemical Use Working Group Legislative Report, Appendix C, pages 62 – 64, and the TURA Facilitated Sub-group Event discussed more fully below helped to inform this review.

TURA is currently administered by the Agency of Natural Resources. The law establishes planning requirements for certain entities and users of chemicals, aimed at reducing levels of chemical used and/or hazardous waste generated. The substances regulated under the program include toxic substances listed in the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III, Section 313 and the Vermont Hazardous Waste Regulations to identify the substances required to be reported under the program, so the response to contaminants of emerging concern mirrors the response of those two regulatory programs. Facilities that are subject to TURA's pollution prevention planning requirements are those that are "large users" of toxics substances, as well as facilities that generate greater than 2,640 pounds of hazardous waste per year. A "large user" is a facility with 10 or more full-time employees, that is identified by Standard Industrial Classification (SIC)[1] 20 – 39 and that: (A) manufactures, processes or otherwise uses, exclusive of sales or distribution, more than 10,000 pounds of a toxic substance per year; or (B) manufactures, processes or otherwise uses, exclusive of sales or distribution, more than 1000 pounds but less than 10,000 pounds of a toxic substance per year if that substance accounts for more than 10% of the total toxic substances used at the facility during the

[1] The SIC has been updated to the North American Industrial Classification System (NAICS).

year. Facilities for which ANR determines that no source reduction opportunities exist may be exempted from the planning requirements.

Facilities that are subject to planning are required to submit plans or plan summaries to ANR every three years and to annually submit progress reports. Facilities are required to develop the plans, but are not required to implement them. The plans must include a list of the toxic substances that exceed the associated thresholds and/or the amounts of hazardous wastes routinely generated by the facility. Planning entities have the option to submit an entire plan or a plan summary that includes a cover sheet, management policies on pollution prevention and employee training related to pollution prevention, and a summary of pollution prevention performance goals. Plan summaries must include methods to be taken by the facility to reduce toxics use and waste generation over the next three years, a list of toxic substances and hazardous wastes that are covered by the plan, and a statement of the facility's policy and commitment regarding toxics use and hazardous waste reduction. Full pollution prevention plans are exempt from the definition of public records and are therefore not subject to public inspection and copying under the Vermont Public Records law. Plan summaries (but not the complete plan) are public records and available to the public. Annually, each facility subject to the planning requirement must prepare and submit a hazardous materials management performance report, known as an Annual Progress Report, which describes the facility's efforts to meet the performance goals of its plan. The reports are submitted on paper and are available to the public.

Limited data from the plans and annual progress reports are maintained by ANR in a database. This data includes information regarding completion of plans and progress reports, fees received, total pounds of toxics or hazardous waste managed, pounds of toxics or hazardous waste reduced, and toxics use reductions methods used. The database is not accessible on a public platform. One ANR employee is tasked with devoting ½ of their time to implementing the TURA program.

Though facilities are not required to actually implement their plans, TURA has demonstrated success in reducing the amount of toxic substances used and the amount of hazardous wastes generated by facilities. Facilities that have implemented planning measures have reduced hazardous waste generated by 2.3 million pounds and toxics used by 1.4 million pounds since 2006.

III. Recommendations to the Governor

A. Creation of a Centralized Electronic Reporting System and Inventory (CERSI)

Executive Order 13-17, Section III.A.2. directs the Interagency Committee on Chemical Management (ICCM) to "[r]ecommend how the State should establish a centralized or unified electronic reporting system to facilitate compliance by businesses and other entities with chemical reporting and other associated regulatory requirements in the State. The recommendation shall:

a. identify a State agency or department to establish and administer the reporting system;

b. estimate the staff and funding necessary to establish and administer the reporting system;
c. propose how businesses and the public can access information submitted to or maintained as part of the reporting system(s), including whether public access to certain information or categories of information should be limited due to applicable statutory requirements, regulatory requirements, trade secret protection, or other considerations;
d. propose how information maintained as part of the reporting system can be accessed, including whether the information should be searchable by: chemical name; common name; brand name; product model; Global Product Classification (GPC) product brick description; standard industrial classification; chemical facility; geographic area; zip code; address; other criteria; or a combination thereof;
e. propose a method for displaying information or filtering or refining search results so that information maintained on the reporting system can be easily accessed; and
f. estimate a time line for establishment of the reporting system."

1. Process To Develop the Recommendations

To arrive at its recommendations, the ICCM conducted three primary discovery, analysis, and planning activities; 1. development of a current regulatory program and system inventory, 2. a Lean[2] Event to analyze current and future states, and 3. a system envisioning exercise to architect a unified chemical reporting system. Each of these activities are discussed further below.

2. Program and System Inventory

The ICCM began its analysis by conducting an inventory of current chemical reporting and recordkeeping programs across Vermont state agencies and departments. The ICCM compiled a matrix of State programs, including those from the Agency of Natural Resources; the Agency of Human Services; Department of Labor; Agency of Agriculture, Food and Markets; Department of Public Safety; Agency of Commerce and Community Development, that administer chemical reporting systems and maintain recordkeeping requirements. This included information on the purpose of the program, chemicals regulated, method of reporting, method of access to the data, data gaps, and record keeping requirements and challenges or limitations for that program. A pdf version of the ICCM's Master Matrix can be found in **Appendix C**. Due to its size, it is not viewable in hard copy, but can be viewed in its electronic version by zooming into the text. In addition, a link to the document, which has been placed on the ICCM's website, is included in the Appendix.

3. Lean Event

Following the inventory and analysis of current regulatory programs, the ICCM established a sub-group which prepared to convene a three-day Lean Event, with the primary goal of the event to create a unified electronic reporting system that (1) helps facilitate compliance by businesses

[2] The term "Lean," coined by James Womack, et al. in the 1990 book, *The Machine that Changed the World*, describes a manufacturing paradigm established by Toyota. It is a management approach that seeks to maximize value to customers, both internal and external, while simultaneously removing wasteful activities and practices.

and other entities with chemical reporting requirements; (2) provide state agencies with easily accessible information about chemicals to prioritize resources to address risks to Vermonters from unsafe chemicals; and (3) provide meaningful public access to information about chemicals in Vermont. Initially, the scope of the Lean Event was limited to those State chemical reporting requirements that are related to the use, storage, distribution, manufacture, or disposal of chemicals. Specifically, the following eight programs fell within the scope at the outset of the event:

- Occupational Safety and Health Administration Hazard Communication Standard (HAZCOM)
- Emergency Planning and Community Right-to-Know Act (Tier II)
- Chemical Disclosure Program for Children's Products
- Pesticides – Sales/Use
- Pesticides - Distribution/Production
- Vermont Hazardous Waste Management Program – Manifests
- Vermont Hazardous Waste Management Program – Sites Management
- Pollution Prevention Planning Program (TURA)

Seven reporting systems supporting those eight programs were analyzed during the Lean event. The ICCM and the subgroup also identified the scope of the event to include existing chemical reporting requirements and any additional chemical reporting requirements that are necessary to facilitate assessment of risks to human health and the environment posed by chemical use in the State. In terms of the reporting process, the ICCM and subgroup identified the scope of the event to include the point where the regulated entity submits chemical inventory and other information to the point in time where the applicable state agency makes the information reported by the regulatory entity available to the public.

The subgroup held the Lean Event on February 6, 7, and 8, 2018. During the three-day event, the subgroup collected the existing chemical reporting requirements for each program and analyzed what additional chemical reporting requirements would be necessary to facilitate assessment of risks to human health and the environment posed by chemical use in the State. The subgroup also analyzed the reporting structure under these programs.

The subgroup also discussed and identified the primary customers of the chemical reporting programs, identified current gaps and issues with the regulatory programs, and utilized concepts and ideas generated through use of an affinity diagramming[3] exercise and Kano analysis[4] to determine, group, and prioritize requirements of a unified reporting system. In addition, members of the ICCM Citizens Advisory Panel (CAP) were brought in on the second day to provide input on the current and future states.

[3] An Affinity Diagram is a tool that gathers large amounts of language data (ideas, opinions, issues) and organizes them into groupings based on their natural relationships. The Affinity process is often used to group ideas generated by Brainstorming.

[4] The Kano Model of Customer Satisfaction classifies product attributes based on how they are perceived by customers and their effect on customer satisfaction. These classifications are useful for guiding design decisions in that they indicate when good is good enough, and when more is better. Project activities in which the Kano Model is useful include identifying customer needs, determining functional requirements, concept development, and analyzing competitive products.

Identifying the primary "customers", or users, of the State's chemical reporting programs and those customers' experiences helped the team assess the current challenges posed to that particular user group related to chemical reporting and recordkeeping, as well as the respective needs and desires of that user group in the creation of a new, unified chemical reporting system. The primary customers identified as part of the chemical reporting programs included:

- Regulated Community (entities required to report and/or maintain records of chemical management and use in the State)
- Public (individuals, stakeholders, emergency responders and planners, researchers/academia)
- State Program Administrators (Compliance & Assistance programs, Regulators, ICCM)

The Lean Event current state analysis highlighted several deficiencies across state programs including:

- Inconsistent chemical identifiers and naming standards;
- Multiple reporting formats, reporting systems including paper based and manual systems, reporting methods, and criteria;
- Variable methods to pay fees and issue refunds;
- Data variability in quality, timeliness, completeness of reports;
- Variability in data and information access which is confusing to public and offers no statewide view of chemical activities in Vermont;
- Confusing to businesses on where and when to report chemical activities;
- Varying levels of allowable public access due to exemptions from public records laws and Federal guidance

At the conclusion of the Lean Event, the subgroup coalesced around several high-level future state recommendations including providing an online reporting guide to assist the regulated community in determining which reporting requirements apply to them based on their activities, providing a singular online portal for chemical reporting by the regulated community, and integrating reported chemical data in to a statewide publicly accessible database. The subgroup also determined that the unified system could include other state regulatory programs in addition to the eight programs originally reviewed within the Lean Event. Additional regulatory programs would be identified during a system envisioning session discussed below.

The subgroup also developed Key Performance Indicators (KPIs) that would be used to measure program and system performance. The ICCM and Lean Event subgroup later evaluated and refined the KPIs following the event. As the system is developed, tested, rolled out, and fully implemented the KPIs would necessarily need to be revisited and revised further to ensure they are reasonable factors by which to measure the system's function and success in improving chemical reporting and recordkeeping in Vermont. The KPIs that would be used to measure the system's performance include:

- Reduce data duplication on customer facing forms by 75% for consolidated systems 1 year after rollout;
- Increase compliance with required State reporting by 10% for all programs 1 year after rollout;

- 75% of reporting submissions for consolidated systems are administratively complete 1 year after rollout;
- 3 out of 4 customers state the centralized system is as good or better than the previous processes 1 year after rollout;
- Annual increase in new system usage (regulated entity and public) by 10%;
- Consolidate number of sources for public access/information from many disparate systems to two primary sites (state open data portal and public chemical discovery website);
- Increase program data that is publicly available by 50% 1 year after rollout.

At the end of the Lean Event, the subgroup created an implementation plan for developing a unified system and timeline for implementation. **Appendix D** contains a copy of the Centralized Electronic Reporting System and Inventory Implementation Plan. Note that the dates and milestones established by the subgroup in the Plan were based on the date of the Lean Event and may need to be adjusted based on the outcome following submission of this report

4. System Envisioning Session

Following the Lean Event, the same subgroup conducted a one-day envisioning exercise on March 16, 2018 to architect a unified reporting system that met the requirements identified in the Kano analysis, minimized the gaps in the current state of chemical reporting, prioritized chemical reporting programs to onboard into the system, and met the goals of the Executive Order. Out of the thirty-one (31) programs originally inventoried, twenty-one (21) of those were state regulatory programs with reporting requirements. Thirteen (13) out of the twenty-one (21) program were identified as ready for onboarding into the system through use of an on-line forms platform. The remaining eight (8) programs would be routed through an alternate process within the system to make their data available via the public data portal and discovery website. These components are discussed more fully below. As part of this envisioning session, the subgroup conducted a deeper analysis of the data elements across the reporting programs in scope to better understand where State chemical reporting and recordkeeping programs and systems were similar and dissimilar to guide a future unified solution. This exercise helped to streamline same or similar requirements among various programs and reduce redundancies. The team reviewed data across reporting systems from the programs identified in the master matrix, identifying 6 common data groupings across those systems. This information can be used to help determine a data standard across State regulatory programs as well as determine how the public and state administrators can query and filter the data. Common data groupings included:

1. Business Information
2. Chemical Information
    - Waste code
    - Name
    - CAS ID
    - EPA ID
3. Chemical Quantity
    - Spilled, released
    - Storage
    - Use
    - Units (lbs, liters)

4. Chemical Concentration
    - Units (ppm)
5. Location Information
    - Business location
    - Spill location
    - Sample location
    - Well locations
    - Address
    - SPAN
    - Lat/long
6. Product Information

5. Recommendations

At the conclusion of these discovery and planning activities, the ICCM arrived at a unified system model it believes can achieve the intended goals of the Executive Order and meet the needs of the primary customers identified during the Lean Event. The system recommendation below proposes how businesses would submit information, and how the public can access information submitted to or maintained as part of the reporting system, including whether the public has access to certain information. In addition, the recommendation proposes how information maintained as part of the reporting system can be accessed, including how the information is searchable by several criteria as well as a method for displaying information or filtering or refining search results for use by the public, and to facilitate and improve state programs' ability to revise or adopt new requirements related to chemical use and management.

The recommended centralized electronic reporting system and inventory is comprised of the following components. A visual diagram, shown in the insert below is provided to further explain the system components and their relationship within the system:

1. Public-facing pre-reporting website. A website that guides the regulated business customer to the appropriate reporting forms by presenting the customer with a series of questions about their entity and activities. The responses to these queries would enable the system to identify which reporting requirements apply to the entity, and therefore provide information and the form or forms that the entity needs to fill out based on the applicable requirements. The site also provides general information on current regulations and regulated chemicals.
2. Authentication & User Account component. A single log-in and account management capability for State chemical reporting by the regulated business customer. This system component provides the ability to update and maintain user accounts with contact, business, and activity information.
3. Online Forms Platform. The software or service that allows for development of online forms including electronic signature, document upload, and payment processing where fees are collected on-line. This component presents a menu of web-based dynamic chemical reporting forms available to the regulated business customer. Forms are pre-populated where applicable with customer account information to expedite date entry and reduce data errors. The online forms allow control of data values entered to reduce data errors and enforce complete

reporting submittals thereby reducing or eliminating administratively incomplete applications. Optional system functions would allow for a standardized file, generated by the regulated business system, to be uploaded to provide form information where feasible or a data transmission via a web service.

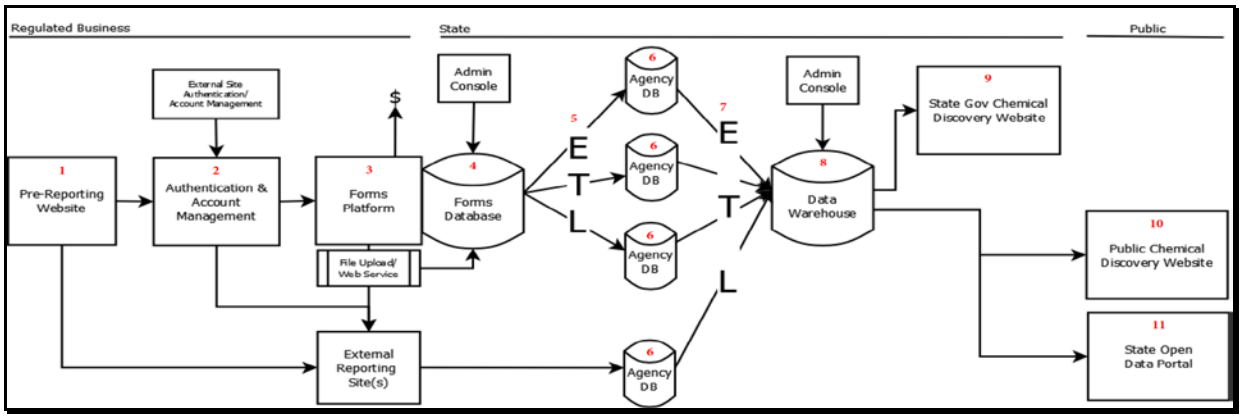
4. Forms Database. The forms database that stores data submitted via online forms. This system component provides an administrative console to allow state administrators the ability to manage and review data before data is loaded to local Agency databases. This component also provides the ability to monitor regulated business customer reporting activities and automate reminders on reporting deadlines.
5. Extract Transform Load[5] (ETL). The process that copies or moves data from the forms database to local Agency databases or vice versa to allow local database values to pre-populate forms to facilitate data entry by the regulated business customer.
6. Local Agency databases. The local Agency databases and systems that store chemical reporting data used to administer state chemical regulatory programs. Data standardization is required across local Agency databases to facilitate the ETL process as well as to facilitate chemical reporting data that is later moved in to a data warehouse to support public chemical discovery websites.
7. Extract Transform Load. The process that copies or moves data from local Agency databases to a data warehouse.
8. Data warehouse. Data is extracted, transformed, and loaded from local agency databases to the data warehouse to provide the state and the public a role-based accessed view of chemical reporting activities across the state. This system component provides an administrative console to allow the state to manage data on the data warehouse.
9. State administrators' chemical discovery website. A website that provides the state, via role-based access that is non-public and internal-facing, the ability to query chemical reporting activities by several criteria including the ability to search activities via a map interface.
10. Public chemical discovery website. A website that provides the public with the ability to query chemical reporting and related information by several criteria including the ability to search activities via a map interface. Criteria includes data elements supported by the data standard including chemical name; common name; brand name; product model; standard industrial classification/NAICS; chemical facility; geographic area; zip code; address; other criteria; or a combination thereof. These criteria may also be used to display information,

[5] ETL is short for ***e**xtract, **t**ransform, **l**oad*, three database functions that are combined into one tool to pull data out of one database and place it into another database.
Extract is the process of *reading data* from a database. In this stage, the data is collected, often from multiple and different types of sources.
Transform is the process of *converting the extracted data* from its previous form into the form it needs to be in so that it can be placed into another database. Transformation occurs by using rules or lookup tables or by combining the data with other data.
Load is the process of *writing the data* into the target database.
(https://www.webopedia.com/TERM/E/ETL.html)

filter, or refine search results so that information maintained on the reporting system can be easily accessed. There may be limitations on searchability of some of the information due to security reasons.

11. State Open Data Portal. Chemical reporting data can be made available via the State's existing Open Data Portal. The Open Data Portal offers another avenue for the public or other interested parties the ability to query and download applicable chemical data.

The reporting system architecture is below. Note the numbers in red correspond with the numbered components above. A larger version can be found in **Appendix E**:



As viewed through the primary customers' use of the State unified chemical reporting system, the envisioned system architecture can provide the following functionality to meet the goals of the Executive Order.

For the regulated community, the system will:

- Provide a pre-reporting website to inform and guide the regulated community to chemical reporting requirements based on business activities;
- Provide current information on state chemical reporting requirements and regulations;
- Provide a single log-in to the State chemical reporting system which will contain the form or forms necessary for the regulated community to comply with State chemical reporting requirements;
- Provide the ability to upload supporting documents;
- Provide a comprehensive chemical list including multiple identification numbers and names;
- Provide a method to maintain business contact and other relevant information. This information can be used to pre-populate chemical reporting forms to reduce the amount of information a user must enter in to forms;
- Provide a method to upload a file or connect to a web service to submit chemical reporting data provided a data standard is met;
- Allow the user to save forms mid-session to complete at another time;

- Allow the user to access past data submittals;
- Automatically create invoices, compile fees, allow online payments, and generate itemized receipts;
- Be responsive in design to display correctly on mobile devices;
- Be secure so that sensitive information is only accessed by users with appropriate credentials;
- Provide state staff points of contact per reporting requirement area;
- Provide technical support during working hours;
- Provide for training on how to use the system.

For a State Administrator, the system will:

- Provide for form validation and error checking to reduce data entry errors or missing data before submittal;
- Provide for role-based access to ensure only authorized state staff may access data pertinent to their areas of interest;
- Provide the ability to archive historical data;
- Provide a primary point of contact for the regulated businesses to reconcile data questions;
- Offer tools to provide outreach and assistance to registered regulated community users;
- Provide a method to maintain a comprehensive chemical list including multiple identification numbers and names to meet the chemical reporting goals of the State of Vermont;
- Provide automated methods to report data to Federal or multi-state partners;
- Provide the ability to upload supporting documents and manage submitted documents;
- Provide the means to review submitted data before migrating data to local Agency databases or other data transfers;
- Provide data transformation and migration mechanisms to migrate data to local Agency databases;
- Provide local Agency web clients to data;
- Provide the ability to automate the email communication to registered users on regulation updates and regulated chemicals;
- Provide functionality to search for publicly available information by chemical name, common name, brand name, product model, standard industrial classification/NAICS, chemical facility, geographic area, zip code, address, other criteria supported by the publicly available data;
- Provide the ability to browse data geographically;
- Provide a method to generate a report of search results;
- Have technical support available during working hours;
- Provide for training on how to use the system.

For the Public, the system will:

- Via a website, provide functionality to search for publicly available information by chemical name, common name, brand name, product model, standard

industrial classification/NAICS, chemical facility, geographic area, zip code, address, other criteria supported by the publicly available data.
- Provide the ability to browse data geographically;
- Provide access to data in a timely manner;
- Provide information/documentation about the data;
- Provide points of contact for reported data;
- Provide a method to generate a report of search results;
- Provide training materials on how to use the website.

To support the system requirements outlined above, the system requires:

i. A master chemical data list/inventory that meets the reporting and querying requirements of the State Agencies, regulated community, and the public;
ii. Chemical reporting data standard to support state and public review and analysis of chemicals;
iii. Local agency web database applications or web interface to the forms database to fully enable a statewide electronic non-paper-based system to manage chemical data.

6. Legislation

Since the proposed system would incorporate specific information and fields from existing forms used by the respective regulatory programs, it is not anticipated that changes to current reporting requirements would be needed. However the subgroup's proposed implementation plan includes a task and timeframe to evaluate any future legislative changes needed to ensure the reporting system meets existing requirements. In addition, there will be a need to address the costs of the development and maintenance of this system through the overall budgeting process.

7. Administration, Staffing, Funding, and Timing

Per the Executive Order's mandate to identify a State agency or department to establish and administer the reporting system, it is recommended that the Agency of Natural Resources in collaboration with the Agency of Digital Services, lead the establishment and overall management of a unified chemical reporting system. The Agency of Natural Resources currently chairs the Interagency Committee on Chemical Management. Additionally, ANR and ADS have experience in leveraging forms platform solutions to provide reporting and permitting portals as well as data integrations across disparate data sources to inform public websites and applications.

Per the Executive Order to estimate the staff and funding necessary to establish and administer the reporting system, the following project breakdown is provided in the tables below:

Cost Estimate

Cost estimates were based on ANR's and ADS's experience implementing public-facing online forms solutions, implementing data integration processes from multiple databases, creating public portals, and developing internal and public stakeholder training resources for information technology projects. It should be noted that as a general premise, pollution prevention costs less, compared to the costs associated with cleanup and remediation. The recommendations in this report have the potential to provide the state with the ability to be proactive in its oversight of chemical use. In addition, the costs of the development and maintenance of this system which

would be established through the overall budgeting process, and across State Agencies, would make the overall cost manageable and achievable.

Implementation	Low	High	Average
Project Planning	$ 10,080	$ 20,160	$ 15,120
Software & Hardware*	$ 346,360	$ 353,720	$ 350,040
Development	$ 188,412	$ 692,580	$ 440,496
Training	$ 16,800	$ 26,880	$ 21,840
Implementation Cost	**$ 561,652**	**$ 1,093,340**	**$ 827,496**
Average Total Maintenance Cost Over 4 Years *(post implementation)*	**$ 492,396**	**$ 492,396**	**$ 492,396**
Total Project Cost	**$ 1,054,048**	**$ 1,585,736**	**$ 1,319,892**
**Software cost may be reduced by leveraging current state investments in web forms software.*			

Project costs include project planning (enterprise architecture, project management, solutioning, security, data architecture), hardware and software costs, vendor support, development (project management, business analysis, software development, and testing), and training (state staff and external stakeholder training).

Staff Hours Estimate

Project staff hour estimates to establish and maintain the system take into consideration project team roles and participation including project managers, enterprise architects, developers, and business project leads. The below estimate does not include additional non-IT program staff involved in developing system requirements, system testing, or external stakeholder participation. These numbers reflect a range of hours estimated to implement and maintain the system depending on the complexity and maturity of the systems supporting the current chemical reporting business processes. Staffing commitment details would be determined during the project planning phase:

Implementation	Low	High	Average
Project Planning	120	240	180
Software & Hardware	40	80	60
Development	1927	3385	2656
Training	80	120	100
Implementation Hours	**2167**	**3825**	**2996**
Average Total Maintenance Hours Over 4 Years *(post implementation)*	**325**	**574**	**449**

Per the Executive Order's mandate to estimate a time line for establishment of the reporting system, the ICCM considered estimated project team staff hours to implement the system and extrapolated that out to include program staff, competing priorities and responsibilities,

procurement timelines, scheduling, and available work days. In addition, duration of the project management phases (exploration, initiation, planning, execution, and closing) in relation to the size of the project and number of Agencies and stakeholders was considered. Upon approval to proceed with the project to create a unified chemical reporting system and inventory, the committee recommends the project be developed in phases per the agile software development method[6]. It is estimated that a useable system could be developed and deployed in approximately 2 years with the onboarding of additional programs over 2 additional years for a total of a 4-year project timeline to full implementation.

B. Establishment of a Review Framework for Evaluating Necessary Changes to State Chemical Reporting and Recordkeeping and Coordinating Chemical Management Actions Across State Agencies

EO 13-17, Section II.A.3. directs the ICCM to "[r]ecommend any necessary statutory amendments or regulatory changes to existing State recordkeeping and reporting requirements for chemicals, hazardous materials, and hazardous wastes that are required to facilitate assessment of risks to human health and the environment posed by chemical use in the State. The recommendations shall consider:

a. the thresholds or amounts of chemicals used, manufactured, or distributed, and hazardous materials and hazardous wastes generated or managed, in the State that require recordkeeping and reporting;
b. the persons or entities using, manufacturing, or distributing chemicals and generating or managing hazardous materials and hazardous wastes that are subject to recordkeeping and reporting requirements; and
c. any changes required to streamline and modernize existing recordkeeping and reporting requirement to facilitate compliance by business and other entities."

1. Process To Develop the Recommendations

To arrive at its recommendations, the ICCM established a subgroup consisting of representatives from the Departments of Labor, Health, and Environmental Conservation, and the Agency of Agriculture, Food, and Markets. The recommendations from the subgroup were discussed with the ICCM and updated based on ICCM feedback.

[6] Agile software development describes an approach to software development under which requirements and solutions evolve through the collaborative effort of self-organizing and cross-functional teams and their customer(s)/end user(s). It advocates adaptive planning, evolutionary development, early delivery, and continual improvement, and it encourages rapid and flexible response to change.

2. Recommendations

a. Reporting and Recordkeeping Change Evaluation Process

In order to maintain dynamic chemical management in Vermont, the ICCM recommends a process for the ongoing review of current reporting and recordkeeping requirements and any changes that are needed to these requirements. This review process is intended to align state actions and to ensure the coordination of chemical management across state government. The Toxics Use and Hazardous Waste Use Reduction Act program would also utilize this same review process for evaluation of changes to chemicals, lists of chemicals, reporting entities, or thresholds beyond what is specified in statute or what has been recommended in Section C below.

In the event where it is unclear whether state reporting and recordkeeping requirements are adequate to allow support to Agencies' understanding of chemical use and management in the state, an Agency or Department shall propose that the ICCM review the current state of recordkeeping and reporting requirements in the state and provide the ICCM with any relevant documentation and an agency recommendation for any proposed changes.

If the ICCM concurs that a review is needed, the ICCM will task a Technical Team, composed of representatives from the Agencies involved in chemical management who have relevant and particularized knowledge and experience, with conducting a review that will look at, among other things, whether such a recordkeeping or a reporting requirement change would be duplicative, whether it would be feasible, whether there are existing federal or Vermont health protective standards, and what actions other states have taken with regard to the subject chemical, class of chemicals, or grouping of chemicals.

Once the review is complete, the Technical Team shall submit a draft report of its recommendations to the ICCM. The recommendation may include regulatory or statutory changes to requirements and/or thresholds as well as education and outreach opportunities to better inform the public about potential risks or targeted sampling that should be done to understand if sensitive receptors may be impacted. The ICCM will then discuss the proposal, provide any feedback, and/or require additional analysis by the Technical Team. Once the ICCM determines the draft report is complete, it will share that draft with the Citizen Advisory Panel (CAP).

The CAP will review and comment on the recommendation. The ICCM shall then determine whether changes to the recommendation are needed based on feedback from the CAP. Once satisfied with the recommendation, the ICCM will vote to move forward with the recommendation.

The follow-up action will depend on the recommendation from the Technical Team, but typically the result would be for either an Agency or Department to initiate their procedures to make changes to recordkeeping or reporting requirements if they can be done administratively. The result may also be coordinated action by multiple Agencies or Departments. It remains the prerogative of any agency to initiate processes outside the scope of the ICCM.

In the event that a statutory change is needed, the State Agency or Department will initiate their own process for making statutory amendments. As needed, the Chair or members of the ICCM may provide testimony to the General Assembly in support of the change.

b. Targeted Chemical Management Action Coordination

The ICCM shall also – except in the case of an emergency – provide an opportunity for state agencies to discuss actions proposed by member Agencies and Departments to make specific changes to clean up standards, health advisory levels, and PELs (Permissible Exposure Levels), among others. Individual changes often have impacts on the required actions of other Agencies and Departments, and this type of coordination would aid them in developing appropriate approaches to managing chemicals in line with their statutory jurisdiction.

Therefore, prior to submitting a chemical management action to ICAR for rulemaking or prior to establishing a new health advisory level or other non-regulatory action, ICCM members shall inform the ICCM of their forthcoming actions to ensure coordination across all government entities. The ICCM will not have the authority to approve any action under an individual Agency or Department authority, but it will work to ensure the necessary follow up actions by its members are discussed and coordinated in advance of prospective actions.

c. Proposed Chemicals for Review

If the recommended process for ongoing review discussed in subsections b. and c. above proceeds, the ICCM has identified the following chemicals as examples of the type it believes may need to be reviewed. These chemicals represent examples of clear instances in which it's likely that additional recordkeeping or reporting is needed:

1. **Trichloroethylene (TCE):**

   What is the reason this should go through the ICCM review?

   TCE is carcinogenic to humans, as defined by the International Agency for Research on Cancer (IARC). The current VOSHA regulations allow for TCE to be used in the workplace, and the current VOSHA PEL TWA for TCE is 270,000 $\mu g/m^3$. The VOSHA PEL was established in 1989 and has not been updated based on current science. In 2016 at the request of DEC, the Vermont Department of Health derived a non-residential indoor air screening value for TCE. This value is 0.7 $\mu g/m^3$. The exposure to TCE is over 385,000 times higher in the workplace than what is considered health protective.

What do we know now about use?

Currently, the State of Vermont is not aware where TCE is being used in a workplace. Additionally, when used in a workplace, employers are required to notify the employees. The workplace does not have to notify the State. TCE can be used for many purposes in the workplace. The limited use of TCE and the higher prevalence of tetrachloroethylene (PCE) used in dry cleaning has indicated TCE as a biproduct of chemical breakdown. Investigations have found such a correlation of TCE in buildings with vapor intrusion from dry cleaner contamination. Dry cleaning facilities historically used PCE in their process and may have disposed of PCE improperly. The Department of Environmental Conservation did a research project in 2016 to determine locations of current and previous dry cleaners and have those data.

2. **Diisocyanates:**

What is the reason this should go through the ICCM review?

Diisocyanates are a family of chemicals used in some spray foam insulation products. If the products are not properly used and cured, the products can release diisocyanates into the air. Diisocyanates are sensitizers and can create respiratory problems when people are exposed multiple times, at lower doses each time. Both workers and residents who have their homes treated are at risk of exposure to diisocyanates. In extreme cases when spray foam insulation is not applied correctly, residents become sensitized and cannot live in their own homes.

What do we know now about use?

Diisocyanates don't fall under Tier 2 reporting. The State of Vermont is not aware where diisocyanates could be found. There are no record keeping requirements for the use of diisocyanates and when used in the work place employees would be notified as part of the Hazard Communication Standard. There is no required notification to homeowners regarding the potential for exposure to diisocyanates.

3. **1,4-dioxane:**

What is the reason this should go through the ICCM review?

1,4-dioxane is a carcinogen. It is an unregulated contaminant, meaning there is no EPA MCL for 1,4-dioxane in water.

What do we know now about use?

The extent of 1,4-dioxane contamination in Vermont is unknown since, in addition to not being required, the standard analytical method used when analyzing other chlorinated solvents does not include 1,4-dioxane. Also, the State does not have a good sense of where 1,4 dioxane is being used or was previously used in Vermont. Several neighboring states have discovered contamination of 1,4-dioxane in groundwater.

C. Improve the Effectiveness of the Toxics Use Reduction and Hazardous Waste Reduction Act

EO 13-17, Section II.A.4. directs the ICCM to "[r]ecommend any necessary statutory amendments or regulatory changes to the Toxic Use Reduction and Hazardous Waste Reduction Act under 10 V.S.A. Chapter 159, Subchapter 2. The recommendations shall consider:

a. a list of chemicals or materials subject to the reporting and planning requirements;
b. the thresholds or amounts of chemicals used or hazardous waste generated by a person that require reporting and planning;
c. the persons or entities using chemicals or generating hazardous waste that are subject to reporting and planning;
d. proposed revisions to the toxic chemical or hazardous waste reduction planning requirements, including conditions or criteria that qualify a person to complete a plan;
e. any changes to streamline and modernize the program to improve its effectiveness;
f. estimate the staff and funding necessary to implement and administer any recommended statutory changes or regulatory changes; and
g. other state programs to reduce the use of toxic and hazardous waste, including the staff and funding required to implement the programs."

1. Process To Develop the Recommendations

To arrive at its recommendations, the ICCM formed a TURA subgroup to work on this portion of the Executive Order. The subgroup consisted of staff currently working on the implementation of Toxic Use Reduction and Hazardous Waste Reduction Act at the Department of Environmental Conservation and representatives from the Agency of Natural Resources, the Department of Labor and Department of Health.

Prior to meeting as a subgroup, DEC personnel held a webinar on March 20, 2018 with facilities currently subject to the TURA planning requirements to obtain feedback on the effectiveness of the existing program and their thoughts on potential changes. Seventeen facilities participated in the webinar and two others called or emailed with comments. The TURA subgroup then met for two 4-hour working meetings on March 27 and 28, 2018 where the group considered options

before making recommendations for each of the elements listed in subsections (a) through (g) above.

The subgroup brainstormed options for subsections (a) through (g) under EO Section II.A.4, conducted research on the options between meetings, then discussed each option as a group and decided on recommendations. The subgroup developed a matrix, found in **Appendix F** as TURA Subgroup Recommendation Matrix that lists the current state, recommended changes, and the rationale and implementation mechanism for each recommendation as an outcome from the two-day event.

2. Recommendations

The ICCM arrived at a series of recommendations it believes can strengthen TURA. Where changes to legislation are proposed, the existing statute is identified, with additions to the statute are denoted by underlined text, deletions by strikethrough.

a. List of chemicals:

Recommendation: Use the list of toxics or toxic substances described in 10 VSA § 6624(7) (includes the chemicals included in the Toxics Release Inventory, also known as Title III, Section 313 of the Superfund Amendments and Reauthorization Act of 1986) with the addition of the "Chemicals of High Concern to Children" list from 18 VSA §1773. Expanding the list to include Chemicals of High Concern to Children will result in the addition of 25 chemicals to the list of reportable chemicals.

In the future, chemicals may be added to the list of toxic substances through a process described above in section III (B)(2)(a) Reporting and Recordkeeping Change Evaluation Process.

Rationale: Expanding the list of chemicals defined as toxic substances will result in increased efforts to plan to reduce the amounts of those chemicals in use which will lead to increased environmental, occupational and public health protection. In the future, as our knowledge of chemicals used in Vermont improves/increases, we may want to focus toxics use reduction and hazardous waste reduction planning on additional chemicals not currently regulated. The development of a robust, scientifically sound, transparent process to add chemicals for planning will be needed.

Mechanism: statutory change
Suggested change to 10 VSA § 6624(7) as follows:

> (7) "Toxic substance" or "toxics" mean any substance in a gaseous, liquid, or solid state listed pursuant to Title III, Section 313 of the Superfund Amendments and Reauthorization Act of 1986 and chemicals listed as "chemicals of high concern to children" in 18 VSA §1773, as amended. This list of substances may be altered

as specified in subsection 6625(d) of this title. "Toxic substance" or "toxics" does not include constituents of fuels used to provide energy, unless those fuels include hazardous wastes from a generator's process.

Regarding adding or removing any toxic substance or hazardous waste from the provisions of TURA, 10 VSA § 6625(d) includes the following language which may need to be changed if a different process were adopted:

(d) The Secretary shall adopt rules to carry out this subchapter. The rules shall include a provision for exempting from the requirements of this subchapter generators for whom the Secretary determines no source reduction opportunities exist. The Secretary may, by rule, add or remove any toxic substance or hazardous waste from the provisions of this subchapter. In order to add or remove any toxic substance or hazardous waste from the provisions of this subchapter, the Secretary shall make findings with respect to toxicity, potential impact on public health and the environment, and the potential for use reduction or waste reduction of the toxic substance or hazardous waste.

Alternative Mechanism: Add toxic substances, including list of "Chemicals of High Concern to Children" to the list of "toxic substances" defined under TURA through rulemaking process described in 10 VSA § 6625(d) (see previous paragraph).

b. Threshold amounts:

Recommendation: Use the threshold amounts specified in 10 VSA §6624(4)(A) and (B) for most toxic substances/toxics but require reporting at lower thresholds for substances listed under the Toxics Release Inventory list as Persistent, Bioaccumulative and Toxic and use the lower threshold amounts stated in Toxics Release Inventory list of chemicals**.**

Rationale: Chemicals with higher environmental persistence, a tendency to bioaccumulate, and toxicity exhibit increased risk at lower volume thresholds.

Mechanism: statutory change
Suggested change to 10 VSA § 6624(4) as follows:

(4) "Large user" means a facility with 10 or more full-time employees that is in the Standard Industrial Classification (SIC) Code required by the Secretary to report and that:

(A) Manufactures, processes or otherwise uses, exclusive of sales or distribution, more than 4,545.5 kg (10,000 lbs) of a toxic substance per year; or

(B) Manufactures, processes or otherwise uses, exclusive of sales or distribution, more than 454.4 kg (1,000 lbs) but less than 4,545.5 kg (10,000 lbs) of a toxic

substance per year if that substance accounts for more than 10 percent of the total of toxic substances used at the facility during the year; or

(C) Manufactures, processes or otherwise uses, exclusive of sales or distribution, more than the reporting threshold established in 40 CFR §372.28 for chemicals of special concern, i.e., designated as persistent, bioaccumulative, or toxic.

c. Persons/Entities Reporting:

Recommendation: Update all reference to Standard Industrial Classification (SIC) codes to refer to North American Industrial Classification System (NAICS) codes, as the industrial classification system replaced SIC codes in 1997. Also amend the definition of Large User in 10 VSA § 6624(4) to include facilities with 10 or more employees onsite or less than 10 onsite and greater than 500 corporate-wide.

Rationale: NAICS codes are more commonly used today and more descriptive of facility type. The large user employee threshold to be amended would include smaller facilities that are part of large corporations that have the resources to effectively plan for toxics use and hazardous waste reduction.

Mechanism: statutory change
Suggested change to 10 VSA § 6624(4), as follows:

(4) "Large user" means a facility with 10 or more full-time employees or that has less than 10 full-time employees in Vermont and corporate-wide has 500 or more full-time employees, that is in the ~~Standard Industrial Classification (SIC) Code~~ North American Industrial Classification System (NAICS) codes required by the Secretary to report and that: …

Also, change the other reference to SIC codes, 10 VSA § 6625 (e):

(e) The Secretary shall adopt, by rule, a list of ~~SIC~~ NAICS codes that identifies those facilities that are subject to this subchapter as a large user. The list initially must include SIC codes 20 through 39. In adding additional ~~SIC~~ NAICS codes, the Secretary shall make findings with respect to chemical use within the ~~SIC~~ NAICS category, and shall find:

(1) that the potential impact on public health and the environment is significant; and

(2) that the potential for use reduction and waste reduction within the category is significant.

d. Reduction Planning requirements, conditions, and criteria:

Recommendation: Require a modest amount of training for those who certify a toxics use or hazardous waste reduction plan.

Rationale: Required training and additional educational opportunities will help planners achieve stated policy goals (reduction of toxics use and hazardous waste generation) through identification of new reduction techniques/opportunities and development of more meaningful, robust plans.

Mechanism: Statutory change to add a new section to 10 VSA§ 6629(c) that lists the training requirement, followed by rulemaking to further describe training requirement.

Suggested change to 10 VSA§ 6629(c):

§ 6629. Toxics use reduction and hazardous waste reduction plan; plan summary

* * * *

(c) The toxics use reduction and hazardous waste reduction plan shall be prepared for each site pursuant to the format adopted under section 6626 of this title and shall include:

* * * *

(10) Every plan completed pursuant to this section shall be reviewed and certified by a responsible corporate official, consultant or engineer who has had eight hours of training within the prior three years on hazardous waste or toxics use reduction techniques, as demonstrated to the Secretary.

e. Streamline and modernize the program:

Recommendation:

Upgrade electronic database, including the following functionality:

- allow for secure online plan and annual report submittal and fee payment;
- provide automated fee calculation;
- offer more online assistance and resources to help planners achieve the goals of the program;
- streamline information required to be submitted;
- automate and integrate with other databases, including the proposed centralized electronic reporting system, when feasible.

Once an improved electronic database is in place, information will be used to target assistance and identify patterns of chemical use and hazardous waste generation in the state.

Alternative Plans - Allow for alternative resource conservation and environmental impact planning (e.g., greenhouse gas, water use, or solid waste/organics reduction) in lieu of toxics use/hazardous waste planning for established planners and to be allowed for alternate planning cycles, e.g., 2020 planning cycle – resource conservation plan, 2023 cycle – toxics use/hazardous waste reduction plan. Planners submitting alternative plans would still track and report annually on toxics use /hazardous waste generation and reductions.

Rationale:

Upgrade Database – The TURA program's current system is primarily paper-based and data is not aggregated in any way that allows for analysis. Upgrading/modernizing the database will allow for electronic reporting and fee payment, reduce need for paper submittal, and allow for review and analysis of data.

Alternative Plans – Where planners have met reduction goals based on current feasibility, technology, etc. (where additional planning may not lead to further reductions), allowing them to implement programs focused on efficiencies related to other environmental impacts would provide more of an incentive to implement and will also have a positive environmental benefit.

Mechanism:

Upgrade electronic database and target assistance – No statutory changes required. 10 VSA Section 6626(b) requires the Secretary to establish a data and information system for use in administering the provisions of this subchapter and part (b)(4) of that section requires the Secretary to "identify additional data and information needs of the program."

Alternative Plans - Statutory Change and rulemaking

Suggested changes:

10 VSA§ 6624 Definitions – add definition of "resource conservation" such as, Resource Conservation means an action that decreases the use or consumption of a natural asset such as water, energy, or raw materials, or increases the efficiency of the use of the asset, without increasing the risk to the public, including workers and consumers, or the environment and without increasing the amount of waste generated.

Add new section, 10 VSA§ 6633 or 6634 to establish requirements for developing resource conservation plans as an alternative to developing toxics use or hazardous waste reduction plans. The requirements would address applicability, general plan requirements, and required information in each resource conservation plan.

f. Staff and funding necessary to implement and administer any recommended statutory changes or regulatory changes:

Recommendation: increase ANR staffing from ½ FTE to 1 FTE.

Rationale: This modest increase is in consideration of the need for increased organizational coordination, content development, database and process improvements, rulemaking, increase in number of planners and implementation of training program and accounting for efficiencies realized by electronic reporting and fee payment. Modest resources will allow the state to identify facilities that should be planners which will increase compliance and provide additional data to state and public regarding toxics use in Vermont.

Mechanism: Internal ANR staffing and budgeting process

g. Other state programs to reduce the use of toxic and hazardous waste, including the staff and funding required to implement the programs.

Recommendation: The Toxics Use and Hazardous Waste Use Reduction Act program would utilize the review process for evaluation of additions, deletions, or changes to chemicals, lists of chemicals, or thresholds as discussed above in Section B. There would also be continued participation of the Toxics Use and Hazardous Waste Reduction Program staff in the ICCM technical team process will facilitate coordination between the program and other state programs related to chemicals management and hazardous waste, for example, the Department of Labor's VOSHA Project WorkSAFE.

Rationale: Adopting this process would provide science-based, consistent, transparent, flexible public process for listing and designation of chemicals used in Vermont. State programs related to chemicals management are represented on the ICCM.

Mechanism: No statutory change needed.

IV. Final Thoughts

The ICCM appreciates the opportunity to contribute to the State's chemical management efforts. It is likewise the ICCM's hope that this report provides useful information to further those efforts, and that the recommendations prove to help fulfill the goal of increased protection of Vermonters from exposure to unsafe chemicals, to better assist the regulated community with compliance with applicable laws related to chemical reporting and management requirements, and to improve availability of information to the public.

Appendices

Appendix A

Executive Order No. 13-17

STATE OF VERMONT

EXECUTIVE DEPARTMENT

EXECUTIVE ORDER NO. 13-17

[Interagency Committee on Chemical Management]

WHEREAS, Vermont citizens may be exposed to harmful chemicals in drinking water, food supplies, outdoor and indoor air, and in consumer products; and

WHEREAS, the State does not have sufficient information—use, volume, location and toxicity—about chemicals present in the State; and

WHEREAS, sufficient information about chemicals present in the State is critical to the State's ability to effectively respond to emergencies and threats to human health posed by harmful chemicals; ensure the safety of first responders; prioritize limited resources to address those chemicals that pose the greatest risk to Vermonters; assist Vermont businesses with compliance with federal and State laws related to chemical reporting and management requirements; and provide information to citizens about chemical use in the State; and

WHEREAS, Act 154 of 2016 directed the Agency of Natural Resources to convene a working group to provide recommendations to the General Assembly to close regulatory gaps related to chemicals of emerging concern like perfluorooctanoic acid (PFOA), increase the State's ability to prevent citizens from exposure to harmful chemicals, and increase public access to information about chemicals in their community; and

WHEREAS, the Act 154 report to the General Assembly recommended, among other things, the establishment of an interagency committee to improve coordination and collaboration among agencies charged with oversight of chemical regulation; the creation of a central or unified electronic reporting system to assist businesses with compliance and provide state agencies and the public access to information about chemicals; the amendment of existing recordkeeping and reporting requirements to ensure state agencies have complete chemical inventory information; and the amendment of the Toxic Use Reduction and Hazardous Waste Reduction Act to strengthen planning requirements; and

WHEREAS, in order to better protect Vermonters from exposure to unsafe chemicals in drinking water and the environment and assist businesses with compliance with federal and State laws related to chemical reporting and management requirements, there is a need to (1) ensure coordination and collaboration among State agencies charged with oversight of chemical regulation; (2) create a central or unified electronic reporting system for businesses that use, manufacture, distribute, and release chemicals; and (3) ensure existing State laws and regulations provide state agencies with sufficient chemical inventory information.

NOW THEREFORE, BE IT RESOLVED, that I, Philip B. Scott, by virtue of the authority vested in me as Governor, do hereby create the Interagency Committee on Chemical Management (Committee), as follows:

I. Composition

The Committee shall consist of the following members:

A. the Secretary of the Agency of Natural Resources or designee;

B. the Secretary of the Agency of Agriculture, Food and Markets or designee;

C. the Secretary of the Agency of Commerce and Community Development or designee;

D. the Commissioner of the Department of Health or designee;

E. the Commissioner of the Department of Labor or designee;

F. the Commissioner of the Department of Public Safety or designee; and

G. the Secretary of the Agency of Digital Services or designee.

II. Chair of Committee and Committee Support

The Chair of the Committee shall be the Secretary of the Agency of Natural Resources.

The Committee shall have the administrative, technical, and legal assistance of the Agency of Natural Resources. The Committee shall have technical assistance from the Agency of Agriculture, Food and Markets; the Department of Health; the Department of Public Safety; and the Department of Labor.

III. Committee Charge and Process

The Committee shall make initial recommendations to the Governor to improve and strengthen existing recordkeeping and reporting processes and regulatory requirements. The Committee shall (1) evaluate chemical inventories in the State on an annual basis; (2) identify potential risks to human health and the environment from regulated and unregulated chemicals in the State; and (3) make recommendations to the Governor to address these risks. The Committee shall meet at least monthly until July 1, 2018 and at least semiannually thereafter.

A. On or before July 1, 2018, the Committee shall make initial recommendations to the Governor, after consultation with a citizen advisory panel, as to how the State should establish a centralized or unified electronic reporting system, amend existing recordkeeping and reporting requirements to ensure sufficient chemical inventory reporting, and strengthen the Toxic Use Reduction and Hazardous Waste Reduction Act. The Committee shall:

(1) Convene a citizen advisory panel to provide input and expertise to the Committee. The citizen advisory panel shall consist of persons available to the Committee on an as-needed basis to provide the following expertise:

- One individual with expertise in toxicology;
- One individual with expertise in environmental health;
- One individual with expertise in maternal and child health;
- One individual with expertise in industrial hygiene or occupational health;
- One individual with expertise in human health and environmental risk assessment;
- One individual with expertise in manufacturing products, located in Vermont and subject to Vermont recordkeeping and reporting requirements;
- One individual with expertise in retail sales, located in Vermont;
- One individual associated with a small business, located in Vermont and subject to Vermont recordkeeping and reporting requirements;
- One individual associated with an academic institution with expertise in chemical management or chemical policy;
- One individual with expertise in environmental law;
- One individual with expertise in public policy, with a focus on chemical policy; and
- One individual with expertise in development and administration of information reporting technology or databases.

(2) Recommend how the State should establish a centralized or unified electronic reporting system to facilitate compliance by businesses and other entities with chemical reporting and other associated regulatory requirements in the State. The recommendation shall:

a. identify a State agency or department to establish and administer the reporting system;

b. estimate the staff and funding necessary to establish and administer the reporting system;

c. propose how businesses and the public can access information submitted to or maintained as part of the reporting system(s), including whether public access to certain information or categories of information should be limited due to applicable statutory requirements, regulatory requirements, trade secret protection, or other considerations;

d. propose how information maintained as part of the reporting system can be accessed, including whether the information should be searchable by: chemical name; common name; brand name; product model; Global Product Classification (GPC) product brick description; standard industrial classification; chemical facility; geographic area; zip code; address; other criteria; or a combination thereof;

e. propose a method for displaying information or filtering or refining search results so that information maintained on the reporting system can be easily accessed; and

f. estimate a time line for establishment of the reporting system.

(3) Recommend any necessary statutory amendments or regulatory changes to existing State recordkeeping and reporting requirements for chemicals, hazardous materials, and hazardous wastes that are required to facilitate assessment of risks to human health and the environment posed by chemical use in the State. The recommendations shall consider:

a. the thresholds or amounts of chemicals used, manufactured, or distributed, and hazardous materials and hazardous wastes generated or managed, in the State that require recordkeeping and reporting;

b. the persons or entities using, manufacturing, or distributing chemicals and generating or managing hazardous materials and hazardous wastes that are subject to recordkeeping and reporting requirements; and

c. any changes required to streamline and modernize existing recordkeeping and reporting requirements to facilitate compliance by business and other entities.

(4) Recommend any necessary statutory amendments or regulatory changes to the Toxic Use Reduction and Hazardous Waste Reduction Act under 10 V.S.A. Chapter 159, Subchapter 2. The recommendations shall consider:

a. a list of chemicals or materials subject to the reporting and planning requirements;

b. the thresholds or amounts of chemicals used or hazardous waste generated by a person that require reporting and planning;

c. the persons or entities using chemicals or generating hazardous waste that are subject to reporting and planning;
d. proposed revisions to the toxic chemical or hazardous waste reduction planning requirements, including conditions or criteria that qualify a person to complete a plan;
e. any changes to streamline and modernize the program to improve its effectiveness;
f. estimate the staff and funding necessary to implement and administer any recommended statutory changes or regulatory changes; and
g. other state programs to reduce the use of toxic and hazardous waste, including the staff and funding required to implement the programs.

(5) Draft any necessary legislation to implement the Committee's recommendations under sections (2), (3), and (4) above.

B. The Committee shall issue a report and make recommendations to the Governor as to any necessary legislative or regulatory actions to reduce risks to Vermonters from unsafe chemicals on December 15, 2018 and biennially thereafter. The report shall include:

(1) a summary of chemical use in the State based on reported chemical inventories;

(2) a summary of identified risks to human health and the environment from reported chemical inventories;

(3) a summary of any change under federal statute or rule affecting the regulation of chemicals in the State; and

(4) recommended legislative or regulatory action to reduce risks to human health and the environment from regulated and unregulated chemicals of emerging concern.

IV. Authority of Agencies

This Executive Order shall not limit the independent authority of a State agency to promulgate regulations related to the reporting, use, distribution, manufacture, or release of chemicals or take other actions under existing State or applicable federal law.

V. Effective Date

This Executive Order shall take effect upon signing.

WITNESS my name hereunto subscribed and the Great Seal of the State of Vermont hereunto affixed at Montpelier this 7th day of August, 2017.

Philip B. Scott
Governor

By the Governor:

Brittney L. Wilson
Secretary of Civil and Military Affairs

Executive Order No. 13-17

Appendix B

Acknowledgements and List of ICCM and CAP Members

Acknowledgements and List of ICCM and CAP Members

The Agency of Natural Resources would like to thank all the members of the ICCM and CAP for their participation, time, and contributions to this initiative.

ICCM Members:

Tracy Dolan, Department of Health
Carey Giguere, Agency of Agriculture, Food and Markets
Chris Herrick, Department of Public Safety
Scott Meyer, Department of Labor
Casey Mock, Agency of Commerce and Community Development
Peter Telep, Agency of Digital Services
Peter Walke, Agency of Natural Resources

Citizen Advisory Panel:

Ian Balcom, Lyndon State College
Rick Bibens, Bibens Ace Hardware
Terese Churchill, EverGreen Environmental Health & Safety
Wolfgang Dostmann, University of Vermont
Jon Groveman, Vermont Natural Resources Council
Deborah Hirtz, University of Vermont
Ruma Kohli, Global Foundries
Bindu Panikkar, University of Vermont
Barb Patterson, Stone Environmental
Adam Rainville, Maple Landmark
Ken Rumelt, Vermont Law School
Jessica Wignall, ICF

The ICCM wishes to thank the following individuals for contributing to the work of the ICCM and the content of this report:

Linda Boccuzzo, Agency of Agriculture, Food and Markets
Bridget O'Brien, Department of Health
Karen Clark, Department of Health
Todd Cosgrove, Department of Public Safety
Sarah Vose, Department of Health
Vernon Nelson, Department of Health
John Hunt, Agency of Digital Services
Justin Kenney, Department of Finance and Management
Ed Antczak, Agency of Natural Resources
Mary Borg, Agency of Natural Resources
Jessica Bulova, Agency of Natural Resources

Mary Clark, Agency of Natural Resources
Wendy Edwards, Agency of Natural Resources
Doug Elliott, Agency of Natural Resources
Dennis Fekert, Agency of Natural Resources
Jordan Gonda, Agency of Natural Resources
Kim Greenwood, Agency of Natural Resources
Heidi Hales, Agency of Natural Resources
Bryan Harrington, Agency of Natural Resources
Cathy Jamieson, Agency of Natural Resources
Neil Kamman, Agency of Natural Resources
Kasey Kathan, Agency of Natural Resources
Ernie Kelley, Agency of Natural Resources
Pete LaFlamme, Agency of Natural Resources
Rick Levey, Agency of Natural Resources
Jeff Merrell, Agency of Natural Resources
Lynn Metcalf, Agency of Natural Resources
Jessie Motard-Côté, Agency of Natural Resources
Megan O'Toole, Agency of Natural Resources
Ellen ParrDoering, Agency of Natural Resources
Bryan Redmond, Agency of Natural Resources
Marc Roy, Agency of Natural Resources
Chuck Schwer, Agency of Natural Resources
Eamon Twohig, Agency of Natural Resources
John Wakefield, Agency of Natural Resources
Tami Wuestenberg, Agency of Natural Resources
John Zaikowski, Agency of Natural Resources

The ICCM wishes to thank the following individuals for attending meetings, participating in discussions, and submitting comments:

Alison Crowley DeMag, American Chemistry Council
Johanna de Graffenreid, Vermont Public Interest Research Group
William Driscoll, Associated Industries of Vermont
Mitch Krauss, Burton Snowboards
Matt McMahon, MMRVT
Nat Shambaugh, Interested Citizen
Erin Sigrist, VTRGA
Martin Wolf, Seventh Generation
John Brabant, Vermonters for a Clean Environment

Appendix C

ICCM Master Matrix

Link to ICCM Master Matrix: http://anr.vermont.gov/about/special-topics/chemical-management-committee

General Info					Reporting Requirements						
Agency/Department	**Program**	**Contact**	**Activity**	**Chemical Name or Group Regulated**	**FS**	**FR**	**SS**	**SR**	**O**	**N**	**Source of Reporting Requirement**
Identify the name of the Agency and Department responsible for administering the current reporting and recordkeeping requirements	*Identify the name or title of Department Program responsible for administering the current reporting and recordkeeping requirements*	*Identify the name of the contact person for the program*	*Identify the type of businesses that currently generate hazardous waste or toxic chemicals, and the type of activity that generates the waste or chemical*	*Provide the specific name of the chemical, if it is in a group, identify the group and chemicals within the group*	*Mark x if the current source of the requirment is federal statute*	*Mark x if the current source of the requirement is federal rule*	*Mark x is the current source of the requirement is state statute*	*Mark x if the current source of the requirement is state rule*	*Mark x if there is some other current requirement*	*Mark x if there are no current requirements*	*Provide the current specific statutory or rule citation*
ANR/DEC	AQCD/Planning Section/Annual Point Source Registration Program	Jeff Merrell (jeff.merrell@vermont.gov)	Vermont stationary / point sources (industrial / commercial / institutional)	Category I Hazardous Air Contaminants (HACs) - known or suspected to cause carcinogenicity; Category II HACs - believed to cause chronic systemic toxicity due to long term exposure; Category III HACs - believed to cause short-term irritant effects			X	X			10 V.S.A. § 555; 3 V.S.A § 2822(j)(B); State of Vermont Air Pollution Control Regulations (VAPCR) 5-802, 5-803, and 5-402
ANR/DEC	AQCD	John Wakefield (john.wakefield @vermont.gov)	Perchloroethylene Dry Cleaners	Perchloroethylene (Tetrachloroethylene) CASRN 127-18-4				X			Vermont Air Pollution Control Regulations 5-253.11(f)
US EPA			Owners and operators of a stationary source that manufactures, uses, stores, or otherwise handles more than a threshold quantity of a listed regulated substance in a process must implement a Risk Management Program.	EPA's list of regulated substances and their threshold quantities can be found at: http://www.epa.gov/emergencies/content/rmp/index.htm. The regulated substances are listed in four tables, two listing the regulated toxic substances (alphabetically and by CAS number) and two listing the regulated flammable substances (alphabetically and by CAS number).		X					Clean Air Act Section 112r https://www.epa.gov/sites/production/files/2013-10/documents/caa112_rmp_factsheet.pdf
US EPA			In accordance with Section 112 of the CAA, EPA establishes stationary source National Emission Standards for Hazardous Air	Approx. 187 EPA listed HAPs. The list of hazardous air pollutants (HAP), or "air toxics", includes specific compounds that are known or suspected to cause cancer or other serious health effects		X					40 CFR 61 and 63
US EPA	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA/SUPERFUND)		Any business or person that releases a regulated substance that impacts public health and/or environment	Agency for Toxic Substances and Disease Registry (ATSDR) and the EPA are required under CERCLA to pepare a list in order of priority, of substances that are most commonly found at facilities on the National Priorities List (NPL) and which are deemed to pose the most significant potential threat for human exposure at the NPL sites. A consolidated list, referred to as teh "List of Lists" includes chemicals referenced under five federal statutory provisions: EPCRA Section 302 Extremely Hazardous Substances (EHSs); CERCLA Hazardous Substances; (CAA SEcion 12(r) List of Substances for Accidental Release Prevention; EPCRA Seciton 313 Toxic Chemicals (Toxic Release Inventory Chemicals); and RCRA	x	x					42 U.S.C. 9601 et seq; 40 C.F.R. Parts 300-374
ANR/DEC	WMPD Spills Management Program and Contaminated Sites Program	Tami Wuestenberg	Any business or person that releases a regulated substance	Hazardous wastes which are listed federal or state haz wastes; long comprehensive lists	x	x	x	x			40 CFR subchapter J; 300-374.6 VT Hazardous Waste Management Regulations; Investigation of Contaminated Properties Rule; Solid Waste Management Rules; Groundwtaer Protection Rule and Strategy; Water Supply Rule;
ANR/DEC/WMPD	Hazardous Waste	Marc Roy	Standards for the management, storage, transport, and treatment of haz	Hazardous wastes which are listed federal or state haz wastes; long comprehensive lists	x	x	x	x			40 CFR parts 260 through 273, VT Hazardous Waste Management Rules
ANR/DEC/WMPD	Underground Storage Tanks	Marc Roy	Standards for installation and operation of underground storage tanks	Gasoline, diesel, kerosene, and heating oil. One facility in the state stores hazardous chemicals other than petroleum - storage of chemicals used in paint/coatings manufacture.	x	x	x	x			40 CFR 280, VT Underground Storage Tank Rules
ANR/DEC/WMPD	Salvage Yards	Marc Roy	Standards for location and operation of salvage yards	Motor vehicle fluids (gas, oil, anti-freeze, misc. other fluids)			x	x			VT Salvage Yard Rules,
ANR/DEC/WMPD	Residuals Management	Eamon Twohig/Ernie Kelley	Management of wastewater treatment sludge (biosolids), septage, short paper fiber, and wood ash from a variety of	Regulations established for nine metals and PCB.	x	x	x	x	N/A	N/A	40 CFR Part 503, VT Solid Waste Management Rules
ANR/DEC/WMPD	Solid Waste Program	Kasey Kathan	Prevention of household hazardous waste and conditionally exempt generator waste disposal within landfills	Household Hazardous Waste & Conditionaly Exempt Generator Waste			X	X			Vermont Solid Waste Management Rules and the State Solid Waste Implementation Plans
ANR/DEC/WMPD	Solid Waste Program	Kasey Kathan	Management and monitoring of wastes disposed within landfills and environmental impact by landfills	Solid waste, landfill leachate	X	X	X	X			Vermont Solid Waste Management Rules
U.S. Environmental Protection Agency (EPA)	Office of Pollution Prevention and Toxics (OPPT)	No State contact	Entities that manufacture, distribute in commerce (including importing and exporting), process, use, or disposal of chemical substances or mixtures.	New and existing chemical substances and mixtures. //"Chemical substances" (any organic or inorganic substance of a particular molecular identifyed, including any combination of such substances occuring in whole or in part as a result of a chemical reaction or occuring in nature; and any element or uncombined radical. //"Mixtures" (any combination of two or more chemical substances if the combination does not occur in nature and is not, in whole or in part, the result of a chemical reaction).	X	X					TSCA Section 5 (40 CFR PART 720) -Notification of intention to manufacture new chemical(s) ("pre-manufature notification).//TSCA Section 12(b) (40 CFR PART 707) -- Notification of export/intention to export a chemical substance or mixture.//Section (40 CFR PART 711):Chemical Data Reporting (requires manufacturers and importers to report regarding chemicals manufactured domestically or imported into the US).//Section 8 (40 CFR PART 710) -- Inventory "active-inactive" rule (requires industry to report all chemicals manufactured and/or processed in last 10 years).
ANR/DEC/EAO	VT Toxics Use Reduction and Hazardous Waste Reduction planning program	Lynn Metcalf	Manufacturing Facilities with >10 FTEs that generate over 10,000 or 1000 pounds of listed toxics or facilities that generate greater than 2640 pounds of hazardous waste per year (subject to exemptions for non-	Toxics - chemicals listed in SARA Title III, Section 313; Hazardous Waste listed in the VHWMR			X				10 VSA Section 6630
ANR/DEC/DWGWPD	Public Water Supply	Ellen Parr Doering	Program does not generate hazardous waste. Disinfection by-products (DBPs) can be formed when using chlorine, particularly when source is surface water.	All community systems monitor for microbial contaminants, inorganics, volatile organics, and synthetic organics, and radionuclides. Disinfecting systems must also monitor for DBPs. Surface water sources must monitor turbidity. Other types of water systems measure for a subset of these contaminants.	x	x	x	x			Water Supply Rule, Subchapters 21-6 and 21-9. 40 CFR Parts 141 and 143. Also 40 CFR Part 141, Subpart D.
US EPA	Toxic Chemical Release Reporting: Community Right to Know, aka Toxics Release Inventory (TRI)	EPA OPPT	Manufacturing Facilities in listed sectors with >10 FTEs that generate over threshold of EPCRA Section 313 listed	600+ chemicals and chemical categories listed under EPCRA section 313 - https://www.epa.gov/toxics-release-inventory-tri-program/tri-listed-chemicals	X	X					40CFR§373.30
ANR / DEC	National Point Source Discharge Elimination System (NPDES)	Jessica Bulova (Wastewater Program)	The NPDES Program controls water pollution by regulating "point sources" that discharge pollutants into waters of the United States. All municipal and commercial facilities that discharge wastewater directly from a point source into a receiving water are required to obtain an NPDES Permit.	Pollutants regulated include any type of industrial, municipal, or agricultural waste discharged into water. Conventional pollutants are those defined in CWA § 304(a)(4) and § 401.16. Toxic (priority) pollutants are those defined in CWA §307(a)(1) and listed in § 401.15 and Appendix A of Part 423 and include 126 metals and manmade organic compounds. The Clean Water Act requires EPA to develop criteria for ambient water quality that reflect the latest knowledge on impacts of pollutants and human health and the environment, these ~ 150 pollutants, which include Toxic Priority Pollutants are published in § 304(a) of the Clean Water Act (CWA). § 3-01(B)(10) of Vermont Water Quality Standards contains narrative criteria designed to protect the State's waters from	x	x					10 V.S.A. Chapter 47, § 1263, 40 C.F.R. Part 122, CWA§ 305(b), CWA § 303(d), 40 CFR Part 503

		Reporting Requirements (continued)								
Agency/Department	**Program**	**Threshold for Reporting**	**Applicability**	**Description of Requirement**	**Method of Reporting**	**# of Staff to Administer Reporting Components of Program**	**Funding allocated to Maintain Reporting Components of Program**	**Method of Access to Records**	**Data Gaps**	**Implementation Challenges**
		Provide the current threshhold for reporting - weight, type, etc.	*Who/what does the activity apply?*	*Describe the specific recordkeeping requirements*	*Describe how the regulated entity currently reports information - website portal, paper submission, electronic submission, etc. and how often (every month, once per year, etc)*	*Identify the current number of staff that administer reporting system*	*Identify the current amount of funding allocated to the reporting system*	*Identify how the regulated entity, state agencies, and the public currently accesses records maintained by the department program - website, in-person inspection, public document request, etc.*	*Identify what is exempt, not covered, or other data gaps.*	*Identify what impedes implementation, ex. Lack of training for regulated entity, method of reporting, insufficient Agency resources, other challenges.*
ANR/DEC	AQCD/Planning Section/Annual Point Source Registration Program	Each operator of a source which emits five tons or more of any and all air contaminants per year shall register the source with the Secretary, and shall renew such registration annually. Under Air Pollution Control Regulation 5-402, the AQCD may at any time require written reports from persons operating, or responsible for, any existing air contaminant source. This is applicable to facilities not reaching the reigistration reporting threshold, but use HACs of concern.	Vermont stationary / point sources (industrial / commercial / institutional)	VAPCR 5-803, requires source emissions data and any other information required to determine the appropriate registration fee. This data shall be supplied by completion of forms which are available from the Air Pollution Control Officer. For VAPCR 5-402, reports shall contain information concerning location, siting, size and height of contaminant outlets, processes employed, pertinent process and material flow, fuels used, nature and amount and time periods or durations of emissions and such other information as may be relevant to the air pollution potential of the source.	Regulated sources provide data annually through electronic e-mail (or paper) submission of completed data forms. Future goal is to provide an online portal where regulated facilities may enter and/or upload the required data for review and further processing.	2 analysts and 1 administrative staff	Program is self-funded through fees assessed to registered sources.	Detailed records avialable through in-person inspection &/or public document request. More detail may become available to the public online, as the new shared Air Facilities database becomes fully implemented post-2018.	Facility reporting largely relies on Material Safety Data Sheets (MSDS/SDS), which have de minimus reporting thresholds (1% for non-carcinogens; 0.1% for carcinogens) that. Chemical products may regularly have components beneath these thresholds, which may be problematic of the chemical products are used in large quantities at a facility. Also, MSDS/SDS typically report chemical components as a range (e.g., 25 - 50%) which makes estimating actual emissions less accurate	Long-established mature program
ANR/DEC	AQCD		Perchloroethylene Dry Cleaners	Records must be maintained, and are provided by the regulated source to the Air Pollution Control Officer upon request	upon request	<1	unknown	upon request	No exemptions to a release of a listed substance	None; long-established mature program.
US EPA			Owners and operators of a stationary source that manufactures, uses, stores, or otherwise handles more than a threshold quantity of a listed regulated substance in a process must implement a Risk Management Program. New facilities must submit a Risk Management Plan to EPA as soon as they have a covered chemical above the threshold.	EPA regulations and guidance for chemical accident prevention at facilities using substances that posed the greatest risk of harm from accidental releases. These regulations were built upon existing industry codes and standards (available at: http://www.epa.gov/emergencies/lawsregs.htm#fraccident) and require companies of all sizes that use certain listed regulated flammable and toxic substances to develop a Risk Management Program, & submit to EPA. Updated every 5 years.						
US EPA										
US EPA	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA/SUPERFUND)	Releases of CERCLA hazardous substances, in quanities equal to or greater than their reportable quanity, are subject to reporting to the National Response Center. Such releases are also subject to state and local reporting under section 304 of the Emergency Planning and Copmmunity Right-to-know act (EPCRA). Releases of CERCLA hazardous substances in quanities equal to or greater than their reportable quanity are subject to reporting to the Nationl Response Center - 40 CFR part 301 table 302.4	Any and all persons with knowledge of a release -	Site Specific - however in general EPA follows a standard set of deliverables- PA/SI; HRS; ROD; RIFS; RDRA….)	Mainly electronic submittal however some federal sites report via paper copies. On-line site specific webpage	5FTEs work on Federal CERCLA sites (Pre-Remedial, Removals and Superfund sites, however it would be difficult to acertain how much of their time is spent specifically on reporting requirements. These staff also work on non-Federal sites.	Federal	Finalized deliverables related to Superfund sites are maintained on a publicly-available EPA Webpage. Additonal information and public records may be inspected pursuant to the Vermont Public Records law (1 V.S.A. Chapter 5) and Federal FOIA.	Federal process is sometimes slow	Lack of adequate federal resources
ANR/DEC	WMPD Spills Management Program and Contaminated Sites Program	Releases and suspected releases. Any person required by 10 V.S.A. §6617 shall immediately report a release or suspected release as indicated by the following: 1) A release of hazardous material, excluding petroleum; (2) A release of any petroleum product that exceeds 2 gallons; (3) A release of any petroleum product that is less than or equal to 2 gallons and poses a potential or actual threat to human health or the environment; or (4) The detection of non-aqueous phase petroleum liquid (NAPL) at a thickness greater than 0.01'.	Any and all persons with knowledge of a release	Once a release is discovered and investigated, reporting requirements are site specific. All sites information is maintained in the WMID database.	Mainly electronic submittal	18 FTE oversee the work in the program and each staff has their own sites they are responsible for - the reporting requirement doesn't take up the FTE time but I'm not sure how to allocate an amount of time. It depends on how many sites you manage?	Federal with state match based on specific grant (e.g., LST, Core, etc.)	Information related to reported spills and contaminated sites are maintained on a publicly-available Environmental Research Tool (ERT) searchable database as well as on a public mapping tool (the ANR Atlas). Additonal information and public records may be inspected pursuant to the Vermont Public Records law (1 V.S.A. Chapter 5)	No exemptions to a release of a listed substance	lack of enforcement for non-compliant responsible parties
ANR/DEC/WMPD	Hazardous Waste	Note: Reporting under subsection (b) of this section must be directed to:	All entities that generate HW	Facilities must submit shipping documentation to State per occurence.	US Mail	1 FTE	Federal w/ state match (80/20 or 75/25)	On-line ID of generator existence, but no ability to determine what wastes are generated or stored on-site.	n/a	None; long-established mature program.
ANR/DEC/WMPD	Underground Storage Tanks	Monday through Friday, 7:45 AM to 4:30 PM; Waste Management & Prevention Division at (802) 828-1138.	Mostly fuel stations (public and private), some businesses that use heating oil for processing (ie heating water for cheese making)	Facilities are subject to either permitting or notification. Permits are issued for 5 years; notifications are upon installation and removal.	Mail or ANR on-line (renewals)	1 FTE	Federal w/ state match (80/20 or 75/25)	On-line ID of # tanks, size of tanks, and products stored.	n/a	None; long-established mature program.
ANR/DEC/WMPD	Salvage Yards	At all other times including State holidays: Department of Public Safety Division of Emergency Management and Homeland Security at (800) 641-	Salvage yards	n/a	n/a	1 FTE	State funds	On-line listing of permitted facilities.	n/a	none.
ANR/DEC/WMPD	Residuals Management	any amount managed. quarterly reporting of annual or biannually generated data	wastewater treatment facilities, septage haulers, short paper fiber and wood ash generators, any entity treating wastewater treatment biosolids for applicastion to the land or for	10 year permits. Quarterly reporting is required for all residual waste managers.	mail or email, moving to electronic only.	1 FTE	Septage fee under 3 VSA 2822(j)(33). Portion allocated to maintaining reporting components n/a.	Program maintains all electronic records via internal database. Public access to reporting records via the web-based "wastewater inventory" at https://anrweb.vt.gov/DEC/WWInventory/	N/A	Insufficient staffing, slow development of electronic reporting to transition from manual data entry
ANR/DEC/WMPD	Solid Waste Program	Weight and broad material types that have been managed. Fixed collection facilities report quarterly, community held events report annually	The collection and management of household hazardous waste or CEG wastes by collection events or fixed collection facilities	If the material is managed at a SW facility the reporting is quaterly through the ReTrac reporting tool. Other collection events occur during the year through "insignificant waste management event approvals" and these report annually.	Web-based ReTRAC database	2 FTE to review all solid waste reporting.	$10,600.00 This is for all solid waste facility reporting not just HHW/CEG	Entities that are registered within our web-based ReTRAC reporting system can view all submitted reports, and the reports are exportable such that a public request can easily be responded to. An annual summary report of all amalgamated data is also published on our	Technically Household Hazardous Waste is solid waste and can be disposed of in the regular trash. HHW/CEG collection events are voluntary and represent people doing the "right" thing so it is doubtful that we are capturing all of these waste at the depots or collection events.	Cost burden to muncipalities (solid waste management entities) of operating an event or operating a fixed facility.
ANR/DEC/WMPD	Solid Waste Program	All facilities that manage materials for disposal are permitted and must report, environmental monitoring, special waste or waste characterization reports are requested dependent on permit type and management activities	All permitted solid waste management facilities	Facilities that managed muncipal solid waste must report on wastes managed quarterly, other facilities (recycling, composting etc.) may report annually dependent on permit requirements. Monitoring reports, waste characterization reports etc. are as required within the issued permit.	Web-based ReTRAC database and paper/electronic reports	3 FTE to review all solid waste reporting.	$10,600.00 This is for all solid waste facility reporting	Entities that are registered within our web-based ReTRAC reporting system can view all submitted reports, and the reports are exportable such that a public request can easily be responded to. An annual summary report of all amalgamated waste management (types, tonnage etc.) data is also published on our website. Monitoring reports etc. can be posted to our website to be made publically available, but currently this is done on an as needed basis (for sites under permit review or of particular public interest) and not routinely for all		
U.S. Environmental Protection Agency (EPA)	Office of Pollution Prevention and Toxics (OPPT)	Premanufacture Notification: Anyone who plans to manufacture (including import) a new chemical substance for a non-exempt commercial purpose.//Notification of export/intent to export: Anyone who exports or intends to export a chemical or mixture that are subject to certain actions under TSCA.//Chemical Data Reporting: Manufacturers (including importers) are required to report if they meet certain production volume thresholds, generally 25,000 lbs or more of a chemical substance at any single site.//Inventory "active-inactive": manufacturers (importers) and processors must report non-exempt chemical inventory over 10-year period ending June 21, 2016 (backward-looking), and must report future activity report for nonexempt chemicals listed after June 21, 2016.	Manufacturers, importers, processors, or other entities that use non-exempt chemicals or mixtures, accordingly.	Premanufacture Notification -- Submissions require all available data on the following: chemical identity, production volume, byproducts, use, environmental release, disposal practices, human exposure, existing available test data.//Notification of export/intent to export -- Submissions must include name and address of the exporter, name of the chemical substance or mixture, date(s) of export or intended export, country(ies) of import, and Section of TSCA (4, 5, 6, or 7) under which EPA has taken action.//Chemical Data Reporting -- Submissions include information related to manufacturing, processing, and use of "large" chemical quantities (those above threshold amounts) of non-exempt chemicals and mixtures. //Inventory "active-inactive" reporting: entities that domestically manufactured (including importers and processors) any chemical listed on the TSCA Chemical Substance Inventory, and manufacturers that will manufacture any "inactive" chemical on the Inventory must report, must report chemical identities	Premanufacture Notification - - Submissions made electronically on a form using the electronic PMN software (e-PMN).//Notification of export/intent to expore - Submissions are sent through U.S. mail or hand/courier delivery.//Chemical Data Reporting Rule -- All entities required to report data electronically using e-CDRweb, the CDR web-based reporting tool, and EPA's Central Data Exchange (CDX) system.//Inventory "active-inactive" reporting -- All reports are made electronically through EPA's Central Data Exchange (CDX) system. EPA is establishing procedures for retrospective and forward-looking activity notifications, including the details of the notification requirements, exemptions from such requirements, and procedures	No State resources	No State resources	Information on chemical health and safety data received by EPA and EPA's assessments and regulatory actions for specific chemicals under TSCA is made available through ChemView. ChemView contains no confidential business information (CBI).//Premanufacture/Intent to Manufacture Notification information that is non-confidential is integrated and made available through the TSCA Chemical Substance Inventory, which is available electronically through EPA's website.	Exemptions/Exclusions: The following are exempted/excluded from the definition of "chemical substance" (and "mixture"): pesticides, tobacco products, firearms, foods, drugs, and cosmetics, when they are manufactured, processed, or distributed in commerce for use as pesticides, tobacco products, firearms, foods, drugs, or cosmetics. Other sections of the law exclude "byproducts" and "impurities".//The following are exempted from Premanufacture Notification requirements: chemical substances having no "separate commercial purpose"; certain polymers; certain research and development (R&D) substances, low volume exemptions (LVE); low release and exposure exemptions (LoREX); and test marketing exemptions (TME).//Chemical Data Reporting Rule - the following are exempted from reporting: water, naturally occurring substances, polymers, microorganisms, and certain forms of natural gas.//All data and information claimed to be "confidential" by a manufacturer or other entity is reported to EPA, but is not available to the public.	Grandfathered Chemicals: When first enacted, approximately 62,000 chemicals were "grandfathered" from regulation under TSCA, deemed as "safe". In 2016, amendments require EPA to evaluate and test already-existing chemicals and make affirmative findings on the safety of new chemicals prior to manufacture and use in commerce, but much of the backlog remains.//Once EPA takes any action regarding regulation of a chemical substance, any same or similar subsequent state regulatory action may be subject to preemption.//EPA budgetary issues, backlog of existing chemicals, and recent changes in administration at EPA and industry-centered policies may influence EPA's work to review chemicals and the ultimate determinations it makes on a chemical's safety.
ANR/DEC/EAO	VT Toxics Use Reduction and Hazardous Waste Reduction planning program	Same as threshold for regulation under the statute - all planners must report.	Manufacturing Facilities with >10 FTEs that generate over 10,000 or 1000 pounds of listed toxics, or facilities that generate greater than 2640 pounds of hazardous waste per year (subject to exemptions for non-routine waste)	Subject facilities must report annually on progress in implementing plans to reduce toxics and/or hazardous waste. They report pounds of reportable toxics used and/or hazardous waste generated relative to previous year, and list any pollution prevention projects implemented that resulted in reductions.	paper forms	0.5 FTE	Program is self-funded through annual pollution prevention progress fees.	public records request to view paper copies of progress reports; Plans are exempt from review 10 V.S.A. §6628(a).	Facilities only report the toxics that they use above the regulatory threshold but they may be using numerous other chemicals below the threshold that are not required to be reported or included in their planning.	Identifying all facilities that should be planners; offering technical assistance to planners to help them implement plans and find new reduction opportunities
ANR/DEC/DWGWPD	Public Water Supply	All monitoring analyses are required to be reported, whether the contaminants are detected or not.	All Public Water Systems are required to report; the contaminants reported vary by classification of water system.	The Water Supply Rule (which incorporates EPA Safe Drinking Water Act regulations by reference) requires reporting for at least 88 contaminants.	Almost all reporting is done electronically, directly from labs analyzing that data to the DWGWPD, which is then entered into SDWIS database. Other lab analyses are submitted via fax or US Mail, and then entered into the SDWIS database.	approximately 1 FTE, involving 2 admin staff and database manager in particular	Federal funds w/state match, approximately 90K	All monitoring data reported is available to the public and EPA via the SDWIS database. A common way to deliver this data is from FOIA and other similar data requests. While most analyzed data is below detection (therefore water is not contaminated), annual compliance reports sent to EPA and on the DWGWPD website indicate the water systems with standard exceedances.	Contaminants are currently limited to a list of 88 chemicals. EPA adds to the list, but only after several years of monitoring and analysis. For example, while EPA has been monitoring for PFOA, it is still not a listed contaminant that is required to be monitored by public water systems.	Many public water systems are very small, and have few funds to monitor additional contaminants. These type of contaminants would require non-standard methods, which greatly increases the costs analytical labs charge. Due to Vermont's long-standing source protection program, drinking water is commonly very safe, and extra monitoring would likely only verify that water is indeed not contaminated.
US EPA	Toxic Chemical Release Reporting: Community Right to Know, aka Toxics Release Inventory (TRI)	Manufacture or Process greater than 25,000 pounds of listed chemical, Otherwise Use greater than 10,000 pounds of listed chemical; Lower thresholds apply to persistent, bioaccumulative or toxic chemicals.	Manufacturing Facilities with >10 FTEs that generate over the threshold of listed toxics	Facilities must report amounts of each TRI chemical that they manufacture, process or otherwise use in excess of the thresholds	Online to EPA's TRI-ME web application	unknown	unknown	Online thru multiple EPA portals	Threshold for non-PBTs is relatively high, EPA adds and subtracts chemicals from the list each year but only covers 600-700 of the 10s of thousands of chemicals in commerce.	Many facilities may not know they need to report; methods of calculating amounts that a facility generates are sometimes very complicated.
ANR / DEC	National Point Source Discharge Elimination System (NPDES)	The Clean Water Act requires all point source discharges to obtain a NPDES permit and report compliance with NPDES permit limits via monthly DMRs submitted to the permitting authority. The permitting authority then enters these data into a national database available to the public at the Permit Compliance System (PCS) and Integrated Compliance Information System (ICIS) databases. Although other pollutants may be discharged, ICIS-NPDES contain data only for the parameters identified in the facility's NPDES permit. There are Sludge reporting requirements for all Publicly Owned Treatment Works (POTWs) servicing a population greater than 10,000 or having a design flow greater than one million gallons per day, must submit an annual report to the permitting authority every year. Sludge DMR form is to be completed by all major and or designated Class I facilities which generate sewage sludge. Facilities that generate or prepare sewage sludge must indicate concentration of PCBs (mg/kg) in the sludge. Facilities that generate or prepare sewage sludge must indicate TCLP results. Toxic Release Inventory (TRI), facilites in different industry sectors must report	All NPDES Permitees: POTWs, Municipal and Industrial WWTF	5 year permits, monthly and annual reporting requirements as specified in NPDES permit.	Mail or electronic, moving to electronic only.	7		On-line listing of permitted facilities. ICIS, Public Records Request		

		Record Keeping Requirements											
Agency/Department	**Program**	**FS**	**FR**	**SS**	**SR**	**O**	**N**	**Source of Recordkeeping Requirement**	**Threshold for Recordkeeping**	**Applicability**	**Description of Requirements**	**Data Gaps**	**Implementation Challenges**
		Mark x if the current source of the requirment is federal statute	*Mark x if the current source of the requirement is federal rule*	*Mark x is the current source of the requirement is state statute*	*Mark x if the current source of the requirement is state rule*	*Mark x if there is some other current requirement*	*Mark x if there are no current requirements*	*Provide the current specific statutory or rule citation*	*Provide the current threshhold for recordkeeping - weight, type, etc.*	*Who/what does the requirement apply to?*	*Describe the specific recordkeeping requirements (annual, semi-annual; display for workers, produce upon request)*	*Identify what is exempt, not covered, or other data gaps.*	*Identify what impedes implementation, ex. Lack of training for regulated entity, method of reporting, insufficient Agency resources, other challenges.*
ANR/DEC	AQCD/Planning Section/Annual Point Source Registration Program												
ANR/DEC	AQCD				X			Vermont Air Pollution Control Regulations 5-253.11(f)	N/A	Perchloroethylene Dry Cleaners	(f) Record keeping. (1) The owner or operator of a dry cleaning facility shall maintain records of the following for a minimum of five years from the date the record was created: (i) The amount of perchloroethylene purchased each month. At the beginning of each month, the owner or operator shall calculate the total quantity of perchloroethylene purchased during the previous twelve consecutive month period; (ii) The date and results of weekly inspections and records of the dates of repair or purchase orders for repair parts to	No exemptions to a release of a listed substance	None; long-established mature program
US EPA													
US EPA													
US EPA	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA/SUPERFUND)	x						42 U.S.C. 9601 et seq; 40 C.F.R. Parts 300-374 (Need to check this - Not sure it's correct)	site specific	type of release; EPA; responsible party;	Each phase of the superfund process requires recordkeeping (PA/SI; HRS; ROD; RIFS; RDRA:	na	Lack of adequate federal resources
ANR/DEC	WMPD Spills Management Program and Contaminated Sites Program				x			40 CFR subchapter J; 300-374.6 VT Hazardous Waste Management Regulations; Investigation of Contaminated Properties Rule; Solid Waste Management Rules; Groundwtaer Protection Rule and Strategy; Water Supply Rule;	site specific	type of release	Site specific	na	insufficient agency resources, recalcitrant responsible parties
ANR/DEC/WMPD	Hazardous Waste	x	x	x	x			Same as L	n/a	Generators of hazardous waste	n/a	n/a	none ID'd at this time.
ANR/DEC/WMPD	Underground Storage Tanks	x	x	x	x			Same as L	All tanks not exempt.	Tank owners	WEEKLY Leak Detection Records (3 years) MONTHLY Inventory control Monthly facility inspections (3 years) Annual self-certification of compliance (internet) Equipment testing if required (annual line leak detectors testing, triannual cathodic protection testing, upgraded/repaired cathodic protection systems annual testing, tank linings inspection 10years, Piping sump and spill bucket tightness testing annual starting in 2020	n/a	none ID'd at this time.
ANR/DEC/WMPD	Salvage Yards			x	x			Same as L	n/a	n/a	n/a	n/a	n/a
ANR/DEC/WMPD	Residuals Management	X	X	X	X	N/A	N/A	40 CFR Part 503, VT Solid Waste Management Rules	any amount	all managers of residual wastes	typicall records must be kept for 5 years following the closure of the facility.	no exemptions	same challenges as for "Reporting Requirements"
ANR/DEC/WMPD	Solid Waste Program			X	X			VSWMR 6-1208(a) for facilities and as a condition of approval for an IWMEA	Any amount	Solid Waste facility operators and/or collection event operators	Records must be kept for 5 years		Electronic reporting has aleviated some of the burden of record keeping, but the regulated entities are not always certain of the requirement to maintain records for five years or have a lack of follow-through with this requirement.
ANR/DEC/WMPD	Solid Waste Program			X	X	X		VSWMR 6-1104, 6-1109, 6-1207, 6-1208, 6-1308 and individual permit conditions	Any amount	Facilities permitted for the management of solid wastes	Records must be kept for 5 years		Electronic reporting has aleviated some of the burden of record keeping, but the regulated entities are not always certain of the requirement to maintain records for five years or have a lack of follow-through with this requirement.
U.S. Environmental Protection Agency (EPA)	Office of Pollution Prevention and Toxics (OPPT)	X	X					15 USC 2607; 40 CFR Part 704 [recordkeeping under CDR Rule/Section 8(a)]; 40 CFR Part 711 [recordkeeping under CDR Rule/Section 8(a) for certain manufacturers and importers of chemical substances]; 40 CFR Part 717 [Recordkeeping of Allegations that Chemical Substances Cause Significant Adverse Ractions to Health or Environment]; 40 CFR Part 721 [recordkeeping under Section 5(a) for "significant new uses"]; 40 CFR Part 725 [recordkeeping for microorganisms for commercial purposes reported under Section 5(a)]; 40 CFR Part 792 [recordkeeping for Good Laboratory Practice Standards]	40 CFR Part 704 -- amounts produced over "small manufacturer" and "small importer" quantities. 40 CFR Part 711 -- required by entities that are required to report information under Section 8 (Chemical Data Reporting Rule) to EPA (amounts produced over "small manufacturer" quantities, unless substance is subject of proposed or promulgated rule or oder). 40 CFR Part 717 -- chemical substances/mixtures that are subject to "significant adverse reaction to health or the environment". 40 CFR Part 721 -- chemical substances/mixtures subject to a "significant new use". 40 CFR Part 725 -- manufacture, import, process or microorganism subject to TSCA jurisdiction for commercial purposes. 40 CFR Part 792 -- performance of any study relting to health effects, environmental effects, chemical fate testing	40 CFR Part 704 -- non-exempt manufacturers, importers, processors of certain chemical substances/mixtures identified in Part 704, Subpart B. 40 CFR Part 711 -- non-exempt manufacturers and importers that manufacture subject substances for commercial purposes over certain amounts at any single sit owned or controlled by that entity during last reporting year. 40 CFR Part 717 -- non-exempt manufacturers, processors, and distributoes of chemical substances and mixtures subject to Section 8(c) that are manufactured by the firm. 40 CFR Part 721 -- manufacturers, importers, distributors, processors of certain listed chemical substances for commercial purpose that are either new or to be used in significant new use of the substance. 40 CFR Part 725 -- manufacturers, importers, processors of non-exempt microorganisms, including those for a "significant new use". 40 CFR Part 792 -- any party (manufacturer or processor) subject to a rule, order, or consent agreement requiring additional testing of a chemical	40 CFR Part 704 -- maintain records for at least 3 years (depending on substance): a copy of report submitted; materials and documentation to verify/reconstruct the values submitted in the report; proof of notification of customers; return receipts. 40 CFR Part 711 -- maintain records that document any information reported to EPA under this section for at least 5 years. 40 CFR Part 717 -- maintain records of significant adverse reactions at firm's headquarters or other appropriate location. Minimum contents must be included in record (date, abstract of allegation, substance, adverse effects, results of self-initiated investigation, etc.) Records must be maintained in certain order and sequence, and must be maintained for period of 30 years. Successor business(es) or EPA must receive records if entity goes out of business. 40 CFR Part 721 -- maintain records of information contained in that significant new use notification and other information required in 721.125 (volumes, MSDS, disposal requirements, safety information, etc.) for a period of at least 5 years. 40 CFR Part 725 -- maintain records and documentation of information included in the submission for the first 3	Generally: Entity records reported to EPA may be inaccessible to public because of confidentiality protections. Private entity records not available to public. Several exemptions in either type of chemical substance, quantities, and types of manufacturers (e.g., small manufacturers and importers) are subject of exemptions to reporting and recordkeeping requirements. 40 CFR Part 717 -- Distributors and retailers are not required to report. Also, reactions that are incidental to certain types of exposure, storage, that result from end use of other chemicals, or that result from other identified circumstances are exempt from reporting as "significant adverse reaction." 40 CFR Part 721 -- chemical substances produced/processed for test marketing, in small quantities, processed as part of an article, produced/processes solely for export, and other exemptions, apply/not required to be reported and records not required to be maintained.	No State implementation challenges.
ANR/DEC/EAO	VT Toxics Use Reduction and Hazardous Waste Reduction planning program							n/a	n/a	n/a	n/a	n/a	n/a
ANR/DEC/DWGWPD	Public Water Supply	x	x	x	x			Water Supply Rule Subchapter 21-9 and 40 CFR Part 141 and 143.	Any and all monitoring must be reported, and records must be kept.	All public water systems.	Systems must keep monitoring records from 3-12 years, depending on the contaminant.	No gaps - if monitored, it must be kept as a record at the water system. In addition, the state of Vermont keeps monitoring records past the EPA minimum requirements.	Water system records are not always well kept, as small water systems are generally run by volunteers, and these volunteers turn over regularly and there may not be a good centralized location for these records.
US EPA	Toxic Chemical Release Reporting: Community Right to Know, aka Toxics Release Inventory (TRI)												
ANR / DEC	National Point Source Discharge Elimination System (NPDES)	X				X		40 CFR 122.41 J	Permit requirement	All permitted facilities:WR-43 series forms and electronic reports, additional permit-mandated monitoring (WET tests, annual consitituent monitoring), bench sheets, calibration reports. Agency: WR-43s and electronically-submitted reports, additional permit-mandated monitoring (WET tests, annual consitituent monitoring)		Although other pollutants may be dischaged (NPDES permit), ICIS-NPDES contain data only for the parameters identified in the facilities NPDES permit. Toxic "priority" pollutants defined in CWA § 307(a)(1) and listed in § 401.15 and Appendix A of Part 423 are limited to 126 pollutants and do not include emerging pollutants such as PFCs.	Toxics data is saved as scanned PDFs and not organized consistently/easily accesible to compile reports.

General Info				
Agency/Department	**Program**	**Contact**	**Activity**	**Chemical Name or Group Regulated**
ANR /DEC	Public Notice of Wastewater Discharges (Act 86)	Jessica Bulova (Wastewater Program)	Act 86 was developed to outline the reporting and public notice of untreated and unpermitted discharges. Unpermitted Discharges are discharges of wastewater, industrial process water, dumping or spills into waters of the State either directly through Stormwater-only drainage systems or other conveyance. The procudure	Pollutants may include convential and nonconventinal contaminants from untreated wastewater, industrial process water, stormwater and spills which may include toxic priority pollutants.
ANR/DEC	Oil Pollution Act of 1990	Matt Moran (WMPD)	Any business or person that releases petroleum into the environment or owns/operates oil storage facilities or vessels	Petroleum
ANR/DEC	Indirect Discharge	Mary Clark (802) 585-4890 mary.clark@vermont.gov	Large domestic wastewater systems that serve commercial busineses; could be nursing homes,	Potentially trace amounts of chemicals are discharged into an Indirect Discharge system
ANR/DEC	Underground Injection Control (UIC)	Mary Clark (802) 585-4890 mary.clark@vermont.gov	Airport deicing fluid (glycol), mining wastes (arsenic, manganese), several activities prohibited such as floor drains in vehicle service bays to subsurface systems	Hazardous chemicals are prohibited by the UIC rules and statutes. Chemicals must meet the GWPRS
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	Cary Giguere	Pesticide Producing Establishments	pesticides
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	Cary Giguere	Businesses that make applications-- over a wide range of use patterns	pesticides
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	Cary Giguere	Pesticide dealers (A)- businesses such as agricultural depots, certain hardware stores and specialty outlets.	pesticides
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	Cary Giguere	Agricultural businesses (forest, crops, nurseries/greenhouses) that use pesticides- and employ non-	pesticides
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	Cary Giguere	Pesticide applicators using restricted use products on owned/leased land to grow agricultural	pesticides
AHS Health	Private drinking water program	Sarah Vose / Sille Larsen	private drinking water labs generate testing data on naturally occuring and manmade chemicals	private drinking water data
AHS Health	Chemical Disclosure Program for Children's Products	Sarah Vose / Kerry Morlock	requires manufacturers to submit a disclosure when Chemicals of High Concern to Children (CHCC) are present in products sold in Vermont	chemicals in children's products
AHS Health	Asbestos and Lead Regulatory Program	Vernon Nelson	Asbestos abatement contractors remove and dispose asbestos waste for property owners	asbestos
AHS Health	Asbestos and Lead Regulatory Program	Vernon Nelson	Lead-based paint abatement contractors remove and dispose lead-based paint waste for property owners	lead
Vermont Department of Labor	Vermont Occupational Safety & Health Administration	Scott Meyer	General Industry, Large Agriculture & Construction	29CFR1910.1000 Permissible Exposure Limits 29CFR1910.1000+ Expanded Health Standards 29CFR1926.1000 Permissible Exposure Limits 29CFR1926.1000+ Expanded

		Reporting Requirements															
Agency/Department	**Program**	**FS**	**FR**	**SS**	**SR**	**O**	**N**	**Source of Reporting Requirement**	**Threshold for Reporting**	**Applicability**	**Description of Requirement**	**Method of Reporting**	**# of Staff to Administer Reporting Components of Program**	**Funding allocated to Maintain Reporting Components of Program**	**Method of Access to Records**	**Data Gaps**	**Implementation Challenges**
ANR /DEC	Public Notice of Wastewater Discharges (Act 86)				x			Environmental Protection Rule Chapter 34: Act 86	Act 86 (2016) requires operators of wastewater treatment facilities (WWTFs), both public and private, to provide public notification of releases of sewage to Vermont's surface waters. The Act also requires the Secretary of the Agency of Natural Resources (Secretary) to publicly notice unpermitted discharges to surface waters that may pose a threat to human health or the environment. All untreated and unpermitted releases of sewage must be reported and signage must be placed at public access points.	All public and private WWTFs, and Agency Staff when an unpermitted sewage discharge is found.	WWTF operators are required to public notice any release on ANR Online within 1-hour of discovery, unless the operator is working in a location that has no access, and then within 4-hours of discovery. A follow up incident report is required within 12-hours of the discovery. Operators must post temporary signs at any public access area downstream for one-mile and for 48-hours after the release has ended. In the instance of an unpermitted discharge Agency Staff will put the incident on ANR online and work with municipalities to ensure temporary signage is placed at all public access points up to one-mile downstream of release.	On ANR Online immediately after release has occurred			On ANR Online		As a new rule, facilities are not always in the habit of reporting in a timely manner. Continued outreach is important to remind facilites of their responsibilities when a untreated discharge occurs. For unpermitted discharges, " see something, say something" outreach to public as well as regulated community could be valuable.
ANR/DEC	Oil Pollution Act of 1990	x	x					33 U.S.C. 2701 et seq.	All releases of petroleum into or upon navigable waters or adjoining shorelines.	Oil storage facility or vessel	Any person in charge of a facility or vessel responsible for discharging oil that may be "harmful to the public health or welfare" must report the spill to the federal government (USCG national Response Center/USEPA). A copy of the report required must also be sent to ANR.	A facility should report discharges to the National Response Center (NRC) at 1-800-424-8802 or 1-202-426-2675	0 (in Vermont)	0			
ANR/DEC	Indirect Discharge			x	x			10 V.S.A. Chapter 47; 10 V.S.A. § 6616 (Chapter 159); 10 V.S.A. §§ 901, 905b (Chapter 37); 10 V.S.A. § 1390 (Chapter 48) Environmental Protection Rules Chapter 14, Indirect	Volume discharged of domestic wastewater	Applies to multiple residential and commercial facilities	Annual inspections, water quantity and quality monitoring, including effluent, groundwater and/or surface water monitoring	Outlook inbox or paper submissions	2	For state government? Unknown. We do charge operating fees that are to cover the reviews of the reports	Permits available on line, otherwise as requested		
ANR/DEC	Underground Injection Control (UIC)	x	x	x	x			42 U.S.C. §§ et seq. (Safe Drinking Water Act); 10 VSA, Chapter 47 Environmental Protection Rules Chapter 11; Vermont Underground Injection Control Regulations	Permit conditions include some amount of monitoring and reporting	Specific activities listed in the UIC rules	Annual inspections, water quantity and quality monitoring, groundwater monitoring	Paper submissions via mail or email	1	Unknown	Permits available on line, otherwise as requested	x	x
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	x	x	x	x	--	--	7 USC 136 et seq. (FIFRA); 40 CFR 152; 6 V.S.A. § 1104; CVR-20-031-012	all use and production	Facilities in the state that produce pesticides or pesticide devices	Initial registration with EPA Region 1, annual production reported to EPA, termination of establishment.	annual submission to EPA. Paper or electronic submission	federal	federal	request to EPA region 1	--	--
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	x	x	x	x	--	--	7 USC 136 et seq. (FIFRA); 40 CFR 171; 6 V.S.A. § 1104; CVR-20-031-012	any use (including non-use)	All commercial, on-commercial and government certified applicators.	annual reporting of use, by EPA registration number, use pattern, and county. Structural pest control operators are exempt from county requirement.	paper or excel spreadsheet submitted with annual renewal	0.1	0.1	reported in aggregate via web	x-homeowner	resouirces
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	x	--	x	x	--	--	7 USC 136 et seq. (FIFRA); 6 V.S.A. § 1104; CVR-20-031-012	all (including none)	Fixed facilities that sell state and federally restricted use products in Vermont.	annual reporting of sales and storage by EPA registration number and county where sold.	paper or excel spreadsheet submitted with annual renewal	0	0	reported in aggregate via web	internet sales are problematic	--
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	N/A	N/A	N/A	N/A	x	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	--	--
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	N/A	N/A	N/A	N/A	x	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	--	--
AHS Health	Private drinking water program			x				Act 163- 18 V.S.A. § 501b. "A laboratory certified to conduct testing of water supplies from a potable water supply, as that term is defined in 10 V.S.A. § 1972(6), shall submit the results of groundwater analyses to the department of health and the agency of natural resources in a format required by the department of health."	reporting limit for that chemical	any certified dimking water lab (in Vermont or any other state) that is testing private drinking water.	A laboratory certified to conduct testing of water supplies from a potable water supply, as that term is defined in 10 V.S.A. § 1972(6), shall submit the results of groundwater analyses to the department of health and the agency of natural resources in a format required by the department of health	labs submit their testing data by emailing a csv file to Health. (currently switching from PDF to csv)	0.25 IT staff	CDC drinking water grant- 134,002 per year, currently in year 3.	creating database (year three of project work)		
AHS Health	Chemical Disclosure Program for Children's Products			x				Act 188- 18 V.S.A. 38A §§ 1771 - 1779	intentionally added chemicals- PQL document http://www.healthvermont.gov/sites/default/files/documents/2016/11/Env_CDP_PQL.pdf 100 ppm for chemicals present as contaminants	any children's product offered for sale in Vermont. Exclusions are listed in statute.	Submit chemical name and CAS; descirption of product including Global Product Classification (GPC) brick description; function of the chemical in the product; amount of chemical in product or component reported in ranges; name and address of manufacturer and name, address and telephone number of a contact person; UPC or brand name and product model. Must report every two years and pay $200 per chemical	online reporting system, requires log in and payment.	one FTE	Funding from disclosures support the program	disclosures are posted on Health Department's website		
AHS Health	Asbestos and Lead Regulatory Program			x				18 V.S.A. 26; Vermont Regulations for Asbestos Control [VRAC], Sections 7 and 9	1% asbestos-containing materials by weight	Asbestos abatement (repair, enclosure, removal, encapsulation, or any other activity for the evaluation or control of any material which contains more than 1% asbestos by weight)	A Vermont-licensed asbestos abatement contractor entity shall notify the Health Department 10 working days prior to starting work (18 V.S.A. 26 §1333) or, in an emergency, no later than 48 hours after work (VRAC 9.1.2) in a format required by the Department of Health AND a Vermont-licensed asbestos consulting entity shall submit visual and air clearance documentation to the Health Department within 30 days of the completion of the work	Submit required notice for demolition or renovation activities (electronic or paper); OR submit Asbestos Abatement Project Permit Application Form (paper)	1.0 staff	Asbestos Certification fees: $100,393; Asbestos Project Permit fees: $37,525 - for calendar year 2016	Program-maintained database, electronic files, and paper files; contractor entity required to maintain records of all regulated activity; program records are accessed upon request	There is no asbestos inventory for Vermont. Any impact on asbestos below the threshold for reporting is unknown to VDH.	Lack of awarness of regulations for residential properties
AHS Health	Asbestos and Lead Regulatory Program			x				18 V.S.A. 38; Vermont Regulations for Lead Control [VRLC], Section 5	Paint or other surface coatings that contain lead in excess of limits established under Section 302© of the Federal Lead-Based Paint Poisoning Prevention Act (currently 1.0mg/cm2 or 0.5% by weight)	Lead abatement (removal of lead-based paint and lead-contaminated dust, permanent containment or encapsulation of lead-based paint, replacement of lead-based painted surfaces or fixtures, and removal or covering of lead-contaminated soil; all preparation, cleanup, disposal, and post-abatement clearance testing activities associated with such measures); OR disturbance of of 1 ft2 of lead-based paint in pre-1978 residential rental housing unit or child care facility	A Vermont-licensed lead abatement contractor entity shall notify the Health Department 10 working days prior to starting work (VRLC Section 5.1(b)) AND must submit documentation of appropriate waste disposal within 60 days (VRLC 5.5(f)); OR The owner of pre-1978 residential rental housing unit or child care facility shall submit an annual Essential Maintenance Practices Compliance Statement to the Health Department by the due date (18 V.S.A. 38 §1759.b, 18 V.S.A. 38 §1759.c)	Submit Lead Abatement Project Permit Application Form (paper) AND waste disposal documentation (electronic or paper); OR submit Essential Maintenance Practices Compliance Statement (website or paper)	2.0 staff	EPA lead certification grant: $121,248 ; Lead Certification fees: $35,381; Lead Project Permit fees: $3,475 - for calendar year 2016	Program-maintained database, electronic files, and paper files; contractor entity and property owners required to maintain records of all regulated activity; program records for lead abatement are accessed upon request; program records for Essential Maintenance Practices compliance are accessed via website (website filings) or upon request (paper filings)	No inventory of lead-based paint in Vermont, facilities or dwellings that contain lead-based paint, or regulated rental housing properties. Any disturbance of lead-based paint below the threshold for reporting is unknown to VDH.	Lack of awarness of regulations within the regulated community; lack of any funding for regulation of lead-based paint in pre-1978 rental housing and child care facilities; lack of data required in order to conduct comprehensive regulatory oversight; insufficent AHS staff and technological resources to conduct comprehensive regulation of lead-based paint in pre-1978 rental housing and child care facilities
Vermont Department of Labor	Vermont Occupational Safety & Health Administration	NA	NA	NA	NA	NA	X	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

		Record Keeping Requirements											
Agency/Department	**Program**	**FS**	**FR**	**SS**	**SR**	**O**	**N**	**Source of Recordkeeping Requirement**	**Threshold for Recordkeeping**	**Applicability**	**Description of Requirements**	**Data Gaps**	**Implementation Challenges**
ANR /DEC	Public Notice of Wastewater Discharges (Act 86)						x						
ANR/DEC	Oil Pollution Act of 1990	x	x					40 CFR Part 112		Any owner or operator of a non-transportation-related onshore or offshore facility engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, using, or consuming oil and oil products, which due to its location, could reasonably be expected to discharge oil in quantities that may be harmful must maintain and keep on file with the EPA and USCG National Response Center a Spill Prevention Control and Countermeasure Plan.	Any owner or operator of a non-transportation-related onshore or offshore facility engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, using, or consuming oil and oil products, which due to its location, could reasonably be expected to discharge oil in quantities that may be harmful must maintain and keep on file with the EPA and USCG National Response Center a Spill Prevention Control and Countermeasure Plan.		
ANR/DEC	Indirect Discharge	x	x			See L	permit reporting requirements	permittees	Monthly, quarterly and annual reporting				
ANR/DEC	Underground Injection Control (UIC)					See L	volume	Permittees	Monthly, quarterly and annual reporting				
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	x	x			7 USC 136 et seq.	all use and product	Federal rule	Record amount produced (product/devices)	Facilities in the state that produce pesticides or pesticide devices	Initial registration with EPA Region 1, annual production reported to EPA, termination of establishment.	--	--
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	x	x	x	x	7 USC 136 et seq. (FIFRA); 40 CFR 171; 6 V.S.A. § 1104; CVR-20-	all applications must have at 6 data recorded	all applications	Must be produced upon request of the Secretary, provided to consumers.	All commercial, on-commercial and government certified applicators.	annual reporting of use, by EPA registration number, use pattern, and county. Structural pest control operators are exempt from county requirement.	x-homeowner	resources
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	x	x	x	x	7 USC 136 et seq. (FIFRA); 6 V.S.A. § 1104; CVR-20-031-012	all restricted use product sales and storage by applicator and county of applicator residenc	sales to certified applicators	Must be produced upon request of the Secretary, kept for 2 years.	Fixed facilities that sell state and federally restricted use products in Vermont.	Reporting of sales and storage by EPA registration number and county where sold.		
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	x	x			7 USC 136 et seq. (FIFRA); 40 CFR 156 and	applications	Federal rule	use	farm, forestry and greenhouse operations that employ non-family members.	Training records, displays for workers, application records kept for 5 years	N/A	new federal rule implemented
Vermont Agency of Agriculture, Food & Markets	Pesticide Regulatory Program	x	x	x	x	1990 Farm Bill; 7 CFR 110;	applications	state and federal rules	use of product	farmers that make applications of state and restricted use products	must record application information, make available upon request and keep for 2 years.	N/A	--
AHS Health	Private drinking water program												
AHS Health	Chemical Disclosure Program for Children's Products												
AHS Health	Asbestos and Lead Regulatory Program	x	x	x	x	NA	NA	18 V.S.A. 26; Vermont Regulations for Asbestos Control [VRAC], Sections 7 and 9; 40 CFR Part 763 Subpart E	1% asbestos-containing materials by weight	Employers/Contactors, facility owners	Contractors must retain records of asbestos activities for 30 years; educational facility owners must keep records of asbestos management plan-related activity for up to 3 years after re-certification	n/a	n/a
AHS Health	Asbestos and Lead Regulatory Program	x	x	x	x	NA	NA	18 V.S.A. 38; Vermont Regulations for Lead Control [VRLC], Section 5; 40 CFR Part 745	Paint or other surface coatings that contain lead in excess of limits established under Section 302© of the Federal Lead-Based Paint Poisoning Prevention Act (currently 1.0mg/cm2 or 0.5% by weight); presence of lead-based paint must be presumed in pre-1978 residential properties and child care facilities	Employers/Contractors, regulated property owners	Contractors must retain records of their lead-based paint projects for up to 5 years; property owners must permanently retain all records of lead-based paint activities; pre-1978 rental property and child care facility must permanently retain all records of compliance with 18 V.S.A. 38	n/a	n/a
Vermont Department of Labor	Vermont Occupational Safety & Health Administration	X	X	X	X	NA	NA	Federal statute; 29 CFR 1910.1200; 29 CFR 1926.59; 21 VSA 201-232; state regulation	All hazardous chemicals except: XX	Employers in General Industry, Construction & Large Agriculture	A list of the hazardous chemicals known to be present using a product identifier that is referenced on the appropriate safety data sheet (the list may be compiled for the workplace as a whole or for individual work areas)	Exemptions: XX	inconsistent chemical identifier, inconsistent chemical identification in products with mulitple chemicals; can be confusing for small businesses; inconsistent format; exemptions do not capture complete chemical inventory

Appendix D

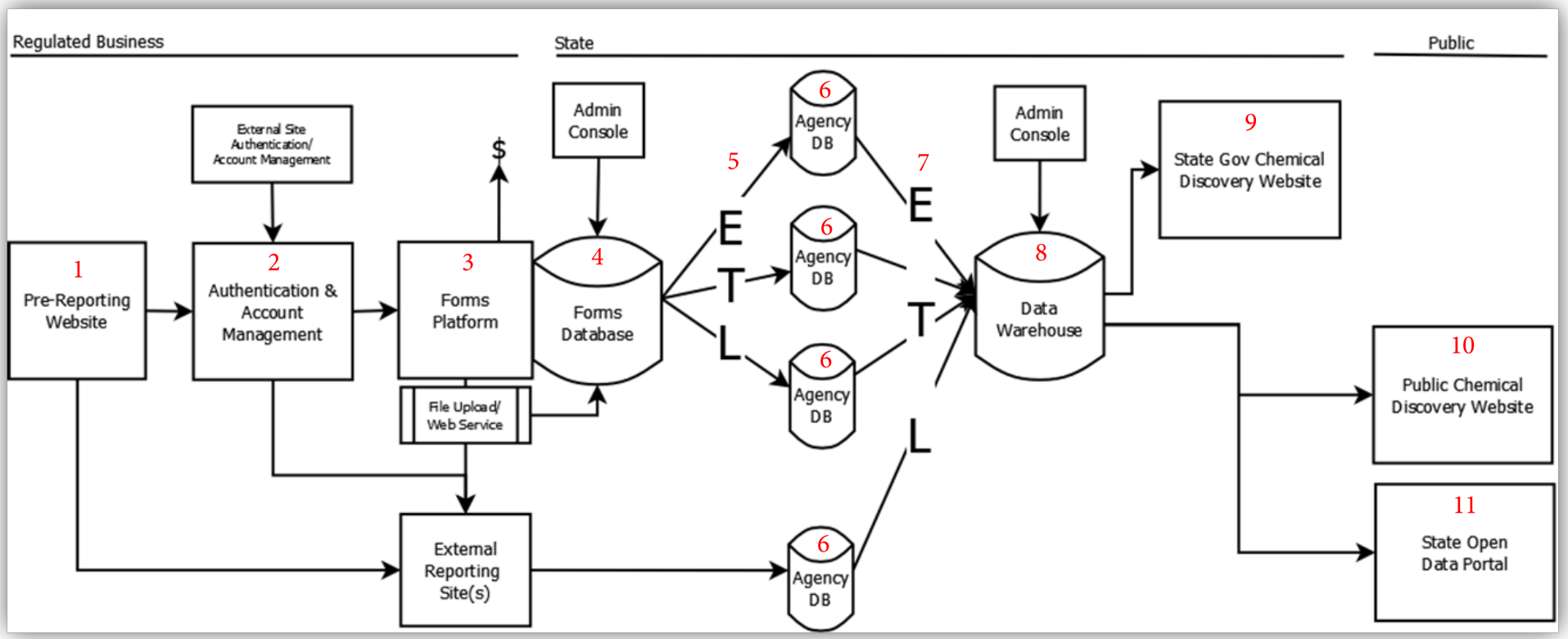
Centralized Electronic Reporting System and Inventory Implementation Plan

Lean Project Implementation Plan

Phase	Task #	Task Description	Due Date	Owner	Paticipants	% Complete	Notes
1	1	Analyze customer & activity overlap among programs in scope	3/16/2018	Chuck Schwer			
1	2	Contact EPA about Tier II data/software requirements	2/23/2018	ADS- PJ Telep			
1	3	Analyze data fields across systems in scope to identify similar and dissimilar data including senstive data	3/30/2018	ADS- PJ Telep			
1	4	Analyze each data set to identify ones for integration	3/16/2018	Chuck Schwer			
1	5	Analyze program forms to identify common elements	3/16/2018	Chuck Schwer			
1	6	List functional requirements of a online reporting system	3/16/2018	Chuck Schwer			
1	7	Scope high level data architecture of online reporting system	4/13/2018	ADS			
1	8	Determine connections to external systems (state or Federal)	4/13/2018	ADS			
1	9	Determine back-end system integrations	4/13/2018	ADS			
1	10	Rough mock-up of interface(s)	5/1/2018	ADS			
1	11	Develop pre-reporting decision tree & interface draft	5/1/2018	Lynn Metcalf			
1	12	Analyze historical data migration requirements	6/1/2018	ADS			
1	13	Seek input from stakeholders on proposed solution	6/1/2018	ICCM-Jen Duggan			
1	14	Determine who builds centralize online reporting system	6/1/2018	ADS CIO			
1	15	Determine support model	6/1/2018	ADS CIO			
1	16	Identify system host Agency	6/1/2018	ADS CIO			
1	17	Determine non-IT state program project staff and time commitment (toward costs estimate)	6/1/2018	ADS PM			
1	18	Estimate effort (hours) to create new system	6/1/2018	ADS			
1	19	Determine if there are statutary or regulatory changes necessary to support new system	6/1/2018	Jen Duggan			
1	20	Determine annual M&O costs of system	6/15/2018	ADS			
1	21	Determine system governance	6/15/2018	ICCM			
1	22	Determine state staff user roles	6/15/2018	ICCM			
2	23	Author report	7/1/2018	ICCM			
3	24	Garner Legislative and leadership approval and resources to commence project	?				
4	25	Initiate IT project process with ADS/BGS - 1 year	? + 1 year				
5	26	Build and deploy system - 3 year time estimate	? + 1 year + 3 years				

Appendix E

Chemical Reporting System Architecture Diagram


Regulated Business
State
Public
1
Pre-Reporting Website
External Site Authentication/ Account Management
2
Authentication & Account Management
$
3
Forms Platform
File Upload/ Web Service
Admin Console
4
Forms Database
5
E
T
L
6
Agency DB
6
Agency DB
6
Agency DB
7
E
T
L
Admin Console
8
Data Warehouse
9
State Gov Chemical Discovery Website
10
Public Chemical Discovery Website
11
State Open Data Portal
External Reporting Site(s)
6
Agency DB

Appendix F

TURA Subgroup Recommendation Matrix

Recommendations for Changes to Toxic Use Reduction and Hazardous Waste Reduction Act under 10 V.S.A. Chapter 159, Subchapter 2

EO Provision (III)(A)(4)	Current Requirement	Recommendation	Rationale	Mechanism
a. List of chemicals	• US EPA Toxics Release Inventory List and Hazardous Wastes identified in VHWMR	• US EPA Toxics Release Inventory List, VHWMR Hazardous Wastes, Chemicals of High Concern to Children (18 VSA §1773), and additions through either rulemaking or newly established process possibly modeled on the process used under the Massachusetts Toxics Use Reduction Act to add or remove chemicals regulated under that Act.	• Expanding list of chemicals of concern will result in their reduction through planning, leading to increased environmental/occupational and public health protection.	• Statutory Change; Either rulemaking or newly established process to add chemicals in the future
b. Threshold amounts	• Thresholds set in 10 V.S.A. § 6624(4)	• 10 V.S.A. § 6624 and Subset of chemicals with lower thresholds (i.e., Persistent Bioaccumulative Toxic chemicals – identified in Toxics Release Inventory chemical list with lower thresholds)	• Facilities that use Persistent, Bioaccumulative Toxic chemicals and other chemicals that pose higher risks should be required to plan when these chemicals are present at lower thresholds due to an increased potential for these chemicals to harm public health and the environment.	• Statutory change
c. Persons/entities reporting	• Set in 10 V.S.A. § 6624: Large toxic substance users,10 FTEs or more, Listed SIC codes - or- Large & Small-quantity generators of HW under VHWMR	• Existing thresholds and waste generator status but use NAICS codes instead of SIC codes • Amend to 10 FTEs onsite or 500 corporate total	• NAICs – more commonly used today; more descriptive of facility type. • Adding corporate employee number would bring in additional planners that are likely to have resources because they are part of a larger corporate entity but that have 9 or less employees onsite. (VDOL data indicates ~3% more entities would be required to plan)	• Statutory change
d. Reduction planning requirements, conditions and criteria	• Annual performance reports must be certified by responsible corporate official or P.E. - 10 V.S.A. § 6630. No certification requirement for plans under 10 V.S.A. § 6629	• Specify that persons who certify plan must have minimum required training on hazardous waste and toxics use reduction techniques (8 hours per 3-year planning cycle).	• Required training and additional resources and educational opportunities will help planners to achieve stated policy goals (reduction of toxics use or hazardous waste generation) through development of more meaningful plans for reducing toxics and waste.	• Statutory change, followed by rulemaking to further describe training program
e. Streamline; modernize program	• Paper/PDF submissions, Access database, One on one/limited assistance	• Upgrade database/electronic reporting system improvements (in the short-term) that could be integrated into ICCM uniform system) • Automatic fee system • Offer targeted technical assistance and training • Update planners on statutory and regulatory changes/ FAQs • Modify plan and report substantive requirements (what is required to be reported) • Allow for alternative resource/environmental impact planning	• <u>Reporting system</u> – Facilitate easier reporting and fee payment; allow for compilation of, access to, review and analysis of data; facilitate coordination among agencies and programs. • <u>Targeted assistance</u> – Improve compliance and reduction of chemicals used (see d. above); and will provide State with real-time information on use of newly-listed chemicals. • <u>Alternate planning</u> – Allow planners that have met reduction goals based on current feasibility, technology, etc., (where additional planning may not lead to further reductions) to implement programs focused on efficiencies re: other processes (e.g., greenhouse gas reduction, water use reduction) that they may have more of an incentive to implement and that will also have a positive environmental benefit. (Alternative planners would still report toxics use/waste generation over thresholds, so the State could still track use/generation).	• No statutory changes for trainings and assistance (implement 6626); maybe regulatory changes. • No statutory change required to improve database and reporting system. • Changes to allow alternative plans will require statutory change and rulemaking
f. Staffing/funding	• ½ FTE	• 1 FTE	• 1 FTE is based on need for organizational coordination, content development, expanded reporting, increase in number of Planners, and implementation of required training. There would be efficiencies from electronic reporting system; and budget increase for staff/labor/materials. Modest resources will allow the State to identify facilities that should be planners – this will increase compliance and provide additional data to State and public re: toxics use in the State. Additional resources would help	• Internal ANR staffing and budgeting process

			State to be proactive/monitor what facilities are using what chemicals to be able to respond to emergencies or identify risks based on usage throughout the State (i.e., PFOA/PFOS).	
g. Other state programs		• Continue work within ICCM technical team to facilitate coordination between VT TUR program and other state programs related to chemicals management. • Enhance relationship b/w DOL VOSHA/WorksSafe and ANR	• DOL/ANR relationship: Enhanced partnership will maximize resources among agencies and enhance interagency cooperation.	No statutory changes needed

Appendix G

Comments on draft Report

From: Barbara Patterson
To: Zaikowski, John
Subject: Re: Comments on ICCM draft report due COB 6/20/18 - reminder
Date: Wednesday, June 20, 2018 3:55:36 PM

Hi John – Thank you for the opportunity to comment on the draft report. I do not have any extensive comments. As I mentioned previously, I think that the system should be developed in phases. While the priorities from the LEAN event could be used to guide this, perhaps consideration should be given to developing a "Proof of Concept" system with a subset of agency programs. This would allow the State to better understand costs and challenges prior to fully undertaking development and deployment of the whole system.

Other comments:
The acronym for "Centralized Electronic Reporting System" is CERSI, not CERCI as specified on page 9.
Some of the KPIs seem unlikely to be achievable (with such high percentages), also, a method for measuring the KPIs should be suggested.
The implementation plan outlined in Appendix D seems incredibly ambitious in terms of the amount of time allowed for each task.
How will the data warehouse stay in sync with local agency databases? The ETL process alone doesn't seem to address this.
Cost Estimate table: It seems that there should be more detailed definition of the items under Implementation and what they include and\or what the assumptions are.

Typos or incomplete sentences:
Pg 13 1st paragraph, the sentence "…including whether public access to certain information." Is incomplete or doesn't make sense
Pg 15 6th bullet under State Administrator – "dentification" should be "identification"
Pg 16 "Additionally, ANR and ADS has…." Should be "have"

Let me know if you have any questions.

Regards,

Barb Patterson

Barbara Patterson
Senior Database Application Developer
Direct / 802.229.6436 Cell / 802.498.8389
E-Mail / bpatterson@stone-env.com
Stone Environmental, Inc.
535 Stone Cutters Way, Montpelier, Vermont 05602
Tel / 802.229.4541 Fax / 802.229.5417
Web Site / www.stone-env.com

ASSOCIATED INDUSTRIES OF VERMONT

REPRESENTING THE VERMONT INDUSTRIAL AND BUSINESS COMMUNITY SINCE 1920

June 20, 2018

John Zaikowski
Agency of Natural Resources, Office of General Counsel
Enforcement & Litigation Section Chief
1 National Life Drive, Davis 2
Montpelier, VT 05620-3901

Re: Comments on Draft Report of the Interagency Committee on Chemical Management

Dear John:

AIV appreciates the opportunity to provide comments on the Draft Report cited above.

Recommendation C(2)(a)

The Draft Report recommends including the list of Chemicals of High Concern to Children (18 VSA §1773) under the statutory definition of chemicals covered under Vermont's Toxic Use Reduction and Hazardous Waste Reduction Act (TURA). However, the purposes and criteria for listing chemicals under the TURA and the Chemicals of High Concern to Children (CHCC) statutes are not the same, and it might not be rational or appropriate to include all the chemicals that are or might in the future be listed under CHCC in the reporting, planning, and other requirements of TURA. Such a linkage could also unnecessarily complicate the consideration of adding or subtracting chemicals on the CHCC list because the implications for TURA would then have to be considered in addition to the criteria currently under the CHCC statute.

It would seem more reasonable and appropriate for the Report to instead recommend consideration of using the existing authority of the Secretary to add chemicals to TURA under 10 VSA §6625(d). The Secretary could review the CHCC chemicals not already covered by TURA (the Draft Report indicates that there are 25 currently) and determine which of those should be included in a rulemaking process as currently provided for.

Recommendation C(2)(b)

The Draft Report recommends lowering the threshold for the definition of a large user of chemicals of special concern to the reporting thresholds under 40 CFR §372.28. This would be a significant lowering of the threshold for the chemicals in question. It is not clear that these thresholds, which were established for the purposes of 40 CFR §372, are rational and appropriate for the purposes of Vermont's TURA statute.

Given uncertainty about the costs and benefits of such a change, and the fact that manufacturers are already required to report to the EPA and the state on these chemicals under 40 CFR §372, it would seem more reasonable and appropriate for the Report to instead identify large user thresholds for chemicals of special concern as a subject for further review and consideration.

Thank you for your consideration, and please do not hesitate to contact us to discuss these comments and related issues further.

Sincerely,

William Driscoll
Vice President

www.aivt.org | info@aivt.org | po box 630, montpelier, vt 05601 | 802.223.3441 phone | 802.223.2345 fax

I. INTRODUCTION

On June 8, 2017, the Interagency Committee on Chemical Management (ICCM) forwarded a draft report to members of the ICCM Citizens Advisory Panel (CAP) for comments. This letter serves as the joint comments of four members of the CAP, Jon Groveman, Lauren Hierl, Shaina Kaspar, and Ken Rumelt.

The ICCM Draft Report makes three primary recommendations in response to Governor Scott's Executive Order: (1) Creation of a centralized electronic reporting system and inventory (CERSI), (2) establish a review framework for evaluating necessary changes to state chemical reporting and recordkeeping and coordinating chemical management actions across state agencies, and (3) improve the effectiveness of the Toxics Use Reduction and Hazardous Waste Reduction Act (TURA). We provide general comments on the report initially and then address each of the primary recommendations individually.

II. COMMENTS

A. General Comments

It is important to remember that the draft ICCM report is a direct result of Vermont's experience with an unregulated toxic chemical, perfluorooctanoic acid (PFOA). The draft report notes correctly that the "discovery of PFOA contamination in Bennington County revealed that the State *does not have sufficient information*—use, volume, location and toxicity—*about chemicals present in the State*."[1] The ultimate goal, therefore, is to prevent similar situations from occurring in the future by ensuring information about chemical use, volume, location, and toxicity are shared with the State and ultimately with the public.

There are several benefits associated with improving chemical reporting in Vermont. We will discuss three here. First, it allows State agencies and personnel to respond quickly and efficiently to newly identified chemical concerns. The contamination in Bennington County alerted State officials to PFOA concerns, yet because PFOA was and continues to be largely unregulated, State environmental and public health officials could not easily determine whether Vermonters in other areas were potentially at risk of PFOA. If information about PFOA use were reported to the State, officials could have responded quickly and efficiently to identify at-risk communities.

Second, reporting chemical usage can help State officials identify potential environmental and public health concerns and, if necessary, mitigate them. To illustrate one example that came up during the last ICCM-CAP conference call, an ICCM member noted growing concerns over PFOA replacement chemicals. These chemicals are similar in structure and function as PFOA,

[1] Draft Report at 6 (emphasis added).

yet typically are slightly smaller at the molecular level. By knowing where in Vermont these chemicals are being used, State regulators will be able to address environmental and public health concerns as quickly as possible should the need arise.

Third, reporting chemical use to the State creates opportunities for Vermonters to access information about chemicals in their neighborhoods, schools, or workplace. Chemical right-to-know laws have existed for many years but, as we know from PFOA contamination in Bennington County, are insufficiently broad in terms of the scope of chemicals that must be reported.

As the ICCM draft report recognizes, there is a problem with chemical reporting in Vermont that needs to be addressed. We support efforts to improve chemical reporting and believe it can be accomplished effectively and efficiently.

Business participants in the Act 154 Chemical Working Group noted that they take great care in tracking their chemical inventories because it makes good business sense. By tracking their inventories and uses, they can identify potential inefficiencies and rid their operations of unnecessary costs. The undersigned suggest that it also makes good environmental public health sense to report a subset of this information to the State. Those companies that do not already track their chemical uses would be encouraged to do so and hopefully would experience the same benefits.

B. Creation of a Centralized Reporting System

We support the creation of a centralized reporting system. Reporting chemical uses should not be an onerous task, particularly in a modern world filled with electronic devices and tracking systems. The proposed online system appears to be the blueprint for a useful tool that if implemented correctly will help realize the goals envisioned in the Executive Order.

One key aspect of the proposed reporting system is the need for a master chemical data list/inventory.[2] This is the backbone on which the system will rely. Rather than simply state the need for a master chemical data list, the report should identify existing chemical databases that alone or combined would serve as Vermont's master list. This might be the U.S. Environmental Protection Agency's Substance Registry Service (SRS), which is "EPA's authoritative resource for information about chemicals . . . ."[3] This database can search for chemicals by Chemical Abstract Service (CAS) number and EPA Identification, among others. The ICCM should also survey business representatives on the CAP to learn what information systems they use to track chemical inventories.

With a master chemical data list/inventory in place, this centralized reporting system should be able to accommodate the full range of chemicals in use in Vermont.

---

[2] Draft ICCM Report at 16.

[3] U.S. ENVIRONMENTAL PROTECTION AGENCY, SUBSTANCE REGISTRY SERVICE, https://ofmpub.epa.gov/sor_internet/registry/substreg/LandingPage.do.

C. Reporting and Recordkeeping Change Evaluation Process

This section of the Draft ICCM Report is, unfortunately, seriously flawed. At the outset, a user-friendly and efficient centralized reporting system should make the need for the "Change Evaluation Process" largely unnecessary. For example, an ideal system would report all chemicals in a particular product at the same time rather than require the user to report each individual chemical ingredient.

However, such a system cannot be achieved, the "Change Evaluation Process" is still problematic. The process begins when it becomes "unclear" whether existing requirements are "appropriately protecting" Vermonters from unsafe chemicals or chemical classes.[4] The problem with this standard is that it is too vague and, unless it is defined appropriately, it will require chemical reporting only after it is too late. The PFOA example is illustrative. At what point in this process would the State require companies to report PFOA use?

The Draft Report includes three examples that represent "clear instances" where it is likely that additional recordkeeping or reporting is needed: trichloroethylene (TCE), diisocyanates, and 1,4-dioxane.[5] The information that makes these "clear instances" include evidence that a substance is carcinogenic, a sensitizer, can cause respiratory problems, create risks for exposure in the home, that existing regulations have "not been updated based on current science," that workplace exposure levels are significantly higher than what is considered protective of health, and are unregulated.[6] These are all worthwhile considerations, but are largely disorganized.

Once identified, moreover, the process for simply requiring companies to report the chemicals is tremendously burdensome and time consuming. The Draft Report indicates that once it becomes unclear, the process for mandating additional reporting requirements requires 10 steps, the final being legislation if needed. The steps are as follows:

- An Agency finds it is "unclear" whether reporting requirements are "appropriately protecting" Vermonters from an unsafe chemical or class.
- The Agency proposes ICCM review recordkeeping/reporting requirements.
- Assuming the ICCM concurs that a review is needed, it asks a Technical Team to undertake a comprehensive review of reporting/recordkeeping requirements.
- The Technical Team then submits a draft report of recommendations to the ICCM.
- ICCM then discusses the proposal and may send it back to the Technical Team for additional analysis.
- Once it determines the draft report is "complete," the ICCM shares the draft with the

[4] Draft ICCM Report at 19.

[5] *Id*. at 20–21.

[6] *Id*.

CAP.

- The CAP then reviews and comments on the recommendations.
- The ICCM then determines whether to change the recommendations.
- Once "satisfied" with the recommendations, the ICCM votes to forward the recommendation, apparently to the appropriate Agencies or Departments.
- If legislation is "needed," the relevant Agency or Department will initiate its own process for making statutory amendments.

One can envision this process taking years to complete, all for simply requiring a company to ***report*** the use of a single chemical or class of chemicals. In other words, it might take years to determine whether a company simply needs to click on another dropdown menu in the proposed centralized reporting system.

We would recommend streamlining this process.

In the meantime, rather than require a review for *all* chemicals that may require additional reporting requirements, it should be limited to those chemicals that are not on any government list indicating concerns of health or environmental impacts. [examples – Prop 65 list in California, others].

JON'S Coments

VLS, VNRC and TAC support the ICCM's recommendation to create a process for the review of current chemical reporting and recordkeeping requirements. As we argued during the Act 154 Chemical Use Working Group process, Vermont must institute more stringent chemical reporting requirements in order to properly inform Vermonters about the risks that toxic substances pose to Vermont communities. We are pleased that the ICCM acknowledges the need to improve Vermont's chemical reporting in the Draft Report.

According to the Draft Report, the ICCM will take action to require reporting of additional chemicals if the ICCM finds that existing reporting and recordkeeping requirements are not "appropriately protecting Vermonters from an unsafe chemical, class of chemicals, or grouping of chemicals." We agree that the chemicals should be subject to reporting and regulation if Vermonters are not being "appropriately protected" under the current system. However, the report should set forth what criteria will be used to determine whether Vermonters are being "appropriately protected." At a minimum, the decision should be based on credible scientific studies that indicate that a chemical or class of chemicals is harmful to Vermonters and must be reported and regulated.

The Draft Report also indicates that if it is not clear whether the current system is "appropriately protecting" Vermonters, an agency can ask the ICCM to review the chemical. If a request for review is made, the Draft Report directs the ICCM to consider the following factors: whether the regulatory action would be duplicative; whether it is feasible; whether there are existing federal or state health standards for the chemical; and what actions other states have taken. We request that added to these considerations should be the consideration of credible scientific studies that indicate that a chemical or class of chemicals is harmful to Vermonters and must be reported and regulated. In addition, we recommend that if a review is requested, the requesting agency should identify their concern about the risk posed by the chemical or class of chemical and what questions they believe need to be addressed before action is taken to regulate a chemical.

Here are my thoughts on tow sections of the Draft Report. Let me know what you thin/would add.

Section III B of the Draft Report - Establishing a Review Framework for Evaluating Changes to State Chemical Reporting and Coordinating Actions

Section III of the Draft Report - Effectiveness of Vermont's Toxic Use Reduction Act (TURA).

The Draft Report makes several recommendations to improve Vermont's TURA. In doing so, the report acknowledges that TURA in Vermont has been ineffective.

We appreciate that the ICCM has recognized that TURA must be improved. However, we are very concerned that the recommendations made to improve TURA are entirely voluntary.

During the the Act 154 Chemical Use Working Group process, we argued that adopt a system that emulates that Massachusetts TURA program. In fact, an TURA expert form Massachusetts addressed the the Act 154 Chemical Use Working Group to review how the program works and detail the success of the program.

We recommend the Draft Report be amended to require the ICCM to propose a program modeled off the Massachusetts law and regulation that at a minimum: funds certified planners hired by the state who are experts in toxic use reduction; raises fund for the program with a fee on users of toxic substances in Vermont; requires large users of toxic substances to prepare a toxic use reduction plan, that is reviewed by state certified planners, and have the plan submitted to the state and made available on the enhanced toxic chemical data base and forward facing web portal.

Shaina's Comments

I just wrote up a little bit more about my two concerns here. I have two goals for having these in the comments (1) so that they will actually be addressed, and (2) so that we publicly threaten Carey and VAAFM to clean up their act and make their information public asap (it's just ridiculous). Ken, I'm not sure if all of the details of what Rachel Hanson wrote and the response are correct, so it might be good to check in with Mason about that.

(1) The “chemical data list and inventory that meets the reporting and querying requirements of the State Agencies, regulated communities, and the public” needs to be clearly identifiable for concerned Vermonters. Neither chemical names nor CAS numbers alone adequately communicate the total inventory of the chemicals. We need both the common chemical name (and the chemical family), the CAS numbers, and [something else??].

(2) One of the goals of the system is to “Provide access to data in a timely manner.” However, I have concerns that this goal will be unachievable due to structural problems in the system, primarily in the local agency databases and systems. One example is a recent information request filed by Vermont Law School’s Environment and Natural Resources Law Clinic on behalf of Toxics Action Center’s community group Moosalamoo Woods and Water. They wanted to get pesticide use data to better inform the pesticide spray issue in their community, and the information had not been updated on the VAAFM website since 2014. We were told that the request would cost over $2,000. As a pro bono legal clinic and small non-profits, this fee for this information means that this information is inaccessible to us. We inquired further and found that the delay was with entering the paper pesticide application permits into the VAAFM database (which Cary Giguere told me was from 1982. It would cost the group $2,000 because the lawyers form VAAFM would have to go through the papers and manually input them rather than doing a search on the database and that lawyer’s time is quite expensive. This gross violation of public information is such a problem that we have been in communication with the ACLU of Vermont to see what the community group’s options are. So, while the ICCM will streamline the community group in getting the pesticide use information once that data is in the VAAFM's local agency database, it will not assist with this backlog and inefficient paper-to-digital local agency database system, in effect not speeding up of making more transparent crucial agency information. The ICCM process needs to prioritize efficiency, speed, accuracy, and transparency at all levels.

From:	Thomas Jagielski
To:	Zaikowski, John
Cc:	Ruma Kohli; Patricia Shirk
Subject:	Globalfoundries Comments on Draft ICCM Report
Date:	Friday, June 22, 2018 5:44:26 PM
Attachments:	Comments on ICCM Document 062118.doc

John,

Sorry for the delay in getting to you…here are Globalfoundries comments regarding the Draft ICCM report that you sent out for review.

Thom Jagielski - **Director BTV Site Ops**
Thomas.Jagielski@globalfoundries.com
802-769-4747 (office)
802-288-6673 (cell)

Comments on ICCM Document:

1. Electronic Reporting Recommendation
    - Electronic reporting is a welcome addition to the recommendations. It should be an overall improvement in efficiency
    - Business confidential information has to be honored on public website
    - Mindful of CFATS chemical security information
    - Information needs to be framed in the proper context
    - The suggested headcount for the IT management is woefully inadequate
2. Triggers for Record Keeping & Reporting Requirements for Additional Classes of Chemicals
    - No clear definition of what would trigger new reporting requirement and review….no definition of what the triggers would be…too overly broad. What is going to require a review, what is the trigger the reviews?
    - Executive Order did not request for new chemicals to be added to the list, the EO only wanted recommendations for the processes to catalog and measure chemical usage in Vermont
    - Record keeping alone does not keep the public safe, engineering controls are needed for public safety
3. Toxic Use Reduction Enhancements
    - Outlined plan would increase the Toxic Use Reduction program significantly
        i. Companies that have 10 employees are impacted
            1. Incorporates the vast majority of Vermont businesses
            2. Small companies do not have the technical expertise to manage
        ii. State of Vermont does not have sufficient resources to manage programs both from a monetary and resource standpoint
        iii. Significant addition of chemicals to the program with the addition of chemicals of high concern

Overall Comments & Recommendations:

1. Electronic reporting is a needed and welcome addition to chemical management. It should provide consistency of information and reduce the amount of time it takes to submit information to the agencies. The system designed must be sensitive to security issues as well as business confidential information

2. It is very unclear as to what the limits are for the new reporting requirements. They are overly broad, unclear and open to the interpretation as to what could or should be reported. In addition, the suggestion of the chemicals to be added to the list is not part of the Governor's executive order.

3. The recommendations increase the scope of the Toxic Use Reduction program excessively. The State does not have the resources to manage the sheer volume of new information that would be generated nor do the many small businesses that have 10 or more employees have the technical expertise to generate, manage and implement a comprehensive Toxic Use Reduction program.