Verisae

Verisae, Inc
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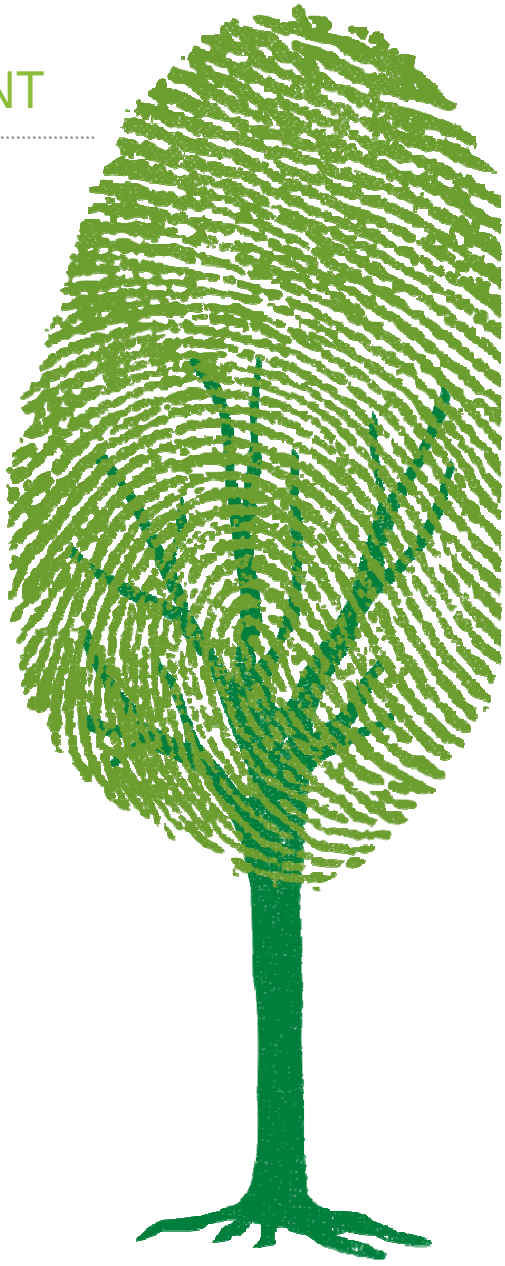
THRIVING NOT JUST SURVIVING…

ARE YOU VENTING AWAY PROFITS FOR NO GOOD REASON? LEARN HOW MOST FOLKS BLOW IT WITH NON-EFFECTIVE REFRIGERANT TRACKING.

Learn how you can thrive in a carbon constrained world while you're required by environmental law to manage your refrigerants - to the pound. Collecting, organizing, and reporting of refrigerant usage is challenging, loaded with complexity, often system auditing is confusing, and it remains difficult to remain in compliance with a regulations that are constantly changing.

WHITEPAPER SUMMARY

EFFECTIVE REFRIGERANT MANAGEMENT



BECOMING A "GREENER BUSINESS" IS ONE DIRECTIVE THAT RESONATES WITH CONSUMERS. BUT ISN'T IT TRUE THAT IN ANY BUSINESS, WHEN IT REALLY COMES DOWN TO IT, THE BEST ROUTE IS ONE OF SAVING OR MAKING MORE MONEY. THE ROAD TO A CLEANER ENVIRONMENT IS A LONG ONE. ONE WE ARE NOW JUST BEGINNING. REVENUE OPTIMIZATION, ACROSS A BUSINESS, CAN START TODAY. BY REDUCING THE MISUSE OF YOUR REFRIGERANTS AND BY KNOWING HOW MUCH OF YOUR REFRIGERANT WILL BE PHASE OUT WILL GO A LONG WAY TO IMPROVING YOUR BOTTOM LINE.

Greening-up a business isn't a passing trend. It's the new imperative for our collected future. It's the strategic advantage that holds huge potential for enhanced efficiencies. It's a compliance maelstrom that is and will continue to be dictated by environmental law.

Concerns about ozone depletion and copious amounts of carbon being dumped into the atmosphere caused governments around the world to take strong, immediate action to prevent further damage and stressors on our environment. It's a work in progress as we all know. In the United States, this resulted in the U.S. Clean Air Act (Section 608) and further amendments to the Environmental Protection Agency (EPA) refrigerant gas regulations that were put in place since the early 1970's.

In a short period of time refrigerants, used in many of our everyday applications and products, were labeled as federally controlled substances. Facilities containing refrigerants have a long list of responsibilities concerning refrigerant management as defined by the U.S. Clean Air Act, The Montreal Protocol, and the Post-Kyoto regulations. Combined these are thorny issues.

As regulatory agencies at the state, federal, and international levels continue to tighten the monitoring of refrigerant gases, the need to have accurate, traceable, and reportable data is very important. You now must monitor, manage, and track AC/HAVC systems, across all locations and systems, to ensure compliance with regulations on gas leak rates, service details, etc.

You may be one of those organizations investing capital and training your people to implement a refrigerant management program. Are you concerned with successfully passing an EPA inspection process? Are you wondering how best to log your service data or track your usage? Wondering where to start?

The EPA inspectors can visit any location, at any time, and request full audit reports that must be produced on the spot for all refrigerant usage covering the prior 5 years. This is a daunting task faced with a manual, paper process.

Perhaps, you don't have a process at all. What then?

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THRIVING NOT JUST SURVIVING

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PART 1: COMPLEXITY OF ISSUES

LEGISLATION, PROTOCOLS, AND COMPLIANCE

A STEP IN THE RIGHT DIRECTION ONE POUND AT A TIME

Businesses that procrastinate regarding the mandatory refrigerant gas tracking and HVAC-R equipment upgrades due to regulatory phase out will find themselves in a whole, new World of hurt. From an environmental perspective, the added benefit to businesses who address refrigerant gases will be a reduction of greenhouse gases (GHGs) that contribute to climate change.

VERISAE, INC.

VERISAE HELPS CUSTOMERS GET TO THE TRUTH BEHIND THEIR ASSETS; WHAT THEY'RE VENTING, BUILDING, TRACKING, AND MANAGING.

REFRIGERANTS - YOUR LEGAL OBLIGATION

In the 1970's, Congress created the Environmental Protection Agency (EPA) and passed The U.S. Clean Air Act, giving the federal government authority to clean up the air, land, and sea. Since then, the EPA, as well as states, tribes, local governments, industry, and environmental groups have worked to establish a variety of environmental programs to reduce pollution levels across America.

The regulations provide requirements for the reduction of harmful refrigerants gas usage. The U.S. Clean Air Act (Section 608) specifies and establishes "standards and requirements regarding the use and disposal of substances during the service, repair, or disposal of appliances and industrial process refrigeration activities."

What are the harmful or controlled substances?

Controlled substances are divided into Class I and Class II substances. Class I substances are one of several groups of chemicals with high ozone-depletion potential. Currently, all of the HCFCs refrigerants are class II substances. Specific definitions of these materials follow throughout this paper. Controlled substances generally belong to the following six categories:

1. Automobile and truck air conditioning
2. Domestic and commercial refrigeration and air-conditioning, e.g. refrigerators, freezers, dehumidifiers, coolers, ice machines, AC units
3. Aerosol products
4. Fire extinguishers
5. Insulation boards, panels, and pipe covers

Why should I care as an organization operating HVAC-R systems?

As displayed by the categories above, the bottom line is many of the controlled substances are pervasive across our society. Your building, business, or facility will no doubt have an AC/HAVC unit. If it does, you'll need to monitor and report usage.

Which compliance regulations apply specifically to refrigerants?

The EPA regulations define the applicable requirements for the use, disposal, servicing, and recycling of refrigerant gases determined to be Class I or Class II substances. Throw in the thorny issue of cross-over requirements with ozone depleting substances of The Montreal Protocol and the carbon emissions reporting of The Kyoto Protocol -- You soon find you're in a compliance law soup. Verisae understand these issues. We're helping many top retailers track refrigerants today.

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REFRIGERANTS - YOUR COMPLEX COMPLIANCE SOUP

The EPA division known as "**enforcement**" plays a major role in enforcing all environmental regulations. It is their job to collect data, monitor compliance, and track refrigerant reporting violations. This regulatory authority manages environmental issues for health, safety, and environmental & ecological concerns. They're the folks you get a little nervous about when they stroll through your door, unannounced, with the goal of doing a refrigerant usage audit.

With regard to the U.S. Clean Air Act and ozone depletion, the EPA issues citations for violations, levies fines, and has the ability to file complaints for violations for failures to use certified technicians when servicing systems. Verisae understands these concerns well. We already have refrigerant solutions in use to mitigate data management issues.

What are the regulations that apply to the monitoring, tracking, and reporting of refrigerants?
Regulations that apply to U.S. based businesses, relating to refrigerant management, may be found in Section 608 and 609 of the U.S. Clean Air Act. In particular, this regulation discusses venting and servicing of HVAC-R systems. The Montreal Protocol and the post-Kyoto protocol also apply in relation to the refrigerants contained in your systems.

Which regulations address misuse or venting of refrigerants in HVAC-R systems?
Effective July 1, 1992, Section 608 of the Act prohibits individuals from intentionally venting ozone-depleting substances used as refrigerants (generally CFCs and HCFCs) into the atmosphere while maintaining, servicing, repairing, or disposing of air-conditioning or refrigeration equipment.

What is The Montreal Protocol? Does this really still apply to my organization?
Yes. Here's why. Scientific studies that originated in 1973, initiated The Montreal Protocol. It is an international treaty designed to protect the ozone layer by phasing out the production of a number of substances believed to be responsible for ozone depletion. The Montreal Treaty was ratified in 1987 and became enforceable in 1989.

What was the chief purpose of The Montreal Protocol?
The Montreal Protocol sought to protect harmful ozone-depleting substances through international agreement and gave weight to global recognition that certain substances deplete and alter the ozone layer. "...Recognizing that world-wide emissions of certain substances can significantly deplete and otherwise modify the ozone layer in a manner that is likely to result in adverse effects on human health and the environment... Determined to protect the ozone layer by taking precautionary measures to control equitably total global emissions of substances that deplete it..." [**Wikipedia**]

How did the Montreal Protocol affect the problem of ozone depletion?
By setting global standards that focused on refrigerants harmful to the environment, The Montreal Protocol initiated a world-wide effort to control the destruction of the ozone layer. This regulation became the basis for future legislation all coordinated in efforts to reduce harmful substances by capping emissions and phasing out harmful gases.

Prior to the regulations banning certain types of refrigerant gases, notably, chlorofluorocarbon (CFC) and hydrochlorofluorcarbon (HCFC), the cost to purchase and replace these refrigerants was relatively inexpensive. Not so any longer. When scientific studies revealed the impact of CFCs and HCFCs that contributed to ozone depletion, these substances were replaced by more costly refrigerants and phased out which increased demand and lowered supply.

REFRIGERANTS - THE ENVIRONMENTAL CONSEQUENCES

How do or why do some refrigerants harm the environment?

Refrigerants are harmful because they destroy ozone and increase the amounts of Greenhouse Gases (GHGs). Originally, highly toxic refrigerant gases, such as sulfur dioxide, chloromethane or ammonia, were among the first refrigerants used in fertilizers, manufacture of butyl rubber, automotive refrigerants, solvents, propellants, de-chlorinators, reagents, preservatives and petroleum refining. Later, in the 20th century, DuPont chemists developed "freon", a popular refrigerant, a less harmful option. Right now, R-22 is by far the most used refrigerant globally.

Why CFCs and HCFCs are considered harmful and are now controlled substances?

Harmful refrigerants are those products that contain refrigerant gases that deplete the ozone and cause global warming. Scientific studies increasingly revealed chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), contain chlorine and bromine, toxic gases that deplete stratospheric ozone.

What are examples of harmful refrigerants gases?

Harmful refrigerants are those which contain chlorofluorocarbons (CFC), halogens and gases that mass in the atmosphere trapping gases and creating a "greenhouse" effect. Perfluorocarbon (PFC) is derived from hydrocarbon and compounded with fluorine for use in refrigerants. Perfluorocarbon are extremely potent greenhouse gases with a lifetime of 50,000 years. PFCs are used to replace CFC in refrigeration units and systems.

HCFCs are hydrochlorofluorocarbons used mainly in refrigerators and propellant cans. HVAC-R system owners and operators must educate themselves regarding compliance regulations that pertain to systems they own or operate. Implementing a monitoring and tracking system that allows for logging pertinent data is one of the most important issues HVAC-R system owners and operators must address, particularly with recent changes, modifications and additions to compliance regulations regarding refrigerant gases and refrigerant gas management.

What does it mean to vent refrigerant gases?

According to the EPA, under Section 608 of the Clean Air Act, it is illegal to knowingly vent substitute refrigerants during any service, maintenance, repair or disposal of an appliance.

What does a "Phase Out" mean relative to R-22 HCFCs?

The gradual reduction in usage of HCFCs is a regulatory "phase out". This means that R-22 will no longer be available for use in the manufacture of refrigerants and refrigerant-related products. R-22, commonly known as "freon", a refrigerant commercially used in air conditioning and refrigeration systems will no longer be available for purchase by January 2010. There will be R-22 available as it is recycled or used in existing systems. New R-22 will not be produced.

When will HCFCs be phased out? What are future timelines for HCFCs?

HCFCs will be phased out in 2010 in new equipment. This applies to R-22 and R123 currently in use at the present time. R-22 refrigerant based HVAC-R systems will be phased out after 2010. Existing systems must be tracked. R-123 and all other HCFCs will be phased out by 2015. No importation or production for these products for any use will be allowed by 2020 and 2030 respectively.

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REFRIGERANTS - THE KYOTO AND POST-KYOTO PROTOCOLS

What is The Kyoto Protocol?
The Kyoto Protocol is an international agreement that sets binding targets for the most industrialized countries to establish mechanisms such as "emissions trading", carbon markets, clean development mechanisms, and joint implementation efforts to reduce greenhouse gases, specifically carbon (CO2) from being released.

What are the objectives of The Kyoto Protocol?
The objectives of the Kyoto Protocol set forth mandates to track and record annual carbon emissions, across an organization's global footprint, and to maintain records of source emissions such as refrigerants and vehicle emissions.

What effect will The Kyoto Protocol have on Global Climate Change?
The Kyoto Protocol seeks to increase awareness of harmful carbon emissions and the dangers of ozone depletion on a global scale and to organize and implement efforts to reduce worldwide carbon footprints which will thus reduce the effects of Global Warming.

How may the California Air Resource Board (CARB) regulations affect my organization?
The California Air Resource Board (CARB), established in 1967, is a federal regulatory agency, the only existing state-run federal agency of its kind in the U.S. CARB performs the tasks of maintaining healthy air quality and regulates pollution controls. CARB also provides assists in air quality efforts by creating models for pollution standards.

The overall intent of CARB's strategy is to monitor and reduce the introduction of man-made GHGs and high GWP gasses into the atmosphere, as called for in the California Global Warming Solutions ACT (AB 32) in effect since 2006 with tighter controls, monitoring, and overall regulations becoming enforceable by early 2010. CARB programs, originating as regional programs, have been modeled by other states and the EPA into programs and legislative efforts in the reduction of greenhouse gases and the tracking of refrigerants at the national level.

What are Greenhouse Gases (GHGs)?
Greenhouse Gases are emissions from man-made chemicals containing chlorine and bromine – including chlorofluorocarbons and hydrochlorofluorocarbons that destroy the ozone layer. The stratospheric ozone layer shields the Earth from the sun's harmful ultraviolet (UV) radiation.

How are Greenhouse Gases harmful?
Overexposure to UV radiation may cause skin cancer and cataracts or can damage crops and materials. They are responsible for the build-up of heat trapping ozone which is the leading cause of climate change.

Why is carbon emissions reporting important and relevant to refrigerant gases?
Carbon Emissions reporting is necessary in order to identify the largest volumes of emissions and the major sources. In commercial facilities, hospitals and schools, where the number of sources of emissions increases the potential for global warming, it's important to track the specific measures of refrigerant gases. Because of the high global warming potential of refrigerants, the EPA requires mandatory reporting as well as measures falling under the protocol.

What will be included in the mandatory Carbon Emissions Reporting Protocols?
Mandatory reporting is the only means to record data on the volume of refrigerants in use, whether refrigeration systems have been replaced or repaired and whether they have been disposed of properly. This also provides greater oversight of the manner in which residual refrigerant gases are recycled.

Refrigerant usage reporting is based upon applicability for businesses that exceed 50 lbs of charges from industrial process equipment and systems. Usage reporting must be logged by certified technicians for the most comprehensive method of tracking usage.

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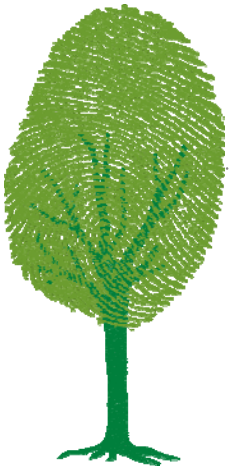

PART 2: SOLVING PROBLEMS

A PATH TO RISK MITIGATION & SAVING MONEY

VENTING OF REFRIGERANT GASES IS NOT A VIABLE OPTION

It is illegal to vent substitute refrigerants during any service, maintenance, repair, or system disposal. Services provided for ozone depleting substances require certification for handling, disposal, and transport. Annual reports of refrigerant usage are required by owners of HVAC-R systems. Tracking and usage must therefore be logged by certified technicians for any system that has a charge of more than 50 lbs or greater.

V E R I S A E , I N C .

VERISAE DELIVERS A POWERFUL SUITE OF WEB-BASED PROCESS MANAGEMENT SOLUTIONS FOR FACILITIES, THE AC/HVAC SYSTEMS IN THOSE FACILITIES, AND THE PEOPLE WHO MANAGE AND REPORT USAGE OF THEM.

VERISAE TRACKS THE COMPLEXITIES FOR YOU

Companies resistant to or unable to keep up with changing compliance regulations will inevitably face large fines for non-compliance just as most companies would when resisting, postponing or violating environmental laws. This will include companies who intentionally or unintentionally emit toxic refrigerant gases into the atmosphere or who are negligent in submitting compliance reports.

Mandatory reporting on HVAC-R systems provides transparency related to the objective of reducing impacts on our environment and business operations. The relationship between Ozone Destruction, Greenhouse Gas (GHG) emissions, refrigerant gas usage, and the eventual mandatory carbon emissions reporting is based upon a global effort to implement regulations that decrease overall greenhouse gas emissions.

As a result, the relationship between high global warming refrigerants such as CFCs and HCFCs, as well as other toxic substances is clearly linked. As such, in order to contain further environmental destruction, businesses operating HVAC-R systems are required to control, track, and report not only refrigerant gas usage but also carbon emissions to regulatory agencies. There are multiple reasons and requirements to attend to for organizations in the 21st century, carbon economy.

Given the gravity of ever-increasing levels of carbon dioxide being emitted into the environment and the danger greenhouse gases pose to humans, the inevitability of further carbon emissions reporting in wider ranges would be of greatest benefit. Records of sales, disposal, storage, and usage of such refrigerants are required to be kept for a period of up to 5 years for all refrigerant systems and gas usage.

Effective refrigerant gas management serves business by reducing the impact on capital assets such as expense refrigerants. Facility equipment and how they operate are major expenses for any organization. Managing refrigerants reduces costs related to replacement and topping off of vented gases. Effective refrigerant tracking also translates into good stewardship of the environment. Such a relationship is business friendly as well a revenue-rewarding.

The remainder of this section defines the refrigeration compliance guidelines as they relate to data monitoring and management with the goal of assisting with the preparation refrigerant usage reports for any organization faced with this task.

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COMPLIANCE SOLUTIONS ARE REALLY DATA SOLUTIONS

The collecting, logging, and retrieving of refrigerant system data is costly and ineffective across more than a couple locations if it is pencil based and manual. In many cases, system auditing and paper-based record keeping is prone to errors and on-the-spot checks are impossible. As an HVAC-R system owner, you may find it difficult to remain in compliance with government refrigerant mandates as they change or to know what data must be maintained for the refrigeration systems as they operation day-to-day.

Although, you may be the owner or operator of a single or multiple HVAC-R systems, it is still your responsibility to maintain accurate and up-to-date information on any service technician working with your refrigerant gas. A little known fact when one realizes that most of the systems related information usually leaves your facility with the technician when they complete a job. The list below outlines the data elements to be logged for each system, for each refrigerant event, for each location, and reported to the regulatory agencies on either a quarterly or yearly bases – in advance on a schedule or upon request.

Refrigerant Event Documentation
Each time a refrigerant usage event takes place, service technicians must be made responsible for capturing important information such as type of gas, amount recovered, amount added, time between re-checks, etc. A continuous quality and verification process must be in place across your organization to ensure that data is captured for each event.

Service Task Management
Several key tasks are required to minimize refrigerant use and assure compliance. In particular, key performance indicators must be set and monitored for each refrigeration system with immediate notifications when failures occur.

Managed Service Provider Database
Service Contractors and/or the locations they are responsible for change on a regular basis. EPA requirements state that a certified technician must be associated with each refrigerant service event. It is important to keep accurate data.

HVAC-R System Management
In addition to contractor maintenance, many organizations have a continuous process of location opening, remodels, acquisitions, and closings. Ongoing database management will be required to address these needs and keep track of what system contains how much refrigerant gas and what is the usage history for each system. As systems are added or mothballed, new components are added or as major renovations occur, it becomes increasingly difficult to track your refrigerants - to the pound – across all of your locations.

Refrigerant Gas Inventory
System owners are responsible for keeping organized procedures for proper refrigerant inventory and maintenance. It is imperative to roll out some sort of refrigerant inventory management program to reduce waste and to gain efficiencies as it relates to expense refrigerants. Regulations will require tracking of systems of 50 pounds or greater.

Data Analysis and Refrigerant Reporting
Refrigerant data analysis should be an ongoing activity to determine leading faults in refrigerant loss and possible solutions to reduce problem, to establish usage trends, to review high usage locations and systems to determine possible design issues, abuse, maintenance deficiencies, etc. EPA compliance response can occur on a moment's notice. Organizations must be able to respond to and provide reports required as a result of an EPA inspection – immediately.

Many owners of HVAC-R systems containing refrigerant gas face similar problems; manual processes to track refrigeration systems are labor intensive, inaccessible when needed, and more prone to errors and omissions with little assurance that data collected or the processes that are followed will keep their organization in regulatory compliance. HVAC-R system owners can find it difficult to remain in compliance with government refrigerant mandates as they change and to know what data must be maintained for the refrigeration systems they operation.

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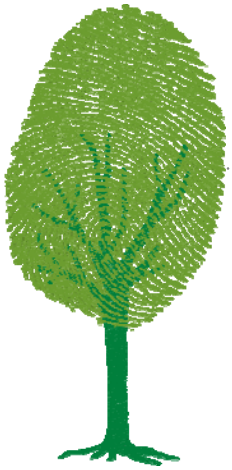

PART 3: EMPOWERED CHANGE

GETTING A LEG UP IN THE CARBON ECONOMY

CENTRALIZED REFRIGERANT MANAGEMENT SERVICES

Verisae is a leading supplier of computerized maintenance, asset and refrigerant management, and carbon footprint reporting software. Services are provided worldwide with offices in the US, UK and Asia. Verisae Refrigerant Tracker (RTRAC) is a web-based solution to manage and control refrigerant use. Verisae makes it easy to report refrigerant related events across your organization.

VERISAE, INC.

COMPLIANCE FEATURES

*** WEB-BASED, NO SPECIAL SOFTWARE NEEDED**

*** KEEP UP-TO-DATE WITH THE LATEST REGULATIONS**

*** SYSTEMS ALERTS AND MESSAGING**

*** SELF-SERVICE AND REGULATION SUPPORT**

*** AC/HVAC SYSTEMS MONITORING & TRACKING**

*** REFRIGERANT USAGE EVENT MANAGEMENT**

*** SERVICE PROVIDER AND TECHNICIAN MANAGEMENT**

*** COMPLIANCE REPORTING DASHBOARD**

SIMPLE TRACKING FOR A COMPLEX PROBLEM

Refrigerant Management Product Vision

Refrigerant Tracker addresses the needs of system owners to register, configure, and manage their refrigeration systems. The collection and retrieval of refrigerant system data is made cost effective, minimizes the complexity of system auditing, and equips organizations to remain in compliance with governmental refrigerant mandates.

Refrigerant Tracker enables accurate monitoring, tracking, and reporting of refrigerant gas usage across a single location with one HVAC-R system or multiple locations with many systems. You can remain in compliance with existing and emerging regulations. You will know accurate inventories. You can keep updated maintenance logs, and track refrigerants - easily!

Secured Refrigerants. Protected Environment. Mitigated Risks.

New refrigerant tracking legislation expected to pass in early 2009 and 2010 will further restrict refrigerant gas usage, reporting, and phase out of damaging HCFCs. With continued tracking of carbon emissions and the pending mandatory reporting of greenhouse gases (GHGs), all organizations maintaining HVAC-R systems with more than 50 pounds of refrigerant gas will need to maintain detailed records.

Refrigerant Tracker is flexible, as tighter controls over harmful substances emerge from government regulators, it will evolve to support business needs.

Refrigerant Tracker enables customers to demonstrate compliance of governmental mandates via reports, exportable data, or informational dashboards at any time via any computer connected to the Internet. Information is presented in a clear, concise, and graphical manner.

Customers have the ability to track refrigerant usage events through one centralized, web-based product. Refrigerant Tracker provide for automated alerts to clients when pre-set thresholds or mandated leak rates are either surpassed or are approaching upper limits.

At its' core, Refrigerant Tracker reduces business risk. It facilitates refrigerant tracking and saves an owners money by managing the information about refrigerant leaks and their causes.

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PART 4: YOUR NEXT STEP

TAKING ACTION TO TRACK REFRIGERANTS

37,000,000 MILLION POUNDS OF REFRIGERANT GAS

Verisae's enterprise refrigerant tracking solutions is in active use by some of the top 100 retailers across the globe. Our solution footprint covers every US state, within over 26,000 sites, across more than 500,000 systems, and includes in excess of 37,000,000 pounds of refrigerant gas. Verisae understands the complexity of refrigerant gas tracking.

VERISAE, INC.

REFRIGERANT TRACKER HELPS FACILITATE THE CAPTURE OF IMPORTANT SYSTEM LEAK DETAILS LIKE FAULT CODES, TECHNICIAN ACTION INFORMATION, AND LEAK LOCATIONS.

A REFRIGERANT TRACKING DASHBOARD LETS THE SYSTEM OWNER KNOW WHAT SYSTEMS HAVE ISSUES OR NEED IMMEDIATE ATTENTION.

REFRIGERANT TRACKER SAVES YOU MONEY, REDUCES RISK, AND HELPS PROTECT THE ENVIRONMENT.

REDUCING RISKS $5.95 AT A TIME

Verisae understands refrigerants and has multi-year experience with refrigerants. We have industry leading HVAC-R experts and a service provider network containing thousands of technicians across the entire U.S. and beyond.

We have regular and ongoing discussions with government officials working to define enhancements and ongoing refrigerant mandates. We have the ability to develop this product from the perspective of customer needs, from the perspective of emerging regulations, and from our involvement with HVAC-R industry experts.

What To Do Next

Verisae has developed a "**30 Minute Refrigerant Management Meeting**" which we will conduct over the phone with you. Here is what is accomplished together in this zero, nonsense session:

- How to Mitigating Service Management Challenges
- Tactics to Prepare for R-22 Refrigerant Phase Outs
- Tips for Saving Money and Mitigating Compliance Risk

This consultation is conducted with **Ted Gartland**, Director of Refrigerants and Carbon Management. He has experience working with the EPA, food retailers, and refrigerant manufacturers for the past 20 years. He offers refrigerant compliance and consulting services to prospective and existing Verisae clients.

To secure a time for your consultation, please visit our registration form at the following address – www.Refrigerant-Tracker.com/30-minute-meeting.html. We will also provide you with a pre-consultation, refrigerant questionnaire that will prepare you to get the maximum value from our short time together.

Want To Get Started Immediately

Refrigerant Tracker is offered for self-registration and purchase online. Select the image below explore the options to try for free or Buy Refrigerant Tracker – today!

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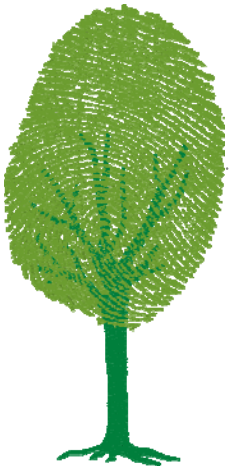

PART 5: APPENDEX

A TOOL TO GET YOU STARTED

TRACKING REFRIGERANT GAS USAGE IS CRITICAL

Refrigerant gas usage must be recorded each time a leak is discovered and/or refrigerant gas is added to a system. Government regulations require an accurate, chronological accounting of refrigerant usage. It is critical that the usage of refrigerant gas is collected after each servicing or leak fix. Data related to usage must be logged in chronological order to maintain proper EPA leak rate calculations. Use the form proved below as an example of the refrigerant data to be captured for each usage event.

Download a Copy @ – Refrigerant Usage Event Form

REFRIGERANT USAGE FORM

VERISAE REFRIGERANT TRACKING FORM 1D

Location	
System Name	
Asset Tag #	
Model # Serial #	

Refrigerant Type (Circle One)

R-22 R-404A (HP62) R-507(AZ50) R-408A R-402A (HP80) R-401A (MP39) R-422A R-422D Other_____

Date of Service			
Work Order #			
Technician Name			
Company Name			
EPA Cert #			
Leak Status (circle one)	Leak Repaired		Repair Attempted
Amount Added (lbs)		Recovered	
Verisae Reference #			

Leak Location: Check One Location in the Appropriate Column

Compressor	Discharge Line	Condenser	Receiver	Liquid Line	Evaporator	Suction Line	Other
☐ Body or Terminal Lugs ☐ Demand Cooling ☐ Fittings ☐ Head/Valve Plate ☐ Oil Float ☐ Transducer ☐ Schrader ☐ Shaft Seal ☐ Unloader ☐ Vibration Eliminator	☐ 3 Way Valve ☐ Ambient (Bypass) Valve ☐ Ball Valve ☐ Check Valve ☐ Heat Reclaim Coil ☐ Hot Gas Bypass ☐ Hot Gas Solenoid ☐ Muffler ☐ Oil Separator ☐ Piping/ Header* ☐ Pressure Regulating Valves ☐ Schrader ☐ Transducer	☐ Ball Valve ☐ Coil ☐ Piping /Header* ☐ Schrader ☐ Splitting Valve ☐ Tube Bundle (Water Cooled) ☐ Transducer	☐ King Valve ☐ Level Indicator/ Alarm ☐ Pressure Relief Valve	☐ Ball Valve ☐ Differential Valve ☐ Drier ☐ Liquid Suction Heat Exchanger ☐ Piping/Header* ☐ Pump ☐ Schrader ☐ Sight Glass ☐ Solenoid Valve ☐ Sub Cooler ☐ Transducer	☐ Ball Valve ☐ Coil ☐ Distributor ☐ Expansion Device- TXV, Float, Cap Tube ☐ Piping /Header* ☐ Schrader	☐ Accumulator ☐ Ball Valve ☐ CPR ☐ EPR ☐ Filter Shell ☐ Piping/ Header* ☐ Schrader ☐ Suction Valve (Solenoid) aka Stop ☐ Transducer	☐ Must Explain* ☐ Nothing added ☐ Retired System* ☐ Startup-New System/ Remodel ☐ Theft* ☐ Top Off From Previous Repair*

Technician Comments: (* indicates that further explanation is necessary)

3rd Level Leak Location		Fault Code (Check one)	Action Code (Check one)	Verification Method
☐ Not Applicable ☐ Compressor 1 ☐ Compressor 2 ☐ Compressor 3 ☐ Compressor 4 ☐ Compressor 5 ☐ Circuit 1 ☐ Circuit 2 ☐ Circuit 3 ☐ Circuit 4 ☐ Circuit 5 ☐ Circuit 6 ☐ Circuit 7 ☐ Circuit 8 ☐ Circuit 9	☐ Circuit 10 ☐ Circuit 11 ☐ Circuit 12 ☐ Circuit 13 ☐ Circuit 14 ☐ Circuit 15 ☐ Circuit 16 ☐ Circuit 17 ☐ Circuit 18 ☐ Circuit 19 ☐ Circuit 20	☐ Abuse ☐ Braze or Joint Failure ☐ Corrosion ☐ Faulty Part ☐ Gasket Seal Failure ☐ Line Break ☐ Missing Part ☐ Normal Mechanical Wear ☐ Other- Must Explain ☐ Vibration Related	☐ Isolated Leaking Part from System ☐ Re-soldered ☐ Replaced Gasket or Seal ☐ Replaced Part ☐ Replaced Unit ☐ Retired -Shutdown System-Removed Refrigerant * ☐ Retrofitted Refrigerant* ☐ System Expansion ☐ System Addition ☐ Tightened Connection ☐ Top off from previous repair* ☐ Under repair* ☐ Welded line	☐ Bubbles ☐ Dye Injection ☐ Electronic/ Ultrasonic ☐ Pressure ☐ Evacuation ☐ N/A **2nd Verification** ☐ Bubbles ☐ Electronic/ Ultrasonic ☐ N/A

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