Wilhelm file CFCs

California Environmental Protection Agency

Air Resources Board • Department of Pesticide Regulation • Department of Toxic Substances Control • Integrated Waste Management Board
Office of Environmental Health Hazard Assessment • State Water Resources Control Board • Regional Water Quality Control Boards

Pete Wilson
Governor

James M. Strock
Secretary for Environmental Protection

MAR 27 1992

Katy Wolf, Ph.D.
Executive Director
Institute for Research and
Technical Assistance
3727 West 6th Street, Suite 505
Los Angeles, California 90020

Dear Dr. Wolf:

Thank you for your January 15, 1992, letter regarding the regulation of used chlorofluorocarbon (CFC) refrigerants and halon fire extinguishants. Your stated purpose in writing this letter was to make the California Environmental Protection Agency (Cal-EPA) aware of your concerns about the regulation of ozone depleting substances such as CFCs and halons as hazardous wastes. Specifically, you are concerned that generators and recyclers of CFCs and halons will have difficulty complying with the South Coast Air Quality Management District's recently adopted rules requiring the recovery and recycling of these wastes if these are considered hazardous wastes. You also expressed concern that a hazardous waste designation may prevent users and recyclers of CFCs and halons from doing business in California.

As you stated in your letter, the U. S. Environmental Protection Agency (U.S. EPA) believes that regulating used CFC refrigerants as hazardous waste would create disincentives for recycling or reclaiming the refrigerants. To address this concern, U.S. EPA promulgated an interim final rule on February 13, 1991, which suspended the applicability of the Toxicity Characteristic (TC) to certain used CFC refrigerants, therefore excluding them from regulation as federal hazardous wastes. The exemption does not apply to any CFCs other than those used as a heat transfer fluid in a totally enclosed refrigeration system, nor does it apply to hydrofluorocarbon refrigerants (HFCs). In addition, this federal exemption does not apply to refrigerants which are collected for disposal. All used or spent refrigerants which are not excluded under this interim final rule must be managed as hazardous waste in accordance with the requirements in Title 40, Code of Federal Regulations (CFR).

California does not have an exclusion or exemption equivalent to that found in federal regulations. Used or spent refrigerants are, therefore, subject to California's hazardous waste management regulations if they are identified as hazardous wastes. This identification involves the assessment of the

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characteristics of the waste in light of the criteria found in title 22, California Code of Regulations (22, CCR), division 4.5, chapter 11. Most of these criteria contain methods to quantify the hazards posed through specified tests, and to then compare the results of those tests to numeric thresholds contained in the criteria. Of the chemicals you reference in your letter, only trichlorofluoromethane (CFC-11), bromochlorodifluoromethane (Halon-1211) and bromotrifluoromethane (Halon-1301) exceed one of the numeric thresholds found in chapter 11. Each have an acute inhalation LC_{LO} below the threshold of 10,000 ppm found in 22, CCR, section 66261.24(a)(5)[1].

There are wastes which do not exhibit any of the identified hazardous waste characteristics, yet clearly should be considered hazardous waste simply by virtue of their potentially detrimental health or environmental effects. The Department of Toxic Substances Control (Department) has classified such wastes in the past as hazardous based on either the general toxicity criteria found in 22, CCR, section 66261.24(a)(8), or the statutory definition of hazardous waste found in California Health and Safety Code (HSC), section 25117. Title 22, CCR, section 66261.24(a)(8), states that a waste is toxic and hazardous if "it has been shown through experience or testing to pose a hazard to human health or environment because of its carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties or **persistence in the environment**"[emphasis added]. HSC, section 25117(a)(1)(B), states that a hazardous waste is defined as hazardous if "because of its quantity, concentration, or physical, chemical, or infectious characteristics may,...,[p]ose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of, or otherwise managed."

It is evident that CFCs and halons, even though most do not exhibit a hazardous characteristic for which a numeric threshold has been established, are hazardous. As is stated in the Montreal Protocol, and reiterated by the U.S. EPA, the threat of environmental damage from these compounds is significant. Clearly the potential damage to stratospheric ozone that these chemicals may cause is captured within the statutory definition

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[1]Acute inhalation LC_{LO} is defined in section 260.10, 22 CCR as "the lowest concentration of a substance or mixture of substances in air, other than acute inhalation LC_{50} in parts per million by volume if the substance or mixture of substances is a gas or vapor, reported to have caused death in humans or animals.

of hazardous waste, as well as the general toxicity provision of 22, CCR, section 66261.24(a)(8). The question is not whether these compounds are, in fact, hazardous, but rather how they should best be managed to prevent accidental or intentional discharge into the atmosphere, and to encourage collection and recycling or destruction.

As hazardous wastes, CFC wastes must be managed pursuant to California's hazardous waste laws, unless there exists a specific exclusion or exemption, such as under the recycling provisions found in HSC, section 25143.2. As stated in the Department's November 19, 1991, letter to Mr. R. O. Turner of LaRoche Chemicals, HSC, section 25143.2(d), excludes certain non-RCRA (California-only) hazardous wastes from regulation as hazardous wastes as long as they are reused and are not reclaimed prior to that reuse (and provided that certain conditions are met). Certain treatment methods are not considered reclamation and could be performed without negating the exclusion. HSC, sections 25143.2(d)(6) and (d)(7) allow filtering, screening, sorting, sieving, grinding, physical or gravity separation (without the addition of chemicals or heat), pH adjustment, and viscosity adjustment prior to reused. CFCs and halons recycled in accordance with these sections, would not be regulated as hazardous wastes. In addition, HSC, section 25143.2(d)(1), allows for wastes which are recycled and used at the site where the waste was generated to be excluded from regulation as hazardous wastes. HSC, sections 25143.2 and 25143.9, specify additional conditions applicable to these exclusions.

Your letter included a list of ten questions which you requested to be resolved. The following are responses to those questions:

1) **Are CFC-113 (1,1,2-trichloro-1,2,2-trifluoroethane), CFC-114 (1,2-dichloro-1,1,2,2-tetrafluoroethane), CFC-115 (chloropentafluoroethane), CFC-502 (chlorodifluoromethane mixed with chloropentafluoroethane), and CFC-500 (dichlorodifluoromethane mixed with 1,1-difluoroethane) refrigerants considered hazardous waste under [chapter] 11 of [22] CCR?**

   As long as the chemicals are a waste as defined in 22, CCR, section 66261.2, they would be considered hazardous waste as discussed above.

2) **For those that are hazardous waste, does the subsequent reclamation process constitute recycling or treatment?**

Unless the recycling or treatment meets one of the exclusions found in HSC, section 25143.2, (discussed above), any recycling or treatment of used CFCs or halons is considered treatment of hazardous wastes, and requires authorization from the Department.

3) **Are CFC-11 (trichlorofluoromethane), CFC-12 (dichlorodifluoromethane), CFC-113, and CFC-114 blowing agents retained in foam considered hazardous waste under [chapter 11, division 4.5, title 22] CCR?**

Typically, the characteristics of wastes which consist of separate components are assessed by evaluating the combined characteristics of the components. In this case, however, these chemicals still remain intact within the foam matrix, and do not form a "mixture" with the foam. The foam containing these hazardous blowing agents would, therefore, be considered hazardous waste.

4) **For those that are hazardous waste, does the subsequent reclamation process constitute recycling or treatment?**

Unless the recycling or treatment meets one of the exclusions found in HSC, section 25143.2, (discussed above), any recycling or treatment of used CFCs or halons is considered treatment of hazardous wastes, and requires authorization from the Department.

5) **Are Halon-1211 (bromochlorodifluoromethane) and Halon-1301 (bromotrifluoromethane) considered hazardous waste under RCRA or under [chapter 11, division 4.5, title 22] CCR?**

As long as the chemicals are a waste, they would be considered hazardous waste in California as discussed above. As for federal hazardous waste identification, they would be considered hazardous only if they exhibit a characteristic of hazardous waste found in Part 261, Title 40, Code of Federal Regulations (40 CFR). These wastes would need to be tested to determine if they exhibit any of the characteristics found in those regulations.

6) **If they are considered hazardous waste, does the subsequent reclamation process constitute recycling or treatment?**

Unless the recycling or treatment meets one of the exclusions found in HSC, section 25143.2, (discussed above), any recycling or treatment of used CFCs or halons is considered treatment of hazardous wastes, and requires authorization from the Department.

7) **Should the oil removed from refrigeration and air conditioning devices be considered hazardous waste if it contains [greater than] 1000 ppm halogens in California or under RCRA?**

In California, used oil, as defined in HSC, section 25250.1(a)(4), includes any spent industrial oils, including compressor, turbine, and bearing oil, hydraulic oil, metal-working oil, refrigeration oil, and railroad drainings.

Section 266.40, 40 CFR, states that used oil is presumed to be mixed with halogenated hazardous wastes if it contains greater than 1000 ppm halogens. According to the federal requirements, persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste. If this presumption can be rebutted[2], and the oil meets all standards for recycled oil found in HSC, section 25250.1(c), the oil would not be regulated as a hazardous waste in California or under RCRA. If the oil exhibits another characteristic, or if it contains greater than 3000 ppm total halogens (regardless of the source), it would be regulated as a hazardous waste in California (see Section 25250.4, HSC).

8) **Does the removal and storage of PCB [polychlorinated biphenyl] containing capacitors constitute treatment in California?**

The removal of capacitors which contain PCBs from appliances does not constitute treatment of a hazardous waste. Therefore, the removal of the capacitors does

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[2]The used oil must also meet the provisions of Section 261.6(a)(3)(iii), 40 CFR.

not require authorization from the Department. The PCB-containing capacitors are considered hazardous waste, and are subject to the same conditions and management requirements as any other hazardous waste in California (see chapter 12, division 4.5, 22, CCR).

9) **Should pressurized containers for refrigerant be considered hazardous waste in California?**

As stated in 22, CCR, section 66261.7(e), "[a] compressed gas cylinder is exempt from this chapter [chapter 11, 22 CCR] and chapter 6.5 of division 20 of the Health and Safety Code when the pressure in the container approaches atmospheric pressure." If the refrigerant containers meet these conditions, they are not hazardous wastes. If, however, the containers are not empty as described in section 66261.7(e) they are subject to regulation as a hazardous waste.

10) **Are filters used in processing refrigerant considered hazardous waste in California?**

If, after testing the filters, they are found to exhibit any federal or state hazardous waste characteristics, they would be considered hazardous waste. It is the responsibility of the generator of the waste to make this assessment.

Your letter has raised some very important points regarding the regulation of refrigerants as hazardous wastes. As an agency, the Cal-EPA is dedicated to streamlining the environmental regulatory process so that human health and safety and the environment can be protected without imposing excessive expense upon business and without duplicative regulatory efforts by state agencies. In response to your letter, I have asked the Department's staff to investigate this issue and prepare a recommendation to address your concerns.

I hope this letter has provided you with the information you requested. I appreciate information and suggestions from concerned organizations and individuals such as you. It is only through the combined efforts of regulatory agencies, industry, and concerned individuals that we can maintain a regulatory system that is both protective of the environment and conducive to businesses. If you have any additional questions or concerns,

please feel free to contact James T. Allen, Ph.D., Chief of the Alternative Technology Division, Department of Toxic Substances Control at (916) 322-2822.

Sincerely,

ORIGINAL SIGNED
BY

James M. Strock
Secretary for
Environmental Protection

bcc: William F. Soo Hoo, DTSC
Marcia Murphy, OPGL
Rick Brausch, ATD
Greg Williams, ATD
Kim Wilhelm, ATD
Ronald Pilorin, ATD

JMS:RB:rb/ks
DCC 603-H

Author: Rick Brausch/2-4226
Alternative Technology Division, DTSC

Division Chief: James T. Allen/2-2822

please feel free to contact James T. Allen, Ph.D., Chief of the Alternative Technology Division, Department of Toxic Substances Control at (916) 322-2822.

Sincerely,

James M. Strock
Secretary for
Environmental Protection

Thank you again for raising this matter —

bcc: William F. Soo Hoo, DTSC
Marcia Murphy, OPGL
Rick Brausch, ATD
Greg Williams, ATD
Kim Wilhelm, ATD
Ronald Pilorin, ATD

JMS:RB:rb/ks
DCC 603-H

Author: Rick Brausch/2-4226
Alternative Technology Division, DTSC

Division Chief: James T. Allen/2-2822

603-H

EXECUTIVE ROUTE SLIP

DATE: 1/25/92

TO:

___ Bill Soo Hoo	___ Mary Locke
✓ Jim Allen	___ Marcia Murphy
___ Paul Blais	___ Buzz Nunn
___ Bob Borzelleri	___ Stan Phillippe
___ Caroline Cabias	___ Ted Rauh
___ Dennis Dickerson	___ Val Siebal
___ Howard Hatayama	___ Jim Cutright
___ John Hinton	___ Allen Wolfenden
___ Don Johnson	___ Mark Leary
___ _____	___ Colleen Jordan

FROM:

✓ Bill Soo Hoo

___ _____

RESPONSE DATE: 2/7/92

2/18/92

INSTRUCTIONS:

___ For Your Information	___ Review & Comment
✓ Please Handle	___ See Me
___ Bill Soo Hoo's Signature	___ Direct Reply

Alternative Technology Services
JAN 23 1992
DTSC
Department of Toxic Substances Control
SACRAMENTO

COMMENTS:

Jim —

Please assign someone to begin to prepare a response for Jim Shook's signature. He will undoubtedly refer this ~~for~~ to us to prepare his response.

Thanks
Bill

P.S. I think Rick Branch worked on an earlier response on this area. Thanks

TSCP 11/90

Department Of Toxic Substances Control
DIRECTOR CONTROLLED CORRESPONDENCE (DCC)

CONTROL NUMBER: 603-H

FROM: Katy Wolf

Date of Letter: 1/15/92

Date Assigned: 1/29/92

TO: James Strock

SUBJECT: Muttimeda Implications

ROUTING:

1. Jim Allen
2.
3.
4.

Return to Delena Fong
Executive Office
Phone: 2-0504

REPLY COMPLETED

DATE:

SIGNED BY:

WRITTEN BY:

DUE DATE

2/7/92

2/18/92 2/7 per Biel. 2/10/92

Institute for Research and Technical Assistance
a nonprofit organization
IRTA

January 15, 1992

James Strock
Secretary
California Environmental
Protection Agency
555 Capitol Mall
P.O. Box 2815
Sacramento, CA 95812

Dear Mr. Strock:

I am writing to make you aware of an issue that has serious multimedia implications. I am Director of an organization called the Institute for Research and Technical Assistance (IRTA), a nonprofit organization. IRTA's aim is to help users to reduce or eliminate their use of ozone depleting substances and chlorinated solvents. The staff is involved in assisting industrial plants in adopting alternative chemicals, processes and products and in demonstrating new technologies and existing technologies for new uses. We work in the areas of metal cleaning, precision cleaning, electronics, paint stripping, dry cleaning, coatings, adhesives, foams, aerosols, refrigeration and air conditioning and fire extinguishants. IRTA is especially interested in multimedia problems that require a systems approach and those that involve multiple governmental agencies and offices.

As I'm sure you are aware, stratospheric ozone depletion has become a serious problem. The worldwide agreement, the Montreal Protocol, calls for a ban on the chlorofluorocarbons (CFCs) and halons--the synthetic substances that contribute substantially to depletion--in the year 2000. At an international meeting scheduled for later this year, it is expected that the phaseout date will be moved up to 1997 or perhaps even earlier. The Clean Air Act Amendments of 1990 require EPA to pass regulations implementing recovery and recycling of CFCs in various refrigeration and air conditioning applications over the next several years. These recycling regulations will begin to go into effect nationwide over the next six months. It is extremely important to begin recovering the CFCs and halons, either

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for reuse to replace virgin production or for destruction so the ultimate environmental damage is lessened.

The South Coast Air Quality Management District (SCAQMD) in Southern California has recently adopted three rules that require the recovery and recycling of refrigerants and halons. SCAQMD Rule 1411 "Recovery or Recycling of Refrigerants from Motor Vehicle Air Conditioners" requires recovery or recycling of CFC-12, the refrigerant used in automotive air conditioning, beginning on January 1, 1992. SCAQMD Rule 1415 "Reduction of Chlorofluorocarbon Emissions from Stationary Refrigeration and Air Conditioning Systems" requires recovery or recycling of fully halogenated refrigerants used in retail food applications (CFC-12, CFC-115, CFC-502) or in chillers (CFC-11, CFC-113, CFC-114, CFC-500) or in other stationary source applications beginning on January 1, 1992. SCAQMD Rule 1418 "Halon Emissions from Fire Extinguishing Equipment" requires recovery or recycling of Halons used in portable fire extinguishers (Halon-1211) and in total flooding systems (Halon-1301) beginning on July 1, 1992.

A group of public utilities in California including Southern California Edison wishes to set up a facility in California to take back second refrigerators. This operation is projected to save a substantial amount of energy. At the same time, the proposed facility will recover and possibly recycle the CFC-12 which is used as the refrigerant in home refrigerators. The technology for recovery of the refrigerants is established. It could involve the use of portable units that first separate the oil and the refrigerant and then remove the moisture and particles using a filter/drier. Alternatively, it might involve using a portable unit to simply recover the refrigerant which would be sent off-site to a refrigerant recycling facility where the refrigerant would be cleaned up using a pressurized distillation process. The facility may also remove the CFC-11 from the walls of the insulating foam that is used in refrigerators. The CFC-11 functions as the blowing agent; it is retained within the walls of the foam to prevent heat transfer. The technology for removing the CFC-11 and reclaiming it is undemonstrated in this country. IRTA is particularly interested in examining the technical feasibility of various CFC-11 recovery processes.

One firm, Great Lakes Chemical, a manufacturer of Halon 1211 and Halon 1301 plans to begin operating a recycling facility in the San

Fernando Valley in the Los Angeles area. They would take in portable fire extinguishers and halon from total flooding systems and reclaim it, presumably with a pressurized still, and sell it back into the market. This firm has received SCAQMD approval for the facility.

The U.S. Environmental Protection Agency (U.S. EPA) published a federal register notice on July 28, 1989. It stated that EPA did not consider CFCs when used as refrigerants to be regulated by Subtitle C of the Resource Conservation and Recovery Act (RCRA). This is because they are not specifically regulated as "solvents" under the F001 and F002 definition, they do not exhibit a characteristic and they are not considered off specification commercial products (U listed wastes). Subsequent to this interpretation, the EPA adopted the Toxicity Characteristic Leaching Procedure (TCLP) for testing the leachability of a waste. CFC-11, one of the CFC refrigerants that is a liquid at room temperature, is hazardous under the TCLP because it contains a small amount of carbon tetrachloride, the precursor chemical used in its manufacture. To correct this inadvertent anomaly, EPA later exempted refrigerants used in the normal course of events to encourage recycling.

The California Department of Toxic Substances Control (DTSC) apparently has a different interpretation. In a letter from DTSC to Dr. Barry Wallerstein of SCAQMD dated February 4, 1991, DTSC appears to sidestep the issue of whether CFC-12 used in automotive air conditioning applications is considered hazardous waste. The letter, included here as enclosure 1, states that EPA does not consider refrigerants used in the normal course of events as hazardous waste. The letter also states that the refrigerants must be evaluated pursuant to Article 11, Title 22, California Code of Regulations (CCR) to determine whether they are hazardous in California. Apparently the burden falls on the user of the refrigerants to determine in each case whether the material is hazardous waste. The letter does designate pressurized CFC containers as hazardous waste because they exhibit the characteristic of reactivity. This would include the containers that are used for the CFCs that are gases at room temperature including CFC-12, CFC-114, CFC-115, CFC-502 and CFC-500.

The DTSC letter goes on to discuss recycling provisions if the CFCs and their containers are regulated as hazardous waste. If the operations that are performed fall into the catagory of recycling as defined by Section 25143.2, Chapter 6.5, Division 20 of the Health

and Safety Code, then they are permitted. If they do not, presumably they are considered treatment operations and would require an appropriate permit. Other issues dealt with by the letter include whether the oil which must be separated from the CFC refrigerants is hazardous waste; whether the filters used in the reclaiming process are hazardous waste; and whether disposable cyclinders are hazardous waste.

In another letter, this time to Mr. R.O. Turner of LaRoche Chemicals dated November 19, 1991, DTSC is more explicit. This letter is included here as enclosure 2. DTSC designates CFC-11 as a hazardous waste in California because it has an acute inhalation LC50 of less than 10,000 ppm which is below the threshold designated in Section 66261.24 (a) (5) of Title 22. Although the letter states that CFC-12 is not hazardous for the same reason, it might be considered hazardous for other reasons, specifically because it contributes to stratospheric ozone depletion. It is ironic that DTSC's vigilant interpretation would prevent recycling and exacerbate ozone depletion.

This letter defines the treatment methods that are allowable under California law for non-RCRA recyclable materials. It also emphasizes that if the CFCs are not specifically exempted from regulation as hazardous wastes, then they must be sent only to authorized facilities by licensed transporters.

The two DTSC letters seem to place the burden of deciding whether CFC-11 and CFC-12 refrigerants are hazardous waste on the user of these refrigerants. In the second letter, CFC-11 is defined explicitly as hazardous because of its LC50. The other refrigerants have not been addressed at all either by the SCAQMD inquiry letter nor by the LaRoche Chemicals letter. Thus it is not clear whether the DTSC considers these other refrigerants as hazardous waste.

A third letter from EPA to me dated February 26, 1990 is included as enclosure 3. This letter states that CFC-11 containing rigid insulating foam is not classified as a hazardous waste under RCRA Subtitle C. In contrast, DTSC clearly classifies CFC-11 containing products as hazardous waste, again because the LC50 is lower than the allowable level under Article 11 of CCR.

Under the SCAQMD rules described above, users of refrigerants, including CFC-11 are currently recovering and/or recycling them as

required. If they are recovering the refrigerant and sending it off-site for processing, they are not likely to be manifesting it as hazardous waste. If they are processing it on-site, they may be treating a hazardous waste without a variance or proper authorization from DTSC. Because of the designation of CFC-11 and the silence of DTSC on the issue of whether the other refrigerants are hazardous waste, these users may be operating illegally according to DTSC; they nevertheless are required to do so by another Governmental agency, SCAQMD.

In the case of the utility project described above, one firm would like to establish an operation in California to take back second refrigerators, remove and reclaim the CFC-12 refrigerant and remove, and perhaps reclaim, the CFC-11 in the insulating foam. This firm has operations that reclaim the refrigerant in other parts of the country. These operations are not required to be treatment, storage and disposal facilities because the states in which they are operating have apparently agreed with EPA's designation that CFC refrigerants in the normal course of events are not hazardous waste. These other existing operations do not remove or reclaim the CFC-11 in the insulating foam. In fact, there are no operations that do so in this country. California has the opportunity to serve as the first host state for an operation that recovers the CFC-11 in insulating foam. Before this could be done, however, the firm would want assurance that a treatment permit would not be required or that a variance could be obtained.

There are a number of issues that remain to be resolved for California businesses. EPA has ruled that all CFC refrigerants used in the normal course of events are not designated as hazardous waste under RCRA. DTSC has stated that CFC-12 refrigerant is unlikely to be hazardous waste but that CFC-11 refrigerant is hazardous waste under CCR. DTSC has not ruled on other refrigerants including CFC-113, CFC-114, CFC-115, CFC-502 and CFC-500. Since these refrigerants are used in chiller and retail food applications, they are required to be recycled by SCAQMD. DTSC should rule on whether these refrigerants are considered hazardous.

If some refrigerants are deemed hazardous, they must be treated as hazardous waste and manifested accordingly. DTSC must then judge whether the processing of these refrigerants constitutes recycling or treatment. If it does, then any facility processing them must obtain a variance or an appropriate treatment permit from DTSC.

DTSC must also rule on whether CFC-11, CFC-12, CFC-113 and CFC-114 in foams constitute hazardous waste. It would seem that the Department already considers CFC-11 hazardous so if it is in the walls of the foam, the foam is hazardous as well. Again, for those CFCs that are designated as hazardous, the subsequent processes must be classified by the Department as recycling or treatment. Both EPA and DTSC have been silent to date on whether the Halons are hazardous waste. These rulings must be made and then a subsequent ruling on the reclamation process must also be made.

Other questions arise in the processing of these materials. First, oil containing halogenated organics above the 1,000 ppm level is considered hazardous waste under RCRA. This ruling was intended to prevent "solvents" from being added to the oil, however, and it is not clear that refrigerants should be defined as "solvents". Second, when refrigerators are dismantled, the capacitors contained within them must be removed. In many cases, these capacitors contain PCBs. I have asked DTSC for a ruling on whether removing these capacitors and storing them for shipment requires a treatment facility permit and I was told that the DTSC region where the facility was located would have to make that judgement. Third, pressurized containers for refrigerants are classified by DTSC as hazardous waste. Fourth, the filters used in reclaiming devices for refrigerant processes may be hazardous waste according to DTSC.

The issues that remain to be resolved can be summarized as follows:

1) Are CFC-113, CFC-114, CFC-115, CFC-502 and CFC-500 refrigerants considered hazardous waste under Article 11 of CCR?
2) For those that are hazardous waste, does the subsequent reclamation process constitute recycling or treatment?
3) Are CFC-11, CFC-12, CFC-113 and CFC-114 blowing agents retained in foam considered hazardous waste under CCR?
4) For those that are hazardous waste, does the subsequent reclamation process constitute recycling or treatment?
5) Are Halon-1211 and Halon-1301 considered hazardous waste under RCRA or under CCR?
6) If they are considered hazardous waste, does the subsequent reclamation process consitute recycling or treatment?
7) Should the oil removed from refrigeration and air conditioning devices be considered hazardous waste if it contains 1,000 ppm halogens in California or under RCRA?

8) Does removal and storage of PCB containing capacitors constitute treatment in California?
9) Should pressurized containers for refrigerant be considered hazardous waste in California?
10) Are filters used in processing refrigerant considered hazardous waste in California?

It would seem as if California EPA is the appropriate body to decide on the next steps. Regulations passed by a local air district and soon to be passed by EPA require the recycling of CFC refrigerants and Halons. These regulations are designed to reduce emissions of the ozone depleting substances to minimize stratospheric ozone depleting. In Southern California, virtually all auto repair facilities, all firms servicing retail food stores and all buildings that have chillers have begun recycling their refrigerants to comply with the SCAQMD rules. Technically these thousands of facilities are operating illegally according to DTSC. In the future, there may be regulations requiring the recovery of CFCs from foams, also to minimize ozone depletion. Taking back second refrigerators as the California utilities wish to do will also minimize energy use. We are faced with a situation where certain government agencies require an activity considered illegal by another government agency. It is not clear that DTSC understands the need to recycle these materials; even if they do understand the clear need, they may be legally prevented from facilitating the reclamation process. California EPA may be able to develop a streamlined permit process for the recycling operations or legislation may be required.

I am asking California EPA to take on this issue. Better protection of human health and the environment is the aim of us all. Sensible environmentally beneficial policies that save energy and minimize ozone depletion cannot be adopted because of conflicting and perhaps inappropriate regulations. Many regulations were passed without foresight and without taking into account a systems approach. Businesses are currently leaving California at an alarming rate and new businesses are reluctant to locate here. The issue discussed in this letter aptly demonstrates why this is so.

IRTA would be glad to work with California EPA to try to resolve the problems described here. It may be that new legislation is required to facilitate some of these operations and we will be happy to assist with this as well. If you would like more information on any

of the points that were brought out, please call me at (310) 820-8509.

Sincerely

Katy Wolf

Katy Wolf, Ph.D.
Executive Director

KW:ff

Enclosures

cc: William Soo Hoo
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