VIA EXPRESS MAIL

March 28, 2014

Pauline Batarseh
Chief
Policy Implementation and Support Branch
Policy and Program Support Division
Hazardous Waste Management Program
California Department of Toxic Substances Control
1001 “I” Street
P.O. Box 806
Sacramento, CA 95812-0806

Subject: Thermostat Recycling Corporation’s 2013 Annual Report for California

Dear Ms. Batarseh:

Attached is TRC’s annual collection report for calendar year 2013. A copy of this report is posted on www.thermostat-recycle.org/resources/media_center.

TRC would like to highlight some aspects of the 2013 program. They are as follows:

- TRC increased collections of waste mercury thermostats from California locations by nearly 30% compared to the previous year.
- The expanded 2013 Google AdWord campaign specifically targeted California consumers and HVAC technicians seeking information on thermostats. The campaign garnered more than 810,000 impressions in California. California ranks #1 in the nation for its share of visits to TRC’s website.
- In June, TRC launched an incentive program that ran through the end of the year. “Recycle. Scratch. Win” offered a scratch card for the return of one or more mercury thermostats with a 1 in 5 chance to instantly win a $5 gift card to In-N-Out burger. Participating collection locations returned a total of 2,401 thermostats between July 1 and December 31.
- TRC was actively in the field last year. TRC representatives visited over 240 HVAC wholesale and retail locations throughout the state that had either never returned a bin or had yet to in 2013.
- TRC doubled its staff in the last year. Ms. Christyn Zehnder joined the staff in January 2013 as TRC’s Senior Manager of Marketing and Communications, and Mr. Ryan Kiscaden joined the staff in January 2014 as TRC’s Senior Account Representative. Ms. Zehnder’s contributions last year included a revamp of TRC’s paid advertising strategy, the BMOP Award Program, and an active TRC presence on social media. Her efforts effectively doubled TRC’s website traffic last year.

In 2014 TRC will continue to aggressively promote its program in California. For example:

- TRC will implement a HVAC technician loyalty rewards program at select HVAC wholesale locations in all major California markets. Anticipated to launch by summer 2014,
the program will award points to participants for every mercury thermostat returned. Points accumulate over time and can be redeemed online for merchandise.

- A new program website was launched (www.thermostat-recycle.org) in March with extensive new features. It includes a state program map and substantial improvements to the site’s “searchability.”
- We’re moving forward with developing “dump-bin” displays for TRC’s recycling containers in an effort to make the program move visible at collection locations. TRC will actively promote the availability of these wraps to California distributors.
- TRC will continue to directly engage existing collection to encourage greater participation.
- TRC will continue its paid advertising campaign with some minor modifications in tactics and scope.
- The addition of Mr. Kiscaden to the staff will enable TRC to directly market the program and specific promotions to a broader array of distributors and also have more active presence in the field in California.

As we proceed, however, TRC respectfully suggests the following key factors must be considered when evaluating the program.

- California was the only state with a “mature” program that saw significant growth in the 2013.
- HHW participation was minimal in 2013. A review of data from DTSC’s form 303 suggests many local governments collect thermostats, but do not opt to use TRC’s program.
- The program will have to work harder to maintain collections, which motivated the addition of staff this year. Most California distributors now demonstrate at least minimal compliance with state law, but it is apparent to us—and vital to the program’s success—that collection partners do more than the minimum proscribed by law.

TRC is looking forward to reviewing this report and future plans during our meeting with DTSC staff in April. If you have any immediate concerns or questions, please do not hesitate to contact me directly at 571-447-4315.

Sincere Regards,

Mark Tibbetts
Executive Director

Cc: Matthew Mullinax, DTSC
TRC Member Representatives
In 2013, TRC recovered 265 pounds of mercury from the equivalent of 23,014 mercury thermostats. A total of 20,957 intact mercury thermostats and 3,853 mercury thermostat switches were recovered from California collection locations in 2013 (mercury thermostats recovered from California locations averaged 1.86 switches per thermostat in 2013, down from 1.93 in 2012).

TRC recovered 21,576 thermostats from HVAC wholesale distributor collection locations (94%), 759 from HHW locations (3%), 603 from Contractor locations (3%) and 77 from retail locations (less than 1%).

By regulation, California set a performance requirement for manufacturers or groups of manufacturers to collect 65,000 thermostats in 2013. The requirement did not go into effect until July 1, 2013. The pro-rated share (July 1, 2013 through December 31, 2013) was 32,500 thermostats.

TRC recovered 13,655 thermostats during this period (12,317 whole thermostats plus 2,508 mercury switches removed from thermostats. Mercury thermostats averaged 1.87 switches per thermostat during this period).

TRC reviewed collections by manufacturer for 2012, 2011, 2010, and 2009 and TRC recovered thermostats with brand name(s) owned by the following

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1 For participating manufacturers, TRC aggregates counts of thermostats collections under the manufacturer that owns or owned the brand name of thermostat. TRC has no information on the brands owned by other manufacturers and it records returns under the brand name of the thermostat. NOM represents thermostats of indeterminate manufacture. TRC began recording names of non-member brands July 1, 2013 prior to that date they were recorded as a “NOM.”

**Waste Mercury-Added Thermostat Management**

Bins with waste mercury thermostats are received at the fulfillment/processing center in Golden Valley, Minnesota. The facility is owned and operated by Honeywell International under contract with TRC.

Bins are received at the loading dock and sent to the TRC processing area. The bin and plastic liner are opened and the contents are identified, sorted, and tallied. The following data is recorded for each bin returned and processed: bin number, business name (location name), city, state, zip code, date returned, number of thermostats and mercury switches by manufacturer and any non-conforming material.

The bin is returned to the location that sent it in with a new prepaid address label within 72 hours of receipt. The thermostats are stored and staged in a plastic lined carton in a storage area for final processing. The containers are dated and processed in order received, first in-first out.

The containers are moved from the storage area to the TRC processing area to have the mercury bulbs removed from the plastic housing. Universal Waste Regulations require the disposal of waste within 12 months of generation. TRC’s processor requires that the disposal occur within 6 months of generation and TRC follows the more stringent requirement. Small quantities of thermostats are removed from the container, which is then closed again. These thermostats are placed at the bulb removal workstation on a tray that contains any potential mercury spillage. The bulbs are removed from the thermostats and placed into a 2 quart container at the work station. If a bulb breaks and the mercury spills, the work area is designed to contain the spillage and the operators are trained in the clean-up and disposal of mercury. The TRC processing area is equipped with special mercury vacuum cleaners and the work area is vacuumed at the end of the work day to assure that any spillage is cleaned up and not left to evaporate.

The 2 quart container is emptied into a special 55 gallon drum which is labeled and dated according to regulations. The drum is sealed with a band and is only opened when contents are being added to it. Special negative pressure venting assures any fumes are drawn away and vented when the drum is opened.
The 55 gallon drum is then shipped to Veolia Environmental Services in Port Washington, Wisconsin for final processing of the mercury ampoules (switches). Veolia Environmental Services meets or exceeds all local, state, federal and EPA regulations for the management of the product. Veolia’s approvals for mercury recovery/recycling include:

EPA - identification WIR000130591 (Veolia Environmental Services, Inc.)
EPA BDAT Requirement - satisfied by all recovery operations
CERCLA (Comprehensive Environmental Response Compensation and Liability Act)
Wisconsin Department of Natural Resources

All facilities involved in processing the waste mercury thermostats received from collection locations follow all EPA guidelines and regulations. TRC has a facility license from Hennepin County Minnesota for the operation of the TRC. Honeywell, Inc. has a Hazardous Waste Generator license from Hennepin County. All persons who handle mercury thermostats as part of the TRC operation receive training in the handling of Hazardous Waste and Universal Waste in compliance with local, state, and federal law.

Program Education and Outreach
(Examples of Outreach)

Direct Mail

In April, May, June, and July TRC mailed a 6x5 full-color postcard to approximately 6,170 principals of HVAC contracting businesses of all sizes located in California. The postcard’s key messages included ease of recycling and moral obligation. TRC sourced the mailing list from MailersHaven (www.mailershaven.com).

Exhibit 1: California Direct Mail
Paid Advertising

TRC’s primary target audience remains HVAC contractors/technicians and distributors. The first group includes HVAC technicians working in residential and light commercial buildings, as they are the ones who remove the vast majority of mercury thermostats from service. The second group consists of HVAC wholesale distributor locations, as they are the most likely and convenient location for the majority of California-based technicians/contractors to purchase replacement thermostats and recycle waste mercury thermostats.

Homeowners are a secondary target audience as they represent a small segment of the market (+/- 10%). Since replacing a mercury thermostat is a rare event (if ever) for a consumer, TRC derives the greatest impact/value from its marketing budget by concentrating on the audience that yields the greatest benefit to program outcomes.

TRC’s experience with previous advertising campaigns is the “Green” environmental message is less effective with our primary audience. Contractors/technicians are influenced mostly by cost, convenience and laws/regulations. TRC applied this lesson when planning and executing the 2013 advertising campaign. The campaign focused on “easy and free” and “It’s the law”, (the “law” message is where applicable; as only a limited number of states ban the disposal of mercury thermostats in solid waste and/or require HVAC contractors to recycle all mercury thermostats removed from service).

The purpose of TRC’s advertisements were two-fold: 1) to continue to build upon brand/program awareness and other promotional campaigns and 2) to accelerate the pace of mercury thermostat replacement by helping contractors recognize opportunities to generate additional revenues by proactively replacing older mechanical (mercury) thermostats.

Print-based advertising — TRC focused on frequency for the 2013 advertising campaign to saturate the market with the program’s brand by placing smaller ads more frequently throughout the year. The scope of the advertising campaign was significantly expanded in 2013 to include additional trade channel publications. TRC attempted to specifically target California when possible, but trade channel options are limited. As such, TRC found regional trade publications like Indoor Comfort News and HVAC Insider Goldenwest were the best options. TRC included the law message in publications that primarily serve California.

New advertising this year included:
- **HVAC Insider Goldenwest**, which has a quarterly subscription of 6,957 in California. Each mailed edition is supplemented by hundreds of “counter” copies which are distributed to wholesalers HVAC Insider field representatives. The advertisement was 1/2pg size in 2-color and ran in the May and August issues. (Exhibit 2)
- **Contracting Business Magazine**, which has 43,000 monthly subscribers nationally who are primarily owners and managers of HVACR contracting
companies. TRC ran a 2-color 1/4 page ad in March, June and August. (Exhibit 3)

- **Indoor Environment & Energy Efficiency Magazine**, which is mailed bi-monthly to all Air Conditioning Contractors of America (ACCA) contractor-members who own, manages, lead, and make decisions for their business. TRC ran a 2-color 1/3 page ad in July, September and November. (Exhibit 4)

TRC also continued print-based advertisements in the following national HVAC trade publications:

- **Indoor Comfort News** is published by the Institute of Heating Air Conditioning Industries Inc. (IHACI). IHACI is California’s largest HVAC trade group and its monthly magazine has approximately 17,000 subscribers in California. TRC ran a 1/8 page 2-color ad May-June and August-October (Exhibit 5). July featured a larger 1/3 page size ad to promote the “Recycle. Scratch. WinSM” campaign with Johnstone Supply (Exhibit 6).

- **Distribution Center Magazine**, the exclusive publication of Heating, Air Conditioning & Refrigeration Distributors International (HARDI) with 11,000 bi-monthly subscribers. TRC ran a full-color 1/3 page ad in August to promote the Big Man on Planet competition. (Exhibit 7)

- **HVACR Business Magazine**, a national publication with approximately 34,000 qualified subscribers, of which approximately 3,295 are in California. TRC ran a 2-color 1/4 page ad March – May. (Exhibit 8)
Web-based advertising — TRC continued the use of rotating banner advertisements in 2013, with changes in scheduling and scope and the addition of new media outlets. New was the implementation of tracking URLs to better assess campaign performance. With these tracking URLs TRC was able to use Google Analytics to determine how much traffic each advertisement drove to the TRC website.
TRC’s web-based ads gained a cumulative total of more than 770,000 impressions and an average click-through rate (CTR) of 0.6%. An impression is a measure of the number of times an ad is displayed, and a CTR is the number of times a click is made on the advertisement divided by the total impressions. The chart below presents benchmark data from Google’s Display Benchmarks tool on average CTR’s in the U.S. by year. As seen below, the highest average CTR was 0.2%, so TRC’s CTR performance well exceeded the national average.

New advertising this year included:

- **ACHRNews.com**, a website that assists the decision-makers from all branches of the air HVAC industry including contractors, manufacturers, distributors, parts and supply wholesalers, and service companies. More than 296,000 HVACR professionals visit the website every month. TRC ran two different banner ads in November and December that resulted in 56,423 combined impressions and an average CTR of 0.2%. (Exhibit 9 & 10)

- **ACHR Newsletter**, a weekly email blast with 10,000 subscribers. TRC ran a banner ad for 4 issues in December with a total open rate of 13,546 and an average CTR of 0.3%. (Exhibit 10)

- **HVACRBusiness.com**: TRC ran a banner ad in July that resulted in 5,063 impressions and a CTR of 2.6%. (Exhibit 11)

- **le3media.com**: ACCA magazine’s official website. TRC ran an animated banner ad June – December. Impressions and CTR not available from publication. (Exhibit 12)
TRC also continued web-based advertisements on the following HVAC industry websites below:

- **ContractingBusiness.com**, which averages 32,000 monthly visitors. TRC ran a rotating banner ad in March and May-July which resulted in 34,099 total impressions and an average CTR of .09%. (Exhibit 13)
- **HVAC-Talk.com**, an online forum that averages 310,000 monthly visitors. TRC ran a rotating banner ad in March and May-July which resulted in 592,037 total impressions and an average CTR of .05%. (Exhibit 13)

**Google AdWords** — In 2011 and 2012 TRC developed and deployed a Google AdWord campaign that geo-targeted contractors and consumers in states with mercury thermostat disposal bans, including California. Advertisements appeared on Google search results pages (Exhibit 14) after an individual searched terms.
related to TRC’s mission (E.g. thermostat replacement, contracting recycling regulations, mercury thermostat recycling, programmable thermostats, etc.).

Recognizing the value and effectiveness of the campaign, TRC implemented and expanded the Google AdWord campaign to run during the months of March, April, May, and June halting it during the summer months and running it again in October, November, and December.

The campaign yielded over 810,000 impressions in California alone with an average CTR of 0.06% (a rate consistent with this type of campaign).

Exhibit 14

(Get mercury thermostats?
Recycle them. It’s the law.
We make it easy.
thmostat-recycle.org

Recycling mercury thermostats made easy.
Staying in compliance with state law made easy.

Find the nearest recycling location to you. Enter your zip code to search.

Zip Code: Search

Let’s face it. It’s important to do everything we can to keep our environment clean.
No surprise there. And when it comes to recycling mercury thermostats you remove from a job site, it should be easy. Because the last thing you need in your day is one more hassle.

But the fact is recycling thermostats in your state is the law. And we’re here to make it easy for you to recycle them.

Just search to find a drop-off location near you. Then drop it off and walk away. It’s that simple.

We’re the Thermostat Recycling Corporation and we’re here to make things easier for you.

Trade Shows

TRC attended and exhibited at the following trade shows relevant to California:

January 28 - 30: AHR Expo
Dallas, TX
AHR Expo is the largest national trade show for the HVACR industry. TRC staff exhibited and promoted the program to HVAC contractors, manufacturers and distributors. The show had a total registered attendance of over 51,224. Specifically, more than 2,000 attendees were from the Western United States, including California.
February 27 – March 1: The Indoor Environment & Energy Expo  
*Orlando, FL*
Co-presenter by ACCA, this expo is the largest marketplace for the indoor environmental and energy services contracting industry. TRC staff exhibited and promoted the program to attending HVAC contractors.

March 17 – 19: HVACR Excellence Educators & Training Expo *(New)*  
*Las Vegas, NV*
The nation’s largest conference that is dedicated to providing professional development exclusively for HVACR educators and trainers. TRC staff exhibited for the first time and promoted the program to educators to include information on mercury thermostat recycling in their trainings.

March 4 – 5: Johnstone Supply Annual Membership Meeting  
*National Harbor, Maryland*
Johnstone Supply is a cooperative wholesaler distributor of HVAC parts and equipment with 350 locations nationwide, including 37 in California. Johnstone’s Annual Membership meeting is invitation only and TRC was once again invited to attend and exhibit as part of an ongoing effort with Johnstone’s corporate staff to encourage and expand the cooperative’s members’ participation in the program. The event is well attended by owners and senior staff and it was a unique opportunity to engage directly with key decision makers.

May 20: Environmental Industries Association Waste Expo *(New)*  
*New Orleans, LA*
TRC participated in a panel presentation with fellow product stewardship programs PaintCare, CARE and Call2Recycle.

*St. Paul, Minnesota*
This is an annual conference that highlights industry trends and provides sessions, roundtable discussions and training opportunities for HHW professionals and those in related fields. TRC staff presented “Marketing: How to Improve Outcomes with a Constrained Supply” during a session to educate the audience about marketing a recycling program. TRC also sponsored and exhibited at this conference.

November 13: IHACI’s annual trade show  
*Pasadena, California*
IHACI is California’s largest HVAC trade group and annually sponsors a one-day trade show at the Pasadena Convention Center. Attended by approximately 5,000 contractors and technicians, this is California’s largest HVAC trade show.

To boost booth traffic, TRC conducted a raffle of a rechargeable drill/impact driver with an approximate value of $120.
December 7-10: Heating Air-conditioning and Refrigeration Distributors International (HARDI)
Phoenix, AZ
TRC exhibited and participated in the “Booth Program,” which provides for 1-on-1 sessions with senior executive staff from HARDI member companies. This event targeted representatives of approximately 80% of the wholesale market for HVACR products. TRC also presented its annual “Big Man on the Planet Award.”

Website/Social Media

Website traffic continued to grow in 2013 as TRC increased its total annual visitors by 85% compared to 2012. There was a 186% increase of visitors from California to TRC’s website and the state remained first among the country in terms of its share of visitors to the site.

The increase in traffic reflects the impact of paid trade channel advertising, Google AdWord campaign, and search engine optimization efforts.

Exhibit 15: Map of TRC website Traffic in California 2013

Earned Media

In 2013 TRC continued to enjoy positive and frequent coverage within the industry trade press, appearing more than 25 times through a variety of publications throughout the year. TRC issued a number of media releases and most were picked up generating additional exposure for the program.

Notably, TRC continued to receive coverage in industry leading publications such as The Air Conditioning and Refrigeration News (110,000 circulation), HVACR Business (circulation 30,000), and editorial pieces in Distribution Center Magazine (circulation
11,000) and *Indoor Environment & Energy Efficiency Magazine* (mailed to every ACCA member who specializes in residential, commercial, and industrial applications).

**Summary of Additional Education and Outreach by Channel**

**HVAC Technician Incentive Program: Recycle. Scratch. Win.**

In June, TRC launched a promotion at thirty-one Johnstone Supply locations throughout California, as shown in Exhibit 16. The promotion lasted through the end of the year. Participants were offered a scratch card for return of one or more mercury thermostats to a participating Johnstone Supply location. There was an approximate 1 in 5 chance to win.

Prizes included a $5 gift card to In-N-Out Burger®, locking tradesman knife, LED flashlight, dual display mini clamp meter and $250 check cards. All prizes were instant winners with the exception of the $250 check cards.

Some figures and facts from the campaign include:

- Approximately 13,000 scratch cards were distributed to 31 locations along with over 2,000 $5 gift cards to In-N-Out Burger.
- A total of 2,401 thermostats were returned during the promotional period from participating locations (this includes thermostats placed in containers prior to the start of the program).
- The program was marketed and promoted. TRC produced and shipped counter cards (Exhibit 17), invoice templates, a blurb for newsletters, etc., to the primary contacts for all participating locations. TRC also ran a 1/3 page two-color ad in the July issue of *Indoor Comfort News* (see Exhibit 6) promoting the program.
- At least 50% of scratch cards were returned unused.
- Approximately 30% of locations that agreed to participate in the program did not return a bin during the promotion and the degree of participation in this program among these locations is unclear.
Informing HVAC Trade Channel on New Program Requirements

In advance of the regulation effective date of July 1, 2013, TRC aggressively pushed information into the HVAC trade channel regarding the new requirements on wholesalers and contractors. TRC issued a media release to the HVAC trade press announcing the changes which were picked up by several HVAC trade publications including California’s *Indoor Comfort News*.

In June, TRC mailed a memo to California HVAC wholesalers and contractors highlighting the new requirements (Appendix A). The memo was sent to approximately 430 locations throughout the state. TRC also directly contacted (via email/phone) senior management representatives of eleven of the state’s leading HVAC distributors. This effort included, in some instances, the sharing of data on the level of individual branch location participation in the program. A follow-up FAQ was developed and distributed to address questions from the initial outreach effort.

TRC continued to work with Heating Air-conditioning Distributors International (HARDI) to raise program awareness. HARDI sent an email (Appendix B) informing over 140 member representatives with locations in California about the new requirements. HARDI also hosted a 30 minute conference to review the TRC program and distributor’s legal obligations in California. TRC staff participated in the call.

Similar information was provided to the Air Conditioning Contractors of America (ACCA). ACCA published an article on their government relations blog (Appendix C), highlighted it in its newsletter, and sent a standalone email to California contractor members.

All information regarding the new CSLB license number regulation was added to TRC’s website under California’s state program page where it remains today.
Further Engagement of Wholesale Distributors
In April TRC mailed a postcard to 195 wholesale locations that had not returned a bin within 12 months. The postcard informed the location about its legal obligation to collect mercury thermostats and provided information on how to contact TRC with questions or for assistance in shipping TRC recycling containers.

In November and December TRC representatives visited over 240 wholesale and retail collection locations throughout California that had not returned a bin within the previous 12 months, many of which had never returned the container. The purpose of the visit was to:

1. Verify participation in the program by confirming location address and the container numbers of the one or more of the recycling containers previously provided by TRC.
2. Train location staff on program procedures by assisting with the preparation of a container for shipment (if it contained one or more mercury thermostats) and contacting Federal Express to arrange pickup of the container.
3. Stimulate future participation in the program through direct engagement of location staff.

Results:
- Containers prepared for shipment by TRC representatives contained approximately 2,260 thermostats.
- 83 of 245 locations visited had no thermostats to return (33%)
- 29 locations closed, moved and/or consolidated, or the container was shipped just before arrival
- 47 of the locations visited had returned a container in 2012. Those locations accounted for 876 thermostats (approximately 38%) recovered through this effort. TRC assumes the majority of those would have returned a container by the end of the year independent of the visit.

Household Hazardous Waste (HHW) Engagement
TRC developed a 22x28 inch double-sided, full color outreach poster specific to California to encourage participation and promote program awareness (Exhibit 18). In December, TRC mailed a poster with accompanying letter (Appendix D) to 78 HHW facility managers throughout the state.

One HHW facility has followed up and contacted TRC to sign-up their location. Mr. James Conway, a Senior Sustainability Analyst from the Office of Sustainability and the Environment Hazardous Materials Management Section in Santa Monica. TRC sent Mr. Conway five free collection containers, along with marketing materials to promote the program. Mr. Conway plans to use these bins to visit contracting firms within Santa Monica to get them signed up with the program.

In addition to the poster and letter mailing, TRC met with a Program Manager from the Elk Grove Waste and Recycling facility at the NAHMMA conference in September. TRC
staff discussed the program with Cedar Kehoe who suggested TRC create a “cheat sheet” on how to easily identify whether or not a thermostat contains mercury. TRC created this sheet (Exhibit 19) and sent it to Cedar on October 1st to use for future purposes. The fact sheet is now featured on TRC’s homepage slider on its website and has been “Tweeted” several times through social media.

Exhibit 18:
Exhibit 19:

Does my thermostat contain mercury?

If the thermostat uses a dial or lever, odds are it contains mercury and needs to be recycled. Containing between 3 and 15 grams mercury, thermostats are likely the device in homes that have the most mercury today.

Examples of mercury thermostats:

- Look for the mercury switch inside.
- If so, it needs to be recycled. It's the law.*

Thermostat Recycling Corporation
1-888-266-0550
thermostat-recycle.org

*Disposal tons apply in the following states: CA, CT, FL, IA, IL, ME, NH, NJ, NY, WV, WI, and VT.

Training Videos

TRC developed two short (2.5 minutes) training videos. One targeted HVAC contractors/technicians to demonstrate how easy it is to recycle thermostats. The second was to support TRC wholesale distributor partners to educate staff of the simplicity of the program and to assist with compliance with critical health and safety policies.

TRC created a YouTube page to host the videos (http://www.youtube.com/user/ThermostatRecycling) online at the end of April, 2013 and posted the one video on its homepage and the other on its safety page.

TRC has aggressively pushed the availability of the video. TRC burned copies of the video and marketed its availability of the video to HVAC educators, HVAC distributors, and others within the channel. TRC mailed copies to all Air Conditioning Contractors of America (ACCA) chapter leaders, IHACI staff, and California utility HVAC training staff (Appendix E). Information was also posted about its availability on the HVAC Educators LinkedIn group with over 1,000 members nationally.

The video for contractors was featured on ACHRNews.com from May-December, including one week on the homepage, and received 973 views from their website. ACHRNews.com enjoys over 296,000 website visits per month of which over 174,000 are unique browsers.
To date (3/28/14), the contractor video has been viewed over 1,700 times on YouTube, and the wholesaler video has been viewed over 300 times. In contrast, the California Department of Toxic Substances Control training video has been online since 9/27/11 and has only had 2,386 hits.

**Social Media**

In 2013 TRC updated its social media strategy to focus on three main tactics:

1. Inform – messaging about TRC’s program and news such as Big Man on Planet competition, new training videos, etc.
2. Contribute – messaging about related industry news to contribute to trending conversations
3. Engage – ask questions to encourage the community to actively participate in conversation

With this strategy and through more frequent updates and engagement, TRC’s Twitter account saw a 37% increase in number of followers in 2013, and its Facebook page enjoyed a 71% increase of page “Likes”.

**Big Man on Planet**

TRC partnered with Heating Air-conditioning and Refrigeration Distributors International (HARDI) to launch the Big Man on Planet (BMOP) competition in 2013. This annual competition encourages HARDI members to promote TRC’s mercury thermostat collection program at their branches nationwide to see who can recover the most thermostats.

TRC mailed invitations to HVAC wholesale/distributor owners and principals throughout the nation, including 29 in California, to invite them to participate in the competition. In 2013, participation more than doubled and over 100lbs of mercury was recovered. Johnstone Supply was crowned the BMOP winner at HARDI’s annual conference. The presentation of the BMOP Cup created significant buzz at the show and the program was an unqualified success in 2013 (Exhibit 20).
Program Expenses

TRC is a national voluntary program that also operates ten mandatory programs on behalf of its manufacturer members. As most promotional activities are run concurrently in multiple states, tracking and isolating expenses specifically to California is not possible. Below is a summary of TRC’s national program expenses for 2013. A copy of TRC’s 2012 IRS Form 990 is attached (Appendix F).

Exhibit 21: 2013 Program Administrative Expenses

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<tr>
<th>Program Component</th>
<th>2013 TRC Program</th>
<th>2012 TRC Program</th>
<th>Percent Change</th>
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<td>TRC Staff and Administration</td>
<td>423,400</td>
<td>$246,162</td>
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<tr>
<td>Recycling Costs</td>
<td>317,874</td>
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<td>Insurance</td>
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<td>Statutory Incentive Payments</td>
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<td>New Collection Containers</td>
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<td>Travel</td>
<td>32,608</td>
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<td>Direct Expense for Marketing &amp; Outreach</td>
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There was significant variance in many expense categories from 2012. Causes for changes include:
• TRC staff and administration increased by 72% in 2013. TRC added a full-time marketing staff person in January, effectively doubling TRC’s staff. Additionally, TRC moved from the National Electrical Manufacturers Association’s (NEMA) office in December of 2012. TRC is now responsible for office lease expense that previously was provided at no cost by NEMA.

• Insurance Expense: There was no meaningful change. The variance reflects changes in how TRC accrued the expense in 2012/2013.

• Statutory incentive payments—Collections decreased by over 30% in both Maine and Vermont.

• Travel: With the addition of staff, TRC attended more industry events in 2013 and was able to increase the frequency of collection location visits.

• Direct Expense for Marketing/Outreach: In 2012 TRC expended $34,000 for marketing consulting. TRC shifted that expense in 2013 to a full-time staff person (new annual staff expense of approximately $87,000) TRC. Funds previously allocated to marketing consulting were used to expand the scope of paid advertising, update TRC’s website, develop training videos, and expand field work.

Evaluation on the Effectiveness of the Program

The California mercury thermostat law went into effect in 2009. Looking back to the year prior to the law’s implementation, TRC effectively doubled the average number of mercury thermostats it recovers from California per month. Last year TRC collections averaged over 1,740 thermostats from California per month—94% of which came from HVAC wholesalers.

California leads the nation in both the count of mercury thermostats recovered and total pounds of mercury. With nearly 30% growth, California was the only state with a prior history of a high level of participation to exhibit significant growth last year.

**Exhibit 22: Growth of Collections Post CA Mercury Collection Act**
In 2013 TRC was able to reverse the trend line (see Exhibit 23) of decreasing collections and experienced significant growth. TRC attributes this to the following factors:

- An expanded and better targeted paid advertising effort that was able to specifically target the California market.
- An increase in wholesaler participation driven by TRC outreach efforts targeting senior management of leading distributors. The fact that DTSC enforcement staff inspected locations in July 2013 lent credibility to TRC’s message that the risk of enforcement was real and substantial for continued non-compliance with the obligation to participate in the program.
- The successful trial of targeted, non-monetary incentives for the return of waste mercury thermostats.
- The likely one-time benefit of recovering thermostats from inactive locations during the end of year sweep of locations.

Exhibit 23: Trend in Collections 2011-2012

TRC offers the following additional observations of the California program:

- HVAC wholesale distributor participation remains essential to overall program success. Distributors remain the primary collection location for the program and active participation drives collections. At the end of 2013 TRC maintains records of approximately 370 HVAC wholesale locations having received one or more TRC recycling containers. Based on an analysis of the California market TRC believes that, with a few exceptions, all major HVAC distributors are enrolled in the program. However, participation at the branch (store) level remains variable. TRC collection data and field work indicates most HVAC wholesale locations demonstrate a minimum level of compliance with California law. In 2013, 295 wholesale locations returned one or more containers.

While up from previous years, there remains a subset of locations that demonstrate disinterest in participating in the program.
TRC expended considerable effort to engage distributors to get participation to this level. At this juncture TRC plans to focus resources on those distributors that engage and actively support the program. TRC believes additional efforts to engage disinterested parties pulls resources away from more productive efforts, and for those not participating in the program TRC respectfully suggests this is now an enforcement issue rather than a programmatic one.

- TRC determined that targeted, non-monetary incentives can positively impact collections. “Recycle. Scratch. WinSM” stimulated additional returns at those locations that actively promoted the program. The program further demonstrated that:
  - Monetary incentives are not necessary, and something as simple as a reasonable chance to win a $5 gift-card for lunch is an effective incentive.
  - Wholesaler engagement is essential. The locations that implemented the program and marketed it saw increased collections. Those that did not promote the program saw no real benefit.
  - Incentive programs do not have to be continuous. For example, many of the locations maintained a higher level of collections after program termination.

- TRC representatives visited over 240 California collection locations during the last quarter of the year that had not returned a container within 12 months in part to stimulate the returns before year’s end. In contrast, TRC tactics in Illinois were different. TRC mailed correspondence to the senior management of market leading distributors in the state. Correspondence included a listing of locations and date of return (or lack of return). Additionally, TRC staff contacted all locations that had not returned a bin within 12 months by phone. Impact on container returns from this effort was similar; albeit at significantly lower cost than having representatives physically visit a location.

TRC sees value in the limited use of field work (see modifications below), but results indicate contact with collection locations via mail and phone is just as effective in stimulating the return of collection containers. Moreover, there is no evidence to date (including visits in other states) that location visits by TRC representatives stimulate participation among locations that are not actively participating. TRC has determined senior management (most often on a regional basis for larger distributors) intervention is necessary to address location non-participation.

- A high percentage of HVAC distributors now exhibit compliance with California law. Yet the program fell short of the performance requirement. This suggests that distributors and others within the channel will need to do more than required by current law. TRC efforts will focus on certain distributors to raise program visibility and incentivize technicians to return waste mercury thermostats to their locations. A secondary objective of this strategy is to create competitive pressure within market and incent additional distributors to actively support the program.
• Direct participation by larger HVAC contractors remains low in California. TRC plans on more active recruitment of this market segment. Technicians from larger contractors visit wholesale distributors less frequently than those from smaller contracting business and TRC sees an opportunity to increase collections by engaging this market segment.

• HHW participation in the program remains problematic. A review of DTSC form 303 data suggests problems with data reporting from local governments. Some locations report receipt of significant quantities of mercury wastes, but TRC has no record of receipt despite the fact TRC has provided the location free containers. Inversely, TRC receives thermostats from HHW programs that are not included in form 303 data.

• The new requirement for C-20 contractors to provide CSLB numbers when returning mercury thermostats has caused confusion and for the most part seems to be widely ignored. Implementation of this requirement is not practical and it has been suggested by a number of locations that it is a barrier to participation. As such, TRC recommends DTSC eliminate this requirement.

Program Modifications

TRC has implemented a number of significant modifications to the program in 2014. They include, but are not limited to:

• The addition of one full-time staff person. TRC added an account representative position in January 2014. This staffer’s primary responsibility is to increase wholesale distributor participation in the program and implement certain program modifications in California. This staff person will spend a portion of his time in the field visiting collection branch locations to provide technical assistance and verifying participation. Additional duties include engaging national and regional management of targeted distributors in California and implementing the planned loyalty program.

This new staff person has extensive HVAC experience, having previously worked in the marketing department of a major mid-Atlantic distributor.

• The development of a technician loyalty program to both increase the number of program participants and frequency of mercury thermostat returns. Preliminary program details include:
  o Participants will receive a scratch card redeemable online for loyalty points.
  o Points are redeemable for brand-name merchandise and can be banked.
  o Minimum number of thermostats returned for merchandise will likely be eight. The more thermostats returned and points redeemed raises the value of merchandise options.
Points will expire for non-activity, incenting recurring participation.

Approximately eight market leading distributors with locations in all California markets will be invited to participate in this program.

Participating distributors will be required to implement the program at all branch locations and actively promote it.

TRC will directly market the program via paid and earned media.

TRC will audit returns by location and redemptions to protect against fraud and abuse of the program.

TRC will randomly visit participating locations to verify participation and adherence to program policy and procedure.

Program will be evaluated for effectiveness in first quarter 2015.

In addition to the HVAC technician incentive program and staff changes, TRC has firm plans for the following enhancements to the program:

- **Website redesign:** TRC launched an updated website in March. Changes include: updated search results to improve customer experience when searching for collection locations, a state map for easier navigation to specific state programs, a new blog and TRC program highlights section, better integration of participating wholesaler brands in the site, and search engine optimization. The redesign is also the first step towards optimizing the site for smartphones and tablets.

- **Dump Bin Displays:** TRC will develop a “wrap” of its collection container for use by wholesale distributors. The purpose is to raise the visibility of program at HVAC wholesale distributors.

- **Update Direct Mail:** Direct mail remains the primary means to directly communicate with California contractors and technicians. TRC is currently reviewing its direct mail program. TRC anticipates significant changes which may include better targeting of mail (focusing on smaller “owner/operator” contractors with postcards, use “lumpy” mail to reach key contacts at larger “professional dealers”), email, changes in the size, timing and frequency of mailings.

- **More frequent collection location contact:** TRC plans to implement rolling mailed reminders to California collection locations that have not returned a bin within 12 months. TRC plans to start this program by the end of March 2014.

- **Implement Customer Relation Management (CRM) software:** TRC plans to implement CRM software. The software aligns with the addition of the account representative position. TRC will more aggressively sell the program in 2014, targeting specific distributors and contractors in key markets. Additionally, the software will enable TRC to better document program activities.

TRC also plans on continued adjustments to its paid advertising strategy. With the addition of a full-time marketing person last year, TRC’s 2014 advertising campaign is well underway with many planned insertion orders completed. Moreover, TRC will be updating its online advertisements this year in an effort to increase click-through rates.
Some additional planned advertising and promotion (subject to change) include:

- Feature TRC program training video on ACHRNews.com on their “How-To” video section (New)
- Contracting Business Magazine dedicated Email blast to subscribers in states with disposal bans, including California (New)
- Banner ad 3x in HVACR Business Magazine’s Enewsletter, a monthly newsletter that reaches more than 10,000 opt in readers each month (New)
- Expand frequency of Google Adwords/pay-to-click campaign and geo-target the campaign to specific state landing pages enabling TRC to incorporate state-specific messaging.
- Expanded Ad placements in The HVAC Goldenwest to target the HVAC channel specifically in California.
- Revamp the “Big Man on Planet Award” program to include an opportunity for more winners, with the goal of doubling the level of participation.
- Continue to exhibit at regional and key national industry events.
MEMORANDUM

To: Branch Manager
From: Neisha Johnson
Operations Manager
Date: June 20, 2013
Subject: New California regulation requires C-20 and C-21 contractors to provide CSLB License numbers to mercury thermostat collection locations

The Department of Toxic Substances Control (DTSC) finalized its mercury thermostat regulation on May 15, 2013. This new regulation is effective July 1, 2013.

The regulation places additional requirements on C-20 HVAC and C-21 Demolition contractors and business collecting waste mercury thermostats through manufacturer sponsored program(s). Beginning July 1, these contractors or their employees, upon delivering a waste mercury thermostat to a collection location, must provide the location with their contractors State Licensing Board Identification Number (CSLB). Alternatively, contractors or their employees may deliver their waste mercury thermostats in a plastic bag or other container and print the CSLB number on the bag or on a label attached to the bag or container.

This regulation also requires manufacturers or their collection program to report these numbers on an annual basis to the agency.

To assist wholesale distributors collecting thermostats through the TRC program, we have developed a simple form to facilitate compliance with this new regulation.

Attached is a photocopy of a form to record and transmit contractor identification numbers to the program. TRC suggests either your staff collect the numbers from customers (assuming they are licensed by CSLB) or provide a means for your customers to self-report.

TRC requests that completed forms be returned within its containers. After July 1, TRC will provide additional two-part carbonless forms in all containers returned to California wholesale and contractor locations. This is to assist you in collecting this information and maintaining records to demonstrate compliance with this regulation. As a reminder, all HVAC wholesale distributors in California are required to collect waste mercury thermostats. Distributors who don’t are prohibited from selling any thermostat and may also be subject to significant civil penalties.

If you have specific questions related to this new regulation and your business’ obligations under this regulation, we suggest you contact DTSC for further guidance. If we can be of further assistance, please contact us toll-free at 1.888.266.0550.

Enclosure:

Printed on 100% post-consumer waste.
Appendix B: HARDI Email Regarding CSLB Regulation

From: Jon Melchi [mailto:jmelchi@hardinet.org]
Sent: Tuesday, July 23, 2013 2:58 PM
To: hardi_list@mailmanager.net
Subject: Mercury T-Stat Information

Dear California-based HARDI member,

It has come to our attention that the State of California plans to be more aggressive in enforcing requirements upon distributors to collect mercury thermostats. As such, our partners at the Thermostat Recycling Corp (TRC) have provided us with a few documents (CA FAQ & CSLB Memo) which may interest you.

Additionally, you and your team are invited to dial in to a conference call on this very topic on Wednesday, July 31st at 10:30am (Pacific Time).

Dial-In: 866-503-4605
Conference Code: 8639023431

Please let me know if you have any questions.

Best,

Jon Melchi
Director of Government Affairs
HARDI
614-345-9140
Effective July 1: New Regulations on Mercury Thermostat Collection in California

By Emily Rogers | June 21, 2013 | Leave a Comment

Over the past two years, ACCA has been tracking and participating in a rulemaking going through the California Department of Toxic Substances Control. This rulemaking was started under direction of 2008 legislation aimed to create new requirements that would increase the recycling of mercury-added thermostats throughout the state.

ACCA’s previous work had assisted in removing excessive requirements on contractors. The first draft of the rulemaking would have required a contractor to report the date when each out-of-service mercury-added thermostat was removed, location of removal, date of disposal, and the location where each mercury thermostat was disposed. The contractor would have also been required to keep these records on-site for three years. The cost of non-compliance or improperly reported records could have resulted in penalties of up to $25,000 per citation per day. Luckily by the second round of public comments, those sections had been removed. (See my previous blogs from 2012 and 2011).

The rule became final last month, and the effective date for compliance is July 1, 2013. The final changes create new reporting rules and performance requirements for manufacturers and slight changes at collection locations and for HVACR contractors.

The change for contractors will be at collection locations. The new rule states the following:

“Upon delivery of out-of-service mercury-added thermostats to a collection location pursuant to California Health and Safety Code section 25214.8.15, a HVAC contractor or an employee of an HVAC contractor shall provide the business operating the collection location with the contractor’s Contractors State Licensing Board Identification Number.”

It goes on to further state that compliance with this can be accomplished by giving the CSLB number at drop off or by printing the number on the bag or container, or on a label affixed to the bag or container that contains the out-of-service mercury-added thermostats.

The Thermostat Recycling Corporation (TRC), a non-profit organization that facilitates and manages the collection and proper disposal of mercury-containing thermostats operating on behalf of the manufacturers, has created a form to facilitate in the collection of CSLB numbers and it looks like this. As a contractor you need to be prepared to put your number on the form at drop off or have your number affixed to the thermostat.

These contractors ID numbers, along with other information, is required to be reported by the manufacturers to the department annually. For more information, read the all text of the final regulation.

Emily Rogers is ACCA’s Director of Energy Policy.
December 18, 2013

Dear [Name],

Thermostat Recycling Corporation (TRC) is providing a copy of the enclosed poster to all permanent Household Hazardous Waste (HHW) facilities in California in an effort to raise awareness and increase participation in TRC’s stewardship program. The California Department of Toxic Substances Control (DTSC) recently provided TRC with data on mercury thermostats collected by HHW programs in California between July 1, 2012 and June 30, 2013. Amazingly, only one of the twenty programs that reported collections of mercury thermostats to California EPA indicated they were participating in the TRC program. TRC’s own records show that only twelve HHW programs have returned TRC bins in 2013.

This is despite the fact the TRC program is completely cost free for local governments in California. The program provides recycling bins at no-cost to HHW programs and covers all recurring costs to transport and dispose of waste mercury thermostats. Even more perplexing is that more than 70 HHW programs in California have ordered TRC bins but are not taking advantage of the program by simply sorting mercury thermostats from other mercury waste and shipping the thermostats to TRC.

To get information about your facility’s participation in TRC’s stewardship program, learn more about the benefits of the program, or to order TRC bins please contact us toll-free at 1-888-266-0550 or via email at trc@thermostat-recycle.org.

Sincerely Regards,

Mark Tibbetts  
Executive Director
Appendix E: Training Video Letter to ACCA Leaders

August 29, 2013

Dear [Name]

Thermostat Recycling Corporation (TRC) has created several short (less than 3 minutes) training videos to provide step-by-step guidance to its mercury thermostat recycling program. These videos are a great learning tool on how to effectively use the program for easy and free disposal of mercury waste thermostats.

For California contractors and their technicians the "contractor with laws" video illustrates the importance of recycling mercury thermostats and how easily contractors can bring ones they remove from service to their participating HVAC wholesaler to recycle for free. The second video serves as a tutorial for participating HVAC collection locations by detailing procedures, safety precautions, and best practices to ensure the program runs smoothly and effectively.

We have enclosed five CDs that contain these videos for your use. We encourage you to incorporate these videos into your training programs. If you need additional copies please let us know and we can provide more. The videos are also available on TRC’s website (www.thermostat-recycle.org) and TRC’s YouTube channel (http://www.youtube.com/user/ThermostatRecycling).

Please do not hesitate to contact me if you have any questions. I may be reached at 571-447-4311, or via email at Christyn.Zehnder@thermostat-recycle.org.

Sincerely Regards,

Christyn Zehnder
Senior Manager of Marketing and Communications