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June 19, 2008

Daniel P. Peters, P.E.
Sr. Environmental Engineer
Covanta of SEMASS
141 Cranberry Highway
West Wareham, MA 02576

Dear Mr. Peters:

Thank you for the 2007 Material Separation Plan 4 ("MSP4") Annual Report. The Massachusetts Department of Environmental Protection ("MassDEP") has reviewed the Covanta SEMASS ("SEMASS") facility report and found that the report included all relevant elements and provided good summaries of your MSP4 programs.

The SEMASS report will be posted on MassDEP's website before the end of the month along with a summary comparison of MSP results across facilities. We look forward to working with you on the continued implementation of MSP4.

As a reminder, as stated in our letter to you dated May 15, 2008, a MSP4 plan budget for CY09 is due by July 1, 2008.

Sincerely,

Greg Cooper, Deputy Division Director
Consumer Programs
Bureau of Waste Prevention

cc: Patti Howard, Covanta SEMASS
Tina Klein, MassDEP



2007 Annual Report

Material Separation Plan For the Diversion of Mercury

SEMASS Resource Recovery Facility Rochester, Massachusetts

February 2008

Prepared by:

Covanta of SEMASS, L.P.
141 Cranberry Highway
West Wareham, Massachusetts 02576



Material Separation Plan – 2007 Annual Report

I. INTRODUCTION

The SEMASS Partnership is pleased to submit its seventh Material Separation Plan (MSP) Report for the SEMASS Resource Recovery Facility (SEMASS RRF) covering the 2007 calendar year. The SEMASS Partnership (SEMASS) owns and operates the SEMASS RRF in Rochester, Massachusetts. Covanta of SEMASS, L.P. is the managing general partner of SEMASS. SEMASS provides solid waste processing and disposal services for more than sixty contracted communities located primarily in southeastern Massachusetts, Cape Cod, and the Boston vicinity. The SEMASS RRF receives and processes approximately 1,000,000 tons of solid waste annually. Electricity created from the processing of solid waste at the SEMASS RRF is sufficient to power approximately 75,000 households. Between 45,000 and 50,000 tons of recyclable ferrous and non-ferrous metals are typically reclaimed each year from waste processing at the SEMASS RRF.

The MSP activities for the 2007 calendar year were implemented in accordance with Material Separation Plan 4 (MSP4). MSP4 was approved by the Department of Environmental Protection (DEP) on December 15, 2006. The document was developed to guide SEMASS' continuing effort to educate and assist the SEMASS customer base in meeting the goals of the program. These goals include: 1) the identification of products in the solid waste stream that contained significant quantities of mercury and which were frequently disposed; 2) the dissemination of instructional and outreach support to educate the public about the reasons to reduce mercury in the waste stream and how to recover mercury-containing products; 3) to aid the SEMASS customer base in implementing removal and recycling programs, while supporting or supplementing existing programs; and 4) management of MSP activities involved with the above stated goals in a cost effective manner.

On March 31st, SEMASS sustained significant damage to our facility due to a catastrophic fire. Our waste handling facilities, computer and telephone networks, and support facilities were heavily damaged. The office location and storage areas used by the MSP Program Coordinator were damaged beyond repair. Nonetheless, SEMASS persisted in our diligent efforts for promotion and execution of the MSP program. All facilities have been rebuilt and repaired and are fully functional. We apologize for any communication difficulties that arose after the fire and appreciate our communities and customers' patience during the reconstruction period.

II. PLAN ACTIVITIES

1.0 IWSA EDUCATION AND OUTREACH.

The Integrated Waste Services Association's activities in support of Massachusetts' Waste-to-Energy Facilities' Materials Separation Plan for 2007 continues the direction set in prior years. This report describes the activities involved in the design, implementation and operation of

IWSA's Program in support of the five waste-to-energy plants operating in Massachusetts and their Mercury Recovery Programs (MRP). Each facilities' MRP is community focused, locally based and operated; and the IWSA activities are designed to support in a coordinated fashion the MRPs on a regional basis.

IWSA Regional Program activities for 2007 consisted of the following elements:

- Radio Advertising for "Keep Mercury From Rising"
- Evaluation & Analysis of the "Keep Mercury From Rising" campaign
- Revision & Update of Website www.keepmercuryfromrising.org
- Availability of print and video materials to facilities, the public and media

Objectives. The Integrated Waste Services Association coordinated the regional education / outreach program for five Massachusetts' waste-to-energy facilities including facilities located in Saugus, North Andover, Millbury, Haverhill, and SEMASS.

In 2007, the Regional Outreach Plan supported individual facility programs by the continued promotion of the media campaign, "Keep Mercury from Rising". This campaign included two waves of radio advertisements designed to reach the broadest possible audience. The campaign used targeted advertising educating the listeners about the concerns related to mercury. The advertisements also encouraged residents to contact their local health departments to receive more information about mercury and find out where in their communities they could dispose of mercury containing devices.

The objectives for 2007 were met and included the following:

- The Regional Outreach Program continued to raise awareness about mercury-containing products in the home and the proper handling and disposal of these products;
- The Program provided information and promote local recycling events;
- The Program continued to build an integrated communications program that leveraged opportunities for incremental, free media, and worked synergistically with the efforts of individual waste-to-energy facilities.

Approach. A public survey was completed in mid-2007 measuring the effectiveness of the educational campaign "Keep Mercury From Rising." Findings from this survey guide the development of the Regional Program. The website, www.keepmercuryfromrising.org, continues to be more user-friendly, and includes more contact information and contractor material, as well as continuing to provide information and assistance with recycling of mercury-containing products to the general public. IWSA produced five videos in 2003 for each waste-to-energy plant, and these videos are available on the website. The videos show the unique and effective programs now in place to keep mercury containing products out of the waste stream.

A public survey was completed in mid-2007 measuring the effectiveness of the educational campaign "Keep Mercury From Rising." Findings from this survey guide the development of the Regional Program. The website, www.keepmercuryfromrising.org, continues to be more

user-friendly, and includes more contact information and contractor material, as well as continuing to provide information and assistance with recycling of mercury-containing products to the general public. IWSA produced five videos in 2003 for each waste-to-energy plant, and these videos are available on the website. The videos show the unique and effective programs now in place to keep mercury containing products out of the waste stream.

1.1 Advertising

IWSA developed a new radio spot for its wave of advertisements in 2007. The new spot capitalized on the educational outreach in past years and offered listeners a proactive message on what to do with items that contain mercury. Set to a catchy jingle, the advertisement reminds people which products are most likely to contain mercury and “Don’t Put Mercury in the Trash!”. The advertisement directs listeners to the Keep Mercury From Rising website or their local health departments for more information. The radio spot is available for download on KeepMercuryFromRising.org.

IWSA purchased two separate two-week radio buys in 2007 and advertised on radio stations that broadened our geographic outreach. Radio is a targeted medium that provides cost-efficient mass communication and built frequency of message delivery.

The first three-week radio buy was implemented May 28 through June 10, 2007. Markets targeted by the radio buy were Boston, Worcester, New Bedford, and Cape Cod. In order to maximize the dissemination of the message, IWSA purchased another two-week radio buy that aired September 24 through October 7, 2007. Based on the results of the survey conducted after the radio ad, we believe the plan was successful in increasing public awareness.

1.2 Web Based Tool.

The website, www.keepmercuryfromrising.org, is user-friendly and provides additional information:

The site provides navigation under the masthead and incorporates information in the following categories:

- Home – includes background on Keep Mercury From Rising and information on calling 1-866-9MERCURY for more information about safe disposal options.
- Drop-off sites – provides information on where to drop-off mercury containing items.
- Spills – provides a variety of information on actions one should take in the event of a mercury spill.
- FAQs –provides answers to five common questions.
- Video/Audio – provides the five videos developed by the facilities as well as an audio file of the new radio advertisement that aired in 2007.
- Links – links were proactively sought and added to this page and efforts were made to increase the number of other website that link to <http://www.keepmercuryfromrising.org>.

- Contractors - contains useful information and links for sources of mercury related information.

1.3 Print Material.

IWSA, in conjunction with Covanta Energy and Wheelabrator, developed fresh, new print materials in 2007 to reinvigorate the regional campaign. The new materials include posters identifying items containing mercury and where you can bring those items in for exchange. IWSA also developed an eye-catching handout in the shape of a trash can that opens and discusses the types of mercury containing items that should not be put in the trash. These trash can flyers were extremely popular and demand was high. More than 70,000 of these flyers were printed in 2007.

1.4 Video.

The five-minute “Keep Mercury from Rising” educational video was completed for each facility in 2003. The video explains the need to recycle mercury-containing products and the efforts undertaken by the state of Massachusetts and waste-to-energy facilities to reduce the amount of mercury entering the environment.

The video now is being used at the five waste-to-energy facilities for educational purposes during tours and other meetings. Copies of the video have been made available to local cable access television stations and a “B-roll” of visuals and sound is available for media covering MSP events. Copies of the video also have been given to local public officials to be shown at meetings, schools, senior citizen centers, and other organizations that would benefit from viewing the video. As noted above, the video also may be viewed at the website.

1.5 Evaluation Tool.

The effectiveness of the regional education campaign is in large part measured by an annual research survey. The polling is designed to measure positive changes in public attitudes and behaviors, as well as the receptiveness of the message. The survey questionnaire was in the field during June 2007, and consisted of 400 completes, providing a 95% confidence level.

The Spring 2007 Massachusetts Study displayed an expected mix of perspectives: on the one hand, we measured continued improvement in mercury awareness and responsibility; however, we observed some warning signs of complacency, skepticism, and price resistance for alternative products without mercury.

Recycling participation is enjoying its highest two-year average (85%) in the past seven years. Over half (53%) of all households said they used *several bins* for different types of products (plastic vs. newspaper). More people would properly dispose of a broken mercury-containing item with a significant decline in the number of people throwing it in the trash. Circular wall

thermostat awareness maintained 65% awareness vs. 58% in the year 2005. Fluorescent light bulbs, although only a point higher than last year, are at 47% awareness vs. 29% in the year 2001. Respondents gave owners of mercury products a higher responsibility number over last year's number, while much lower responsibility ratings were given to waste companies and the government.

While 89% of respondents considered mercury to be a hazardous material, 89% of respondents do not look for how much mercury is in household products before purchased, causing a potential dangerous disconnect. A more casual attitude towards mercury was observed, as fewer respondents (50% today vs. 61% in 2006) would immediately stop using a mercury item in the home, if labeled, and would wait to replace it, as needed. Signs of a tighter economy were seen in the willingness of people to find cash to pay for an equivalent thermostat that did not contain mercury. Last year, more would pay \$45 for a non-mercury replacement of a \$30 circular wall thermostat. This year, more chose the \$33 replacement threshold.

As was found in MSP3, it was determined that the radio ads reached a greater target audience than the print advertisements in newspapers. IWSA purchased two separate three-week radio buys in 2007 and used the same radio stations that had broadened our geographic outreach in 2006. Radio is a targeted medium that provides cost-efficient mass communication and built frequency of message delivery.

2.0 LOCAL EDUCATION AND OUTREACH.

2.1 Community and School Outreach.

Local education and outreach has proven to be an important component of executing the MSP. By making the residents within SEMASS' contracted communities more aware of how to properly dispose of mercury-containing products and elemental mercury, and of the various Activities offered by the MSP, the greater the likelihood of success.

A bullet summary list of the various local education and outreach activities completed by SEMASS during 2007 is provided below:

- On March 25th, SEMASS sponsored a Council of SEMASS Communities (COSC) meeting with our long-term communities and provided an update of the MSP program results and solicited input on program specifics.
- SEMASS has conducted tours of our facility during which we educate participants regarding mercury awareness. Because of the fire that occurred on site on March 31, 2007, this outreach program was severely curtailed for most of the year. SEMASS resumed tours in November and December and will increase the quantity of tours during 2008. Tours that were completed include:
 - The Plymouth Cub Scouts, Troop 47, Pack 7 on January 17th

- Representatives from the Center for Ecological Technology (CET) and attending town representatives conducted a tour on December 7th in conjunction with Mercury Awareness Training held at SEMASS.
- SEMASS worked with and supported the Cape Cod Cooperative Extension (CCCE) and its staff regarding outreach to schools.
- SEMASS, in cooperation with Covanta Haverhill, manned a booth at the Massachusetts Municipal Association Trade Show and Conference on January 11th and 12th of 2007, at the Hynes Convention center in Boston, Massachusetts. This continues to be a valuable tool to reach a multitude of communities to talk about the MSP program and the various tools available to them to educate and manage mercury in the waste stream.
- In June of 2007, a mass mailing was sent to the sixty (60) SEMASS communities highlighting various educational and funding programs available to them via the MSP program. Communities were given the opportunity to respond on a menu style form requesting information, funding or outreach tools to further the goal of the MSP.
- On July 12th, SEMASS was invited to speak at the McDevitt Elementary School in Waltham, MA, regarding recycling in the home, including how to safely dispose and recycle items in the home that contain mercury.
- On October 6th and 7th, SEMASS manned a booth at the Cranberry Harvest Festival in Carver, MA for the outreach and education of mercury awareness in the waste stream. Over 10,000 attendees from communities in southeastern Massachusetts and as far away as the Netherlands came to the booth to learn about mercury containing items in the home and how to safely dispose of them at the end of their useful life.
- On November 6th, SEMASS worked with Weymouth Educational Television Company (WETC) to film the processing of waste at the facility. This film was used to educate the residents of Weymouth about their MSW and its use as a fuel to make electricity. The raw footage from this program will be used to create a program for all SEMASS community cable stations to air as an educational program alerting citizens to the danger of throwing household items containing mercury in the trash. Work on this project is expected to be complete in 2008.
- On December 5th, SEMASS hosted an appreciation dinner for the volunteers from the UMass Cape Cod Cooperative Extension (CCCE) for their efforts at Household Hazardous Waste collection sites and ongoing thermometer, thermostat exchanges. We have found it to be a useful tool to get feedback in an informal setting to improve the efficacy of the MSP program as it pertains to the Household Hazardous Waste collection and public education components.
- On November 14th, SEMASS participated as the speaker at the Catholic Women's Guild at the Wamputta Club in New Bedford, MA, on the topic "Don't Throw Mercury in the Trash". Represented at this occasion were residents from Marion, Mattapoisett,

Fairhaven, Fall River, and New Bedford. On an ongoing thermostat exchange program has been established for the members of this club.

- On November 8th, SEMASS participated in the Sturdy Memorial Employee Appreciation Vendor Fair to provide outreach and educational materials related to the MSP program and mercury awareness in cooperation with the city of Attleboro Board of Health.
- On September 10th, SEMASS provided the Town of Stoughton, MA, with three-thousand (3,000) flyers titled “Don’t Throw mercury in the Trash” to be distributed to the student population to coincide with their Household Hazardous Waste collection day on September 15th.
- During the 3rd Quarter, SEMASS acquired outreach materials with updated contact information and the Covanta logo for use in MSP4 outreach activities and to restock existing inventories that were lost due to fire damage.
- SEMASS provided funding and information during October to the Town of Braintree, MA, for use in their newly developed website to educate the residents about the recycling program, including proper disposal of mercury containing items. The web site can be seen at www.braintreerecycling.org.

2.2 Business Outreach.

In 2007, SEMASS’ outreach to businesses was expanded from principally using Pozitive Environmental Solutions, Inc. (PESI) for the location of mercury-containing products and elemental mercury to include the Center for Ecological Technology (CET) to expand the ongoing education and reclamation of mercury-containing items in the business sector.

Additional business outreach efforts were conducted by SEMASS as part of Task 3.0 activities including: Medical and Dental Facilities (see Section 3.1), the Thermostat Program (see Section 3.4), the Boatyard Marina Program (see Section 3.7), and the Business Reimbursement Program (see Section 3.9). Refer to Section 3.0 for a discussion of those business outreach and reclamation efforts. PESI’s efforts were focused on the search and location of businesses with potentially large sources of mercury. A number of businesses were identified and mercury amounts were reclaimed under this task. A bullet list of activities is below.

- SEMASS has maintained memberships in various Chambers of Commerce and business associations to foster education and outreach to a variety of business in the SEMASS communities through “Business After Hours” and fundraising opportunities.
 - Cranberry Country Chamber of Commerce that serves the towns of Bridgewater, Carver, Halifax, Lakeville, Middleboro, Plympton, Raynham, Rochester, and Wareham.
 - Waltham Chamber of Commerce
 - Tri-Town Business Association serving Rochester, Mattapoisett, and Marion.

2.3 Mercury Handling and Awareness Training.

Our mercury awareness, handling training contractor, HAZMATEAM, Inc. of Hudson, NH, provided multiple training sessions for SEMASS communities at various locations during 2007. Each training session was approximately 2 ½ hours in duration and covered various aspects of mercury including its physical characteristics, health effects, handling and storage, spill management, and its effect on the environment. The training was available to anyone from our SEMASS communities such as school representatives, DPW personnel, and emergency response personnel. A mailing was sent out in October for the training sessions on November 26th and December 7th. Because of the fire incident in the Spring of 2007, a larger session was planned to allow communities to view the SEMASS facility after reconstruction.

HAZMATEAM, Inc. completed two (2) training sessions for SEMASS communities. A total of thirty-three (33) persons from multiple communities and organizations attended and completed these training sessions.

- November 26th at the SEMASS Resource Recovery Facility in Rochester followed by a tour of our facility.
- December 7th at the SEMASS Resource Recovery Facility in Rochester followed by a tour of our facility.

A number of communities have asked for additional tour and speaking opportunities following the training sessions to better educate the members of their communities. Tours will commence in the Spring of 2008, and speaking engagements will begin in February of 2008 at the Chatham Library.

3.0 MERCURY REDUCTION / RECYCLING PROGRAMS.

3.1 Medical and Dental Facilities.

Task 3.1 activities during 2007 focused primarily on the collection and recycling of mercury-containing sphygmomanometers (blood pressure cuffs/monitors) with replacement of mercury-cuffs with non-mercury units. In the search for these devices, other mercury-containing products were also typically identified and reclaimed. A key target area was smaller veterinary and health care clinics led by our consultant, Center for Ecological Technology (CET). During November, CET sent out a mass-mailing to forty-nine (49) veterinary and one-hundred and thirty-five (135) medical facilities within the SEMASS communities. Follow-up will continue into 2008. :

- **Town of Mattapoisett** On December 12th, SEMASS assisted in the recycling and reclamation of eighteen (18) sphygmomanometers from the Healthcare for Women Medical Clinic.

- **Town of Attleboro.** SEMASS worked closely with staff at Sturdy Memorial Hospital in November to reclaim and recycle one-thousand three-hundred twenty (1,320) linear feet of fluorescent bulbs, thirty-two (32) Compact Fluorescent Lamp, one-hundred seventy-two (172) circular fluorescent lamps and ninety-three (93) mercury thermostats. SEMASS also provided outreach materials and non-mercury containing thermometers at their annual employee appreciation wellness trade show.
- **Town of Wrentham** SEMASS worked closely with staff at Pediatric Specialists to reclaim and recycle three (3) sphygmomanometers on December 5, 2007.
- **Town of Middleboro** On December 12th, SEMASS assisted in the recycling and reclamation of one (1) blood pressure cuff from the Angeles Psychiatry office.
- **Town of Bridgewater** On December 26th, SEMASS assisted in the recycling and reclamation of eleven (11) sphygmomanometers from the Primary Care Associates.

In 2007, support from the SEMASS MSP Program was requested by the Massachusetts Department of Mental Health (DMH) to assist in the pick up and recycling of fluorescent bulbs and miscellaneous mercury-containing items that had accumulated in three area facilities located in Southeastern Massachusetts. SEMASS will continue to work with DMH to facilitate an ongoing recycling program for fluorescent bulbs and sphygmomanometers that have reached the end of their useful life. Many of the residents in our contracted communities benefit from, or support these DMH facilities noted below:

- On December 26th, SEMASS contracted with Complete Recycling Solutions (CRS) for the pick up and reclamation of 14,490 linear feet of fluorescent bulbs, seven-hundred twenty-four (724) Compact Fluorescent Lamps (CFL's), and forty-two (42) circular lamps from the Taunton State Hospital located in Taunton, Massachusetts. Packaging was provided for future lamp recycling and reclamation.
- On December 26th, SEMASS contracted with CRS for the pick up and reclamation of seven-hundred seventy-six (776) linear feet of fluorescent bulbs, eleven (11) Compact Fluorescent Lamps (CFL's), and forty-eight (48) circular lamps from Brockton Multi Service Center located in Brockton, Massachusetts. Packaging was provided for future lamp recycling and reclamation.
- On December 26th, SEMASS contracted with CRS for the reclamation of two-thousand four-hundred thirty-two (2,432) linear feet of straight fluorescent bulbs from the Corrigan Mental Health Center located in Fall River, Massachusetts. Packaging was provided for future lamp recycling and reclamation.

SEMASS will continue to follow-up with any elemental mercury inquiries from dentists, orthodontists or other dental offices going forward under this task.

3.2 Thermometer Exchange Programs.

SEMASS continued to offer the communities opportunities for exchanging glass fever thermometers containing mercury with digital thermometers that were purchased by SEMASS. Activity on this task continues to be in demand and thermometers remain the most commonly recognized mercury-containing device. To inform the SEMASS customers of this opportunity, various communication methods were used throughout the year including presentations at Council of SEMASS Communities (COSC) meetings, training sessions, informational mailings, telephone calls and personal meetings with community representatives/officials. SEMASS used these communication tools to advise and provide its customers with the necessary information to assist them in implementing a thermometer exchange program.

The communities employed various types of mercury thermometer collection and exchange events throughout the year. Some of these events occurred on a single day, while others continue to occur on an ongoing basis. Household hazardous waste collection days were also used by the communities as an opportunity for collecting mercury thermometers and exchanging them for digital thermometers.

Several of the communities also held thermometer exchange events on an ongoing basis at specified location(s) within a community. These locations varied, but were typically at the Board of Health offices, Town Halls, solid waste handling and transfer stations, and/or Department of Public Works yards. Communities that provided this type of thermometer exchange opportunity gave the local residents more opportunity to participate.

A bullet list of some of the various thermometer exchange events is detailed below:

- SEMASS supported the Cape Cod Cooperative Extension's (CCCE) efforts at ongoing thermometer exchange events on Cape Cod.
 - On June 11th, SEMASS provided three hundred (300) non-mercury fever thermometers and one hundred (100) Dunkin' Donuts'™ coupons.
 - On September 25th SEMASS provided two-hundred and fifty (250) non-mercury fever thermometers.
- On February 6th, SEMASS provided to the Town of Carver Board of Health fifty (50) non-mercury fever thermometers as part of the on-going exchange at the Town Hall.
- On October 31st, SEMASS provided to the Town of Hanson Board of Health fifty (50) non-mercury fever thermometers as part of the on-going exchange at the BOH.
- On October 17th, SEMASS provide to the Town of Seekonk Department of Public Works fifty (50) non-mercury fever thermometers as part of the on-going exchange at the DPW.
- On September 10th, SEMASS provided the Town of Stoughton three-hundred (300) non mercury fever thermometers for their thermometer exchange.

- On September 14th, SEMASS provided to the Town of Weymouth fifty (50) non-mercury fever thermometers for their thermometer exchange.
- On August 28th, SEMASS provided to the Town of Hanson Board of Health fifty (50) non-mercury fever thermometers as part of the on-going exchange at the BOH.
- On August 29th, SEMASS provided to the Town of Hingham Department of Public Works fifty (50) non-mercury fever thermometers as part of the on-going exchange at the DPW.
- On November 29th the Town of Acushnet was provided fifty (50) non-mercury fever thermometers.
- On December 11th the Town of Provincetown was provided one hundred (100) non-mercury fever thermometers as part of an ongoing exchange at the town hall.
- During March and December, SEMASS purchased additional quantities of non-mercury thermometers to restock existing inventory.

3.3 Community Reimbursement / Household Hazardous Product Event Support

SEMASS allocated funds to reimburse communities for the cost of contracting with a vendor to properly dispose or recycle mercury containing devices that they collected through various initiatives such as thermometer exchanges and household hazardous product days (HHP days). In addition to reimbursing the cost to reclaim these devices, SEMASS also supported the community household hazardous product or hazardous waste collection days, with various methods such as advertisements, brochures, etc. in an effort to promote their collection.

SEMASS conducted mass-mailings for mercury reimbursement to our list of community contacts in January and July. Additional reminders were provided to the representatives at COSC meetings. In these mailings, each community received a cover letter explaining the process and a reimbursement form to be completed prior to receipt of reimbursement for their mercury disposal/recycling costs.

- SEMASS issued reimbursement letter requests to contact persons of our sixty (60) long-term customers/ municipalities during two periods:
 - 1st Half 2007 Reimbursement. In January 2007, a letter request was issued to one-hundred and seventy-two (172) contact persons. This letter offered reimbursement for MSP-associated costs for the period of July 1st – December 31st, 2006.
 - 2nd Half 2007 Reimbursement. In September 2007, a letter request was issued to one-hundred and sixty-six (166) contact persons. This letter offered

reimbursement for MSP-associated costs for the period of January 1st – June 30th, 2007.

- SEMASS issued reimbursement payments to the following numbers of municipalities/long-term customers. Qualified expenses (mercury-related items) were reimbursed at 100% of costs.
 - 1st Half 2007 Reimbursement. Assistance was provided to eighteen (18) communities during the period with an overall participation rate of 30%. The same period in 2006 was 48%.
 - 2nd Half 2007 Reimbursement. Assistance was provided to nineteen (19) communities during the period with an overall participation rate of 32%. The same period in 2006 was 31%.
- The overall community reimbursement town participation rate for 2007 was 43% with 26 communities out of 60 participating in at least one of the reimbursement periods. For 2006 the participation rate was 55%, so this task remained relatively steady.

A critical part of Task 3.3 also includes support of household hazardous product (HHP) events. Below are some highlights of SEMASS efforts to support community HHP events during 2007:

- SEMASS provided funding support during February, May, and October to the Cape Cod Cooperative Extension for HHP advertisement of HHP events for all Cape Cod and Martha's Vineyard SEMASS communities (sixteen communities total) and reclamation of mercury devices. These HHP events ran throughout spring, summer and fall 2007.
- SEMASS provided funding support during May and October to the South Shore Recycling Cooperative (SSRC) for costs associated with printing of household hazardous waste event flyers. This provided HHP event support to fifteen (15) SEMASS communities for HHP events throughout spring, summer, and fall 2007.
- In conjunction with Task 3.2, SEMASS provided non-mercury thermometers, supplies (mercury awareness flyers, spills kits, buckets, etc.) and funding support to the Carver-Marion-Wareham Regional Refuse Disposal District for support of their community HHP and Thermometer Exchange Activities event held on May 9th. This event provided HHP and mercury product recycling opportunities for residents of Carver, Marion, Mattapoisett, Wareham, and Rochester.

Much of the mercury-containing products reclaimed as part of Task 3.3 consisted of large volumes of various fluorescent bulbs including straight bulbs, U-tubes, circular lamps, compact fluorescents and HID lamps. Several large sources of mercury, however, were reclaimed during the Household Hazardous Product (HHP) events and some of these are noted below: Substantial credit should go to the Cape Cod Cooperative Extension, their volunteers, and the various Town personnel who helped sponsor these events.

- **Town of Barnstable.** Reclamation of 9.8 pounds of elemental mercury, five-hundred fifty (550) mercury-thermostats, and fifty-two (52) industrial switches.
- **Town of Berkley.** Reclamation of fifty three (53) thermostats.
- **Town of Bourne.** Reclamation of 19.7 pounds of elemental mercury, two-hundred and seventy one (271) mercury thermostats, and five-hundred and sixteen (516) electrical/industrial switches.
- **Town of Dennis.** Reclamation of 51.6 pounds of elemental mercury, one-hundred and thirty-six (136) mercury thermostats, twelve (12) electrical switches and one (1) blood pressure cuff.
- **Town of Eastham.** Reclamation of twenty-four (24) mercury-containing sphygmomanometers, one-hundred and fifty-six (156) lab thermometers, and 16.8 pounds of elemental mercury.
- **Town of Falmouth.** Reclamation of ten (10) mercury-containing sphygmomanometers, 58 pounds of elemental mercury, four-hundred and eighty-two (482) mercury thermostats, and twenty-eight (28) industrial switches.
- **Town of Harwich.** Reclamation of two-hundred and four (204) mercury thermostats, three (3) sphygmomanometers, and five (5) electrical switches.
- **Town of Lakeville.** Reclamation of twenty-five (25) mercury thermostats, and 2 pounds of elemental mercury.
- **Town of Mashpee.** Reclamation of one-hundred and fifty-four (154) mercury thermostats, one (1) sphygmomanometer, and sixty-two (62) electrical/industrial switches.
- **Town of Middleborough.** Reclamation of 6.0 pounds of elemental mercury, sixty-six (66) mercury thermostats, and one (1) sphygmomanometer.
- **Town of Orleans.** Reclamation of one-hundred and twenty-two (122) mercury thermostats, and 7.0 pounds of elemental mercury.
- **Town of Sandwich.** Reclamation of one-hundred and fifty-five (155) mercury thermostats, and five-hundred thirty-seven (537) electrical/industrial switches.

In an effort to support some of the second tier communities in their efforts to identify, separate, and reclaim mercury in the waste stream, SEMASS assisted the following towns:

- In April, the Town of Seekonk requested assistance with the disposal of fifty-two (52) thermometers, five (5) thermostats, twenty-four (24) electrical switches, and 1.0 pounds of elemental mercury.
- In June, the Town of Blackstone asked for and received assistance with the disposal of seven-thousand eight-hundred (7,800) linear feet of fluorescent bulbs, one-hundred thirty-three (133) circular lamps, and twenty-four (24) thermometers received at their recycling center.
- In August, the Town of Mansfield Board of Health requested the pick up and disposal of twenty-two (22) thermometers and nine (9) thermostats from their office.
- In October, the Town of Brookline requested assistance with the disposal of thirteen (13) thermometers, five (5) thermostats, and one (1) sphygmomanometer located at their transfer station.

3.4 Commercial and Residential Thermostat Program.

This task concentrated on continuing efforts for the collection and reclamation of municipal, residential and commercial thermostats through the use of existing programs first established in MSP2. Some details of these efforts are outlined below:

- On June 14th, a mass mailing was sent to all SEMASS communities regarding the thermostat exchange program available to them as detailed in MSP4. Towns were eligible for replacement thermostats as well as funding up to \$200 to subsidize the cost of labor to have the thermostats replaced.
- During 2007, SEMASS provided to the Town of Middleboro one-hundred (100) non-mercury containing programmable and non-programmable thermostats for their on going exchange program. The Middleboro Board of Health manned an exchange booth at the Concerts on the Common during the summer months to allow residents of Middleboro to avail themselves of this program.
- On September 24th, SEMASS provided to the town of Norwell eighteen (18) non-mercury containing programmable thermostats for their on going thermostat exchange program.
- On October 26th, SEMASS provided to the Town of Randolph nine (9) non-mercury containing programmable thermostats for their on going thermostat exchange program.
- On November 28th, SEMASS provided the Town of Berkley eighteen (18) programmable thermostats for use in their ongoing thermostat exchange program.
- The Cape Cod Cooperative Extension (CCCE), their associated volunteer staff, and Town personnel led multiple, mercury reclamation efforts with various heating, ventilation and

air conditioning (HVAC) suppliers on Cape Cod. SEMASS provided support in the form of supplies, materials and reimbursement of 100% of the reclamation costs. CCCE's efforts included the following:

- **Town of Barnstable.** Four different HVAC firms
 - Bourque HVAC. Two separate collections on March 30th and September 14th that reclaimed: two (2) glass fever thermometers, one-hundred fifty (150) mercury thermostats, and one (1) electrical switches.
 - Soares. Reclamation on April 20th of twenty-three (23) mercury thermostats plus 1.75 pounds of elemental mercury.
 - Robies HVAC. Reclamation on July 6th of forty-five (45) mercury thermostats.
 - F.W. Webb. Reclamation on December 1st of two (2) mercury thermostats.
- **Town of Falmouth.** Two different HVAC firms
 - Bayside Mechanical. Reclamation on September 29th of thirty (30) mercury thermostats plus 0.1 pounds of elemental mercury.
 - Bennett Plumbing and Heating. Reclamation on December 7th of fifty (50) mercury thermostats.
- **Town of Sandwich.** Two different HVAC firms
 - All Gas Heating. Reclamation on November 21st of forty-five (45) mercury thermostats plus three (3) industrial switches.
 - Ready Rooter. Reclamation on December 7th of nine (9) mercury thermostats.
- **Town of Yarmouth.** Three different HVAC firms
 - Rusty's Plumbing. Reclamation on October 23rd of one-hundred thirty-three (133) mercury thermostats and 1.7 pounds of elemental mercury.
 - South Shore HVAC. Reclamation on October 23rd of one-hundred fifty-seven (157) mercury thermostats, and three (3) industrial switches.
 - A&B Canco. Reclamation of 2.5 pounds of elemental mercury.
- On October 31st, SEMASS provided plastic buckets, supplies, and contact information to the following Heating, Ventilation and Air Conditioning (HVAC) companies:
 - Advanced Air and Heating, Freetown, MA
 - Victory Heating and Air Conditioning, Bellingham, MA
 - Bay State Air, Stoughton, MA
- During 2007, SEMASS purchased a significant supply of digital, non-mercury thermostats (approximately 750) to build up inventory in preparation for MSP4 activities and expanded municipal thermostat exchanges during 2008.

3.5 School Clean-Outs.

Under MSP4, SEMASS teamed school clean-outs with Municipal thermostat activities to revitalize this task. In June 2007, a mass mailing was sent to the sixty (60) SEMASS communities (as mentioned in MSP4 Task 2.1) that provided information regarding funding for the replacement of thermostats with non-mercury containing thermostats in school buildings. Activities completed during 2007 include the following.

- Dighton-Rehoboth High School, North Dighton Mercury amounts reclaimed included two and a half pounds of elemental mercury, and eighteen (18) large lab thermometers.
- Dighton Middle School, Dighton Mercury reclaimed included Twelve (12) lab thermometers containing 1.7 pounds of mercury

Overall, requests for support and program activity under the school clean-outs task was significantly less than in past years. SEMASS will seek to revitalize this task through more direct outreach and visits during 2008.

3.6 Universal Waste Sheds.

During 2007, SEMASS placed various Universal Waste Sheds (UWS) in communities. Some of the communities received a UWS for the first time and others received an additional shed due to an anticipated expansion of an existing bulb program or the relocation of a recycling center. The demand and support requests for this task continued on a strong-level during 2007.

- The City of Attleboro received an additional UWS at the newly relocated recycling center on Pond Street.
- The Town of Freetown received their first UWS
- The Town of Braintree received an upgraded UWS in anticipation of their expanded collection of Universal Waste.
- The Town of Lakeville received an additional UWS for to expand their bulb collection program.
- The Town of Middleboro received a UWS for their expanded thermostat exchange program.
- The Town of South Yarmouth received a UWS for their expanding bulb collection program.
- The Town of Edgartown received a UWS for the MSP program.

- The Town of Brookline, a second tier community, was provided a UWS for their use in collecting Universal Waste.

3.7 Boatyards, Marinas, & Marine Facilities.

In accordance with the MSP4 plan, outreach efforts continued to target boatyards, marinas and other marine repair and/or maintenance facilities for mercury-containing products. Bilge pumps that are commonly used in boats often have mercury-containing switches that are frequently replaced when normal routine maintenance is performed on the boats. Furthermore, because many of SEMASS' contracted communities are located on the coast, this task represents a potential source of mercury that could be captured for reclamation.

Activity on this task was minimal during 2007. The majority of respondents utilize the Household Hazardous Waste Collection days organized by the Cape Cod Cooperative Extension (CCCE), and so it is difficult to segregate the amount of mercury containing items for this task from the amount collected via Task 3.3 Community Reimbursement and HHW Support . For 2008, SEMASS will utilize the efforts of an intern to conduct face-to-face outreach to marinas and boat repair locations on Cape Cod to re-invigorate this task.

3.8 Municipal Water Meter Reclamation.

During December 2007, a mass mailing was sent to municipal water or wastewater departments in the SEMASS communities with educational outreach information regarding the potential for mercury containing items in their department. A self addressed stamped reply postcard was included to facilitate participation in this program. To date, SEMASS has not received any notice of water departments that have mercury meters, but results are expected to be ongoing throughout 2008. Other mercury-containing items are being discussed, however. For example, the Town of Brewster, MA, has identified mercury-containing thermostats in their building. Follow-up on this will occur during 2008.

3.9 Business Reimbursement.

SEMASS' outreach to businesses was expanded to include the Center for Ecological Technology (CET) to provide educational information and reclamation resources of mercury containing items in the business sector. CET, working on behalf of SEMASS, mass mailed ninety-one letters to tanning salons in the SEMASS communities to facilitate the recycling of tanning bed bulbs.

- **Town of Attleboro.** On December 28th, SEMASS, working with Center for Ecological Technology (CET), reclaimed and recycled ninety (90) tanning bed bulbs from Studio 152 Tanning Salon.

- **City of Waltham.** On December 19th, SEMASS, working with Complete Recycling Solutions (CRS) facilitated the recycling and reclamation of three-hundred sixty-four (364) tanning bed bulbs.

Additional, miscellaneous business reimbursement was provided for reclamation of the mercury-containing items:

- On August 30th, SEMASS and Complete Recycling Solutions (CRS) reclaimed the estimated equivalent of 38,776 linear feet of fluorescent bulbs from the Balfour Building in North Attleboro, MA.
- On December 15th, SEMASS and Veolia Environmental Services reclaimed forty (40) ignitron tubes from Checon Corporation in Attleboro, MA, which represents the equivalent of twenty-four pounds of elemental mercury.

The initiation of Task 3.9 activities for business reimbursement and mercury reclamation was delayed due to the SEMASS fire and subsequent reconstruction. SEMASS plans an aggressive resumption of these task activities during 2008 using our consultant, CET. We will seek to continue the targeted reclamation of tanning salon fluorescent bulbs and expand to other businesses using outreach to Boards of Health and Chambers of Commerce.

4.0 PROGRAM ADMINISTRATION.

Administration of the MSP program is conducted as part of Task 4.0 and includes implementation of the following activities on an on-going basis:

- General communications with our community members or regional recycling organizations
- Communications with the MADEP or other regulatory personnel.
- Internal progress calls and/or meetings with the program team members and management
- Program subcontractor & contractor (i.e. PESI, HAZMATEAM, Veolia, CRS, CET, etc.) management, discussion, coordination, meetings, contracting & payment/account processing
- Tracking program budget and expenditures
- Tracking reclaimed/recycled quantities of mercury, and mercury-containing devices
- Maintenance of program files & records

Further administrative efforts during 2007 also included the following activities:

- Preparation, review, and submittal of the 2006 Annual Program Report (draft and final versions).
- Location of MSP Coordinator’s office in Fuel Building to facilitate tour opportunities for MSP outreach.
- Various re-location of MSP Coordinator’s office after the aforementioned building was deemed uninhabitable after the fire on March 31st at the SEMASS facility.
- Group discussions during March, April, and June with IWSA and the other WTE Plants (Covanta Haverhill, Wheelabrator) with regards to:
 - Task 1.1 radio advertisement campaigns
 - Task 1.5 Survey Results (Evaluation Tool)
 - New MSP4 Plan activities

III. MERCURY RECOVERY RESULTS

The type and quantity of mercury items (elemental or products) that were diverted from the waste stream in 2007 are provided in Table 1 and are broken down by SEMASS community versus device type. The total amount of mercury reclaimed during the 2007 was estimated at an equivalent of 346 pounds of elemental mercury. This quantity was determined using the revised reporting formats and criteria for estimating mercury amounts developed during 2004 in conjunction with MADEP, IWSA, Wheelabrator, and Covanta Energy. These criteria include the use of unit mercury weights by type of device that were developed by NEWMOA and that are incorporated into SEMASS’ MSP4 Plan.

The breakdown of mercury devices by Program Task is shown on Table 2. Please note that totals for Task 3.2 Thermometer Exchange events are typically lumped in with Task 3.3 since most communities combine reporting of these tasks. The most productive tasks appear to be Task 3.1 Medical and Dental Facilities, Task 3.2 Thermometer Exchange Programs, Task 3.3 Community Reimbursement and HHW Support and Task 3.4 Commercial/Residential Thermostats. The least productive tasks were Task 3.5 School Cleanouts, Task 3.7 Boatyards, Marinas and Marine Facilities and Task 3.8 Municipal Water Meter Reclamation.

IV. PLAN EXPENDITURES

SEMASS expenditures on the 2007 MSP program are detailed by task activity on Table 3. Expenditures for 2007 totaled \$324,865 broken down by major task as follows:

- | | |
|--|------------|
| • Task 1.0 - IWSA Education and Outreach: | \$ 50,000 |
| • Task 2.0 - Local Education and Outreach: | \$ 96,216 |
| • Task 3.0 - Mercury Reduction/Recycling Programs: | \$ 128,800 |
| • Task 4.0 - Program Administration: | \$ 49,850 |

As detailed in Table 3, MSP expenditures were comparable to budget for Tasks 1.0 and 4.0. Expenditures for Task 2.0 was higher than budget, primarily driven by increased support requests. Expenditures for Task 3.0 were less than budgeted. This was due to lack of demand for a few Task 3.0 activities (Task 3.3 - town reimbursements, Task 3.5 - school cleanouts, Task 3.7 - Boatyards and Marinas, Task 3.8 – Municipal Water Meter Reclamation, and the delayed start of Task 3.9 - business reimbursements).

SEMASS will step up efforts during 2008 for the Task 3.0 activities where demand and program support requests have diminished.

SUPPORTING TABLES