ENVIRONMENTAL PROTECTION

SITE REMEDIATION AND WASTE MANAGEMENT

DIVISION OF SOLID AND HAZARDOUS WASTE

Recycling Rules

Processing of End-of-Life Vehicles that Contain Mercury Switches

Proposed Amendments:	**N.J.A.C. 7:26A-1.3, 2, and 2.1**
Proposed New Rule:	**N.J.A.C. 7:26A-9.1**
Authorized By:	Bradley M. Campbell, Commissioner, Department of Environmental Protection
Authority:	N.J.S.A. 13:1E-1 et seq., 13:1B-3, 13:1D-1 et seq., 13:1E-9, 13:1D-125 et seq., 26:2C-1 et seq., 47:1A-1 et seq., 58:10-23.11, and 58:10A-1 et seq.
Calendar Reference:	See summary below for explanation of exception to calendar requirement.
DEP Docket No:	14-04-07/445

Proposal Number: PRN 2004-

A public hearing concerning this proposal will be held on

Date: Monday, October 25, 2004

Time: 9:00 a.m. until close of comments

New Jersey Department of Environmental Protection

Public Hearing Room

401 East State Street

Trenton, New Jersey 08625

Submit written comments by (no later than 60 days after publication) to:

Attention: DEP Docket Number _____

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P.O. Box 402

Trenton, New Jersey 08625-0402

The Department of Environmental Protection (Department) requests that commenters submit comments on disk or CD as well as on paper. Submittal of a disk or CD is not a requirement. The Department prefers Microsoft Word 6.0 or above. Macintosh formats should

not be used. Each comment should be identified by the applicable N.J.A.C. citation, with the commenter's name and affiliation following the comment.

This rule proposal can be viewed or downloaded from the Department's web site at http://www.state.nj.us/dep.

The agency proposal follows:

Summary

As the Department has provided a 60-day comment period on this notice of proposal, this notice is excepted from the rulemaking calendar requirement pursuant to N.J.A.C. 1:30-3.3(a)5.

The Department is proposing a new rule and related amendments in the Recycling Rules at N.J.A.C. 7:26A, which govern the operation of recycling centers in New Jersey under the Solid Waste Management Act, N.J.S.A. 13:1E-1, et seq, and the New Jersey Statewide Mandatory Source Separation and Recycling Act, N.J.S.A. 13:1E-99.32. The proposed rules mandate the removal of mercury switches from end-of-life vehicles by certain entities that recycle these vehicles.

On November 17, 2003, the Department received a rulemaking petition from United States Pipe and Foundry Company (U.S. Pipe), a domestic producer of ductile iron pipe, seeking

amendments to the Department's hazardous waste regulations, or in the alternative, to its recycling regulations. In its petition, U.S. Pipe requested that N.J.A.C. 7:26G, which regulates hazardous waste, be amended to provide that failure of a car dismantler to remove mercury switches constitutes improper disposal. Alternatively, U.S. Pipe requested that the universal waste provisions of the recycling rules at N.J.A.C. 7:26A be amended to require mercury switch removal. U.S. Pipe argued that vehicle dismantlers were the most appropriate entity to address the presence of mercury-containing switches from end-of-life vehicles. The Department filed a notice of action on the petition with the Office of Administrative law on January 16, 2004, for publication in the February 17, 2004, New Jersey Register (36 N.J.R. 1128(b)). The notice of action referred the matter for further deliberation while the Department awaited the results of a Department-sponsored pilot program to address mercury contamination of the iron and steel recycling stream. The Department received a final report on the pilot program on March 24, 2004. A notice of action granting the rulemaking in part was subsequently filed with the Office of Administrative Law on April 15, 2004 and published in the May 17, 2004 New Jersey Register (see 36 N.J.R. 2561(b)). With this proposal, the Department is initiating the rulemaking responding to the rule petition.

Although this proposal is a direct result of the rulemaking petition, mercury has been a major focus of the Department for some time. Mercury is a toxic heavy metal that persists in the environment once it is released into the atmosphere. Concern about high levels of mercury deposition and subsequent bioaccumulation in aquatic ecosystems – a process that can pose serious health risks for humans and animals that eat mercury contaminated fish – has emerged as an important public health and environmental issue in recent years. Mercury moves through the

environment as a result of both natural and human (anthropogenic) activities. Once mercury enters waters, either directly or through air deposition, it can bioaccumulate in fish and animal tissue as methylmercury, its most toxic form. Bioaccumulation means that the concentration of mercury in predators at the top of the food chain can be thousands or even millions of times greater than the concentrations of mercury found in the water. Exposure to high levels of mercury has been associated with serious neurological and developmental effects in humans.[1] The operations that are proposed to be regulated under this rulemaking contribute to the presence of mercury in the atmosphere, water and soil.

The Department convened two Mercury Task Forces in 1992 and 1998. The first Mercury Task Force found that emissions from municipal solid waste (MSW) incinerators were, at the time, the main sources of mercury emissions in the State. The Department promulgated rules for MSW incinerators at N.J.A.C. 7:27-27 in 1994 to control mercury emissions, and reserved sections of the rules in order that the Department could evaluate and develop standards for other sources of mercury emissions. The second Mercury Task Force advocated an overall goal of the elimination of anthropogenic uses and releases of mercury, and recommended an 85 percent reduction in in-State mercury emissions from 1990 levels by 2011, from all sources, including iron and steel manufacturing processes, which emit approximately 1,000 pounds of mercury per year.[2] The second Mercury Task Force also estimated that over 1,000 pounds of mercury is contained in light switches in motor vehicles that are discarded yearly in New Jersey and that this quantity of mercury is likely to enter the recycled metals waste stream.[3] Once present as a contaminant in the recycled metals waste stream, mercury is emitted when the metals are reprocessed during the course of iron and steel melting.

In addition to the two mercury task forces, the Department carried out a Mercury Switch Data Collection Pilot Project (Pilot Project) to determine the effectiveness of removing mercury-containing switches from end-of-life vehicles. This Pilot Project was completed and the final report dated March 24, 2004 was approved by the Department. Both of the Mercury Task Force reports and the Pilot Project report are available on the Department's web site at http://www.state.nj.us/dep/dsr/mercury/. The Department has drawn heavily from the reports in developing these amendments and new rule.

Also relevant as background for this rulemaking is the Solid Waste Management State Plan Update for Municipal and Industrial Solid Waste (Solid Waste Management Plan). The Solid Waste Management Plan details the State's goals, objectives and policies for the management and recycling of municipal and industrial solid waste for a 10 year period. On April 13, 2002, the Department embarked on substantial revisions to the Solid Waste Management Plan. The Department anticipates proposing the revisions later this year. The anticipated revisions would refocus the Department's solid waste planning and recycling efforts on a preferred management hierarchy. This hierarchy gives preference to methods that employ source reduction and source separation and recycling, rather than disposal or other traditional "end-of-pipe" solutions. Consistent with this hierarchy, the removal of mercury switches prior to shredding or processing as scrap metal, thereby preventing mercury from entering high temperature processes, would be a preferred source reduction strategy. Moreover, removing mercury switches from end-of-life vehicles before they are crushed or shredded would be an effective way to reduce mercury emissions into the environment.

End-of-life vehicles are those vehicles that are sold, given or otherwise conveyed for the purpose of recycling. Vehicle dismantlers, in conjunction with scrap recycling facilities, perform most of the recycling of end-of-life vehicles in New Jersey. Scrap recycling facilities produce a steel scrap product, which is used by steel mills and foundries. According to the Pilot Project report, approximately 500,000 vehicles are shredded annually in New Jersey.[4] In preparing an end-of-life vehicle for shredding, the battery is removed, fluids are drained, and the vehicle is crushed or flattened to reduce its volume. Mercury components, such as those contained in convenience light and anti-lock braking systems, are not usually removed. The existing rules at N.J.A.C. 7:26A do not require vehicle dismantlers or scrap recycling facilities to remove mercury switches from vehicles prior to shredding, though some facilities may be removing them voluntarily. The Department does not believe, however, that facilities are removing mercury switches and recycling them in any significant amount. As indicated in the Pilot Project report, "automotive recyclers operate on low margins and will not voluntarily undertake the collection and disposal of mercury switches."[5]

The Department is concerned about the mercury contained in end-of-life vehicles for a number of reasons. Mercury is a persistent and toxic pollutant that bioaccumulates in the environment. An elevated level of mercury in the environment causes a variety of human health effects and is also harmful to animals. Additionally, according to the report and recommendations prepared by the second Mercury Task Force, emissions of mercury in New Jersey are greater than what is deposited in New Jersey from the atmosphere, which indicates that New Jersey's mercury emissions are being deposited out of State; therefore, local mercury

sources not only create local health problems, but also cause the State to be a net exporter of atmospheric mercury.[6]

Although vehicle manufacturers have ceased using mercury switches in newly-manufactured vehicles, over the next decade and beyond millions of vehicles containing mercury switches will be recycled. Therefore, it is imperative that the mercury contained in end-of-life vehicle switches does not enter the environment. The Pilot Project report stated, "to efficiently remove mercury switches prior to the shredding process, removal must occur at the auto dismantler/recycler or scrap processing yard prior to crushing or flattening for shipment to the shredder."[7]

The operations that the Department herein proposes to regulate contribute to the presence of mercury in the atmosphere, water, and soil. The proposed rules would require vehicle recyclers who sell, give or otherwise convey ownership of end-of-life vehicles to scrap recycling facilities for recycling to remove mercury-containing convenience lighting and ABS switches from end-of-life vehicles prior to delivery to a scrap recycling facility, unless a switch is inaccessible due to significant damage to the vehicle in the area surrounding the location of the switch. Should a scrap recycling facility agree to accept an end-of-life vehicle that has not been intentionally flattened, crushed or baled, and which contains mercury switches, the scrap recycling facility would be responsible for removing the mercury switches.

The Department's Pilot Project report stated, "studies have indicated that 99 percent of the mercury in vehicles is contained in switches. Of the vehicles containing mercury, the

convenience light switches account for 87 percent of the total mercury, while the antilock brake system switches account for 12 percent."[8] According to the United States Environmental Protection Agency (EPA), the remaining one percent is found in some flat panel displays and headlamps. EPA evaluated the costs associated with removing mercury switches from end-of-life vehicles, and the resulting reductions of mercury emissions, and found that the removal of mercury switches associated with convenience light was cost effective – that is, the benefit to the public and the environment outweighed the cost to remove the switches. With respect to mercury from flat panel displays and headlamps, EPA stated that removal of this mercury is not cost effective. EPA found that such a small amount of mercury contained in the flat panel displays and headlamps, coupled with poor accessibility to the mercury and the associated costs of removal, made removal of mercury from these small applications not cost effective.[9] The Department agrees with EPA's assessment and has not included mercury from flat panel displays or headlamps in this rulemaking.

EPA also determined it was not cost effective to require removal of mercury switches other than hood and trunk convenience light switches. New Jersey's Pilot Project report stated, however, that it may be relatively easy to remove mercury-containing anti-lock braking system (ABS) switches from Chrysler/Jeep Grand Cherokees.[10] Removal of mercury switches from ABS units in other four-wheel drive vehicles is more complicated and time consuming. Nevertheless, such mercury switches contain significantly more mercury than convenience light switches, and removing the switches would provide significant environmental benefit. For example, the Pilot Project report stated that each mercury-containing ABS sensor contains approximately three times more mercury than the typical convenience light switch.[11] Therefore,

the Department is mandating the removal of convenience light switches and ABS switches in this rulemaking, unless the switches are made inaccessible due to damage to the vehicle.

Summary of the proposed amendments and new rule:

N.J.A.C. 7:26A-1 General Provisions

N.J.A.C. 7:26A-1.3 Definitions

At N.J.A.C. 7:26A-1.3, the Department proposes to add definitions for the following terms related to the proposed new rule regarding mercury switch removal: "end-of-life vehicle," "mercury switch," "mercury minimization plan," "scrap recycling facility," "vehicle" and "vehicle recycler." An "end-of-life vehicle" is one that is sold, given, or otherwise conveyed to a vehicle recycler or scrap recycling facility for the purpose of recycling. "Mercury switches" are defined as each mercury-containing capsule, commonly known as a "bullet." A "mercury minimization plan" defines how mercury switches will be removed, collected and recovered from end-of-life vehicles. A "scrap recycling facility" is a business where machinery and equipment are used to process and manufacture scrap iron, steel or other metallic scrap for sale for remelting. A "vehicle" is defined as any passenger car, station wagon, truck, van, or sport utility vehicle of less than 12,000 pounds gross vehicle weight (GVW). Although some laws use different GVW limits to define a "vehicle" (for example, tax laws allow different depreciation rates for vehicles greater than 6,000 lbs. GVW and for the purposes of Federal emissions control regulations, EPA uses an upper limit of 10,000 lbs. GVW in its definition of "medium duty

passenger vehicle), the Department has chosen an upper limit of 12,000 lbs. to capture heavier Sport Utility Vehicles (SUVs), as well as more traditional light duty vehicles such as pickup trucks. (For example, a Ford F350 pickup truck pre-1999 ranges from 8,800 to 11,000 GVW.) An upper limit of 12,000 lbs. GVW would still exclude some larger trucks, but the Department believes the majority of these are handled by a few specialized recycling facilities. Because there are relatively few of them, the larger trucks as a group are unlikely to contain a significant amount of mercury compared to the light-duty vehicle fleet. The Department has also excluded recreational vehicles (RVs) from the definition of "vehicle" to keep the task of mercury switch removal simple and less costly. For example, RVs may contain some unusual mercury-containing devices, such as load-levelers and stoves with mercury-containing shut-off valves. These devices could present problems in removal that the convenience light switches and ABS sensor switches do not. Moreover, the Department believes these vehicles are unlikely to contain a significant amount of mercury compared to the vehicles covered by the definition. Lastly, a "vehicle recycler" is a person or business that acquires, dismantles, or destroys six or more end-of-life vehicles in a calendar year. The primary business of a vehicle recycler is to resell a vehicle's parts.

N.J.A.C. 7:26A-2 Annual Fees for a General or Limited Approval to Operate a Recycling Center for Class B, Class C or Class D Recyclable Materials

The Department is proposing to amend the title of Subchapter 2 and make a number of amendments to N.J.A.C. 7:26A-2.1. The Department proposes to amend the title of this

subchapter to reflect that the subchapter includes fees other than those for entities that are required to obtain either a limited or general Class B, C, or D approval. For example, N.J.A.C. 7:26A-2.1(b)5, which is proposed to be recodified at N.J.A.C. 7:26A-2.1(d) (with no change in text), imposes a compliance fee for all composting operations exempt from the requirement to obtain a general or limited approval under N.J.A.C. 7:26A-1.4(a). At N.J.A.C. 7:26A-2.1(e), the Department is proposing an annual compliance monitoring fee of $106 for each facility regulated under N.J.A.C. 7:26A-9. This fee, as further discussed in the Economic Impact statement, would cover costs incurred by the Department for travel to and from a site to be inspected, the onsite inspection, and subsequent inspection reports. The fee for compliance monitoring will enable the Department to adequately fund enforcement of the new rule.

N.J.A.C. 7:26A-9 Processing End-of-Life Vehicles that Contain Mercury Switches

The Department is proposing a new subchapter, Subchapter 9, which addresses requirements for processing end-of-life vehicles that contain mercury switches.

N.J.A.C. 7:26A-9.1 Requirements for processing end-of-life vehicles that contain mercury switches

Proposed new N.J.A.C. 7:26A-9.1 sets forth the requirements for processing end-of-life vehicles that contain mercury switches. The first stop for most end-of-life vehicles is a vehicle recycler. Once salvageable parts are removed by these facilities, end-of-life vehicles are crushed or flattened for transportation efficiencies making the mercury switches they contain inaccessible. The next stop for these crushed or flattened end-of-life vehicles is a scrap recycling facility or "shredder." These facilities produce high quality scrap steel, which is sold worldwide

for use by steel mills and foundries. Recovery and cleaning of the shredded steel scrap at these facilities is accomplished primarily by magnetic separation. Most of the mercury in end-of-life vehicles is contained in a steel bullet, which is attracted to the magnets along with the scrap steel. According to the Pilot Project report, the bulk of the mercury switches in end-of-life vehicles are magnetically collected along with the shredded steel scrap.[12] Therefore, removing mercury switches is most efficient prior to the shredding process. From a practical and cost standpoint, removal of mercury switches is most efficient at the auto dismantler/recycler or the scrap processing yard before the vehicles are crushed or flattened for shipment to the shredder.

Proposed N.J.A.C. 7:26A-9.1(a) requires vehicle recyclers who sell, give, or otherwise convey ownership of an end-of-life vehicle to a scrap recycling facility for recycling to remove mercury-containing convenience light switches and ABS switches from the vehicle prior to delivery to the scrap recycling facility, unless the switch is inaccessible due to significant damage to the vehicle in the area surrounding the location of the mercury switch. Such inaccessible switches would have to be noted on the mercury switch records of the vehicle recycler. The Department believes that the number of inaccessible switches is negligible and, therefore, the failure to remove them would not materially affect mercury emissions. The Department notes that a significant amount of the profit made by a vehicle recycler comes from the resale of salvaged parts. It is in a vehicle recycler's financial interest, therefore, to seek end-of-life vehicles which have not yet been crushed or flattened, and, therefore, have accessible mercury switches. Once accessible switches have been removed from end-of-life vehicles by vehicle recyclers, they may choose to flatten or crush the vehicles to make them easier to transport to the vehicle shredder.

Proposed new N.J.A.C. 7:26A-9.1(b) makes a scrap recycling facility responsible for removing accessible mercury switches if the facility accepts end-of-life vehicles that have not been intentionally flattened, crushed or baled and that still contain mercury switches. Since it is a scrap recycling facility's business decision to accept end-of-life vehicles that have not yet been crushed or flattened, the Department believes the facility should be responsible for removal of the switches.

Proposed new N.J.A.C. 7:26A-9.1(c) sets forth the recordkeeping requirements for facilities that remove mercury switches. Each facility would be required to maintain records of the number of mercury switches collected each month, the number of end-of-life vehicles containing mercury switches processed each month, the vehicle identification number associated with each removed mercury switch, the vehicle identification number of any vehicle that was damaged such that a mercury switch was inaccessible, as well as the number of end-of-life vehicles processed each month. These records would need to be kept for a minimum of three years, which is the standard number of years the Department requires other recycling facilities to maintain records. Additionally, the records would have to be made available for review by the Department upon its request. The Department would use these records to assess compliance with the regulations, and to help determine the efficiency of the mercury switch recycling program.

Proposed new N.J.A.C. 7:26A-9.1(d) requires each vehicle recycler and scrap recycler to have a written mercury minimization plan to detail how it would remove, collect, and recover mercury switches from end-of-life vehicles. According to the Pilot Project report, the biggest obstacle to efficient removal of mercury switches is the learning curve for locating and removing

the switches. Reference documents supplied by vehicle manufacturers on vehicles containing mercury convenience light switches were proven to be unreliable, and only reinforced the mistaken belief that older vehicles did not contain mercury switches. The Pilot Project report stated that the best procedure to determine the presence of mercury switches in end-of-life vehicles was to inspect the hood and trunk lids of all vehicles.[13] Therefore, the Department believes that vehicle recyclers and scrap recyclers cannot rely on current reference material. Each facility will need to develop its own written plan describing for its employees how to properly remove, collect, and recover mercury switches contained in end-of-life vehicles. The Department expects that vehicle recyclers and scrap recyclers would use this plan as a training guide to ensure consistency in the removal of mercury switches.

Proposed new N.J.A.C. 7:26A-9.1(e) would prohibit any person from representing that mercury switches have been removed from an end-of-life vehicle if that person has not removed the mercury switches or arranged for another person to remove them. Any person who falsely represents that mercury switches have been removed is subject to enforcement action, including a monetary penalty assessed in accordance with N.J.A.C. 7:26-5.5.

Proposed new N.J.A.C. 7:26A-9.1(f) would require removal, collection, storage, transportation, and recycling of mercury switches in compliance with the universal waste rules at N.J.A.C. 7:26A-7. This requirement will ensure that mercury switches removed from end-of-life vehicles are handled in an environmentally sound manner.

Social Impact

The proposed new rule and amendments would have a positive social impact for the State's residents and persons who work in the State or who visit the State for business and recreation because they will help improve the State's air, water, and land quality, and public health. These beneficial effects are discussed in the Environmental Impact statement below.

Economic Impact

The Department proposes to impose a $106 annual compliance fee on each facility that is required to remove mercury-containing switches. Unlike a higher fee that might be charged only to those facilities that the Department actually inspects, the annual fee on all regulated facilities is intended to equalize the burden among the entire regulated community. Under this method, every regulated facility would contribute to funding the Department's enforcement activities (for example, compliance inspections and enforcement actions) instead of the burden being on only those facilities that actually receive an inspection in a given year. In addition to equalizing the burden on the regulated community, this method of fee assessment allows the Department more flexibility in targeting and initiatives, without regard to the number of inspections it performs.

The Department has statutory authority to charge fees to cover its actual costs. The proposed annual compliance fee of $106.00 is based upon the estimated number of hours annually that the Department will spend on inspections, the Department's hourly cost to provide appropriate personnel, and the number of regulated facilities. In calculating the hourly cost of appropriate personnel, the Department considered the average salary of the staff assigned to the activity, plus a component for direct support staff and division overhead, and fringe benefits such as pensions, health benefits, workers' compensation, disability benefits, and the employer's

share of the Federal Income Compensation Act. It also included indirect costs, which consist of management salaries, operating expenses, divisional indirect salaries and related expenses, building rent, and the Department allocation of indirect costs listed in the Statewide Allocation Plan prepared annually by the State Department of the Treasury. Also included in the calculation is the operational expenses attributable to the employee, and the program, including postage, telephone, training, travel, supplies, equipment maintenance, vehicle maintenance and data system management. There is also included a component for legal services in connection with the types of activities for which fees are assessed. Finally, the calculation includes the average number of hours (approximately 1,428) that each employee spends annually performing activities for which fees are assessed. Based upon this formula, the Department's hourly rate is $106.

The Department estimates that it will spend approximately 400 hours per year inspecting vehicle recyclers and scrap recycling facilities. This estimate is based upon the Department's experience regulating recycling facilities throughout the State. The anticipated hours spent on inspections, multiplied by the hourly rate of $106.00, results in an anticipated annual cost of inspections approximately $42,400. There are approximately 400 vehicle recyclers and scrap recycling facilities in New Jersey. Accordingly, spreading the cost of inspection across the entire regulated community results in an annual compliance fee of $106.00 per facility.

In addition to the $106.00 annual compliance fee per facility, each facility that is required to remove mercury-containing switches will incur costs associated with the removal. The Pilot Project report estimated that the total cost of location, removal, documentation, handling, transportation and proper disposal of mercury convenience light switches is approximately $3.00 per switch. Removal of ABS switches is more complicated and time consuming and, therefore,

more costly. The Pilot Project report estimated that the cost to remove these units is at least $5.00 per unit.[14] The Department expects the cost of removing mercury switches to decrease each year, as employees of regulated facilities become more skilled at locating and removing the switches and as the number of switches requiring removal decreases as car manufacturers phase out their use.

Though not required by the proposed new rule, the Department recommends that facilities remove the mercury-containing bullets or capsules from the convenience light switches prior to shipping them off-site for processing under the Universal Waste rules. Removal of the capsules will help minimize the cost of handling and processing of the mercury switches. For example, the Pilot Project report indicated that processing and recycling a five gallon pail of either mercury switch "bullets" or entire switch assemblies is $150.00, plus shipping and handling as a universal waste. The average cost per switch for shipping, handling, processing and recycling of an entire switch assembly, which contains the "bullet," is on the order of $1.00 per switch. Alternatively, if the "bullet" is removed from the convenience light switch assembly and shipped without the assembly, the cost of shipping, handling, processing and recycling would be on the order of five cents per switch, not including the cost of removing the bullet from the switch unit. A "bullet" takes up less space than an entire switch assembly, which means that a single five gallon pail would hold more mercury switches, yet the $150.00 cost of processing and recycling a single pail would be the same.

Removal of the mercury-containing bullet from the convenience light switch assembly is estimated to require approximately three-quarters of a minute and, therefore, cost approximately 50 cents per switch.[15] Thus, the average total cost of removing the bullet from the convenience

light switch assembly and transporting, handling, processing and recycling the mercury switch or "bullet," is approximately 55 cents, compared to $1.00 if the bullet were left in the switch assembly. (It is not possible to remove the mercury bullets from ABS assemblies because the mercury bullets are encased in a plastic resin material.) Additionally, as scrap recycling facilities and vehicle recyclers become more proficient at identifying and removing regulated mercury switches, labor costs should be reduced.

The Department believes that few, if any, scrap recycling facilities and vehicle recyclers are currently removing and recycling mercury switches from end-of-life vehicles. Therefore, there would be an initial negative economic impact to these entities when the rules take effect. The cost to comply with the proposed rules may be offset should recently proposed legislation become law. New Jersey State Assembly bill A2482 and its companion bill S1292 in the State Senate establish a program for removal of mercury switches from end-of-life vehicles. If enacted, the legislation would require vehicle manufacturers to pay to a vehicle recycler or scrap recycling facility a minimum of $2.00 for each mercury switch that the recycler removes as partial compensation for the labor and other costs incurred in the removal of the mercury switches. Additionally, the legislation would require manufacturers to provide reimbursement for the cost of containers suitable for storing removed mercury switches, transportation related packaging costs, shipping costs, and recycling costs. A manufacturer would be required to reimburse vehicle recyclers and scrap recycling facilities only if the vehicle recyclers and scrap recycling facilities record the vehicle identification number associated with each switch and provide the information to the manufacturer.

Companies that transport or recycle mercury-containing devices may experience a positive economic benefit from the proposed rules as vehicle recyclers and scrap recycling

facilities would need to contract with these companies for handling the transportation and disposition of the removed mercury switches.

Iron and steel foundries might experience a positive economic impact if "mercury free scrap" is easier or less costly to obtain because of the new rule. It is possible, however, that the price of "mercury free scrap" may instead increase if scrap recycling facilities raise the price of shredded scrap to address their added costs of complying with the new rule.

Iron and steel foundries may also benefit as a result of the reduced mercury emissions that would result from the reduction of mercury in scrap due to the new rule. On January 5, 2004, the Department proposed air pollution control rules with similar requirements to the Federal NESHAP regulations. (See 36 N.J.R. 123.) The Department anticipates that the proposed rules at N.J.A.C. 7:26A would assist iron and steel foundries in complying with the mercury air emissions rules because switch separation would significantly reduce mercury emissions at these facilities. As a result, these entities might not have to purchase add-on pollution control equipment.

Lastly, the economic impact of the new rule on the Department is anticipated to be minimal. The existing rules do not require Department inspectors to perform compliance inspections of vehicle recyclers and scrap recyclers. Accordingly, the Department would undertake inspections to determine whether the facilities are complying with the new rule. By adopting the $106.00 per facility annual compliance monitoring inspection fee, the Department would be able to cover the costs of needed inspections.

Environmental Impact

The Department expects an overall positive environmental impact from the new rule. Vehicle recyclers, scrap recycling facilities, and iron and steel foundries divert end-of-life vehicles from landfills. However, mercury that is not removed from end-of-life vehicles prior to crushing and shredding contaminates the scrap metal used by iron and steel foundries and may be released to the environment when the scrap metal is melted during the steel manufacturing process. As a result, iron and steel manufacturing plants are a significant in-State source of mercury emissions. Mercury that is not removed from end-of-life vehicles prior to crushing and shredding may fall onto the ground during the crushing and shredding process, and may also contaminate the non-metallic residue, also called fluff, that is produced by the shredding process, to be released to the environment when the fluff is disposed of. Removing mercury switches from end-of-life vehicles prior to crushing and shredding is thus an effective way to reduce mercury emissions into the environment.

The Pilot Project report stated that it has been estimated that 8.8 to 10.2 metric tons of mercury are contained in scrap autos recycled in the United States annually.[17] The primary source of mercury is convenience light switches located in the trunks and hoods of many vehicles. Steel mills and foundries that utilize shredded steel scrap as a portion of the raw material charge are believed to be among the largest point sources of mercury emissions in New Jersey.[18] The New Jersey Mercury Task Force in 2002 estimated that approximately 1,000 pounds of mercury are emitted annually from the melting of shredded scrap in New Jersey.[19] Additionally, studies have indicated that 99 percent of the mercury in vehicles is contained in switches. Of the vehicles containing mercury, the convenience light switches account for 87

percent of the total mercury where antilock brake system switches account for 12 percent.[20] Therefore, removal of the mercury convenience light switches has the potential to substantially reduce mercury emissions at steel mills and foundries. According to the Pilot Project report, preliminary data from testing of air emissions from a steel mill suggests that removal of mercury switches from vehicles prior to shredding results in a reduction in mercury emissions of approximately 50 percent.[21]

Effects of mercury emissions to the air

Mercury is a persistent, bioaccumulative, toxic pollutant. Mercury, in the form of methylmercury, contaminates freshwater fish caught throughout New Jersey. Concentrations exceeding 1.0 ppm have been found in higher trophic level fish, especially largemouth bass and chain pickerel, in about 40 percent of fifty-five New Jersey water bodies that have been sampled. Contaminated fish have been found in remote areas such as the Pine Barrens, as well as in industrialized areas of the State. Mercury concentrations in lower trophic level fish are also elevated in New Jersey and often are in the range of 0.2 to 0.5 ppm. Many tested water bodies exceed the EPA's surface water criterion of 0.3 ppm (as measured in fish tissue).[22]

Human exposure to methylmercury comes primarily from eating contaminated fish. Exposure to methylmercury from fish is known to have a potentially profound impact on the developing nervous system, and mercury-contaminated fish in the mother's diet can significantly alter fetal development. Since contamination of fish represents a major health concern, it poses a significant economic threat to New Jersey's commercial and recreational fishing industries.

Deposition of mercury from air emissions plays an important role in the global cycling of mercury and in the bioaccumulation of mercury in lakes in temperate regions.[23] Worldwide, a three- to five-fold increase in the deposition of mercury to lake sediments has been observed since the advent of the industrial revolution. The timing and scope of the increase in mercury deposition implicate combustion of fossil fuels as the principal cause for the global increase in mercury deposition.[24] The second Mercury Task Force found that although there are likely large discharges of mercury directly to some water bodies in New Jersey, air emissions containing mercury appear to make up the primary route of mercury entering the environment of New Jersey, which mercury could eventually make its way to fish tissue.[25] A recent study has found widespread and significant mercury contamination of sediments in New Jersey aquatic systems.[26]

New Jersey air emissions and atmospheric deposition

The second Mercury Task Force found that emissions of mercury from iron and steel manufacturing are in the range of 1,000 pounds per year, most of which comes from mercury contained in shredded scrap. The second Mercury Task Force estimated that well-characterized in-State anthropogenic emissions of mercury to the air total about 3,500 pounds per year, so iron and steel manufacturing accounts for approximately 29 percent of New Jersey's anthropogenic air emissions.[27] As noted above, the Pilot Project report estimated that removal of mercury switches from vehicles prior to shredding could result in a reduction in mercury emissions from iron and steel melting of approximately 50 percent.

The second Mercury Task Force estimated that deposition of mercury in New Jersey

from air emissions is in the range of 1,100 pounds per year.[28] It based this estimate on measurements of mercury in precipitation,[29] and from dry deposition, which is the fallout of atmospheric particles and adsorption of gas-phase molecules to ground and plant surfaces. (Approximately 40 – 45 percent of the 1,100 pounds per year of mercury deposition per year is in the form of dry deposition.[30]) Further analysis of the New Jersey Atmospheric Deposition Network (NJADN) results indicates that annual deposition rates of mercury in precipitation range from approximately 14μg/m^2/year to 18 μg/m^2/year.[31] Additional data provide further evidence that dry deposition may be substantial[32,33] and may be greater than wet deposition.[34,35] If an overall deposition rate, including both wet and dry deposition, of 20 to 30 μg/m^2/year is assumed, and the area of New Jersey is 19,200 km^2 (1.92 x 10^{10} m^2), it can be estimated that between 1.92 x $10^{10}m^2$ x 20 μg/m^2/year, and 1.92 x $10^{10}m^2$ x 30 μg/m^2/year or between approximately 800 and 1,300 pounds per year of mercury is deposited on the surface of New Jersey. This range is consistent with the second Mercury Task Force mercury deposition estimate of approximately 1,100 pounds per year.

Existing data do not permit an exact determination of how much of the deposition of mercury on New Jersey is from in-State sources. Some reports and models, however, do provide some insight on the relative local and non-local share of deposition. It has been estimated, based on models, that perhaps one third of U.S. emissions to the air are deposited within the U.S., with the remainder joining the global atmospheric pool.[36] Other studies suggest that 50 percent of wet mercury deposition may be caused for by local or regional sources.[37,38,39] A study in Florida (which, because it is a peninsula, may not be typical of other regions) found that over 70 percent of the mercury deposition was from relatively local sources.[40] Confirmation that local sources

impact deposition in Florida is based on the finding of sharp declines in concentrations of mercury in biota since major controls on mercury emissions from in-state medical and MSW incinerators were implemented in the early 1990s. In Florida, mercury emission reduction efforts have achieved dramatic results. Mercury concentrations in fish and wading birds in the Everglades have declined 60 to 70 percent in the last 10 years as a result of controls to reduce emissions of mercury from industries in southern Florida. The reductions in mercury concentrations in fish have enabled the Florida Department of Health to downgrade fish consumption advisories in central and northern areas of the Everglades.[41]

Another recent report indicates that deposition rates in relatively non-remote lakes in the upper Midwest have declined recently, but deposition in remote lakes has not declined.[42] This and another recent report[43] suggest that changes in mercury emissions from local sources do have a local impact. Further analysis of the preliminary NJADN results indicates that rain in New Jersey is enriched with mercury to a degree similar to that collected throughout Florida and around the Chesapeake Bay, and more enriched with mercury than rain in Delaware, Pennsylvania, and upper Midwestern states.[44] Because the fallout patterns of mercury are not uniform, the Department believes that local and regional sources are important contributors to the quantities of mercury deposited in New Jersey. (If the sources were primarily national and international, the fallout pattern would be expected to be more uniform over a broad geographic area.)

Mercury emissions from anthropogenic sources are typically in the form of elemental mercury, oxidized mercury (also called reactive gaseous mercury or RGM, divalent mercury,

ionic mercury, or Hg^{+2}), or mercury bound to particles. Of the species of mercury emitted by iron and steel melters, whose feed material includes shredded end-of-life vehicles that are the subject of the proposed new rule and amendments, oxidized and particle-bound mercury are believed to deposit much closer to sources than elemental mercury.[45] Much of the mercury deposited both through precipitation (wet deposition) and dry deposition is either oxidized or particle-bound.

The form of mercury emitted by New Jersey iron and steel melting facilities is a factor in determining the deposition of mercury in New Jersey caused by air emissions. A stack test at one New Jersey iron manufacturing plant found that approximately 62 percent of the emissions was oxidized mercury.[46] Another report suggests that mercury emitted from iron and steel production is 80 percent elemental, 10 percent oxidized, and 10 percent particulate.[47] As stated above, the Department believes that oxidized mercury is expected to deposit close to the source from which it is emitted.

The Department also anticipates a reduction in emissions of elemental mercury as a result of the proposed rules. Although only a small portion of elemental mercury emitted from New Jersey facilities is expected to deposit locally, elemental mercury eventually becomes oxidized in the atmosphere and deposits somewhere. Thus, reductions in elemental mercury emissions, especially if accomplished at a national and international level, will lead to decreased mercury deposition over broad geographic areas. As a net exporter of mercury emissions, New Jersey should take a leadership role on mercury emissions reductions, including reducing mercury in the scrap sent to iron and steel melters from vehicle recyclers. Then, as other jurisdictions

follow New Jersey's example, greater reduction in mercury deposited in New Jersey will occur.

Estimating the benefits of emission reductions

The Department expects reduction in emissions of mercury in New Jersey to lead to a significant reduction in inputs of mercury to New Jersey water bodies.

Studies have shown that between 1.5 percent and five percent of the yearly inputs of mercury to a water body accumulate in fish.[48,49,50] Research has also shown that modest increases in atmospheric mercury loading can lead directly to enhanced levels of mercury in biota,[51] and that reductions of anthropogenic emissions of mercury will lead to relatively rapid reductions in concentrations in aquatic species. Reduced atmospheric deposition of mercury in New Jersey can be expected to lead to lower levels of mercury in New Jersey freshwater fish. Declines in mercury concentration of saltwater fish that spend a significant portion of their life cycle in near-shore waters could also occur.

Lower mercury concentrations in the environment will also minimize human health impacts caused by ingesting mercury-contaminated fish. Health impacts which will be lessened as a result of implementation of the proposed rules include neurological and developmental damages to fetuses and children, as well as health impacts on adults. Benefits of increased ecological health and greater viability of some species of wildlife are also expected.

Executive Order No 27(1994) and P.L. 1995, c.65 require administrative agencies that adopt, readopt or amend any State regulations that exceed any Federal standards or requirements to include in the rulemaking a comparison between the two sets of standards and an explanation of the costs and benefits associated with adopting a State standard that exceeds a Federal standard.

There are two sets of Federal regulations to which these proposed rules can be compared: Federal National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries (NESHAP) air regulations at 40 C.F.R. Part 63 and the Federal Resource Conservation and Recovery Act (RCRA) hazardous waste/universal waste regulations at 40 C.F.R. 260-266, 268, 270, and 273. The Department's proposed rules do contain some standards that exceed those of the aforementioned Federal regulations. Those areas where the standards of the proposed rules exceed the comparable Federal rules are specifically identified and discussed below.

NESHAP regulations

Under the NESHAP regulations, iron and steel foundries must comply with certain work place standards. To comply with these standards, a melter has two options. The melter must either meet certification requirements for their charge materials (which prohibit the use of materials that include post-consumer automotive body scrap), or develop and implement a scrap selection and inspection program to minimize the amount of organics and hazardous air pollutant metals in furnace charge materials. Foundries typically utilize shredded steel scrap as a portion

of their raw material charge. Such "scrap" includes recycled metals from discarded motor vehicles and home appliances, and waste metals from demolished building structures. According to the Department's Pilot Project report, 55 to 60 percent of the scrap processed in a typical shredding facility or scrap supplier are vehicles.[52] Therefore, under the NESHAP rules, a melter using scrap to produce steel, would need to obtain a certification from its scrap supplier that the scrap supplier has implemented procedures to remove mercury switches and lead components from automotive scrap. Scrap suppliers and their suppliers, vehicle recyclers, would each need to implement a mercury switch removal plan. This is consistent with the Department's proposed rules.

The NESHAP regulations also require foundries to have a materials acquisition program. This program must specify that the melter's scrap supplier remove accessible mercury switches from the trunks and hoods of automotive bodies contained in the scrap. A copy of the procedures used by the scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed must be maintained onsite by the melter as well. While the Federal materials acquisition plan requires only the removal of accessible mercury switches, as do the Department's proposed rules, the Federal rule does not address the removal of mercury in anti-lock braking systems. Therefore the requirement to remove ABS switches under these proposed rules exceeds the Federal standards.

With respect to recordkeeping, the NESHAP regulations require foundries to maintain records documenting compliance with the scrap selection and inspection plan. These records must include a copy of the procedures used by the scrap supplier for either removing accessible

mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable. Recordkeeping requirements under the Department's proposed rules differ in some respects from this Federal rule. The Department's proposed new rule would require vehicle recyclers and scrap recycling facilities to have a "mercury minimization plan" that defines how mercury switches would be removed from end-of-life vehicles. The Department expects this plan will be submitted by scrap recycling facilities and vehicle recyclers to foundries to document compliance with the scrap selection and inspection plan as required by the NESHAP regulations. The Department's proposed rules, however, would go farther than the NESHAP regulations, in that they would require vehicle recyclers and scrap processor to also maintain records of the number of end-of-life vehicles processed each month, the number of end-of-life vehicle processed each month that contain mercury switches (including information about vehicles with inaccessible mercury switches) and the number of mercury switches collected each month. The Department believes this additional information is necessary for planning and in determining compliance with the regulatory requirements.

RCRA Regulations

In addition to the Federal NESHAP regulations, the Department's proposed rules may be compared to the Federal RCRA regulations. The RCRA regulations govern the generation, transportation, treatment, storage, disposal or recycling of hazardous wastes, and the Federal rules provide for streamlined collection process for certain types of hazardous waste, including mercury-containing thermostats. For example, the Federal rules at 40 C.F.R. part 273 extends the amount of time that businesses can accumulate these materials on site. It also allows

companies to transport them with a common carrier, instead of a hazardous waste transporter, and no longer requires companies to obtain a manifest. The Federal rules do not include mercury switches from end-of-life vehicles.

Under New Jersey's hazardous waste rules, which incorporate the Federal rules by reference, mercury-containing devices, such as mercury switches, can be handled as universal wastes rather than hazardous wastes. While mercury switches may be handled now as universal waste under the existing New Jersey rules, under neither the existing New Jersey rules nor the existing Federal RCRA/universal waste regulations is mercury switch removal mandatory. In fact, the Federal RCRA/universal waste rules do not cover mercury switches from end-of-life vehicles. Therefore, mandating removal of mercury switches under these proposed rules exceeds the comparable Federal RCRA regulations.

The Department believes some vehicle recyclers and scrap recycling facilities, however, are voluntarily removing mercury switches from end-of-life vehicles now. Facilities voluntarily removing mercury switches are required to handle them as either hazardous or universal waste in accordance with the hazardous waste rules at N.J.A.C. 7:26G or the universal waste provisions of the Recycling Rules at N.J.A.C. 7:26A-7 and to maintain records similar to those required under these proposed rules. Additionally, certain generators of hazardous waste must have waste minimization plans to reduce the volume and toxicity of the waste they generate or make a good faith effort to minimize the waste they generate and select the best waste management method that is available. Some vehicle recyclers may generate wastes, such as parts cleaners (solvents), car batteries, and used oil, which are regulated in New Jersey under the hazardous waste or universal waste regulations. Therefore, some vehicle recyclers or scrap recycling facilities may

already have waste minimization plans that can be modified to comply with the requirement to develop a "mercury minimization plan" under these proposed rules.

The Department's Pilot Project report noted that the primary tools required to remove convenience light mercury switches are a screw driver or pry bar, small socket wrench and a pair of wire cutters.[53] Removal of ABS switches would require similar tools. In cases where trunks were shut and locked and vehicles had no keys, a forklift or other heavy equipment was needed to pop open the trunk. Removal of ABS switches is only slightly more complicated. In some cases a wrench is needed to unbolt the unit, which is located beneath the rear seat. In others, the vehicle must be raised on a lift, after which the switch may be removed.[54] All of the tools necessary to remove the convenience light and ABS switches are available and in common use. Therefore, the Department believes removal of the mercury switches is achievable using current technology.

In developing this rulemaking, the Department considered whom the rulemaking would affect, and how it would affect them, and determined that some groups would be directly impacted while other groups may be indirectly impacted. As discussed in the economic impact statement, there would be a cost to vehicle recyclers and scrap recyclers to comply with the proposed requirements. In addition to the annual compliance monitoring fee of $106.00, the baseline cost for removal, packaging and disposition of a mercury switch is estimated to be approximately $3.00 per convenience light switch, and $5.00 for each ABS switch. Even though vehicle manufacturers are phasing out the use of mercury in convenience light switches and ABS systems, the Pilot Project report stated that mercury-containing convenience light switches will

be present in end-of-life vehicles for at least the next 15 years. Industry reports indicate that mercury-containing ABS switches will be present in end-of-life vehicles for approximately the same amount of time. During this period, the Department expects the baseline cost to slowly decline as fewer mercury switches will need to be removed and recycled, thereby lowering handling, transportation, and disposal costs. Moreover, as vehicle recyclers and scrap recycling facilities get more adept at identifying and removing the switches, labor costs should also be reduced. For example, the Pilot Project report notes that it takes less than one minute to remove a mercury convenience light switch unit from an end-of-life vehicle, and once a dismantler gains experience at switch removal, actual removal time is about one half minute per switch.[55]

As noted in the Economic Impact statement companies that transport or recycle mercury-containing devices may benefit from increased contracts for the transportation and recycling of removed mercury switches. Also, iron and steel foundries may find "mercury free scrap" easier or less costly to obtain after adoption of the new rule and amendments. It is also possible that these foundries would experience a small negative economic impact should the cost of "mercury free scrap" rise in response to added costs to scrap recyclers to comply with the proposed rules.

Although it is not possible for the Department to quantify the exact benefit, the Department anticipates that fishermen, tourists, water suppliers, and the general public would experience a benefit from adoption of the proposed rules, since reduction in mercury emissions from iron and steel foundries should result in an improvement in the quality of environmental resources, particularly water quality.

Conclusion

As discussed above, the proposed new rule does contain standards that exceed those of comparable Federal regulations. However, the rule is anticipated to lower mercury concentrations in the environment, which will minimize human health impacts caused by ingesting mercury-contaminated fish. Other benefits include increased ecological health and greater viability of some species of wildlife. Given the adverse health effects that exposure to mercury causes, and given the need to protect water quality, and in light of the existence of technology at a reasonable cost to meet the proposed rules, the proposed standards that exceed comparable Federal standards are justified.

Jobs Impact

The Department does not anticipate that the proposed rules will have any impact on jobs. Since businesses that would be regulated under this proposed rulemaking operate on a low profit margin, it is possible that the cost of compliance may cause some businesses to reduce staff. It is equally likely, however, that jobs will be created as more staff are hired to remove and properly package the switches, develop plans, and maintain records. Because each member of the regulated community will respond differently to cost increases, however, it is not possible to estimate accurately the extent, if any, to which the new rule will affect employment.

Agriculture Industry Impact

The Department has evaluated this rulemaking to determine the impact of the proposed rules on the agriculture industry. The agriculture industry as a whole does not process or recycle end-of-life vehicles. Therefore, the proposed rules will have no impact on the State's agriculture industry.

Regulatory Flexibility Analysis

As required by the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department evaluated the reporting, recordkeeping, and other compliance requirements that the proposed rules would impose upon small businesses. The Regulatory Flexibility Act defines the term "small business" as any business that is a resident in this State, is independently owned and operated and not dominant in its field, and employs fewer than 100 full time employees. According to the Pilot Program report, several hundred vehicle recyclers and scrap recycling facilities operate in New Jersey; all are small businesses.

To comply with the proposed rules, vehicle recyclers and scrap recycling facilities will have to keep records of the number of mercury switches collected each month, the number of end-of-life vehicles containing mercury switches processed each month, and the number of end-of-life vehicles processed for recycling each month. Removal of the switches can be accomplished using tools that are readily available. Vehicle recyclers and scrap recycling facilities may also need to employ professional services firms to develop or assist in the development of the required mercury minimization plan or to educate them on the location or placement of mercury switches in different vehicles and the best methods for removing them. They will also need to contract with businesses that transport or otherwise handle the disposition

of the mercury switches as universal wastes.

Inasmuch as, according to the Pilot Project report, all of the regulated facilities are small businesses, it is not possible for the Department to exempt or otherwise reduce requirements on small businesses and still achieve its goal of reducing the amount of mercury emitted into the environment by ensuring mercury-containing convenience light and ABS switches are removed from end-of-life vehicles.

Smart Growth Impact

Executive Order No. 4 (2002) requires State agencies that adopt, amend or repeal any rule to describe the impact of the proposed rule on the achievement of smart growth and implementation of the New Jersey State Development and Redevelopment Plan (State Plan). The proposed rules do not relate to the State's land use and development policies in a way that would either encourage or discourage any development or redevelopment in this State contrary to the guiding principles of the State Plan. As a result, the Department does not expect this rulemaking to have an appreciable impact on the State's achievement of smart growth or implementation of the State Plan.

Since the proposed rules will help protect air quality, the proposed rules support the conservation and environmental protection goals and policies underlying the State Plan.

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Full text of the proposal follows (additions indicated in boldface thus; deletions indicated in brackets [thus]):

CHAPTER 26A

RECYCLING RULES

Subchapter 1. GENERAL PROVISIONS

7:26A-1.3 Definitions

The following words and terms, when used in this chapter, shall have the meanings set forth below. All terms which are used in this chapter and which are not defined herein but which are defined in N.J.A.C. 7:26 shall have the same meanings as in that [sub]chapter.

* * *

"End-of-life vehicle" means a vehicle that is sold, given or otherwise conveyed to a vehicle

recycler or scrap recycling facility for the purpose of recycling.

"Mercury switch" means a mercury-containing capsule, commonly known as a "bullet."

"Scrap recycling facility" means a location where machinery and equipment are utilized for processing and manufacturing scrap metal into prepared grades of scrap and whose principal product is scrap iron, scrap steel or nonferrous metallic scrap for sale for remelting purposes. A business with a North American Industry Classification System (NAICS) Code of 421930 is a "scrap recycling facility."

"Vehicle" means any passenger car, station wagon, truck, van, or sport utility vehicle of less than 12,000 pounds gross vehicle weight (GVW).

"Vehicle recycler" means an individual or entity engaged in the business of acquiring, dismantling or destroying six or more end-of-life vehicles in a calendar year for the primary purpose of resale of the vehicles' parts. A business with the North American Industry Classification System (NAICS) Code of 421140 is a "vehicle recycler."

Subchapter 2. ANNUAL FEES FOR A GENERAL OR LIMITED APPROVAL TO OPERATE A RECYCLING CENTER FOR CLASS B, CLASS C, AND CLASS D RECYCLABLE MATERIAL, **AND OTHER FEES**

7:26A-2.1 Fees for general or limited approval; **other fees**

(a) (No change.)

(b) The following apply to the annual fee for general approval and the monthly fee for limited approval:

1. – 4. (No change.)

[5. All composting operations exempt under N.J.A.C. 7:26A-1.4(a) shall pay a compliance fee of $1,381 for an exemption determination inspection.]

(c) **Except as provided at (e) below,** [The] **the** following apply to the annual fee for compliance monitoring. The annual fee for compliance monitoring will cover the Department's costs of facility compliance inspections and case management activities related to compliance monitoring:

1. – 5. (No change.)

(d) Each composting operation exempt under N.J.A.C. 7:26A-1.4(a) shall pay a compliance fee of $1,381 for an exemption determination inspection.

(e) Each facility regulated under N.J.A.C. 7:26A-9 shall pay an annual compliance monitoring fee of $106.00.

[(d)] **(f)** The omission of any type of service from the fee schedules set forth in (a), (b) or (c) above shall not be construed as a waiver of the Department's authority to assess fees for such services. An applicant/permittee making a submission which it believes is not included in any of the schedules set forth in (a) above shall request an initial review of the submission. As part of its initial review, the Department shall determine the fees for performing its services in connection with the submission. Such fees shall be equal to the number of hours estimated by the Department to be required for the performance of such services, multiplied by an hourly rate of $106.00. The

Department will calculate the fee for performance of the Department's services as follows:

1. If the Department determines, in its discretion, that the activity is of a type listed in (a), above, the amount of the fee shall be equal to the amount listed in (a).

2. If the Department determines, in its discretion, that such activity is not of a type listed in (a) above, the fee shall be equal to the Department's estimate of the number of person-hours required to perform such activity, multiplied by the hourly rate of $106.00.

[(e)] **(g)** A determination of a fee made pursuant to [(d)] **(f)** above shall expire on the date which is 90 days after the date such determination has been issued, unless the applicant or permittee has paid such fee to the Department in full before expiration. If the applicant or permittee desires to continue to pursue the submission for which the fee determination has expired, such applicant or permittee shall request a redetermination of the fee in writing, and the Department shall redetermine the fee in accordance with [(d)] **(f)** above, as applicable.

[(f)] **(h)** The Department may, in its discretion, refrain from commencing work on the activity which is the subject of a fee determined pursuant to [(d)] **(f)** above until the Department has received full payment of the fee. If the Department has already commenced work, the Department may, in its discretion, suspend such work until it has received full payment of the fee.

SUBCHAPTER 9. PROCESSING OF END-OF-LIFE VEHICLES THAT CONTAIN MERCURY SWITCHES

7:26A-9.1 Requirements for processing end-of-life vehicles that contain mercury switches

(a) A vehicle recycler who sells, gives or otherwise conveys ownership of an end-of-

life vehicle to a scrap recycling facility for recycling shall, in accordance with the mercury minimization plan required under (d) below, remove every mercury switch from each convenience light switch assembly and anti-lock braking system assembly in the end-of-life vehicle prior to delivering the vehicle to a scrap recycling facility, unless a mercury switch is inaccessible due to significant damage to the vehicle in the area surrounding the location of the mercury switch.

b) Notwithstanding (a) above, a scrap recycling facility that receives an end-of-life vehicle that has not been intentionally flattened, crushed or baled and that contains mercury switches shall, before it intentionally flattens, crushes, bales, or shreds the end-of-life vehicle, and in accordance with the mercury minimization plan required under (d) below, remove every mercury switch from each convenience light switch assembly and anti-lock braking system assembly in the end-of-life vehicle, unless a mercury switch is inaccessible due to significant damage to the vehicle in the area surrounding the location of the mercury switch.

c) A vehicle recycler or scrap recycling facility that removes mercury switches pursuant to (a) or (b) above shall maintain for at least three calendar years the following records on-site for inspection by the Department:

1. The number of mercury switches collected each month;

2. The number of end-of-life vehicles containing mercury switches processed each month;

3. The vehicle identification number of each vehicle in which a mercury switch is inaccessible due to significant damage to the vehicle in the area surrounding the location of the mercury switch;

4. The number of end-of-life vehicles processed for recycling each month; and

5. For each removed mercury switch, the vehicle identification number of the vehicle from which it was removed.

d) Each vehicle recycler and scrap recycling facility shall develop a written mercury minimization plan that describes how mercury switches will be removed, collected and recovered from end-of-life vehicles. This plan shall be kept on-site and be made available for inspection by the Department.

e) No person shall represent that mercury switches have been removed from an end-of-life vehicle being sold, given or otherwise conveyed for recycling if that person has not removed the mercury switches, or arranged with another person to remove the mercury switches in accordance with this subchapter.

f) Upon removal, mercury switches shall be collected, stored, transported, and recycled in compliance with the rules for management of Class D universal waste at N.J.A.C. 7:26A-7.

Based on consultation with staff, I hereby certify that the above statements, including the Federal Standards Analysis addressing the requirements of Executive Order No. 27 (1994), permits the public to understand accurately and plainly the purposes and expected consequences of this proposal. I hereby authorize this proposal.

Date: _____

_____
Bradley M. Campbell, Commissioner
Department of Environmental Protection