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ALASKA STATE LEGISLATURE

SESSION

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SENATOR BERT K. STEDMAN

MEMORANDUM

To: Senator Hollis French, Chairman
Senate Judiciary Committee

CC: Senator Bert Stedman
Senator Lesil McGuire
Senator Bill Wielechowski
Senator Gene Therriault

From: Weston Eiler, Legislative Aide *Weston Eiler*

Date: March 18, 2009

Subject: Senate Bill 59 – Hearing Questions Follow-Up

Senator Stedman would like to follow-up on questions raised during the March 18th Senate Judiciary Committee hearing on Senate Bill 59. Committee members raised questions regarding the scope of the bill's expanded access for low-speed vehicles, the official definition of low-speed vehicle, and required safety tests.

Section 1 Subparagraph B of SB 59 states that low-speed vehicles may operate on a highway with a maximum speed of 45mph if the highway is, "within an area of the unorganized borough, outside of a city, that is not connected by road to Anchorage or Fairbanks." The attached list details which communities would be allowed, and which would be unable, to implement this expanded access to 45 mph roads for low-speed vehicles.

Federal Motor Vehicle Safety Standard (FMVSS) 500 defines low-speed vehicle as:

- (a) a 4-wheeled motor vehicle,
- (b) whose speed attainable in 1.6 km (1 mile) is more than 32 kilometers per hour (20 miles per hour) and not more than 40 kilometers per hour (25 miles per hour) on a paved level surface, and
- (c) whose Gross Vehicle Weight Rating (GVWR) is less than 1,133 kilograms (2,500 pounds).

FMVSS regulations also require several inspections including tests of the vehicle's maximum speed, carrying weight, and safety equipment. The attached documentation provides further details on the expected affect of SB 59 and applicable federal regulations. Please feel free to contact our office if you have any questions.

DISTRICT A

Ketchikan • Sitka • Petersburg • Wrangell

Pelican • Elfin Cove • Port Alexander • Saxman • Meyers Chuck • Thorne Bay • Coffman Cove • Hollis

Senate Bill 59

*Community eligibility
to expanded low-speed
vehicle access under*

Section 1

*Subparagraph B of
Senate Bill 59*

Eligible

Communities

*Communities not
connected by road to
Anchorage or
Fairbanks, and with
fewer than 25,000
residents*

-
1. Adak
 2. Afognak
 3. Akhiok
 4. Akiachak
 5. Akiak
 6. Akutan
 7. Alakanuk
 8. Alatna
 9. Aleknagik
 10. Aleutians East
Borough
 11. Allakaket
 12. Ambler
 13. Anaktuvuk Pass
 14. Andreafsky
 15. Angoon
 16. Aniak
 17. Anvik
 18. Arctic Village
 19. Atka
 20. Atmautluak
 21. Atqasuk
 22. Barrow
 23. Beaver
 24. Belkofski
 25. Bethel
 26. Bettles
 27. Birch Creek
 28. Brevig Mission
 29. Bristol Bay Borough
 30. Chalkyitsik
 31. Chase
 32. Cheformak

33. Chevak
34. Chignik
35. Chignik Lagoon
36. Chignik Lake
37. Chiniak
38. Chistochina
39. Chuathbaluk
40. Chuloonawick
41. Clark's Point
42. Coffman Cove
43. Cold Bay
44. Coldfoot
45. Copper Center
46. Copperville
47. Council
48. Covenant Life
49. Craig
50. Crooked Creek
51. Cube Cove
52. Deering
53. Dillingham
54. Diomedea
55. Edna Bay
56. Eek
57. Egegik
58. Ekuk
59. Ekwok
60. Elfin Cove
61. Elim
62. Emmonak
63. Evansville
64. Eyak
65. False Pass
66. Ferry
67. Fort Yukon
68. Miller Landing
69. Galena
70. Gambell
71. Game Creek
72. Georgetown
73. Golovin
74. Goodnews Bay
75. Grayling
76. Gustavus
77. Haines
78. Haines Borough
79. Halibut Cove
80. Hamilton
81. Healy Lake
82. Hobart Bay
83. Hollis
84. Holy Cross
85. Chisana
86. Hoonah
87. Hooper Bay
88. Hope
89. Houston
90. Hughes
91. Huslia
92. Hydaburg
93. Hyder
94. Igiugig
95. Iliamna
96. Ivanof Bay
97. Jakolof Bay
98. Kaguyak
99. Petersville
100. Pope-Vannoy
Landing
101. Silver Springs
102. Kake
103. Kaktovik
104. Kaltag
105. Kanatak
106. Karluk
107. Kasaan
108. Kasigluk
109. Kenny Lake
110. Ketchikan
111. Ketchikan Gateway
Borough
112. Kiana
113. King Cove
114. King Island
115. King Salmon
116. Kipnuk
117. Kivalina
118. Klawock
119. Klukwan
120. Kobuk
121. Test
122. Kodiak
123. Kodiak Island
Borough
124. Kodiak Station
125. Kokhanok
126. Koliganek
127. Kongiganak
128. Kotlik
129. Kotzebue
130. Koyuk
131. Koyukuk
132. Kupreanof
133. Kwethluk
134. Kwigillingok
135. Lake & Peninsula
Borough
136. Lake Minchumina
137. Larsen Bay
138. Lazy Mountain
139. Levelock
140. Lime Village

141. Lower Kalskag
 142. Lutak
 143. Manley Hot Springs
 144. Manokotak
 145. Marshall
 146. Mary's Igloo
 147. Flat
 148. Gateway
 149. Glacier View
 150. McGrath
 151. Meadow Lakes
 152. Mekoryuk
 153. Chenega Bay
 154. Metlakatla
 155. Meyers Chuck
 156. Moose Creek
 157. Mosquito Lake
 158. Mountain Village
 159. Naknek
 160. Nanwalek
 161. Napaimute
 162. Napakiak
 163. Napaskiak
 164. Naukati Bay
 165. Nelson Lagoon
 166. Toksook Bay
 167. New Stuyahok
 168. Newhalen
 169. Newtown
 170. Nightmute
 171. Nikolai
 172. Nikolski
 173. Noatak
 174. Nome
 175. Nondalton
 176. Noorvik
 177. Northwest Arctic
 Borough
 178. Nuiqsut
 179. Bill Moore's Slough
 180. Nulato
 181. Nunam Iqua
 182. Nunapitchuk
 183. Ohogamiut
 184. Old Harbor
 185. Oscarville
 186. Ouzinkie
 187. Paimiut
 188. Pauloff Harbor
 189. Pedro Bay
 190. Pelican
 191. Perryville
 192. Petersburg
 193. Pilot Point
 194. Pilot Station
 195. Pitkas Point
 196. Platinum
 197. Point Baker
 198. Point Hope
 199. Point Lay
 200. Port Alexander
 201. Port Alsworth
 202. Port Clarence
 203. Port Graham
 204. Port Heiden
 205. Port Lions
 206. Port Protection
 207. Port William
 208. Primrose
 209. Quinhagak
 210. Rampart
 211. Red Devil
 212. Ridgeway
 213. Ruby
 214. Russian Mission
 215. Attu Station
 216. Beluga
 217. Buckland
 218. Saint George
 219. Saint Mary's
 220. Saint Michael
 221. Saint Paul
 222. Salamatof
 223. Salcha
 224. Sand Point
 225. Savoonga
 226. Saxman
 227. Scammon Bay
 228. Selawik
 229. Seldovia
 230. Shageluk
 231. Shaktoolik
 232. Shemya Station
 233. Shishmaref
 234. Shungnak
 235. Sitka
 236. Skagway
 237. Skwentna
 238. Slana
 239. Sleetmute
 240. Solomon
 241. South Naknek
 242. Stebbins
 243. Stevens Village
 244. Stony River
 245. Sutton-Alpine
 246. Takotna
 247. Tanana
 248. Tatitlek
 249. Tazlina
 250. Telida
 251. Teller
 252. Tenakee Springs
 253. Tetlin
 254. Thorne Bay
 255. Togiak
 256. Tuluksak
 257. Tuntutuliak
 258. Tununak
 259. Twin Hills
 260. Two Rivers
 261. Tyonek
 262. Ugashik
 263. Umkumiute
 264. Unalakleet
 265. Unalaska
 266. Unga
 267. Upper Kalskag
 268. Tanaina
 269. Venetie
 270. Wainwright
 271. Wales
 272. Whale Pass
 273. White Mountain
 274. Whitestone Logging
 Camp
 275. Wiseman
 276. Womens Bay
 277. Woody Island
 278. Wrangell
 279. Yakutat
 280. Aleneva
 281. Alpine
 282. Buffalo Soapstone
 283. Mud Bay
 284. New Allakaket
 285. Red Dog Mine
 286. Seldovia Village
 287. Thom's Place
 288. Excursion Inlet
 289. Vosnesenka
 290. Whitestone Comm.
 Assn.

Non-Eligible Communities

*Communities connected
by road to Anchorage or
Fairbanks, or with over
25,000 residents*

1. Alcan Border
2. Anchor Point
3. Gakona
4. Anchorage
5. Anderson
6. Big Lake
7. Butte
8. Cantwell
9. Central
10. Chicken
11. Chitina
12. Circle
13. Clam Gulch
14. Cohoe
15. College
16. Cooper Landing
17. Cordova
18. Crown Point
19. Denali Borough
20. Dot Lake
21. Y
22. Knik-Fairview
23. Douglas
24. Dry Creek
25. Eagle
26. Eagle River-
Chugiak
27. Eagle Village
28. Eielson AFB
29. Eklutna
30. Ester
31. Fairbanks
32. Fairbanks North Star
Borough
33. Fort Greely
34. Fox
35. Fox River
36. Fritz Creek
37. Funny River
38. Lakes
39. Livengood
40. Girdwood
41. Glennallen
42. Gulkana
43. Happy Valley

44. Harding-Birch
Lakes
45. Healy
46. Farm Loop
47. Homer
48. Juneau
49. Kachemak
50. Kalifornsky
51. Kasilof
52. Kenai
53. Kenai Peninsula
Borough
54. Knik River
55. Matanuska-Susitna
Borough
56. McCarthy
57. McKinley Park
58. Mendeltna
59. Mentasta Lake
60. Minto
61. Moose Pass
62. Nenana
63. Nikiski
64. Nikolaevsk
65. Niniichik
66. North Pole
67. North Slope
Borough
68. Northway
69. Northway Junction
70. Northway Village
71. Palmer
72. Paxson
73. Pleasant Valley
74. Portage Creek
75. Prudhoe Bay
76. Seward
77. Bear Creek
78. Lowell Point
79. Soldotna
80. Sterling
81. Talkeetna
82. Tanacross
83. Tok
84. Tonsina
85. Trapper Creek
86. Willow Creek
87. Valdez
88. Wasilla
89. Whittier
90. Willow
91. Diamond Ridge
92. Deltana
93. Dot Lake Village
94. Fishhook
95. Four Mile Road

96. Lake Louise
97. Tolsona
98. Point MacKenzie
99. Sunrise
100. Susitna
101. Nelchina
102. Chickaloon
103. Big Delta
104. Delta Junction

Note:

***Under existing law,
low-speed vehicles are
allowed in these
communities and able
to drive on roads with
a speed limit of up to
35mph. SB 59
expands access to
roads with 45mph
only in certain
communities due to
traffic congestion and
safety concerns.***

could create safety issues and concerns that negatively impact and cause severe damage to a new growth industry that provides real and significant solutions to our country and our planet's key issues." This petitioner envisions a Medium Speed Vehicle class that "would essentially be the same as the LSV regulations with the exception of the top speed of 35 miles per hour and additional vehicle requirement to increase the safety of margin [sic] for rollover, stopping, acceleration, and avoidance maneuvering." The petitioner lists these additional vehicle requirements as: Ability to maintain 35 mph on a level grade, ability to maintain 30 mph up an 8 percent grade, a minimum width of 55 inches, a "coil over shock" suspension, four-wheel hydraulic disc or drum brakes, and three-point automotive seat belts, in addition to the requirements that already exist for LSVs in FMVSS No. 500. The petitioner also states, "Additional testing of the vehicles should also be considered, including crush zones with a 2.5mph 'no damage' requirement. A full frontal crash should be required to meet safety standards between 17-18 mph, which is a derivative of full speed automobiles being crash tested at 35 mph." The petitioner does not state where the no damage crush zones would be on the vehicle, how they would be measured, or which safety standards would be tested at 17 or 18 miles per hour.

Porteon believes the new medium speed vehicle class is necessary because LSVs currently travel, with their top speed of 25 mph, on streets with speed limits up to 35 mph and normal traffic flow is impeded by these vehicles. MSVs, with their top speed of 35 mph, "would create a more cohesive traffic environment for mixed use vehicles."

III. Low Speed Vehicles

In 1998, NHTSA established Federal Motor Vehicle Safety Standard (FMVSS) No. 500, "Low speed vehicles," in response to growing interest in using golf cars and other similar-sized, 4-wheeled vehicles, including Neighborhood Electric Vehicles (NEVs), to make short trips for shopping, social, and recreational purposes primarily within retirement or other planned communities with golf courses. See 63 FR 33194. The definition of LSV established in that rulemaking was, "a 4-wheeled motor vehicle, other than a truck, whose speed attainable in 1.6 km (1 mile) is more than 32 kilometers per hour (20 miles per hour) and not more than 40 kilometers per hour (25 miles per hour), on a paved level surface."

In 2005, NHTSA published a final rule amending the definition of LSVs by removing the restriction on trucks, and instead establishing a 2,500-pound maximum GVWR. See 70 FR 48313.

This allowed small vehicles designed for work-related applications within the intended communities, such as landscaping or delivery purposes, to be included within the definition of an LSV, without opening the category to unintended vehicles, such as street-sweepers or speed-modified passenger cars. Additionally, in 2006, in response to petitions for reconsideration from Dynasty Electric Car Corporation and Global Electric Motorcars (GEM), both manufacturers of electric LSVs, NHTSA increased the maximum GVWR for LSVs to 3,000 pounds. This was done, in part, to "level the playing field" between electric and gasoline-powered LSVs, by allowing for the additional weight in batteries required by electric vehicles. See 71 FR 20026.

In conceiving the concept of the LSV as a small vehicle that would not be subject to the same stringent safety criteria as other vehicles, a critical concept was that it would not ordinarily mix with other traffic. In our 1998 rule establishing the category of LSVs, NHTSA explained in the summary that the rule:

[R]esponds to a growing public interest in using golf cars and other similar-sized, 4-wheeled vehicles to make short trips for shopping, social and recreational purposes primarily within retirement or other planned communities with golf courses. [emphasis added]

NHTSA's detailed analysis, as explained in the preamble of the 1998 final rule, recognized the importance of the fact that under most conditions, LSVs would not intermingle with regular automobile traffic, and the occasions where they would mix would be in controlled, low-speed environments. NHTSA stated that NHTSA has carefully reviewed their argument about the effects of this rulemaking, LSV safety, and thus the need for FMVSSs for LSVs, will be determined by the combination of three factors: vehicle design and performance; operator training and ability; and the operating environment. The agency believes that Standard No. 500, in combination with a limited operating environment and appropriate operator training and ability, will appropriately address the safety needs of LSV users.⁴

Additionally, in the 1998 final rule, NHTSA analyzed the Fatal Analysis Reporting System (FARS) data regarding fatalities involving golf cars. It was found that of the nine reported fatalities,

⁴ 63 FR 33208.

eight of them involved a collision with a car or truck. This further underscored the importance of driving environment.

In the 1998 final rule, the agency studied the use of NEVs in various municipalities that permitted them to travel on public roads. In that notice, we stated that "the driving environment [of LSVs] should be appropriate to the vehicle and its characteristics. Limiting LSV use to low-speed city and suburban streets is necessary, but does not eliminate the safety risks."⁵ NHTSA analyzed the State laws governing the on-road permissibility of NEVs in various States. Of the 12 States discussed, only one State (Arizona) permitted NEVs to travel on any road with a speed of 35 mph or less. The other 11 States (California, Nevada, New Mexico, Colorado, Wyoming, Illinois, Minnesota, Iowa, Florida, Georgia, and Texas) restricted NEVs to roads specifically designated by State and local governments.⁶

One portion of the analysis discussed possible reasons for the disparity of fatalities between Sun City⁷ (which had four NEV fatalities) and the City of Palm Desert (which had zero). We noted that:

The City of Palm Desert has a more controlled environment than Sun City for golf car use. The City of Palm Desert permits on-road use of golf cars in the same lanes as passenger cars and other larger motor vehicles in speed zones posted for speeds up to 25 miles per hour. In speed zones posted for speeds over 25 miles per hour, golf cars may be operated on-road only if there is a lane designated for their use and if the golf car is, in fact, operated within that lane. By contrast, NHTSA understands that Sun City, under state law, allows golf cars to operate in the same lanes as larger traffic on any road with a maximum speed of 35 miles per hour.

Based in part on this analysis, as well as our other observations, we concluded that operating environment played an important role in determining the benefits of establishing the LSV classification, as well as determining what safety standards should apply to that class. While NHTSA does not regulate the driving environment (such decisions are at the discretion of State governments), it did recommend that LSVs be licensed only for use in environments with very limited traffic. Specifically, we stated:

NHTSA recognizes that not all operating environments may be as controlled as that of the City of Palm Desert. The agency encourages other states and municipalities to study the features of the City of Palm Desert's

⁵ 63 FR 33208.

⁶ See 63 FR 33207.

⁷ We note that Sun City is located in Arizona, the only State that allowed NEVs to travel on any street with a speed limit of 35 mph or less.

TP-500-02
April 19, 2006

U.S. DEPARTMENT OF TRANSPORTATION

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

LABORATORY TEST PROCEDURE

FOR

FMVSS 500, Low-Speed Vehicles



ENFORCEMENT
Office of Vehicle Safety Compliance
Room 6115, NVS-220
400 Seventh Street, SW
Washington, DC 20590

18. DATA SHEETS

FMVSS 500 - LSV INFORMATION AND TEST SUMMARY

TEST LAB: _____ CONTRACT NO.: _____
 VEHICLE MAKE/MODEL/YEAR : _____
 NHTSA No.: _____ VIN: _____ DATE OF MFR: _____
 TYPE PROPULSION : _____ SEATING CAPACITY: _____

GVWR _____ GAWR FRONT _____ GAWR REAR _____

DEALER INSTALLED ACCESSORIES: _____

TIRE TYPE and SIZE: _____

| Safety Equipment | Pass | Fail |
|--|------|------|
| Headlamps (S5(b)(1)) | | |
| Turn signal lamps, front and rear (S5(b)(2)) | | |
| Taillamps (S5(b)(3)) | | |
| Stop lamps (S5(b)(4)) | | |
| Reflex reflectors, one red on each side, one on rear (S5(b)(5)) | | |
| Drivers side exterior mirror (S5(b)(6)) | | |
| Passenger side exterior mirror or interior mirror (S5(b)(6)) | | |
| Parking brake (S5(b)(7)) | | |
| Windshield, AS-1 or AS-4 composition (S5(b)(8)) | | |
| Vehicle Identification Number (VIN) (S5(b)(9)) | | |
| Seat belt assemblies - Type 1 or 2 (S5(b)(10)) | | |
| Certification label (Part 567) | | |
| Vehicle Loading | Pass | Fail |
| Certification Label GVWR < 1,361 kg. | | |
| With Occupant Weight added to UVW: GVWR ≥ total measured vehicle weight GAWRs ≥ measured axle weights | | |
| With Occupant, Cargo & Luggage Weight added to UVW: GVWR ≥ total measured vehicle weight GAWRs ≥ measured axle weights | | |
| Maximum Speed Test | Pass | Fail |
| Maximum Speed (S5(a)) _____ km/hr (more than 32.0 km/hr and not more than 40.0 km/hr) | | |

Cindy Smith

From: · Russell Stigall [russell@akvoice.org]
Sent: Wednesday, March 18, 2009 11:56 AM
To: Sen. Bert Stedman
Cc: Sen. Hollis French; Sen. Bill Wielechowski; Sen. Lesil McGuire; Sen. Gene Therriault
Subject: Support for SB 59 - low-speed vehicles
Attachments: ACA Support SB59 LSV.doc

Dear Senator Stedman,

Please accept this letter of support for SB 59 on behalf of the 38,000 members of the Alaska Conservation Alliance.

Sincerely,
Russell Stigall

*Alaska Conservation Alliance
Clean Energy Legislative Organizer
(907) 463-3366*

cc: Senate Judiciary Committee members French, Wielechowski, McGuire and Therriault

Gerald Herbrandson
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solarwind@aptalaska.net

Senator Bert Stedman
Representative Peggy Wilson

February 3, 2009

Regarding: HB59 – “An Act relating to the operation of low-speed vehicles”

1998 I started the business *Solar Wind* to promote the use of alternative energy systems within Alaska. In the 11 years that I have been in business I have sold over \$350,000.00 worth of solar panels, inverters, batteries, generator, water turbines, and wind turbines. I have well over 100 customers significantly reducing their dependence upon carbon fuels.

Last year I expanded my business to include electric vehicles (EV's). Currently there are nine (9) EV's operating in Petersburg. Since last summer these vehicles have been driven over 8,000 miles saving 400 gallons of fuel.

EV's are ideal for small rural communities that have access to hydroelectric power. They cost less than 2 cents a mile to operate. The battery system that comes with the vehicle provides over 25 miles of range and is designed to function for over 20,000 miles, adding about 12 cents per mile for operation. There is minimal maintenance and no oil changes.

These EV's are a **low-speed vehicle (LSV)** and are ideally suited for short trips to the post office, grocery store, school, and shopping. Such short trips are the most fuel inefficient for internal combustion engines (ICE) and are hard on a cold engine.

Within Petersburg, as well as many of our smaller communities, most of our roads are posted at 35 mph or less and therefore are well suited to LSV's. The proposal to allow the use of LSVs on roads posted at 45 mph or less would greatly broaden the window of use.

I spoke to our chief of police, Mr. Stone, regarding the use of LSV's within Petersburg and he commented that many of our older citizens never drive over 25 mph anyway. He did not feel that their reduced speed would create a safety hazard within our community.

An interesting side note – many of my customers are older individuals who have difficulty getting in and out of conventional cars and trucks. However, they find the LSV's to be easy to get into and operate. They are some of my best champions driving their vehicles on a daily basis even through the winter.

I appreciate the support that you are providing to the use of alternative energy and LSV's. Please feel free to contact me at any time if there is information that I could provide or if you need support. Next time that you are in Petersburg I would enjoy giving you a ride from the airport or wherever (there may be a charge of 1.5 cents per mile).

Gerald Herbrandson
Solar Wind of Alaska



Alaska Conservation Alliance

Uniting for Alaska's Future

March 4, 2009

The Honorable Senator Stedman
State Capitol
Juneau, Alaska 99801

Re: SB 59 - An Act relating to the operation of low-speed vehicles

Dear Senator Stedman,

On behalf of the Alaska Conservation Alliance (ACA), a consortium of 40 Alaska-based conservation groups, I would like to express our support for SB 59, an Act relating to the operation of low-speed vehicles. Allowing low speed vehicles to access more mileage of state and municipal roads will allow those already in possession of a low-speed vehicle to get more use out of their investment while at the same time giving an added incentive to low-speed vehicle purchases by meeting more customer needs.

For those Alaskan communities working toward energy self-sufficiency through local, secure clean-energy production and use, the switch to hybrid-electric and all-electric vehicles is a must. By allowing low speed vehicles to access additional roads within these communities, roads that could take drivers to the airport, hospital, ferry terminal or grocery store, this bill will make cheap, efficient, low-speed vehicles more practical in these self-sufficient communities.

Additionally, low-speed vehicles can cost tens of thousands of dollars less than full-sized electric cars. This bill will help broaden the penetration of electric vehicles and offer transportation options to commuters with lower incomes. The Alaska Conservation Alliance strongly encourage the Alaska Legislature to pass SB 59. Thank you for your time and consideration.

Sincerely,

Kate Troll
Executive Director



CC: Senate Judiciary Committee members

PO Box 1006600, Anchorage, Alaska 99501 / Ph. 907.258.6171 / Fax 907.258.6177
419 6th Street, Ste. 321, Juneau, Alaska 99801 / Ph. 907.463.3366 / Fax 907.463-2554 / www.akvoice.org

Petersburg gets charged up about their new electric cars

By **ROBERT MONTEITH**
Pilot writer

Petersburg's first ever car dealership held an open house last weekend. The event, which showed off the "Miles" electric car, was a huge success, attracting a crowd of over 100 people

"They made quite a few of these and put them in the larger cities. As you can see, that doesn't really make sense because they have boulevards and freeways so they didn't sell at all. So they were trying to figure out what to do with them. A number of dealers in small rural communities found out about this. They picked up on it because these are ideally suited for isolated small communities that don't have any freeways," he said.

The open house even attracted Douglas Wilson, an executive of the Miles' manufacturer, who wants to know the appeal of the car in a place like Petersburg.

"He came up here specifically to show them why they are buying the cars. It's because of the ease of access and for just running around, it just makes a lot of sense," explained Herbrandson.

He went on to say that while he didn't expect the electric cars to replace a family's first vehicle, they offered a lot as a way of getting around town quickly.

throughout the three-hour event.

"The first two hours, it was a lot like a fair. There were a lot of people milling around. I couldn't even answer all the questions. We invited all the current owners and they all came down to give everybody rides. It was just a lot of fun," said Gerry Herbrandson,

"Everybody is going to have to keep their truck to haul their boat out, haul their firewood, or do their long runs, but the problem is going to the grocery store or post office is just a short run. That is awful hard on gas engines. That's where your fuel efficiency is very low. You pick up some condensates in the engine because it's not getting warm enough. The electric cars, this is where they shine. If people are choosing to replace their second car, this is the car of choice because it meets a lot of needs," he said.

One need is the cost of fuel, which Herbrandson lists at about 1.5-2 cents worth of electricity per mile.

So far, business has been good for the upstart company with several Petersburg families purchasing the vehicles. The Herbrandsons will travel to Wrangell this weekend for another open house event.

who operates the company with brother Rod.

The brothers brought the compact electric cars to Petersburg after discovering the product existed. Herbrandson said he had been enthusiastic about alternative sources of energy like solar paneling for a long time. This new automobile venture, named Solar Wind of Alaska, is an extension of that interest.

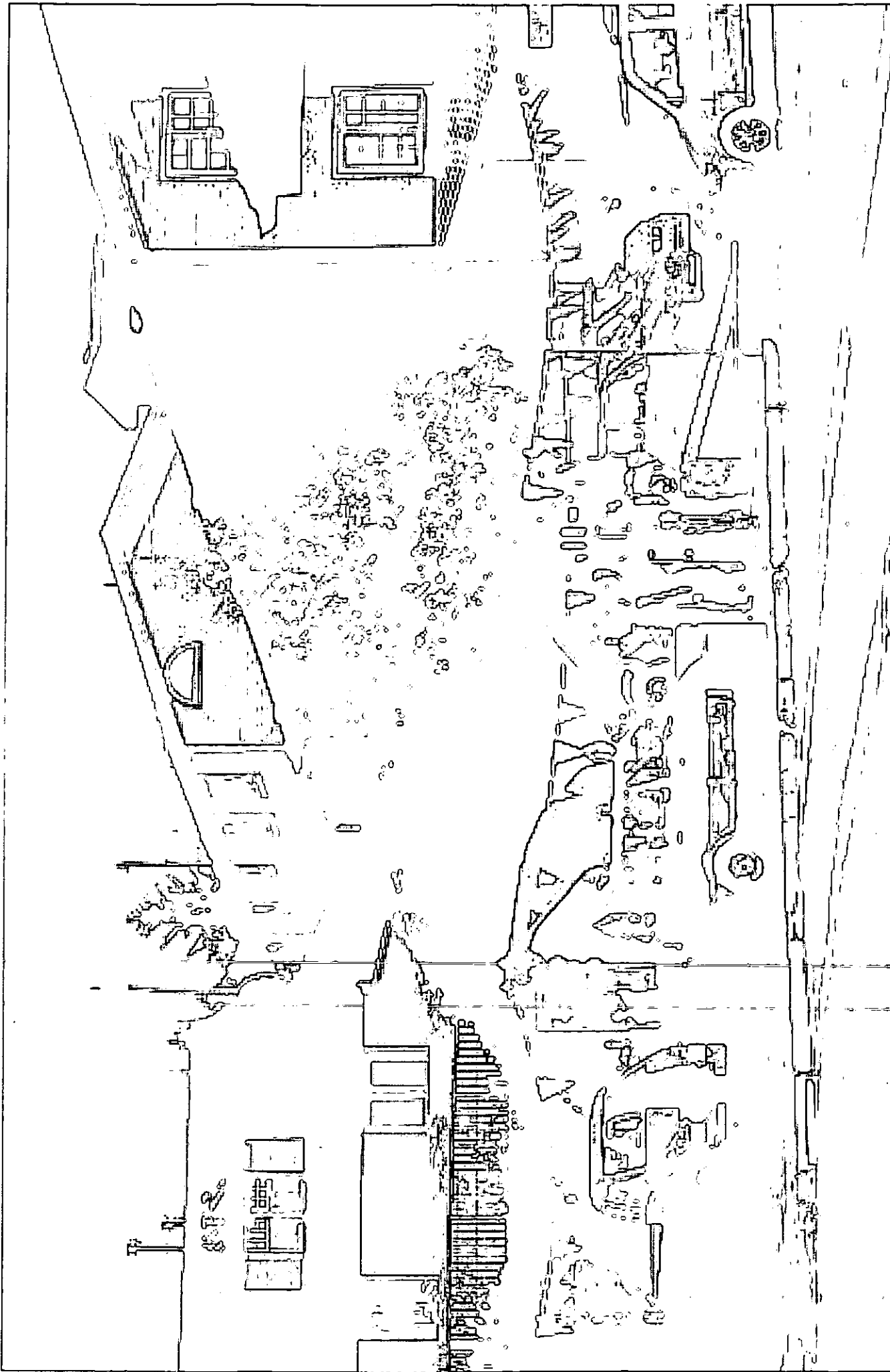
The cars themselves run on 48 volt direct current motors that limit themselves to a legal low mileage vehicle limit of around 30 mph. The Herbrandsons have also recently started offering a truck, which is boosted up with a 72 volt AC motor that can haul 700 lbs.

Herbrandson explained that for a long while, the manufacturer had difficulty finding the right market for these cars, which have a range of 30-50 miles between charges.



ROBERT MONTEITH / Petersburg Pilot

The Herbrandson brothers' electric car sales event attracted more than 100 people on Sunday.



Public testimony in regards to SB54 on April 3, 2009

Justin Powell
www.fairbanksgas.com
1075 Trianon Dr.
Fairbanks, AK

Thank you, Chairman French for allowing public testimony today on SB 54. I want to share with you several events have transpired over the last few years that have left Alaska with a market that can no longer self regulate itself. The result being a dramatic increase in refinery margins which has cost the residents of Alaska over \$230 million dollars over the last year.

In 2004 Flint Hills bought the North Pole refinery and entered into a contract with the State of Alaska to buy royalty oil from the North Slope. Within this contract was a stipulation that Flint Hills must invest in desulfurization facilities to be able to meet pending EPA requirements. Only months after the legislature ratified the royalty oil sales contract, Flint Hills backed out of this commitment setting the stage for where we find ourselves today.

In 2007 the EPA regulations of 15ppm ultra low-sulfur diesel took effect. As you can see from the chart on page 3, ULSD was first offered for sale in Alaska on June 1st, 2007. Prior to the new EPA regulations the Tesoro and Flint Hills refineries both produced similar product lines of gasoline, diesel and jet fuel with neither producer having a significant market ownership in one product.(Fig 1.) In fact in 2002 the State of Alaska reported that in-state refineries exported 84 million gallons of surplus gasoline.

Figure 1. 2002 Refinery Production

| | Percent of production | Quantity (million bbls.) |
|-----------------------|-----------------------|--------------------------|
| Flint Hills | | |
| Gasoline & Naphtha | 19 | 4.44 |
| Jet Fuel | 57 | 13.31 |
| Diesel | 19 | 4.44 |
| Gas Oil | 4 | 0.93 |
| Asphalt | 1 | 0.23 |
| Tesoro | | |
| Gasoline | 25 | 4.56 |
| Jet, diesel, fuel oil | 45 | 9.03 |
| Bottoms & residual | 30 | 5.48 |

After the new EPA regulations went into effect this balanced market was shattered. Due to Flint Hill's lack of investment they could no longer produce gasoline and diesel to meet stricter EPA requirements. Tesoro gained a 100% market share of the ULS Diesel market and an 80% share of the gasoline market. Flint Hills focused on the production of jet fuel and was forced to purchase low-sulfur feed stock from Tesoro to dilute with their high sulfur gasoline to meet EPA regulations.

The third Alaska refiner, Petrostar mainly produces jet fuel and heating oil. Neither of these products was impacted by the 2007 EPA regulations. Petrostar has carved out their own share of this market as the prime supplier to the military bases. They have been able to maintain this market ownership of Alaska's military contracts through their minority owned preferred bidder status as a wholly owned subsidiary of ASRC.

The result today is that we have three refiners who each have over an 80% share in one or two segments of the market. The effect of this niche market ownership is blatantly obvious when you look at the chart on page two. The only product that all three refineries produce is jet fuel which does not show the same upward trends as gasoline and diesel fuel.

Without outside intervention it is highly unlikely that this situation will correct itself. All three refineries are enjoying profitable margins and there is no incentive for them to increase the level of competition in the market. Unless the legislature acts we will continue to see higher prices indefinitely.

There are three possible ways to remedy our current situation:

1. Flint Hills could build a desulfurization unit and reenter the gasoline and diesel fuel markets. This would rebalance the market shares bringing more competition. At this time Flint Hills has no plans to do so.
2. The State of Alaska could build the infrastructure to allow independent retailers to bring in fuel from outside Alaska. A fuel purchase program could be managed through existing channels. You only have to look as far as the gas pump in Juneau to see that this is possible. The capitol costs and risks are too great to expect a private entrepreneur to make this investment. To quote a local Fairbanks fuel distributor, *"There is no way for an independent such as myself to import any real volume from the PNW (Pacific Northwest), I have no access to storage thus no way to bring enough in to make a meaningful difference in the market and the risk exposure is huge the refineries could make it an unprofitable load in the blink of an eye."*
3. The third choice is to pass SB54 and bring balance to the market through regulation. This is the least preferred way of restoring prices, but the only way to provide immediate correction to the market.

I thank you for your time and consideration of this bill and urge you to move SB54 to a floor vote.

Justin Powell

www.fairbanksgas.com

(907)460-7888

Figure. 2

| Fuel Price Comparison 4/3/2009 | | | | | |
|--------------------------------|-----------|-----------|--------|-------------------|-------------------|
| | Fairbanks | Anchorage | Juneau | Washington (-tax) | US Average (-tax) |
| Gasoline | 2.46 | 2.36 | 2.07 | 1.93 | 1.75 |
| Diesel | 3.37 | 3.34 | 2.59 | 2.06 | 1.96 |

Figure. 3

Crack spread is a term used in the oil industry for the differential between the price of crude oil and petroleum products extracted from it - that is, the profit margin that an oil refinery can expect to make by "cracking" crude oil. http://en.wikipedia.org/wiki/Crack_spread

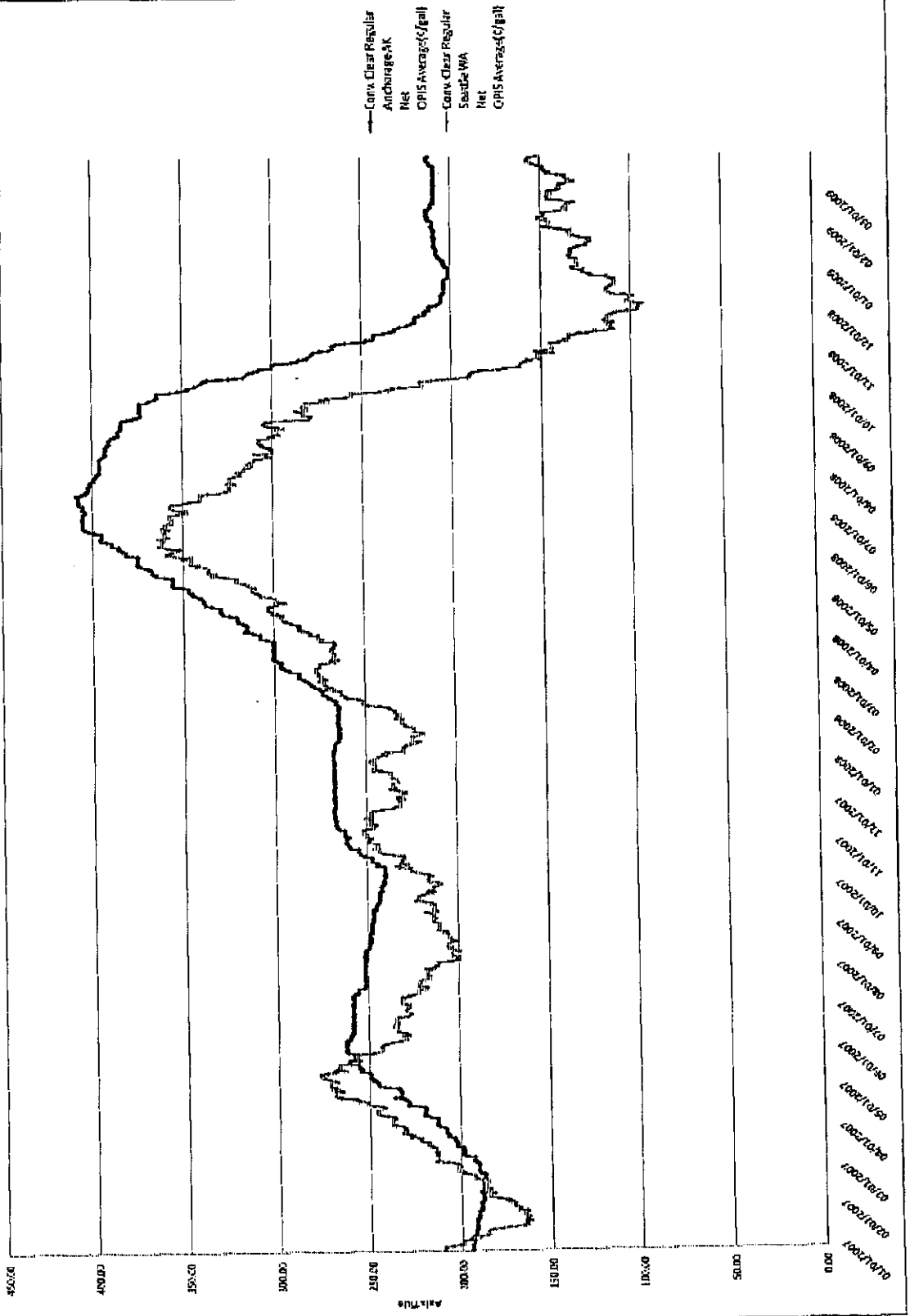
Gasoline Crack Spread

Alaska $\$2.12 \times 42g./bbl - \$49.38(\text{ANS crude spot}) = \39.66
~~Seattle $\$1.52 \times 42g./bbl - \$49.38(\text{ANS crude spot}) = \19.66~~
 Difference **\$25.26 or 175%**

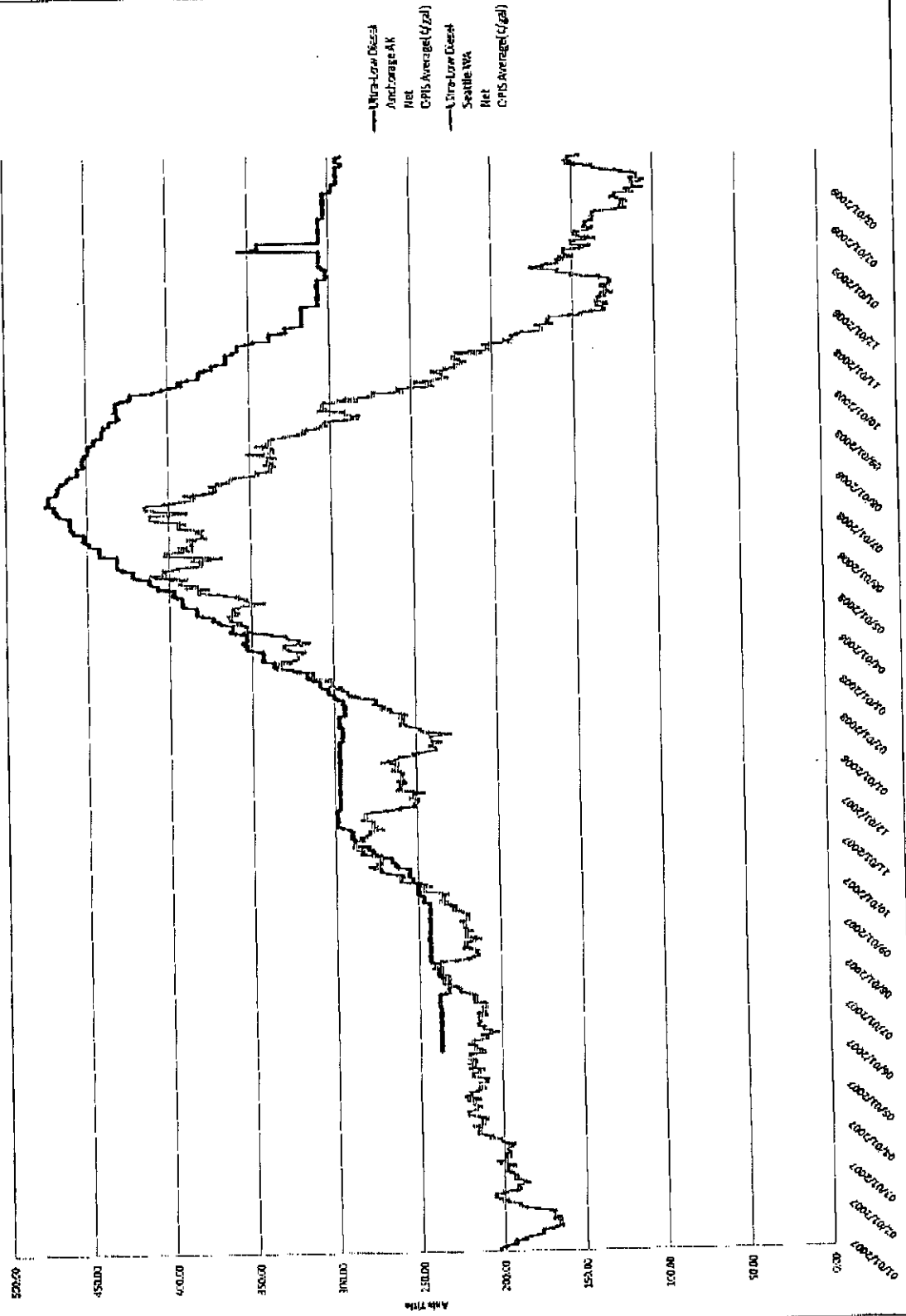
Diesel Crack Spread

Alaska $\$2.92 \times 42g./bbl - \$49.38(\text{ANS crude spot}) = \73.26
~~Seattle $\$1.52 \times 42g./bbl - \$49.38(\text{ANS crude spot}) = \19.66~~
 Difference **\$61.74 or 536%**

Unleaded Gasoline Net Wholesale



ULS Diesel Net Wholesale



Wholesale Rack Prices ANCH vs. SEA (Gasoline)

Average Rack difference 54 cents/gallon

ANCHORAGE, AK

2009-03-31 17:05:40 EDT

OPIS CLOSING BENCHMARK FILE

OPIS NET CLEAR PRICES

| | Terms | Qty | Move | Mid | Move | Pre | Move | Date |
|--------------------|--------|--------|--------|--------|--------|--------|--------|-------|
| Shell | b N-10 | 197.90 | - 2.00 | 204.90 | - 2.00 | 213.90 | - 2.00 | 02/27 |
| Chevron | b N-10 | 205.80 | + 5.00 | 213.80 | + 5.00 | 221.80 | + 5.00 | 03/27 |
| Flintkris | u N-10 | 218.00 | - 5.00 | 225.00 | - 5.00 | 232.00 | - 5.00 | 03/31 |
| Texaco | b N-10 | 220.00 | + 4.00 | 227.00 | + 4.00 | 234.00 | + 4.00 | 03/25 |
| Texaco | u N-10 | 220.00 | + 4.00 | 227.00 | + 4.00 | 234.00 | + 4.00 | 03/25 |
| LOW RACK | | 197.90 | | 204.90 | | 213.90 | | |
| HIGH RACK | | 220.00 | | 227.00 | | 234.00 | | |
| RACK AVG | | 212.34 | | 219.54 | | 227.14 | | |
| BRD LOW RACK | | 197.90 | | 204.90 | | 213.90 | | |
| BRD HIGH RACK | | 220.00 | | 227.00 | | 234.00 | | |
| BRD RACK AVG | | 207.90 | | 215.23 | | 223.23 | | |
| UBD LOW RACK | | 218.00 | | 225.00 | | 232.00 | | |
| UBD HIGH RACK | | 220.00 | | 227.00 | | 234.00 | | |
| UBD RACK AVG | | 219.00 | | 226.00 | | 233.00 | | |
| CONT AVG-03/31 | | 212.34 | | 219.54 | | 227.14 | | |
| CONT NET AVG-03/31 | | 212.34 | | 219.54 | | 227.14 | | |
| CONT NET LOW-03/31 | | 197.90 | | 204.90 | | 213.90 | | |
| CONT NET HI-03/31 | | 220.00 | | 227.00 | | 234.00 | | |

ANCHORAGE, AK

| | |
|-------------------|--------|
| LOW RETAIL | 232.33 |
| AVG RETAIL | 236.25 |
| LOW RETAIL EX-TAX | 213.66 |
| AVG RETAIL EX-TAX | 217.59 |

SEATTLE, WA

2009-03-31

11:01:56 EDT

OPIS NET CLEAR PRICES

| | Terms | Qty | Move | Mid | Move | Pre | Move | Date |
|---|--------|--------|--------|--------|--------|--------|--------|-------|
| Cenex | b 1-10 | 148.50 | - 5.00 | 158.40 | - 5.00 | 168.30 | - 5.00 | 03/30 |
| COB | u N-10 | 151.25 | - 4.00 | 160.25 | - 4.00 | 169.25 | - 4.00 | 03/30 |
| Chevron | b N-10 | 151.60 | - 3.00 | 161.10 | - 3.00 | 170.60 | - 3.00 | 03/30 |
| Texaco | b N-10 | 151.60 | - 3.00 | 161.10 | - 3.00 | 170.60 | - 3.00 | 03/30 |
| Shell | b N-10 | 153.50 | - 1.00 | 163.00 | - 1.00 | 172.50 | - 1.00 | 03/30 |
| Texaco | u N-10 | 153.75 | - 4.50 | 162.75 | - 4.50 | 171.75 | - 4.50 | 03/30 |
| US Oil | u N-10 | 154.25 | - 8.50 | 163.25 | - 8.50 | 174.25 | - 8.50 | 03/30 |
| LOW RACK | | 148.50 | | 158.40 | | 168.30 | | |
| HIGH RACK | | 154.25 | | 163.25 | | 174.25 | | |
| RACK AVG | | 152.06 | | 161.41 | | 171.04 | | |
| OPIS PACIFIC NORTHWEST DELIVERED SPOT (SRI) | | | | | | | | |
| FOB SEATTLE | | 146.84 | | -- -- | | 163.34 | | |
| BRD LOW RACK | | 148.50 | | 158.40 | | 168.30 | | |
| BRD HIGH RACK | | 153.50 | | 163.00 | | 172.50 | | |
| BRD RACK AVG | | 151.30 | | 160.90 | | 170.50 | | |
| UBD LOW RACK | | 151.25 | | 160.25 | | 169.25 | | |
| UBD HIGH RACK | | 154.25 | | 163.25 | | 174.25 | | |
| UBD RACK AVG | | 153.08 | | 162.09 | | 171.75 | | |
| CONT AVG-03/31 | | 152.28 | | 161.64 | | 171.28 | | |
| CONT NET AVG-03/31 | | 152.06 | | 161.41 | | 171.04 | | |
| CONT NET LOW-03/31 | | 148.50 | | 158.40 | | 168.30 | | |
| CONT NET HI-03/31 | | 154.25 | | 163.25 | | 174.25 | | |

SEATTLE-BELLEVUE-FEVERETT, WA

| | |
|-------------------|--------|
| LOW RETAIL | 207.98 |
| AVG RETAIL | 227.06 |
| LOW RETAIL EX-TAX | 154.04 |
| AVG RETAIL EX-TAX | 173.45 |

ALASKA STATE LEGISLATURE

SESSION

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Senator_Bert_Stedman@legis.state.ak.us



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Ketchikan, AK 99901-6442
Phone (907) 225-8088
Fax (907) 225-0713

SENATOR BERT K. STEDMAN

SPONSOR STATEMENT

Senate Bill 59

“An Act relating to the operation of low-speed vehicles”

In recent years, electric cars have progressed so they now come with all the necessary safety equipment as regular passenger vehicles. The use of low-speed electric vehicles has extended beyond golf communities and they are showing up in our towns. This new breed of electric car can help reduce carbon dioxide emissions and provide cheaper, environment-friendly transportation options for Alaskans.

Current Alaska law only allows electric cars to operate on roads with posted speed limits of 35 mph or less. In communities throughout Alaska, owners of electric cars are seeking access to more miles of road. If enacted, SB 59 will allow low-speed electric vehicles on roads with posted speed limits of 45 mph or less. This new access would be limited to communities not connected by road to Anchorage or Fairbanks, and with a maximum of 25,000 residents.

Larger communities may not want low-speed electric vehicles traveling on roads with high traffic volume for safety purposes. SB 59 allows municipalities to opt-in and expand access of low-speed vehicles at their discretion. However, many small communities throughout Alaska have few road miles and low traffic volume providing a suitable environment for electric cars. SB 59 will give individual communities the opportunity to increase electric car usage if they so choose.

Contact: Weston Eiler, Legislative Aide to Senator Bert Stedman at (907)-465-3873

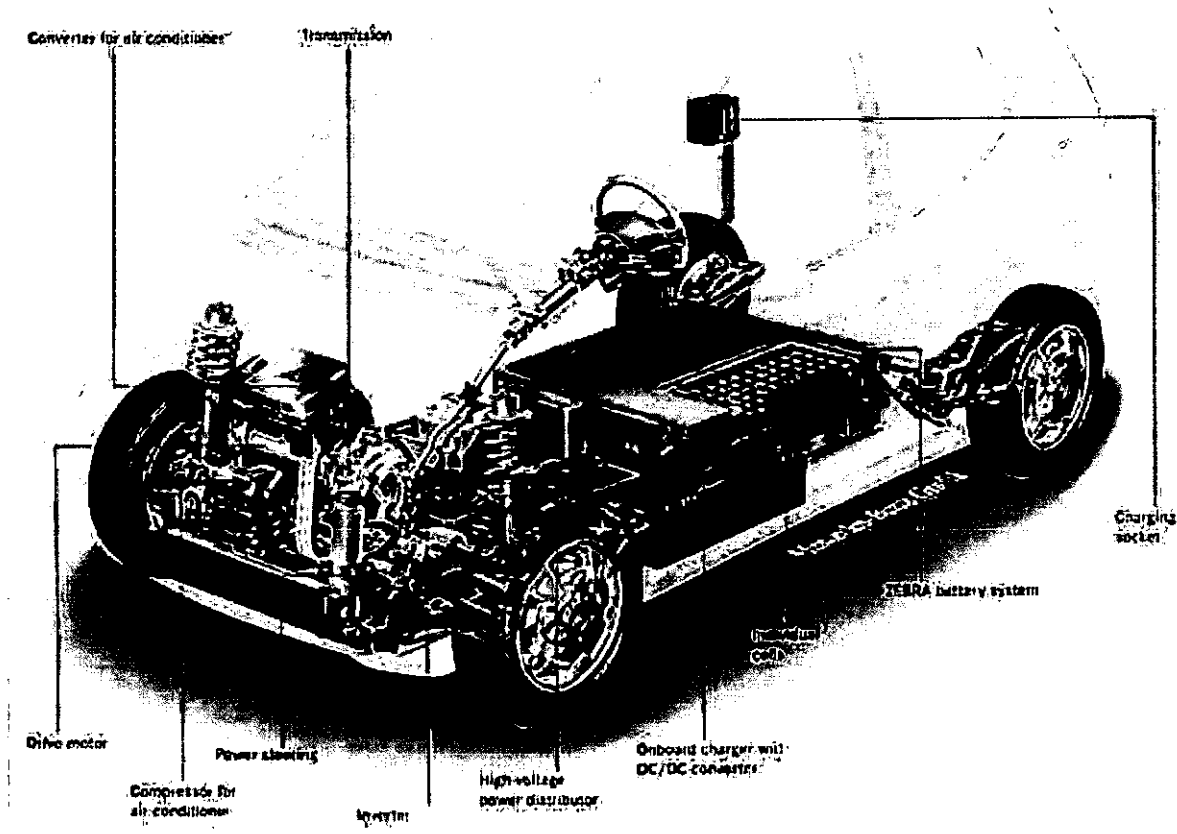
DISTRICT A

Ketchikan • Sitka • Petersburg • Wrangell

Pelican • Elfin Cove • Port Alexander • Saxman • Meyers Chuck • Thorne Bay • Coffman Cove • Hollis

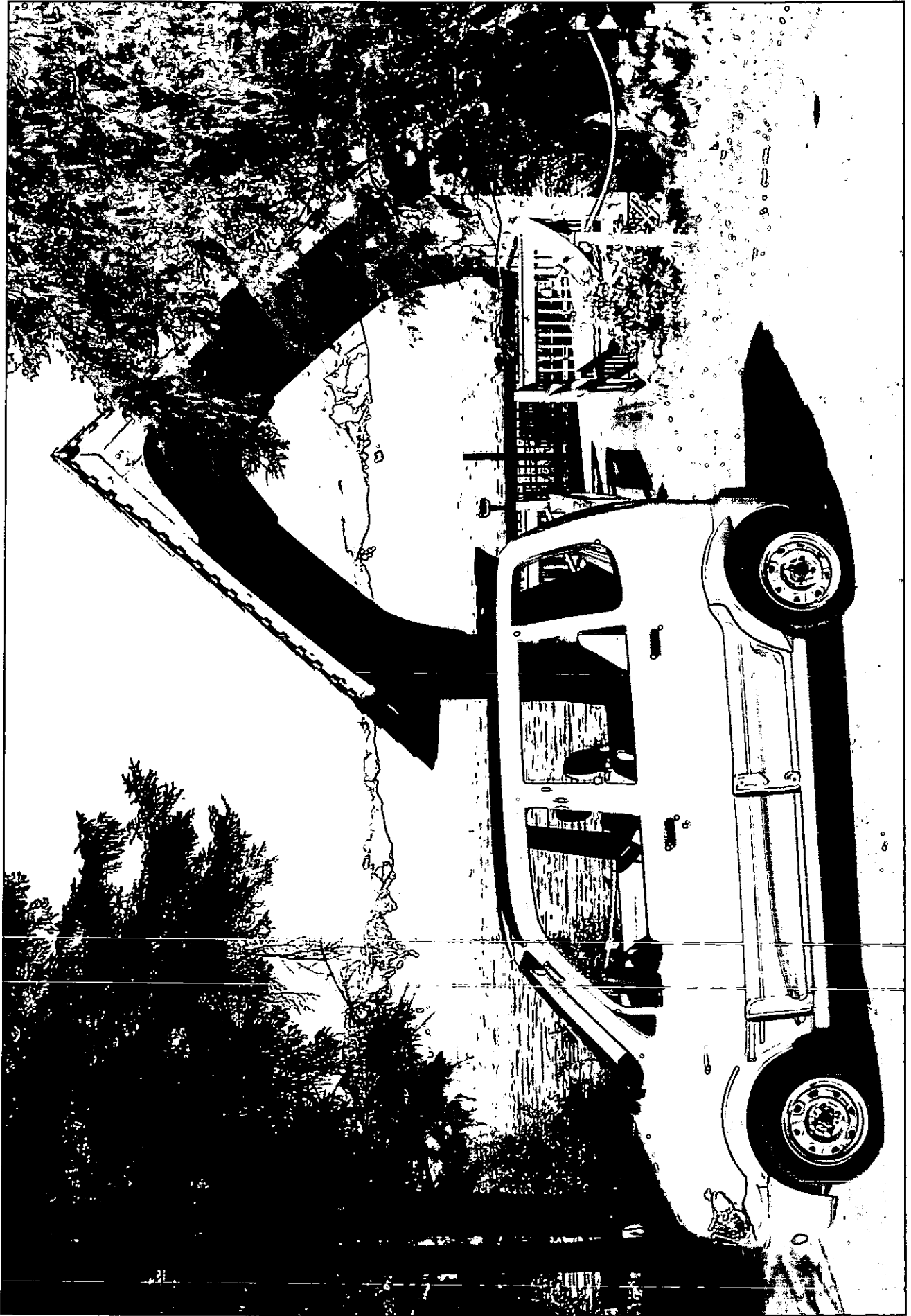
Electric Cars You Can Drive

Electric cars and its hybrid technology is a burgeoning market, and the chance for America to become energy-independent is on everyone's minds as of late. No one wants to be paying for gasoline, when an 8-hour charge can get them much, much more for their time and money. When you read about these vehicles, keep in mind that this technology is new, but it's reliable.



Electric Cars Available in 2008

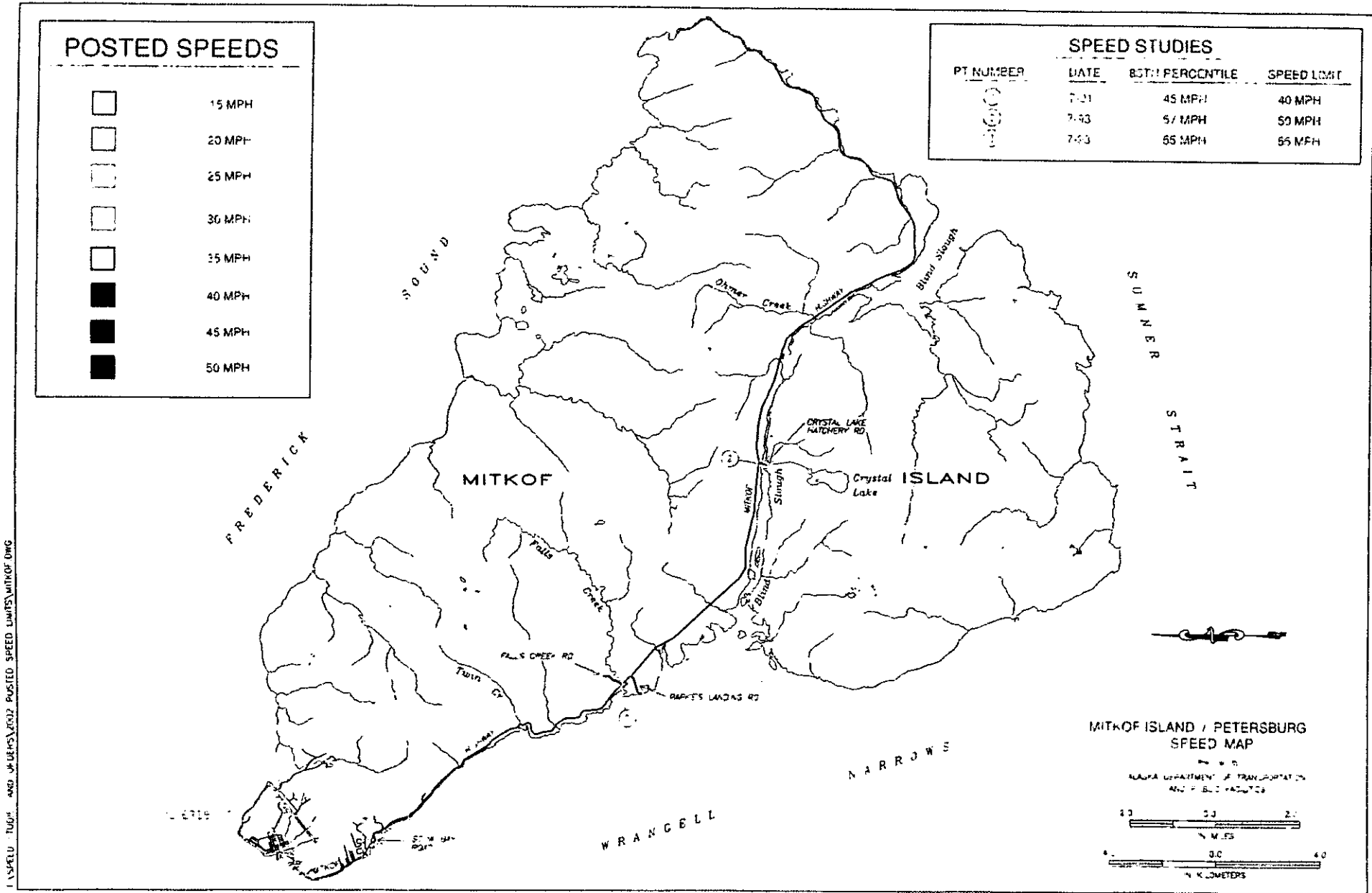
- Tesla Roadster Electric Car
- GEM Electric Car
- Dynasty iT Sedan Electric Car
- ZENN Electric Car
- Zap Xebra Electric Car
- Aptera Type-1



Miles EV ZX-40 ~ Retail: \$14,750

Southeast Alaska Community Speed Limits (estimated length of road for each speed limit)

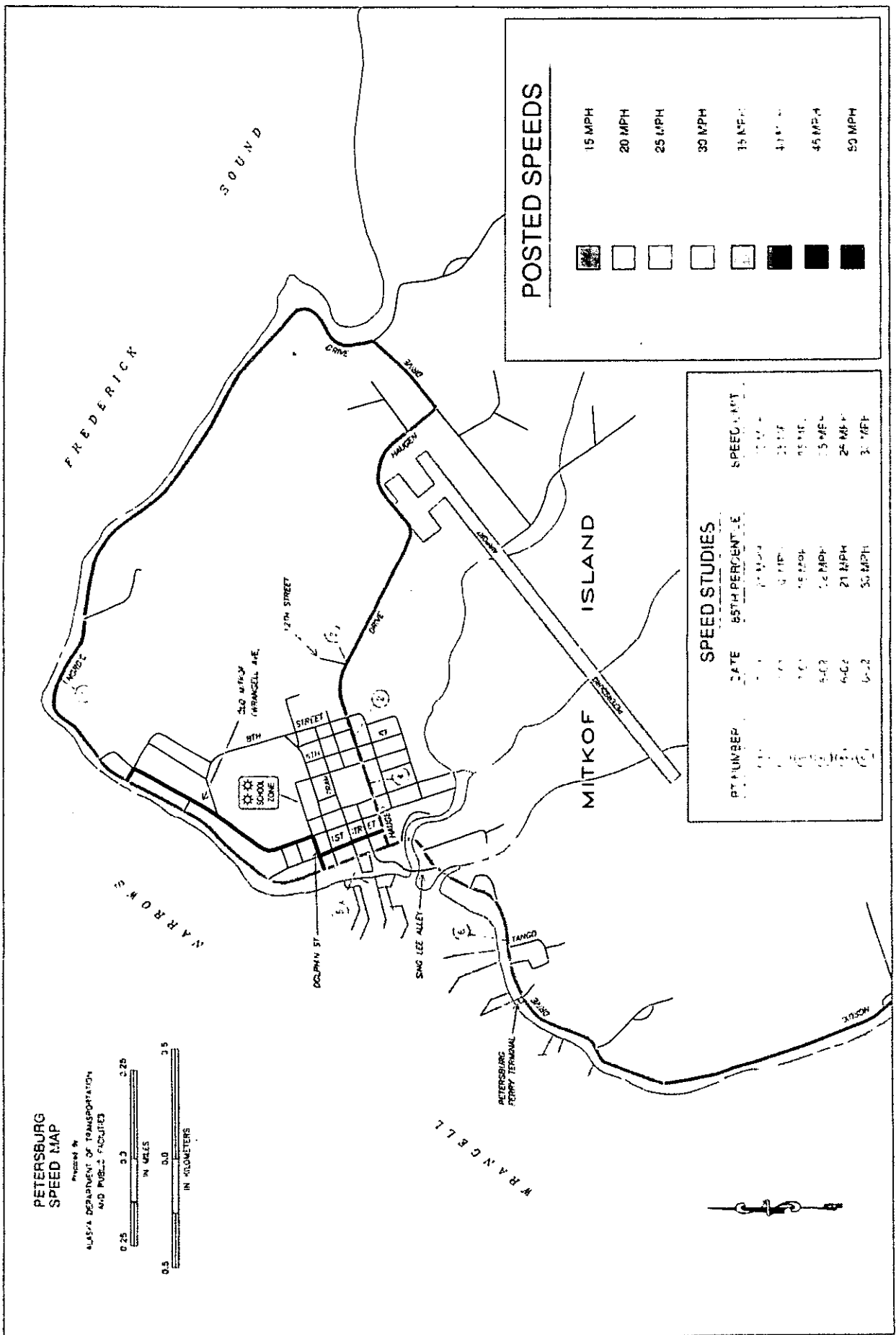
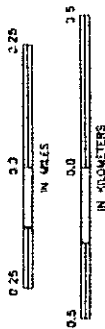
| Location | Total Miles | 15mph | 20mph | 25mph | 30mph | 35mph | 40mph | 45mph | 50mph | 55mph | total state miles | % miles state |
|------------------|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------------------|---------------|
| Sitka | 49.431 | 0.3 | 0.21 | 4.15 | 0.9 | 3.1 | 4.6 | 3 | 0 | 0 | 16.26 | 32.89% |
| Peterburg | 72.068 | 0 | 1.465 | 0.84 | 3.78 | 3.404 | 0.05 | 0 | 29 | 0 | 38.539 | 53.48% |
| Wrangell | 53.79 | 0 | 0.09 | 0.225 | 0 | 1.414 | 2.78 | 8 | 4.25 | 0 | 16.759 | 31.16% |
| Ketchikan | 93.732 | 0 | 11.962 | 8.5 | 2.236 | 5.75 | 4 | 10.5 | 8 | 3.5 | 54.448 | 58.09% |



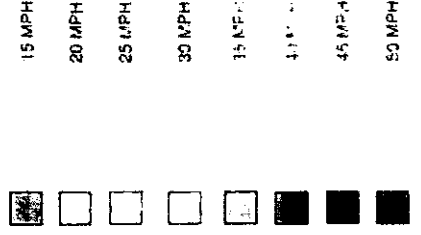
I:\SPEDU - TUG - map of DEMS\2002 POSTED SPEED LIMITS\MITKOF.DWG

PETERSBURG SPEED MAP

Prepared by
ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES



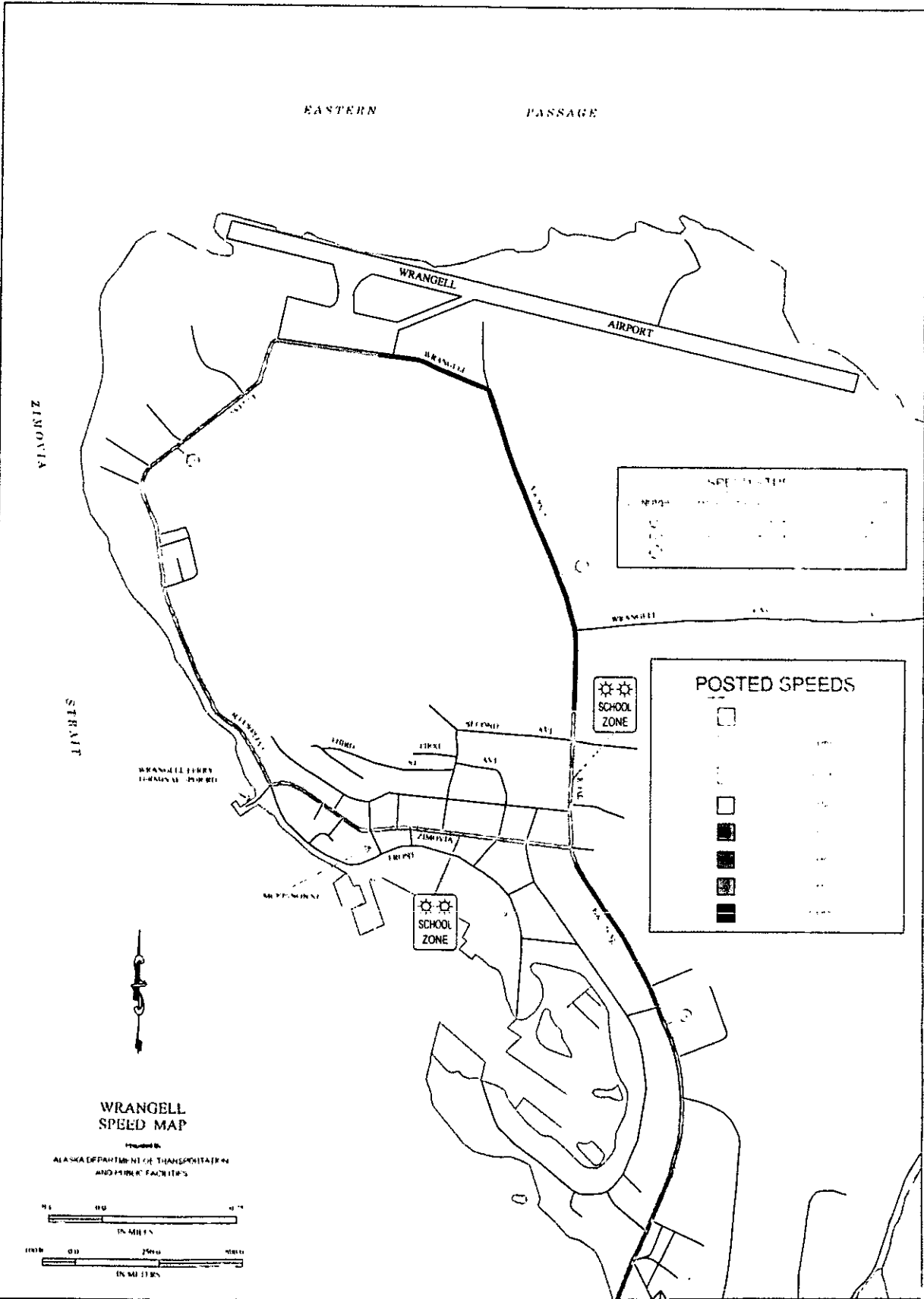
POSTED SPEEDS

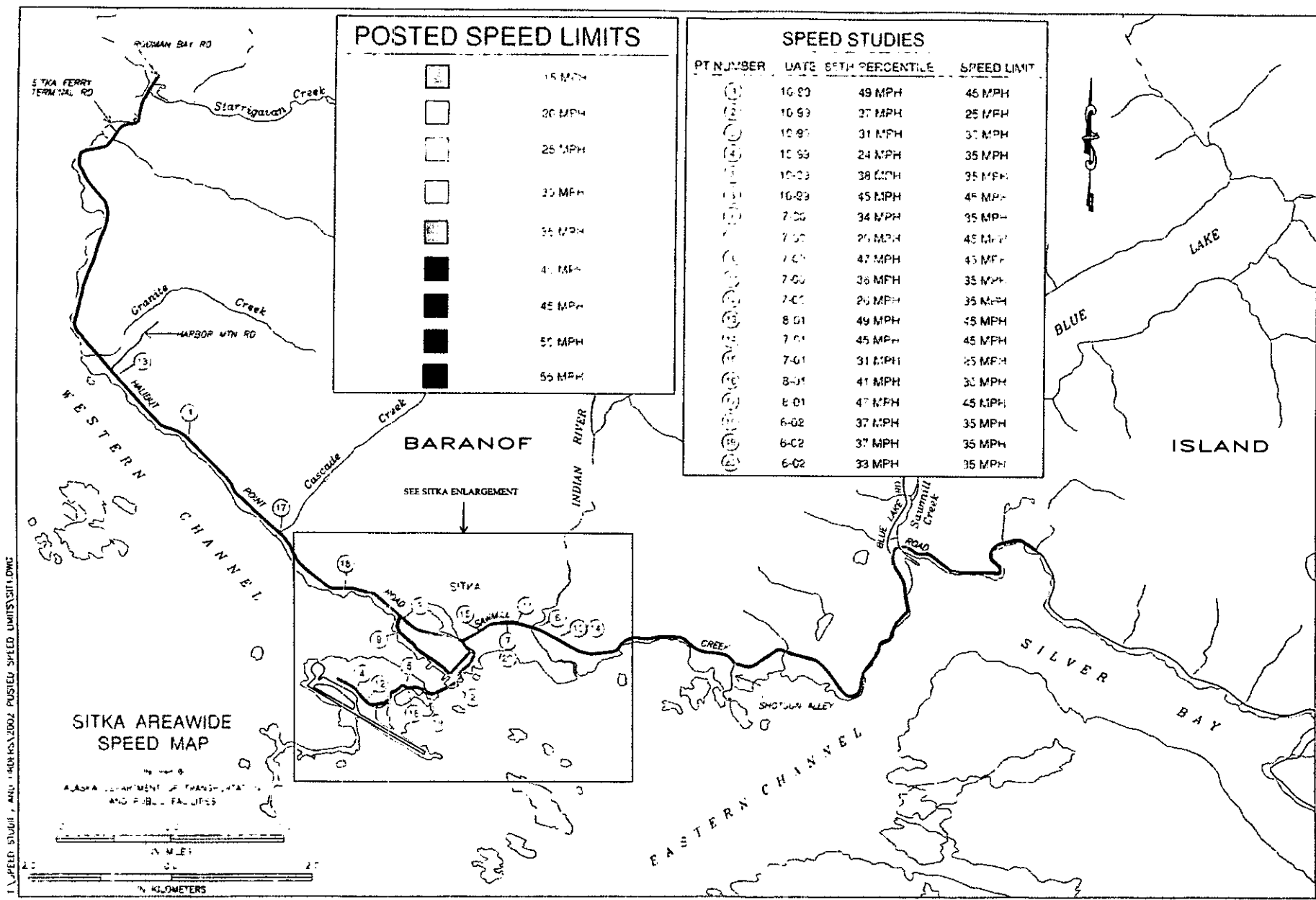


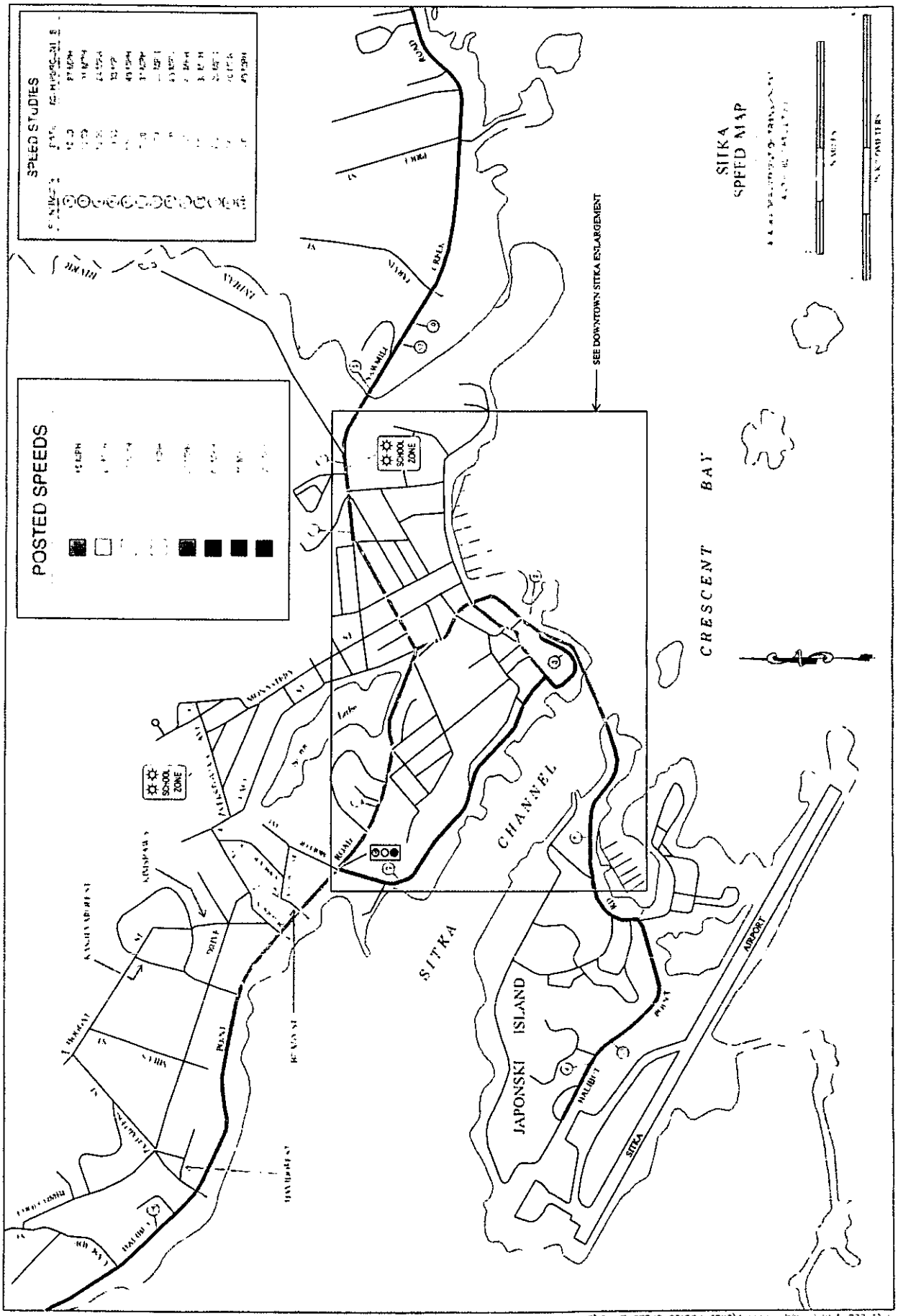
SPEED STUDIES

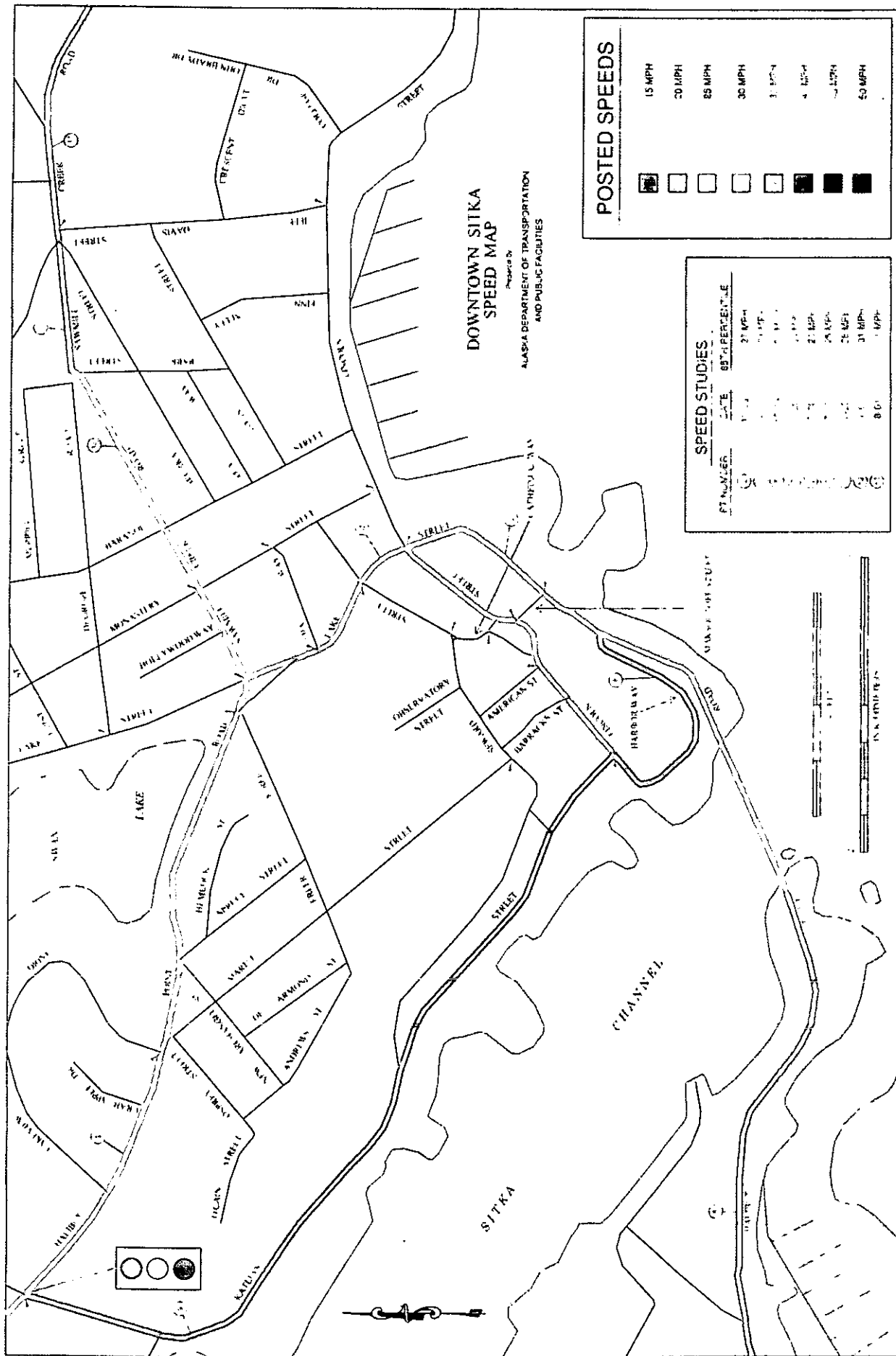
| PT. NUMBER | DATE | 85TH PERCENTILE | SPEED LIMIT |
|------------|---------|-----------------|-------------|
| 101 | 10/1/70 | 21 MPH | 25 MPH |
| 102 | 10/1/70 | 18 MPH | 25 MPH |
| 103 | 10/1/70 | 15 MPH | 25 MPH |
| 104 | 10/1/70 | 12 MPH | 25 MPH |
| 105 | 10/1/70 | 9 MPH | 25 MPH |
| 106 | 10/1/70 | 6 MPH | 25 MPH |
| 107 | 10/1/70 | 3 MPH | 25 MPH |

1. J. L. D. STREET AND (1971) 2007 POSTED SPEED LIMITS PETERSBURG, AK









1: SPEED STUDIES AND ORDERS/2002/POSTED SPEED LIMITS/SITKA.DWG

durable construction and the ability to carry heavier loads at lower costs than a full-speed [vehicle] or purpose-designed LSV." While we agree that acceding to ETA's request would have this effect, it is again an effect we hope to avoid.

To begin, we note that foreign made on-road motor vehicles, that are capable of high-speed use, are not eligible to be transformed into LSVs via the adoption of a speed-limiting governor. In a June 28, 2000 letter of interpretation to Mr. Thomas E. Dahl on this issue, we stated there are no circumstances under which the addition of a speed governing device to a high-speed vehicle would make the vehicle meet the definition of an LSV. After explaining that we established the LSV class because the vehicles were too small to meet the full FMVSS requirements, we stated that a common feature of this class appeared to be that they were capable of a maximum speed of 25 mph *as designed and manufactured*. This is still our interpretation of the regulation.

Furthermore, the agency has stated several times that one concern we have regarding the LSV classification is that it could be used as a mechanism to import foreign motor vehicles without first making them conform to the FMVSSs. For example, in the 2005 final rule, we stated that "[t]he [2,500-pound] GVWR limit prevents attempts to circumvent FMVSSs for cars, trucks, and multipurpose passenger vehicles by applying the LSV classification to vehicle types that are able to meet the [full FMVSS] standards."⁹ ETA's recommended 4,000-pound limit would permit the result we intended to prevent, and we view that as a reason to deny the petition.

b. Technology-Neutral Regulation

ETA's final argument is that the current GVWR limitation provides an advantage to gasoline-powered vehicles over electric vehicles. The agency is aware that, with current technology, the batteries needed to power an electric vehicle weigh substantially more than the fuel needed to power an internal combustion engine. This was considered to some extent in our original rulemaking establishing the 2,500-pound GVWR limit in 2005, and considered extensively in our 2006 rule increasing that limit to 3,000 pounds, a rule undertaken at the behest of two electric LSV manufacturers.

In the petitions that led to the 2006 rulemaking, NHTSA was presented with two differing solutions to this problem. The first, presented by Dynasty Electric

Car Corporation, recommended a 2,500-pound GVWR restriction for internal combustion engine LSVs and a 2,800-pound GVWR restriction for electric LSVs. The second, recommended by GEM, requested that the GVWR limit be raised to 3,000 pounds for all LSVs, as this would accommodate electric LSVs with a cargo-carrying capacity of 1,000 pounds.

In the 2005 rule establishing the GVWR limitation, we discussed why we were not establishing different GVWR limitations for electric and gasoline-powered vehicles, despite the issue regarding the weight of the batteries. We noted that each propulsion type has its own advantages. While gasoline-powered vehicles are lighter, "the fact that electric LSVs are successful in the market indicates that any advantage of the [internal combustion] vehicle due to greater load capacity under our GVWR restriction will be overcome by other attractions of the electric vehicle to consumers."¹⁰ ETA, perhaps inadvertently, cites several of these advantages in its petition. These include the high cost of gasoline, government mandates to reduce or eliminate petroleum-fueled vehicles from fleets, and the environmental benefits of electric vehicles. Therefore, we do not believe it is necessary to increase the regulatory complexity by setting different GVWR limitations based on propulsion method.

Finally, we believe that 3,000 pounds is a level at which electric LSVs that perform cargo-carrying work are practicable to build. In the 2006 final rule, we quoted one of the petitioners, GEM, where it stated:

All that GEM seeks in the U.S. market is a comparable "level playing field" by allowing LSV trucks to weigh as much as 3000 pounds GVWR, which would accommodate the electric batteries and an appropriate payload for LSV trucks.

We note that GEM currently produces a cargo-carrying electric LSV with a GVWR of 3,000 pounds or less. We noted on GEM's Web site the GEM eL XD, which has a GVWR of 3,000 pounds, a payload capacity of 1,450 pounds, a top speed of 25 mph, and a range of up to 40 miles.¹¹ This example illustrates that the current GVWR limit permits the development of cargo-carrying, electric LSVs.

IV. Conclusion

For the reasons stated above, we are denying ETA's petition to increase the maximum allowable GVWR to 4,000

pounds for electric LSVs. Furthermore, because we are not increasing the maximum allowable GVWR, we are denying ETA's recommendation to establish brake requirements and tire weight rating requirements in FMVSS No. 500.

Issued on: September 19, 2008.

Stephen R. Kratzke,

Associate Administrator for Rulemaking.

[FR Doc. E8-22736 Filed 9-25-08; 8:45 am]

BILLING CODE 4910-59-P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. NHTSA-2008-0154]

Federal Motor Vehicle Safety Standards; Medium Speed Vehicles

AGENCY: National Highway Traffic Safety Administration (NHTSA), DOT.

ACTION: Denial of petition for rulemaking.

SUMMARY: This document denies petitions for rulemaking submitted by Environmental Motors, and Porteon Electric Vehicles, Inc. and Mirox Corporation. The petitioners requested that NHTSA commence rulemaking to create a new class of motor vehicles known as medium speed vehicles, which would have a maximum speed capability of 35 mph. The petitioners contemplated that these vehicles would be subject to a set of safety standards greater than those that apply to low speed vehicles but substantially less than the full set of safety standards that apply to other light vehicles such as passenger cars. The petitioners cited a number of reasons in support of their petition, the most significant of which related to potential environmental benefits. After carefully reviewing the petitions, we are denying them because the introduction of such a class of motor vehicles without the full complement of safety features required for other light vehicles such as passenger cars would result in significantly greater risk of deaths and serious injuries. While NHTSA agrees with the importance of environmental issues, the agency believes that it is neither necessary nor appropriate to significantly increase the risk of deaths and serious injuries to save fuel.

FOR FURTHER INFORMATION CONTACT:

For technical issues: Gayle Dalrymple, Office of Crash Avoidance Standards, NVS-123. Telephone: 202-366-5559;

⁹ 70 FR 48317.

¹¹ See GEM Web site, available at <http://www.gemcar.com>.

⁹ 70 FR 48316.

facsimile: 202-493-2739; e-mail gayle.dalrymple@nhtsa.dot.gov.

For legal issues: Mr. Ari J. Scott, NHTSA Office of the Chief Counsel, NCC-112. Telephone: (202) 366-2992; facsimile: (202) 366-3820; e-mail ari.scott@nhtsa.dot.gov.

Both officials can be reached by mail at the National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590.

SUPPLEMENTARY INFORMATION:

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- I. Overview
- II. Petitions for Rulemaking
- III. Low Speed Vehicles
- IV. State Legislation on MSEVs and Relevant Federal Requirements
- V. Agency Response to Petitions
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 - B. The traffic environment in which MSVs would likely travel is an environment for which the full set of the Federal motor vehicle safety standards is needed to prevent fatalities and serious injuries
 - C. It is neither necessary nor appropriate to significantly increase the risk of deaths and serious injuries to save fuel
 - D. Other issues
- VI. Conclusion

I. Overview

NHTSA has received three petitions for rulemaking, from Environmental Motors, Porteon Electric Vehicles, Inc. and Mirox Corporation, requesting that the agency commence rulemaking to create a new class of motor vehicles known as medium speed vehicles MSVs. While the specific requests vary, they essentially ask the agency to conduct rulemaking to exclude smaller light vehicles that would currently be classified as passenger cars, multipurpose passenger vehicles (MPVs) or trucks from many or most of the Federal motor vehicle safety standards, if their speed capability is 35 mph or less. The vehicles would instead be subject to a set of safety standards greater than those that apply to low speed vehicles (LSVs) but substantially less than the full set of safety standards that apply to other light vehicles.

The petitioners made a variety of arguments in support of their requests, the most significant of which related to environmental benefits, including facilitating the development of electric vehicles and fuel savings. They argued that because LSVs are not permitted to have a speed capability greater than 25 mph, they cannot safely keep up with traffic in urban areas, and a need therefore exists for vehicles with a higher speed (35 mph) capability. The petitioners also noted that two States have passed laws that purport to allow

medium speed electric vehicles to operate on certain public roads.

After carefully considering the petitions, we are denying them because the introduction of such a class of motor vehicles without the full complement of safety features required for other light vehicles would result in significantly greater risk of deaths and serious injuries. We address the petitioners' arguments in detail in the rest of this document, but note the following points in this overview.

The petitioners appear to view MSVs as a variant of LSVs, i.e., a special class of small motor vehicles that would not be required to meet the full complement of the Federal motor vehicle safety standards. However, the rationale for applying a limited set of safety standards to LSVs is not relevant to MSVs.

NHTSA issues different safety standards for different types of motor vehicles. The agency established the special category of motor vehicles called LSVs to accommodate the use of small golf cars and other vehicles primarily intended for use in controlled, low-speed communities, such as retirement communities. In order to qualify as an LSV under the agency's definition, a vehicle must, among other things, have a speed capability no higher than 25 mph. LSVs are subject to a limited set of safety measures in FMVSS No. 500, including requirements related to the installation of lamps, mirrors, seat belts and a windshield. However, LSV's are not subject to most of the standards to which other light vehicles such as passenger cars are required to comply, including the rigorous crashworthiness standards.

One of the principal concerns raised by the petitioners is that the 25 mph speed limitation that applies to LSVs prevents these vehicles from keeping up with traffic in urban areas. However, the 25 mph limitation reflects the fact that NHTSA designed the set of safety standards that apply to LSVs for vehicles intended to be used in controlled, low speed environments. Vehicles with a speed capability above 25 mph are more likely to be driven outside controlled, low speed environments, and the limited LSV safety requirements are not appropriate for such vehicles.

The petitioners appear to assume that the full set of safety standards applicable to other light vehicles such as passenger cars would not be appropriate for MSVs, i.e., small vehicles with a speed capability of 35 mph. However, the traffic environment in which these vehicles would likely travel, including, e.g., urban roads with

a speed limit of 35 mph or 45 mph, is an environment for which the full set of the Federal motor vehicle safety standards is needed to prevent fatalities and serious injuries. MSVs would be traveling in mixed traffic at speeds in which crashes posed a risk of serious injury or fatality and in which safety features such as frontal and side air bags significantly reduced that risk. Also, a number of the crash test requirements included in our safety standards simulate crashes in this higher speed environment. We note that the petitioners did not provide analysis demonstrating why any of the Federal motor vehicle safety standards are not needed for MSVs.

NHTSA shares the concerns of the petitioners about the importance of environmental issues and saving fuel, and notes that it is currently engaged in rulemaking in which it has proposed to substantially increase average fuel economy standards for passenger cars and light trucks. We also note that a number of smaller vehicles have been introduced in recent years that are certified to comply with the full set of Federal motor vehicle safety standards. In addition, the current unprecedented cost of fuel is forcing manufacturers to improve fuel efficiency and reduce vehicle size without Federal mandates.

While we appreciate the importance of environmental issues, NHTSA does not believe that it is necessary or appropriate to significantly increase the risk of deaths and serious injuries to save fuel by introducing a new class of motor vehicles that does not provide adequate safety protection.

II. Petitions for Rulemaking

Environmental Motors

One of the petitions received by NHTSA was from Environmental Motors, an electric vehicle (EV) dealer located in Glendale, CA.¹ That company stated that the petition was being sent as part of an effort by a coalition interested in getting zero emission, energy-efficient vehicles on the road in a safe and timely manner. The coalition includes EV manufacturers and sellers (including Miles Electric Vehicles, Zenn Motor Company, e-ride Industries, Dynasty Electric Car Corp., Boshart Engineering, Free Drive EV, Inc, Clean-Tech LLC, LE Electric Automobiles, LLC, and Electrovaya, Resort Vehicles, Inc.), the City of Santa Monica, CA, the University of California, Santa Barbara, and the Sustainable Transport Club of Santa Monica, CA. All of these groups sent letters supporting Environmental

¹ This petition can be viewed at <http://www.regulations.gov>, docket #NHTSA-2008-0019.

Motors' petition, which were attached to the petition.

The petition itself requested that NHTSA establish a Medium Speed Vehicle (MSV) standard. According to the petition, the promulgated MSV standard should incorporate "the right mix of safety features," although it did not specify what it considered a right mix. In doing so, the petition requested that NHTSA consider a number of factors. These include:

- The fact that MSV legislation has been passed by several States.
- Alleged safety benefits of vehicles being able to keep up with traffic.
- That a MSV class would assist in the development of electric vehicles.
- That most MSVs would be electric, and noting the environmental benefits of electric vehicles.

Additionally, in letters of support, various supporters added additional arguments. These included:

- The fact that full-speed electric vehicles are expensive.
- Safety disbenefits incurred by the fact that some individuals modify LSVs to increase their speed.
- As an alternative to creating a class of MSVs, NHTSA could increase the speed limitation for LSVs.

Mirox Corporation

Another petition that NHTSA received was from Mirox Corporation (Mirox).² Mirox's petition was more detailed than that of Environmental Motors, but also suggested that NHTSA create a class of MSVs with a maximum top speed of 35 mph.

Mirox requested that NHTSA define a MSV as a vehicle with: (1) A maximum speed of 30–35 mph, a maximum GVWR of 3,000 lbs. for cargo-carrying vehicles, or 2,500 lbs. for vehicles with passenger-carrying capacity only; (3) has three or four wheels; and (4) a limited number of equipment and bumper requirements. These requirements are more stringent than those required for LSVs, but substantially less than those required for other light vehicles such as passenger cars. Most prominently, Mirox would exclude MSVs from the requirements of FMVSS Nos. 138, 202a, and 208. The petitioner's request is explained in more detail below.

Mirox presents a variety of reasons for recommending its MSV classification. Some of these are similar to those identified by Environmental Motors, but some are unique. The following is a summary of the arguments put forth by Mirox:

- MSVs are a viable alternative to motorcycles, including enclosed, three-

wheeled motorcycles, which are currently subject to a very limited array of safety standards. Mirox notes that the rate of motorcycle fatalities has been increasing, and argues that the use of MSVs could alleviate this. Mirox also argues that MSVs would provide better protection from weather and outside conditions than motorcycles, and are therefore likely to be used more often. Additionally, Mirox states that MSVs would be easier to drive than motorcycles, which would also help reduce injuries.

- MSVs are a better alternative to LSVs for use in driving in urban environments. Mirox states that due to speed limitations, LSVs are unsuited to driving in urban conditions, as they impede traffic flow and have limited acceleration potential. Mirox also argues that drivers will prefer MSVs as defined by the petitioner, as they will offer more protection from outside conditions and be equipped with a wider array of safety features than LSVs.

- Mirox expounds on the environmental and economic benefits of increased fuel economy for MSVs over passenger cars. It argues that because most MSVs will be electric, they will not consume fuel while idling, which is common in the urban environments that Mirox believes will be the primary environment for MSVs.

- Like Environmental Motors, Mirox points to the adoption of MSEV statutes in Montana and Washington, and argues that Federal regulations should be changed to sanction vehicles built in accordance to those statutes.

- Mirox cites the use of "quadricycles" in Europe, and argues that similar vehicles should be permitted in the U.S. as well. Mirox asserts that European experience, especially in France, has shown that the quadricycle class of vehicles is the safest of all vehicle classes, and that their drivers had fewer accidents than the average driver of a full-sized car.

In its petition, Mirox recommended a specific, detailed definition for MSVs. While similar in nature to that for an LSV, Mirox's definition contains more specific safety requirements. We note that, while it espoused the benefits of electric power, unlike the Montana or Washington statutes, Mirox's recommended definition would include gasoline-powered MSVs.

Specifically, Mirox's recommended definition of medium-speed vehicle is:

A self-propelled, four-wheeled or three-wheeled motor vehicle, equipped with a roll cage or crush-proof body design, whose speed attainable in one mile is more than thirty miles per hour but not more than thirty-five miles per hour on a paved level

surface. Each Medium-speed vehicle shall at a minimum be equipped with [the] following safety equipment that [conforms] to [the] existing FMVSS and current applicable SAE standard:

- Headlamps as per FMVSS No. 108
- Front and rear turn signal lamps (SAE I) (49 CFR 571.108)
- Taillamps (SAE T), (49 CFR 571.108)
- Stop lamps (SAE S), (49 CFR 571.108)
- Reflex reflectors: one red on each side as far to the rear as practicable, one amber on each side as far to the front as practicable (SAE A)
- Side marker lights, one red on each side as far to the rear as practicable, one amber on each side as far to the front as practicable (SAE P)
- An exterior mirror mounted on the driver's side of the vehicle and either an exterior mirror mounted on the passenger's side of the vehicle or an interior mirror (49 CFR 571.111)
- A parking brake (49 CFR 571.135)
- A windshield of AS-1 or AS-5 composition, that conforms to the American National Standards Institute's "Safety Code for Safety Glazing Materials for Glazing Motor Vehicles Operating on Land Highway," Z-26.1-1977, January 28, 1977, as supplemented by Z26.1a, July 3, 1980 (49 CFR 571.205)

- A VIN that conforms to the requirements of 49 CFR Part 565, Vehicle Identification Number

- A Type 1 or Type 2 seat belt assembly conforming to FMVSS No. 209, installed at each designated seating position, and whose mounting complies with FMVSS No. 210

- Bumper system; both front and rear that conforms to 49 CFR Part 581

- Audible Warning Devices; Horn and Reverse Warning Beeper

- If the vehicle is electrically powered it shall conform to FMVSS No. 305

- A GVWR of less than 1,361 kilograms (3,000 pounds) if the vehicle is designed with substantial cargo-carrying capacity (i.e., vehicles intended for carrying goods), or 1,134 kilograms (2,500 pounds) if the vehicle is designed solely for transport of passengers.

Additionally, if the Medium-speed vehicle contains any equipment that is referenced in any of the following FMVSS[s], such equipment or features shall [conform] to all the requirements of the applicable FMVSS:

FMVSS Nos. 101, 102, 103, 104, 105, 106, 108, 109, 110, 111, 113, 116, 118, 124, 135, 139, 201, 202, 203, 204, 205, 206, 207, 209, 210, 212, 214, 216, 219, 225, 301, 302, 304, 305, and 401.

Porteon Electric Vehicles, Inc

The last petition received by NHTSA was from Porteon Electric Vehicles, Incorporated of Portland, Oregon.³ This petitioner plans to market an electric car designed from the ground up rather than retrofit an imported vehicle by removing the IC engine and replacing it with an electric motor. The petitioner is concerned, "that unregulated growth

² This petition can be viewed at <http://www.regulations.gov>, docket #NHTSA-2008-0019.

³ This petition can be viewed at <http://www.regulations.gov>, docket #NHTSA-2008-0019.

could create safety issues and concerns that negatively impact and cause severe damage to a new growth industry that provides real and significant solutions to our country and our planet's key issues." This petitioner envisions a Medium Speed Vehicle class that "would essentially be the same as the LSV regulations with the exception of the top speed of 35 miles per hour and additional vehicle requirement to increase the safety of margin [sic] for rollover, stopping, acceleration, and avoidance maneuvering." The petitioner lists these additional vehicle requirements as: Ability to maintain 35 mph on a level grade, ability to maintain 30 mph up an 8 percent grade, a minimum width of 55 inches, a "coil over shock" suspension, four-wheel hydraulic disc or drum brakes, and three-point automotive seat belts, in addition to the requirements that already exist for LSVs in FMVSS No. 500. The petitioner also states, "Additional testing of the vehicles should also be considered, including crush zones with a 2.5mph 'no damage' requirement. A full frontal crash should be required to meet safety standards between 17-18 mph, which is a derivative of full speed automobiles being crash tested at 35 mph." The petitioner does not state where the no damage crush zones would be on the vehicle, how they would be measured, or which safety standards would be tested at 17 or 18 miles per hour.

Porteon believes the new medium speed vehicle class is necessary because LSVs currently travel, with their top speed of 25 mph, on streets with speed limits up to 35 mph and normal traffic flow is impeded by these vehicles. MSVs, with their top speed of 35 mph, "would create a more cohesive traffic environment for mixed use vehicles."

III. Low Speed Vehicles

In 1998, NHTSA established Federal Motor Vehicle Safety Standard (FMVSS) No. 500, "Low speed vehicles," in response to growing interest in using golf cars and other similar-sized, 4-wheeled vehicles, including Neighborhood Electric Vehicles (NEVs), to make short trips for shopping, social, and recreational purposes primarily within retirement or other planned communities with golf courses. See 63 FR 33194. The definition of LSV established in that rulemaking was, "a 4-wheeled motor vehicle, other than a truck, whose speed attainable in 1.6 km (1 mile) is more than 32 kilometers per hour (20 miles per hour) and not more than 40 kilometers per hour (25 miles per hour) on a paved level surface.

In 2005, NHTSA published a final rule amending the definition of LSVs by removing the restriction on trucks, and instead establishing a 2,500 pound maximum GVWR. See 70 FR 48313. This allowed small vehicles designed for work-related applications within the intended communities, such as landscaping or delivery purposes, to be included within the definition of an LSV, without opening the category to unintended vehicles, such as street-sweepers or speed-modified passenger cars. Additionally, in 2006, in response to petitions for reconsideration from Dynasty Electric Car Corporation and Global Electric Motorcars (GEM), both manufacturers of electric LSVs, NHTSA increased the maximum GVWR for LSVs to 3,000 pounds. This was done, in part, to "level the playing field" between electric and gasoline-powered LSVs, by allowing for the additional weight in batteries required by electric vehicles. See 71 FR 20026.

In conceiving the concept of the LSV as a small vehicle that would not be subject to the same stringent safety criteria as other vehicles, a critical concept was that it would not ordinarily mix with other traffic. In our 1998 rule establishing the category of LSVs, NHTSA explained in the summary that the rule:

[R]esponds to a growing public interest in using golf cars and other similar-sized, 4-wheeled vehicles to make short trips for shopping, social and recreational purposes primarily within retirement or other planned communities with golf courses. [emphasis added]

NHTSA's detailed analysis, as explained in the preamble of the 1998 final rule, recognized the importance of the fact that under most conditions, LSVs would not intermingle with regular automobile traffic, and the occasions where they would mix would be in controlled, low-speed environments. NHTSA stated that NHTSA has carefully reviewed their argument about the effects of this rulemaking. LSV safety, and thus the need for FMVSSs for LSVs, will be determined by the combination of three factors: vehicle design and performance; operator training and ability; and the operating environment. The agency believes that Standard No. 500, in combination with a limited operating environment and appropriate operator training and ability, will appropriately address the safety needs of LSV users.⁴

Additionally, in the 1998 final rule, NHTSA analyzed the Fatal Analysis Reporting System (FARS) data regarding fatalities involving golf cars. It was found that of the nine reported fatalities,

eight of them involved a collision with a car or truck. This further underscored the importance of driving environment.

In the 1998 final rule, the agency studied the use of NEVs in various municipalities that permitted them to travel on public roads. In that notice, we stated that "the driving environment [of LSVs] should be appropriate to the vehicle and its characteristics. Limiting LSV use to low-speed city and suburban streets is necessary, but does not eliminate the safety risks."⁵ NHTSA analyzed the State laws governing the on-road permissibility of NEVs in various States. Of the 12 States discussed, only one State (Arizona) permitted NEVs to travel on any road with a speed of 35 mph or less. The other 11 States (California, Nevada, New Mexico, Colorado, Wyoming, Illinois, Minnesota, Iowa, Florida, Georgia, and Texas) restricted NEVs to roads specifically designated by State and local governments.⁶

One portion of the analysis discussed possible reasons for the disparity of fatalities between Sun City⁷ (which had four NEV fatalities) and the City of Palm Desert (which had zero). We noted that:

The City of Palm Desert has a more controlled environment than Sun City for golf car use. The City of Palm Desert permits on-road use of golf cars in the same lanes as passenger cars and other larger motor vehicles in speed zones posted for speeds up to 25 miles per hour. In speed zones posted for speeds over 25 miles per hour, golf cars may be operated on-road only if there is a lane designated for their use and if the golf car is, in fact, operated within that lane. By contrast, NHTSA understands that Sun City, under state law, allows golf cars to operate in the same lanes as larger traffic on any road with a maximum speed of 35 miles per hour.

Based in part on this analysis, as well as our other observations, we concluded that operating environment played an important role in determining the benefits of establishing the LSV classification, as well as determining what safety standards should apply to that class. While NHTSA does not regulate the driving environment (such decisions are at the discretion of State governments), it did recommend that LSVs be licensed only for use in environments with very limited traffic. Specifically, we stated:

NHTSA recognizes that not all operating environments may be as controlled as that of the City of Palm Desert. The agency encourages other states and municipalities to study the features of the City of Palm Desert's

⁴ 63 FR 33208.

⁵ See 63 FR 33207.

⁷ We note that Sun City is located in Arizona, the only State that allowed NEVs to travel on any street with a speed limit of 35 mph or less.

⁴ 63 FR 33208.

plan, and to adopt those features to the extent practicable.⁸

In later rulemakings, NHTSA made several adjustments to the definition of LSVs. First and foremost, the agency dropped its original restriction on "truck-like" vehicles, and replaced it with a maximum gross vehicle weight rating for LSVs.⁹ This weight limit was originally 2,500 lbs., but was later increased to 3,000 lbs.¹⁰

IV. State Legislation on MSEVs and Relevant Federal Requirements

In the past year, two States have enacted legislation that purports to allow medium speed electric vehicles (MSEVs) to operate on certain public roads. Montana was the first State to pass such a law, on April 23, 2007. This was followed shortly thereafter by Washington State, which passed on May 15, 2007. These are the only two States that NHTSA is aware of that have passed any sort of MSV legislation.

The Montana and Washington statutes define MSEVs as electric-powered vehicles with a maximum speed of 35 mph that meet certain limited safety requirements similar to those established by NHTSA for LSVs.¹¹ The Montana law permits MSEVs to travel on public roads with a posted speed of up to 45 mph,¹² while the Washington law restricts them to roads with a posted speed of 35 mph or less.

NHTSA has considered the legislative history and other information relating to the aforementioned State laws. Both States were interested in expanding the use of electric vehicles in order to reduce fuel consumption, and economic and environmental benefits associated with that end. Additionally, there was a stated belief that a speed of 35 mph is needed for safety, as they would be able to keep up with traffic better. The following excerpt from the Washington State Senate report illustrates the considerations at issue:

Staff Summary of Public Testimony: PRO: These electric vehicles are environmentally friendly and provide significant energy savings. They are not golf carts; they are cars designed for running errands in town. The current speed of 25 mph is too slow and puts people at risk. Increasing the allowed speed to 35 mph will improve safety.¹³

Under Federal law, vehicles with a speed capability above 25 mph that would be considered MSEVs under

these State laws are classified as passenger cars, multipurpose passenger vehicles, or trucks. These vehicles are subject to the full range of FMVSSs that apply to these vehicles. The responsibilities of manufacturers and dealers to comply with Federal law, including not manufacturing or selling vehicles unless they comply with all applicable FMVSSs, are not limited by State laws on MSEVs.

V. Agency Response to Petitions

After carefully considering the petitions from Environmental Motors, Proteon and Mirox, we are denying them. First and foremost among this agency's considerations are safety concerns. The concept of establishing such a class of motor vehicles with limited safety features that would be likely to intermingle with larger, higher-speed vehicles in urban environments would result in significantly greater risk of deaths and serious injuries. The petitioners did not provide analysis demonstrating why any of the Federal motor vehicle safety standards are not needed for MSVs, given the traffic environment in which these vehicles would be likely to travel.

A. The Rationale for Applying a Limited Set of Safety Standards to LSVs Is Not Relevant to MSVs

As noted earlier, the petitioners appear to view MSVs as a variant of LSVs, i.e., a special class of small motor vehicles that would not be required to meet the full complement of the Federal motor vehicle safety standards. However, the rationale for applying a limited set of safety standards to LSVs is not relevant to MSVs.

NHTSA issues different safety standards for different types of motor vehicles. The agency established the special category of motor vehicles called LSVs to accommodate the use of small golf cars and other vehicles primarily intended for use in controlled, low-speed communities, such as retirement communities. In order to qualify as an LSV under the agency's definition, a vehicle must, among other things, have a speed capability no higher than 25 mph. LSVs are subject to a limited set of safety measures in FMVSS No. 500, including requirements related to the installation of lamps, mirrors, seat belts and a windshield. However, LSVs are not subject to most of the standards to which other light vehicles such as passenger cars are required to comply, including the rigorous crashworthiness standards.

One of the principal concerns raised by the petitioners is that the 25 mph speed limitation that applies to LSVs

prevents these vehicles from keeping up with traffic in urban areas. They argued that because LSVs are not permitted to have a speed capability greater than 25 mph, they cannot safely keep up with traffic in urban areas, and a need therefore exists for vehicles with a higher speed (35 mph) capability.

However, the 25 mph limitation reflects the fact that NHTSA designed the set of safety standards that apply to LSVs for vehicles intended to be used in controlled, low speed environments. Vehicles with a speed capability above 25 mph are more likely to be driven outside controlled, low speed environments, and the limited LSV safety requirements are not appropriate for such vehicles.

When promulgating the original LSV rule, as stated above, at the time one of the most important factors was that LSVs were conceived as vehicles that would be used in controlled, low-speed environments, primary in retirement communities and those centered around golf courses. NHTSA surveyed the applicable State laws governing the on-road use of LSVs, and found that only one out of twelve States with LSV-use laws permitted them to travel on any public road with a speed limit of 35 mph or less. The other remaining States limited their use to specially-designated roads.¹⁴ While NHTSA does not have the authority to prescribe the roads for which different types of vehicles are permitted, the agency suggested limiting LSVs to controlled environments. The following passage from the 1998 final rule properly summarizes NHTSA's position on this point:

Still another reason [for the significant disparity in the number of deaths involving NEVs] may lie in the different operating environments in the two communities. The City of Palm Desert has a more controlled environment than Sun City for golf car use. The City of Palm Desert permits on-road use of golf cars in the same lanes as passenger cars and other larger motor vehicles in speed zones posted for speeds up to 25 miles per hour. In speed zones posted for speeds over 25 miles per hour, golf cars may be operated on-road only if there is a lane designated for their use and if the golf car is, in fact, operated within that lane. By contrast, NHTSA understands that Sun City, under state law, allows golf cars to operate in the same lanes as larger traffic on any road with a maximum speed of 35 miles per hour.

NHTSA recognizes that not all operating environments may be as controlled as that of the City of Palm Desert. The agency encourages other states and municipalities to study the features of the City of Palm Desert's plan, and to adopt those features to the extent practicable.¹⁵

⁸ 63 FR 33208.

⁹ 70 FR 48313, August 17, 2005.

¹⁰ 71 FR 20026, April 19, 2006.

¹¹ The specific definitions are at Mont. Code Ann. 61-1-101 and West's RCWA 46.04.295.

¹² Mont. Code Ann. 61-8-377.

¹³ Washington State Senate Bill Report, HB 1820, March 21, 2007.

¹⁴ 63 FR 33207.

¹⁵ 63 FR 33208.

We recognize that since that time many States have passed laws permitting LSVs on a much wider variety of roads than originally contemplated. Today, many States permit LSVs on all public roads with posted speed limits of 35 mph or less. Some States even permit them on roads with speed limits of 45 mph.

As we have noted before, however, we continue to believe that LSV use on roads outside confined, controlled areas will be limited by the fact that occupants will not want to travel at less than 25 mph in mixed-vehicle traffic for other than very short trips, regardless of how States may or may not restrict their use. See 68 FR 68319, December 3, 2003.

We agree with the petitioners that the increased speed capability and other features in the requested MSV category would facilitate and encourage drivers to use MSVs in general driving environments. This, however, means that the rationale for applying a limited set of safety standards to LSVs is not relevant to MSVs. Instead, and as discussed further below, this is an argument for why these vehicles should be required to comply with the same safety standards as other light vehicles used in general driving environments, such as passenger cars.

B. The Traffic Environment in Which MSVs Would Likely Travel Is an Environment for Which the Full Set of the Federal Motor Vehicle Safety Standards Is Needed To Prevent Fatalities and Serious Injuries

The petitioners appear to assume that the full set of safety standards applicable to other light vehicles such as passenger cars would not be appropriate for MSVs, i.e., small vehicles with a speed capability of 35 mph. However, the traffic environment in which these vehicles would likely travel, including, e.g., urban roads with speed limits of 35 mph or 45 mph, is an environment for which the full set of the Federal motor vehicle safety standards is needed to prevent fatalities and serious injuries. We note that the energy involved in vehicle-to-vehicle collisions increases proportional to the square of the velocity of travel, and the result of a vehicle collision at 35 mph is twice as severe as the same collision at 25 mph.

MSVs would be traveling in mixed traffic at speeds in which crashes posed a risk of serious injury or fatality and in which safety features such as frontal and side air bags significantly reduced that risk. Also, a number of the crash test requirements included in our safety standards simulate crashes in this higher speed environment. We note that

the petitioners did not provide analysis demonstrating why any of the Federal motor vehicle safety standards are not needed for MSVs.

As part of considering this issue, we have looked at crash information on public roads with speed limits of 35 to 45 mph. For this traffic environment, the need for the safety features required in FMVSS No. 208, air bags, are far more important than for lower speed crashes, as frontal crashes become a more prominent part of the overall crash picture.

The total number of occupants killed annually in crashes is 37,314 (2002–2006 average, Fatality Analysis Reporting System). Of these occupant fatalities, 6,319 were killed on roads with posted speed limits of 35 mph or less, and 13,493 are killed in crashes on roads with posted speed limits of 45 mph or less. The total number of occupants suffering incapacitating injury annually is 13,492. Of these, 1,798 were injured in crashes on roads with posted speed limits of 35 mph or less, and 4,261 occupants were injured in crashes on roads with posted speed limits of 45 mph or less. It is important to note that those numbers reflect vehicles that were certified to comply with the Federal motor vehicle safety standards.

We estimate that in 2005, on roads posted at 35 mph or lower, 1,921 crash victims lived because the vehicles were compliant with all FMVSSs, including 278 saved by air bags. In crashes on roads posted at 45 mph or lower, 3,163 lives were saved because the vehicles involved were compliant with all FMVSSs. Of those, 414 were saved by air bags.¹⁶

Given these statistics, we believe the full set of Federal motor vehicle safety standards is needed for vehicles traveling in the traffic environment in which MSVs would likely travel, including, e.g., urban roads with speed limits of 35 mph or 45 mph.

Finally, as noted above, a number of the crash test requirements included in our safety standards simulate crashes in this environment. For example, our highest speed crash test in FMVSS No. 208 (vehicle compliance is currently phasing in) simulates a 35 mph frontal crash between the tested vehicle and a vehicle like itself. Our crash test in FMVSS No. 214 that helps ensure thoracic protection simulates a crash in which the tested vehicle traveling at 15 mph is struck in the side by a light vehicle traveling at 30 mph.

¹⁶ Using the methodology of "Lives Saved by the Federal Motor Vehicle Safety Standards and Other Vehicle Technologies, 1960–2002" DOT HS 809–833.

C. It Is Neither Necessary nor Appropriate To Significantly Increase the Risk of Deaths and Serious Injuries To Save Fuel

The petitioners and the supporters which wrote in favor of the Environmental Motors petition emphasized the potential to conserve fuel, thereby saving money at a time of high fuel prices as well as reducing emissions that can harm the environment. In the two States that passed MSEV statutes, the legislative history also shows that this legislation was conceived due to concerns about saving fuel.

NHTSA also considers fuel conservation an important goal. However, we believe that it is neither necessary nor appropriate to significantly increase the risk of deaths and serious injuries to save fuel.

Fuel conservation can be accomplished by means that are not inconsistent with the need for safety. Significant innovation is currently underway in fuel economy, gas-electric hybrid engine technology, and continued development of fully electric vehicles, such as the Chevrolet Volt, noted in the Mirox petition. NHTSA recently published a proposal to substantially increase fuel economy (CAFE) standards for passenger cars and light trucks. These standards affect nearly all light vehicles, and will have a tremendous impact on fuel savings. Furthermore, these vehicles are being designed to meet the full FMVSS requirements for passenger cars or other applicable vehicle class.

D. Other Issues

The petitioners raised a number of additional issues, which we discuss in this section.

Quadracycles

The Mirox petition compared the requested MSV classification to a type of vehicle used in Europe known as a "quadracycle." The Economic Commission for Europe (ECE) defines a quadracycle in two vehicle categories, L₆ "light quadracycle" and L₇ "quadracycle":¹⁷

Category L₆: A vehicle with four wheels whose unladen mass is not more than 350 kg, not including the mass of the batteries in the case of electric vehicles, whose maximum design speed is not more than 45 km/h, and whose engine cylinder capacity does not exceed 50 cm³ for spark (positive) ignition engines, or whose maximum net power output does not exceed 4 kW in the case of other internal combustion engines, or whose

¹⁷ TRANS/WP.29/78/Rev.1/Amend. 4, 26 April 2005.

maximum continuous rated power does not exceed 4 kW in the case of electric engines.

Category L₇: A vehicle with four wheels, other than that classified for the category L₆, whose unladen mass is not more than 400 kg (550 kg for vehicles intended for carrying goods), not including the mass of batteries in the case of electric vehicles and whose maximum continuous rated power does not exceed 15 kW.

Mirox claimed that quadricycles are an extremely safe method of transportation that is used extensively in Europe. The chief benefits of quadricycles is that they are easy to use (unlike motorcycles), easy to park, and consume far less fuel than even the smallest European passenger cars. Mirox requested that MSVs be defined in such a way that at least some European quadricycles can be legally imported as MSVs.

While the petitioner claimed that quadricycles are extremely safe, Mirox did not provide any data to support this claim or to show that introduction of these vehicles into the U.S. would be consistent with the need for safety. We note that we have earlier denied the petition of GG Quad North American to change the definition of "motorcycle" to allow quadricycles to be sold in the U.S. as motorcycles (71 FR 67843, November 24, 2006).

Aftermarket Speed Modifications of LSVs

A letter written in support of the Environmental Motors petition by Electrovaaya suggested that "The new [MSV] regulations would give people a better option than illegally changing an LSV to go faster." We agree with Electrovaaya that modifying an LSV to increase the speed is highly undesirable.

However, we do not believe that adopting a regulation to accommodate this practice is a prudent response to the issue. Furthermore, we would point out that manufacturers, dealers, sellers, and motor vehicle repair businesses that modify the speed of an LSV are in violation of the "make inoperative" provision.

This statutory provision, 49 U.S.C. 30122, *Making safety devices and elements inoperative*, reads in part:

A manufacturer, distributor, dealer, or motor vehicle repair business may not knowingly make inoperative any part of a device or element of design installed on or in a motor vehicle or motor vehicle equipment in compliance with an applicable motor vehicle safety standard prescribed under this chapter unless the manufacturer, distributor, dealer, or repair business reasonably believes the vehicle or equipment will not be used (except for testing or a similar purpose during maintenance or repair) when the device or element is inoperative.

If one of the above-mentioned entities increased the speed of an LSV to 25 mph or greater, that LSV would no longer comply with paragraph S5.3 of FMVSS No. 500, which specifies that the vehicle's top speed must be less than 25 mph. Therefore, the modifying entity would be subject to civil penalties as specified in 49 U.S.C. 30165.

Burgeoning Electric Vehicle Market

Porteon states in its petition, "Regardless of our [the electric cars' industry] success or failure, the U.S. will soon see an influx in electric vehicles as fuel prices, urbanization, and climate change effect [sic] transportation and state regulation. It is estimated that over 20 manufacturers

are in operation or commencing production along with a new influx of imports anticipated from China and Malaysia. Our concern is that unregulated growth could create safety issues and concerns that negatively impact and cause severe damage to a new growth industry that provides real and significant solution to our country and our planet's key issues." NHTSA would like to point out that the electric vehicle market is not unregulated. Any vehicle not certified as an LSV, or that travels at speeds greater than 25 miles per hour, must meet all the FMVSSs in place for the appropriate vehicle type (passenger car, truck, bus, or MPV). The petitioner can rest assured that growth of the electric vehicle market will not occur without the vehicles meeting the existing regulatory safety requirements enforced by NHTSA. The only difference between electric vehicles and those predominately in use today is their propulsion system. An electric propulsion system will not exempt these vehicles from the requirement to meet all the Federal standards for motor vehicles.

VI. Conclusion

For the reasons discussed above, NHTSA denies the petitions for rulemaking submitted by Environmental Motors, Proteon Electric Vehicles and Mirox Corporation.

Issued on: September 19, 2008.

Stephen R. Kratzke,

Associate Administrator for Rulemaking.

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SENATOR BERT K. STEDMAN

MEMORANDUM

To: Senator Hollis French, Chairman
Senate Judiciary Committee

From: Senator Bert Stedman *Bert K. Stedman*

Date: March 5, 2009

Subject: Request for Hearing

I respectfully request that Senate Bill 59, "An Act relating to the operation of low-speed vehicles", be scheduled for a hearing in the Senate Judiciary Committee at your earliest convenience.

Attached is the following documentation:

- Sponsor Statement
- CS for Senate Bill 59
- Fiscal Note – Department of Transportation & Public Facilities
- Fiscal Note – Department of Public Safety
- Fiscal Note – Division of Motor Vehicles
- General Background Information on Electric Cars
- Southeast Alaska Speed Limit Mileage Data & Maps
- NHTSA Ruling on Medium Speed Vehicles

If you have any questions or need more information, feel free to contact me or my aide Weston Eiler. Thank you for your attention to this important matter.

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