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In the Supreme Court of New Jersey  
**Docket Number 58,879**

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**STATE OF NEW JERSEY,**  
**Plaintiff-Petitioner,**

v.

**JANE H. CHUN, *et al.*,**  
**Defendants-Respondents.**

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Defendants' Initial Brief after Remand  
re Source Code

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TO: Honorable Justices of the Supreme Court of New Jersey  
In care of Stephen W. Townsend, Clerk  
Hughes Justice Complex  
25 West Market Street, Box 006  
Trenton, New Jersey 08625

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Office of the Attorney General  
Attention: Christine Hoffman, Deputy Attorney General  
Hughes Justice Complex  
25 West Market Street, Box 080  
Trenton, New Jersey 08625

—

On the Brief:

Samuel Louis Sachs, Esq., and Christopher Hewitt, Esq., for Hausler, Wood  
Matthew W. Reisig, Esq., for Desai, Lieberwirth, Piasecki, Salkowitz  
John Menzel, J.D., for Anzano, Ling, Nawaz, Walker, Whitman  
Evan M. Levow, Esq., for Chun, Demirelli, Miralda, Ogbutor, Slater, Tirado  
Jonathan Kessous, Esq., Garces & Grabler, for Miralda, Yataco

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Date submitted: December 10, 2007

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#### RELEVANT TRANSCRIPTS:

##### *2006 Hearings*

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##### *2007 Hearings*

September 17, 2007 (Geller) .....	1RT ____.
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September 19, 2007 (Geller, Dee) .....	3RT ____.
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September 24, 2007 (Shaffer) .....	5RT ____.
September 25, 2007 (Shaffer, Wisniewski) .....	6RT ____.

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SysTest Labs Assessment Report for Draeger Safety Diagnostics, Inc. Alcotest 7110 MKIII-C, New Jersey Firmware Version 3.11 .....	Da77.
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## CITATIONS:

<b><u>Constitutions</u></b>	
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<i>Barker v. Wingo</i> , 407 U.S. 514, 92 S.Ct. 2182, 33 L.Ed.2d 101 (1972) .....	67.
<i>Berger v. U.S.</i> , 295 U.S. 78, 55 S.Ct. 629, 79 L.Ed. 1314 (1935) .....	60.
<i>Brady v. Maryland</i> , 373 U.S. 83, 83 S.Ct. 1194, 10 L.Ed.2d (1963) .....	60, 62, 68.
<i>California v. Trombetta</i> , 467 U.S. 479, 104 S.Ct. 2528, 81 L.Ed.2d 413 (1984) .....	63.
<i>Crawford v. Washington</i> , 541 U.S. 36, 124 S.Ct. 1354 (2004) .....	56, 58, 67.
<i>Daubert v. Merrell Dow Pharmaceuticals, Inc.</i> , 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993) .....	48, 49.
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<i>In re LTI Marksman 20-20 Laser Speed Detection System</i> , 314 N.J.Super. 211 (Law Div. 1996) .....	49.
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<i>Romano v. Kimmelman</i> , 96 N.J. 66 (1984) .....	6, 8, 50, 51, 67.
<i>Rubanick v. Witco Chem.Corp.</i> , 125 N.J. 421 (1991) .....	50.
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<i>State v. Branch</i> , 182 N.J. 338 (2005) .....	57, 58.
<i>State v. Buda</i> , 389 N.J.Super. 241 (App.Div. 2006), cert.gr. 191 N.J. 317 (2007) .....	56.
<i>State v. Burr</i> , 392 N.J.Super. 538 (App.Div. 2007) .....	56.
<i>State v. Byrd</i> , 393 N.J.Super. 218 (App.Div. 2007) .....	56.
<i>State v. Chun</i> , 191 N.J. 308 (2007) .....	4.
<i>State v. Dorman</i> , 393 N.J.Super. 28 (App.Div.), cert.gr. in part, 192 N.J. 475 (2007) ..	56.
<i>State v. Downie</i> , 117 N.J. 450 (1990) .....	6, 8.
<i>State v. Farrell</i> , 320 N.J.Super. 425 (App.Div. 1999) .....	67.
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<i>State v. Foley</i> , 370 N.J. Super. 341 (Law Div. 2003) .....	6, 11, 14, 15, 19.
<i>State v. Harvey</i> , 151 N.J. 117 (1997) .....	46, 50, 52.
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<i>State v. Kent</i> , 391 N.J.Super. 352 (App.Div. 2007) .....	56.
<i>State v. Martini</i> , 160 N.J. 248 (1999) .....	62.
<i>State v. Nyhammer</i> , 396 N.J.Super. 72 (App.Div. 2007) .....	56.
<i>State v. Parsons</i> , 341 N.J.Super. 448 (App.Div. 2001) .....	62.

<i>State v. Renshaw</i> , 390 N.J.Super. 456 (App.Div. 2007) .....	56.
<i>State v. Storm</i> , 141 N.J. 245 (1995) .....	61.
<i>State v. Sweet</i> , 191 N.J. 318 (2007) .....	56-57.
<i>Strickler v. Greene</i> , 527 U.S. 263, 119 S.Ct. 1936, 144 L.Ed.2d 286 (1999) .....	63.
<i>U.S. v. Agurs</i> , 427 U.S. 97, 96 S.Ct. 2392, 49 L.Ed.2d 342 (1976) .....	60, 61, 62, 63.
<i>In re Winship</i> , 397 U.S. 358, 90 S.Ct. 1068, 25 L.Ed.2d 368 (1970) .....	67.

**Treatises**

----, <i>Model Rules of Professional Responsibility</i> 3.8, comment (1994) .....	61.
Hitler, Adolph, <i>Mein Kampf</i> (James Murphy translation, 1933) .....	10.

**Websites**

<a href="http://encarta.msn.com">http://encarta.msn.com</a> .....	2.
<a href="http://www.wikipedia.org/wiki/Big_Lie">http://www.wikipedia.org/wiki/Big_Lie</a> .....	2
<a href="http://www.sourcewatch.org">http://www.sourcewatch.org</a> .....	2