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| **Environmental Enlightenment #185**By Ami Adini - Reissued July 24, 2018

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| This is a SHORT, LIGHT and SIMPLE newsletter. Its purpose is to rekindle in the initiated terminology they have once learned and enlighten the uninitiated on terms they may have heard but never known the meaning of. |
| *Plume* can mean various things.The word comes from Latin *pluma*, meaning small soft feather.

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| Here are some eagle plumes. | http://amiadini.com/NewsletterArchive/180724-NL185/envEnl-185_clip_image001.jpg |
| http://amiadini.com/NewsletterArchive/180724-NL185/envEnl-185_clip_image002.jpg | A plume is also a feather or bunch of feathers worn as an ornament or a mark of rank(Picture courtesy of Tampa-Hillsborough County Public Library System) |
| Or, a form that is like a long feather | http://amiadini.com/NewsletterArchive/180724-NL185/envEnl-185_clip_image003.jpg |
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In our environmental lingo, a *plume* is a space in air, water, or soil that contains pollutants released from a point source.The diagram below illustrates a plume of contaminants released from a point source at ground level migrating downwards to groundwater and carried downstream. See how the plume segregates into three phases: liquid, vapor and dissolved particles.http://amiadini.com/NewsletterArchive/180724-NL185/envEnl-185_clip_image008.jpgThe figures that follow were borrowed with permission from materials of GORE Surveys, a product and service provided by W. L. Gore & Associates, Inc. (now provided by Amplified Geochemical Imaging, LLC).

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| The colored shapes represent two plumes of contaminants in the groundwater originating from two distinctly separate point sources; the “hot” red cores being the likely points of release.The vertical scale of colors represents the intensity of the contaminant levels, from the low level blue to the ultra high level violet.The plumes reduce in intensity with distance from the center. | http://amiadini.com/NewsletterArchive/180724-NL185/envEnl-185_clip_image010.gif | http://amiadini.com/NewsletterArchive/180724-NL185/envEnl-185_clip_image012.gif |

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| Commingled Plume is the condition that exists where contamination from two or more discrete releases have mixed or encroached upon one another.You can see here two different discharges to the groundwater where the spreading plumes have met and mingled. |   | http://amiadini.com/NewsletterArchive/180724-NL185/envEnl-185_clip_image014.gif |

The situation below is even more compounded with the commingling of 10 primal plumes.http://amiadini.com/NewsletterArchive/180724-NL185/envEnl-185_clip_image016.gifBefore one attempts remediation of a contamination case, and where more than one point source is the cause, it is essential to gain complete understanding of the origins of the various plumes.Engaging in remediation without such understanding may prove costly at best and futile at worst, because one may end up pulling plumes all over the place and complicating the remedial effort to no end. |
| You can find past issues of our "Environmental Enlightenment" at [amiadini.com](http://www.amiadini.com/) Wealth of information about environmental site assessments in the real estate transactions and issues concerning assessment and cleanup of contamination in the subsurface soil and groundwater. |

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| Call me if you have any questions. There are **no obligations.**Ami Adini Environmental Services, Inc.Environmental Consultants & General Engineering ContractorsCalifornia Lic. #1009513 A B HAZ ASB**818-824-8102**; **mail@amiadini.com**[www.amiadini.com](http://amiadini.com/)Ami Adini is a veteran environmental practitioner with over 40 years of experience. He carries a Bachelor of Science degree (B.Sc.) in Mechanical Engineering including academic credits in Nuclear and Chemical Engineering and postgraduate education in these fields. His career includes design and construction of nuclear plant facilities, chemical processing plants and hazardous wastewater treatment systems. He is a former California Registered Environmental Assessor Levels I & II in the 1988-2012 registry that certified environmental professionals in the assessment and remediation of environmentally impacted land, and a Registered Environmental Professional (REP) since 1989 with the National Registry of Environmental Professionals (NREP). He is a California Business & Professions Code Qualifying Responsible Managing Officer (RMO) in the General Engineering Contractor classification with Hazardous Substance Removal and Asbestos certifications, and president of AMI ADINI ENVIRONMENTAL SERVICES, INC. (AAES), a general engineering contractor and consulting firm specializing in environmental site assessments, rehabilitation of contaminated sites and removal of environmental risks from real-estate transactions. (Contact Ami for a complete resume.) **AAES provides practical solutions to environmental concerns using the highest standards of ethics and integrity while providing its clients with maximum return on their investments.** |

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