Submitted by Council Member Sherri Myers
Item 22-00291
AG. CONF ITEM #2

TO: City of Pensacola Environmental Advisory Committee
Date: May 26, 2010

HEALTH AND ENVIRONMENTAL IMPACT OF AT&T UTILITY POLES AND REMEDIATION RECOMMENDATIONS

PRESENTED BY:

Sherri Myers

I am an attorney licensed in the state of Florida, Kentucky and Tennessee (inactive). My area of expertise is the civil rights of persons with disabilities, including environmental induced disabilities such as multiple chemical sensitivities, gulf war syndrome, autism, some forms of developmental disabilities, asthma, hearing lose and tinnitus associated with exposure to ototoxic chemicals and other related environmental illnesses.

I first became interested in environmental illness when I was a staff attorney at Legal Services of Northwest Florida from 1991 through 1994 and began working with Citizens against Toxic Exposure (CATE), a grassroots organization founded to address a legacy of environmental injustice that impacted the lives of residents, both homeowners and tenants of federally subsidized housing, living adjacent in close proximity to the Escambia Wood Treating Plant. While at Legal Services, I obtained a $132,000 environmental justice law project grant from the Florida Bar Foundation to assist CATE in obtaining federal technical assistance grants for the Escambia Wood Treating superfund site and the Agrico superfund site.

Through my numerous contacts with residents living in a community impacted by many toxic substances from superfund sites, I became acutely aware of the impact on human health and the environment from exposure to toxic chemicals in the environment. Furthermore, I am a person with a disability as a result of exposure to pesticides. I have Multiple Chemical Sensitivity (MCS) and was for years on the state of Florida Department of Agriculture registry of pesticide sensitive persons.

I have long been involved in environmental activism because of my disability, which according to epidemiological studies affects some 16% of the US population, including a high number of Gulf War veterans. Needing to reduce my own exposure to pesticides, I worked with the former Escambia County Administrator, George Touart, and the director of Neighborhood and Environmental Services, Keith Wilkins to transform Escambia County Mosquito Control into the one of the most environmentally safe and highly professional mosquito control programs in the State of Florida, and perhaps the entire Gulf Coast area. Our mosquito control budget was doubled in the year 2001 in order to implement a program that reduced significantly the county's reliance on adulticiding with toxic chemicals such as Malathion, Naled, and Pyrethrin to one that relies on mosquito monitoring, verification of species, water source reduction and extensive larviciding.

For all of the reasons stated above, I bring before the Environmental Advisory Board , a serious environmental issue impacting human health and the environment in the City of Pensacola; the installation of AT&T utility poles.

From my years of working with, and researching the environmental issues at the Escambia Wood Treating Superfund Site, I am aware of the highly toxic chemicals used in the processing and manufacturing of utility poles. Many times in the early 90's I listen to residents in the Rosewood Terrace community complain about smells emanating from the superfund sites that caused burning eyes, burning throats, headaches and other symptoms. In the winter of 2010, on one beautiful clear morning I walked down my neighborhood street and was overcome with the smell of a chemical like solvent that was pervasive in the air. Every morning, noon and night, "THE SMELL" as it is referred to by residents, was ever present, but seemed to change directions as the wind changed. Neighbors searched for the source, sniffing manhole covers, drainage ditches, inspecting businesses along Davis Highway. THE SMELL evaded us. Could it be a meth lab? It seemed a plausible theory when there is a pervasive and persistent chemical smell in a neighborhood that can't be located.

In March, Chief Mathis made arrangements for narcotic officers to meet me in the neighborhood to "sniff out" the situation. The morning narcotics was scheduled to come to the neighborhood I received a call from a neighbor who excitingly informed me that she had discovered the source of THE SMELL - the new utility pole that had been installed in her yard. I couldn't believe it. I drove to my neighbor's house to check the pole for myself. The smell of solvent was strong. I walked to the pole and THE SMELL got stronger. IT WAS THE POLE! But, it wasn't just one pole. Another new pole had been installed at the other end of the block and with the same solvent odor. The odor traveled at least 100 feet.

I assumed the poles had been installed by Gulf Power. I went to Gulf Power's corporate office because I could not get a live person on the phone. That afternoon a Gulf Power engineer came to my house and we walked down Parker Ave toward Sewell St. When we were within 30 feet of the pole THE SMELL became obvious. The engineer told me that the pole did not belong to Gulf Power, that it was an AT&T pole. He promised to have someone call me from AT&T. However, all of the communications with AT&T proved fruitless. I asked representatives to replace the poles. They refused and I was told that they were discussing the matter with their attorney.

In April, I brought the matter before the City Council and the issue was referred to the Environmental Advisory Council. Since April, I have obtained records from the City Attorney, Mr. Wells as follows:

1. The Material Safety Data Sheet (MSDS) for the AT&T poles. The chemicals used in the poles are #2 Diesel Fuel and Pentachlorophenol (the same contaminate at the Escambia Wood Treating Superfund Site). A by-product of pentachlorophenol is dioxin and furans.

2. A letter from an AT&T official (who doesn't have a phone number) to AL Coby, the City Manager regarding the poles.

3. Franchise Agreements between AT&T and Gulf Power and the City.

4. References to all City Codes regulating utility poles.

Besides the records I received from the City of Pensacola, I have researched the Florida Statutes relating to the authority of local municipalities to regulate utility poles on rights of ways and to charge franchise fees. I have also researched the environmental impact to human health and the environment from the use of wood utility poles. There is a lawsuit filed in the United States District Court for the Northern District of California by the Ecological Rights Foundation against Pacific Gas and Electric Company (PG&E) citing violations of the Clean Water Act (CWA) and the citizen's suit provision of the Resource Conservation and Recovery Act (RCRA). The lawsuit alleges violations based on the harm to the environment from PG&E's 300,000 toxic wood utility poles treated with the same chemicals AT&T poles are treated. I have attached a copy of the Citizens' Notice Letter dated September 3, 2009 from the Klamath Environmental Law firm to PG&E, EPA and various other federal and state boards and agencies as required by law as a prerequisite to filing the lawsuit. The reason I have attached the Citizen's Notice Letter is that it describes in detail the harm to the environment and human health from exposure to chemicals that leak, drip, run, off gas, release toxic dust into the environment.

The Ecological Rights Foundation tested the rainwater that dripped from wood poles treated with the same chemicals used in the treatment of AT&T wood poles. On page 3 of the letter, the second paragraph states, "Pentachlorophenol that dripped off one Pole was detected at levels so high that it exceeded the calibration limits of the test." The facts regarding the toxicity of wood utility poles should not be taken lightly. Even ATSDR warns parents not to allow their children to on utility poles, especially in the summer.

The strong smell and chemical saturation of the soil around AT&T poles on Sewell Street are unacceptable. With that said, there are three entities responsible for addressing this issue; the City of Pensacola, AT&T and Gulf Power as it is a third party beneficiary using AT&T poles.

I recommend the Environmental Advisory Board make the following recommendations to the City Manager, City Attorney and City Council:

1. Order AT&T to remove and replace the two poles on Sewell St.

2. Order AT&T to cease installing poles that emit an odor and leach chemicals into the soil. All of the poles that AT&T has installed in the past year are odor emitting poles.

3. Request the City test the soil and air around the new AT&T poles on Sewell St.

4. Request the City obtain a Material Safety Data Sheet on the poles installed by Gulf Power on City right of ways.

5. Review the City franchise agreements with utility companies and city codes to require all new poles to be "green" nonpolluting poles. There numerous companies that manufacture environmental safe utility poles.

6. Request the City hire an environmental coordinator.

7. Request the City approach the County regarding obtaining grant funds to research the environmental and health impacts of wood utility poles and to develop a plan and strategy to begin converting to nontoxic poles.

8. That the Environmental Advisory Board meet on a regular basis to address all of the environmental issues raised above, including developing a plan to review the City's other environmental policies as they pertain to the use of pesticides, integrated pest management, use of green janitorial supplies and any other environmental issues such as the oil spill that needs to be addressed on a continuous basis.

at&t

AT&T Florida
External Affairs
2221 Industrial Drive
Panama City, FL 32405

Ray Dubuque
Area Director -
External Affairs

April 6, 2010

Mr. Al Coby
City Manager
City of Pensacola
180 Government Center
Pensacola, Florida 32521

Dear Mr. Coby:

This letter responds to your March 26 call asking for information about treatments used on AT&T wood utility poles in the City. We understand that your call was motivated by a resident's inquiries at the March 25 City Council meeting due to an odor emanating from an AT&T pole in her neighborhood, located near 5924 Sewell Street.

The utility poles installed by AT&T in the City are treated with an EPA-approved treatment whose active ingredient is called pentachlorophenol, which is necessary to protect against insect attack and decay. The treatment extends the life of the poles so there is less frequent replacement of poles and resulting disruption.

Attached is a copy of the Material Safety Data Sheet for the treated wood dated May 30, 2008, which the supplier of the pole referenced above prepared in accordance with regulations of the Occupational Safety & Health Administration (OSHA) within the U.S. Department of Labor. The purpose of the Data Sheet is to provide information to workers that handle the treated wood, but it also includes an EPA Consumer Information Sheet on pages 8-9 confirming that the active ingredient is EPA-registered and referencing site and handling precautions for the treated wood. Note that the precautions essentially speak to uses of the treated wood for purposes and in surroundings other than as used for utility poles.

We believe that the recent unusual temperature fluctuations have caused the odor arising from the pole. However, as weather conditions become more normal, we expect the odor to subside. We apologize for any inconvenience to residents in the area. If you have any questions please let me know.

Sincerely,

Judy Childers

for Ray Dubuque

Attachment

1 of 8

MATERIAL SAFETY DATA SHEET

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL NAME
Wood Treated With Pentachlorophenol

PRODUCT NAME
N/A

SYNONYMS
Penta Treated Wood, Pressure Treated Wood

MANUFACTURER
Name T. R. Miller Mill Company Inc.
Address P. O. Box 709 Brewton, AL 36427
Emergency Phone No. 251-867-4931 or 800-872-1614 AL, or 800-633-8740 USA

SECTION 2 COMPOSITION INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NUMBER	% RANGE	OSHA PEL
*Pentachlorophenol Technical Grade	87-86-5	≤1%	.5 mg/m^3
*Petroleum Solvents	-	≤15%	
Natural Wood Fiber	-	≥84%	-

*In this example, the concentrations of these components are based on the typical analyses expected from pressure treatment of southern pine in accordance with American Wood-Preservers' Association Standard C4.

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Tan to dark brown solid with petroleum odor.
WARNING! Sawing or machining treated wood products can produce wood dust which may present a fire or explosion hazard. Exposure to wood dust may cause irritation to lungs, upper respiratory tract, skin and eyes. Repeated exposure to wood dust can cause dermatitis, keratitis, and respiratory allergic effects

POTENTIAL HEALTH EFFECTS

INHALATION
Concentrations of 0.3 mg/m^3 technical grade pentachlorophenol can cause nose irritation. Concentrations above 1 mg/m^3 can cause irritation of upper respiratory tract with sneezing and coughing. Wood dust can cause irritation of nose and throat.

SKIN
Technical grade pentachlorophenol is readily absorbed through the skin. Pressure treated wood can cause irritation of the skin. Wood dust can cause dermatitis.

Chloracne: In humans, the absorption of technical grade pentachlorophenol by any route may result in the development of the skin condition, chloracne. This usually appears as blackheads, whiteheads and yellow cysts over the temples and around the ears. In severe cases, involvement may be extensive. Mild cases may be similar in appearance to other forms of acne and to skin changes commonly seen with aging.

EYE
Technical grade pentachlorophenol causes irritation of the eyes at 1 mg/m^3. If exposure is prolonged, slight transient corneal damage can occur. Wood dust can cause pain and irritation of eyes.

INGESTION
Ingestion of pressure treated wood or sawdust is unlikely. Symptoms of ingestion of technical grade pentachlorophenol can include rapid heartbeat and respiration, elevated temperature and blood pressure, muscular weakness, excessive sweating, dizziness and nausea.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
No medical conditions are expected to be aggravated from normal exposures to penta treated wood. Exposure to technical grade penta may cause acute or chronic kidney or liver disease, asthma, bronchitis, chronic acne or other skin conditions.

CHRONIC EFFECTS
Pentachlorophenol is listed on the IARC carcinogen list but not by NTP or OSHA. IARC classifies wood dust as a carcinogen to humans (Group 1).

SECTION 4 FIRST AID MEASURES

FOR ACUTE EXPOSURE TO WOOD DUST:

INHALATION
If persistent irritation, severe coughing, or breathing difficulties occur, get medical advice before returning to work where wood dust is present.

SKIN
If a rash or persistent irritation or dermatitis occur, get medical advice where applicable before returning to work where wood dust is present.

EYES
Flush eyes with water to remove dust particles.

FOR ACUTE EXPOSURE TO TECHNICAL GRADE PENTACHLOROPHENOL:

INHALATION
Move victim to fresh air. If breathing has stopped, administer artificial respiration. Call a physician.

SKIN
Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water for at least 15 minutes. Wash contaminated clothing before reuse.

EYES
Flush eyes immediately with water for at least 15 minutes. Contact a physician.

INGESTION
Call a physician or Poison Control Center immediately. If possible, vomiting should be induced under medical supervision. Drink one or two glasses of water and induce vomiting by touching the back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

NOTES TO PHYSICIAN
Technical grade pentachlorophenol is a metabolic stimulant. Treatment is supportive. Forced diuresis may be effective to reduce total body burden. Treat hyperthermia with physical measures. Do not administer aspirin, phenothiazine, or atropine since they may enhance toxicity.

SECTION 5 FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT
N/A

AUTOIGNITION TEMPERATURE
Wood Dust: 400 - 500°F (Typical)

FLAMMABLE LIMITS IN AIR (PERCENT BY VOLUME)
Wood Dust: 40 g/m^3 (LEL)

EXTINGUISHING MEDIA
Water

UNUSUAL FIRE AND EXPLOSION HAZARD
Wood dust is a strong to severe explosion hazard if a dust "cloud" contacts an ignition source.

FIRE FIGHTING INSTRUCTIONS
Use water to wet down wood dust to reduce the likelihood of ignition or dispersion of dust into the air. Toxic gases and ash are formed by fire or thermal decomposition. Firefighters should wear self-contained breathing apparatus, and avoid skin contact.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Pressure treated wood is unlikely to be involved in release or spill as intended by this section. If pressure treated wood is spilled, recover and reuse.

Sweep or vacuum spills of wood dust for recovery or disposal; avoid creating dust conditions. Provide good ventilation where dust conditions may occur. Place recovered wood dust in a container for proper disposal.

SECTION 7 HANDLING AND STORAGE

HANDLING
Avoid contact with skin and breathing dust. Do not eat, drink, or smoke in work area. Wash hands prior to eating, drinking or using restroom. Change into uncontaminated clothing before leaving work premises. Thoroughly wash potentially contaminated clothing before reuse. Do not launder clothes with other non-contaminated clothing and/or household laundry. Follow protective controls set forth in Section 8 when handling this product.

See additional handling and use site precautions in the *Consumer Information Sheet* (Section 16).

STORAGE
STORAGE CONDITIONS
Store treated wood in open, well ventilated area.

Label treated wood with *Consumer Information Sheet*. Thoroughly read and follow the use site precautions which are specified by the *Consumer Information Sheet*.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

ENGINEERING CONTROLS
VENTILATION
Maintain adequate ventilation to keep wood dust levels below recommended limits.

To determine the exposure level(s), monitoring should be performed regularly. Safety shower and eye wash station should be available.

PERSONAL PROTECTIVE EQUIPMENT
EYE AND FACE PROTECTION
Wear safety glasses and/or goggles or face shield when sawing, sanding, drilling or performing other work on treated lumber which may cause release of wood dust or chips.

SKIN PROTECTION
Avoid frequent or prolonged skin contact with pentachlorophenol treated wood. When handling the treated wood, wear PVC, neoprene or nitrile gloves and tightly woven clothing including long sleeve shirt and pants.

RESPIRATORY PROTECTION
Where concentrations exceed or are likely to exceed the recommended exposure levels, an approved respirator must be worn. When sanding, sawing, drilling or performing other work on treated wood which may cause the release of wood dust, an approved respirator is recommended.

GENERAL
Protective equipment and clothing should be selected, used, and maintained according to applicable standards and regulations. For further information, contact the clothing or equipment manufacturer.

EXPOSURE GUIDELINES

Technical Grade Pentachlorophenol:	ACGIH	0.5 mg/m^3		
		OSHA	0.5 mg/m^3	
Wood Dust:	(ACGIH)	Hardwood	1 mg/m^3	
		Softwood	5 mg/m^3	STEL 10 mg/m^3
	(OSHA)	Total Dust	15 mg/m^3	
		Respirable Fraction	5 mg/m^3	

Hard woods include beech, oak, mahogany, maple, walnut and others. Soft woods include fir and pine. If wood dust is maintained below acceptable levels, pentachlorophenol levels will not approach the 0.5 mg/m^3 limit.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

CHEMICAL FORMULA
N/A

MOLECULAR WEIGHT
N/A

APPEARANCE AND ODOR
Tan to dark brown solid with petroleum odor

SPECIFIC GRAVITY
Variable (dependant on wood species and moisture content)

VAPOR PRESSURE
N/A

BOILING POINT
N/A

DECOMPOSITION TEMPERATURE
N/A

VAPOR DENSITY
N/A

SOLUBILITY IN WATER
Wood: Insoluble
Penta: 14 ppm @ 20°C

VOLATILES, PERCENT BY VOLUME
N/A

SECTION 10 STABILITY AND REACTIVITY

CHEMICAL STABILITY
Stable

CONDITIONS TO AVOID:
Do not contact wood with extreme heat or open flame and do not burn. Product will ignite at temperatures above 400°F.

INCOMPATIBILITY WITH OTHER MATERIALS
Wood Dust: Avoid contact with oxidizing agents and drying oils.

HAZARDOUS DECOMPOSITION PRODUCTS
Toxic gas and ash generated on combustion includes the following: Hydrogen chloride, chlorine, chlorinated hydrocarbons, carbon monoxide, aldehydes, organic acids, plus normal hazard of wood smoke.

HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

ANIMAL TOXICOLOGY
When absorbed in sufficient quantity into the tissues of dogs, rabbits, rats and guinea pigs, pentachlorophenol produces an acute toxic state characterized by accelerated respiration, moderately elevated blood pressure, hyperpyrexia (elevated fever), and hyperperistalsis (excessive vomiting).

CHRONIC TOXICITY

WOOD DUST:
In epidemiologic studies of the furniture industry an increased incidence of nasal tumors has been identified related to wood dust exposure. These same increases are not noted in the building industry, including carpenters.

Prolonged overexposure to wood dust has been associated with dryness of nose, eye irritation, nasal obstruction, prolonged colds and frequent headaches. Depending on species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and/or irritation.

CARCINOGENICITY
IARC classifies wood dust as a carcinogen to humans (Group 1). This classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust.

PENTACHLOROPHENOL:
Technical grade pentachlorophenol has been found to have toxic effects in laboratory animals. This finding may also indicate human toxicity. Exposure to treated wood should be kept to a minimum. Overexposure to pentachlorophenol could result in injury, illness, or even possibly death. Overexposure to pentachlorophenol has caused liver and kidney toxicity in laboratory animals.

CARCINOGENICITY
Technical grade pentachlorophenol (penta) has been evaluated for possible cancer causing effects in laboratory animals. An increase in vascular tumors were observed in female mice. The International Agency for Research on Cancer (IARC) has concluded that, with respect to pentachlorophenol, there is sufficient evidence of carcinogenicity to experimental animals, and inadequate evidence of carcinogenicity to humans, resulting in a classification as a 2B animal carcinogen.

Pentachlorophenol is listed on the IARC carcinogen list but not by NTP or OSHA. For additional information, consult MSDS for pentachlorophenol.

REPRODUCTIVE TOXICITY
Reproductive toxicity tests have been conducted to evaluate the potential adverse effects technical grade and purified pentachlorophenol may have on reproduction and offspring of laboratory animals. Both technical and purified pentachlorophenol have been found to be embryo and fetotoxic to rats, but not to hamsters. Neither technical grade nor purified pentachlorophenol caused teratogenic effects (birth defects), but did cause delays in normal fetal development. The EPA has expressed the opinion that pentachlorophenol can produce defects in the offspring of laboratory animals. Exposure to pentachlorophenol during pregnancy should be avoided.

NOTE: This product may contain trace quantities of hexa, hepta and octachlorodibenzo-p-dioxins, hexa, hepta and octachlorodibenzofurans and hexachlorobenzene. The State of California has listed pentachlorophenol, hexachlorodibenzo dioxin and hexachlorobenzene under Proposition 65 as chemicals known to the State to cause cancer and hexachlorobenzene as a chemical known to the State to cause birth defects or other reproductive harm.

SECTION 12 ECOLOGICAL INFORMATION

Treated wood is unlikely to be released in a manner to cause environmental impact as intended by this section. However, small quantities of penta potentially could be released from penta treated wood while in service.

If released to the soil, penta adsorbs to the organic portion of the soil and does not readily disperse. Penta in soil has been found to biodegrade with a half-life ranging from days to a few weeks. If released in water, penta will adsorb to sediment, photodegrade and biodegrade. Penta released to clear water undergoes photolysis with a reported half-life of 0.66 hours.

Penta-treated wood does not represent a significant threat to aquatic environments due to penta's non-persistence at low concentrations, rapid photodegradation in clear water, biodegradation in clouded water, and low bioaccumulation in aquatic organisms.

SECTION 13 DISPOSAL CONSIDERATIONS

SPILL RESIDUES

Dispose of treated wood by ordinary trash collection or burial. Treated wood should not be burned in open fires or in stoves, fireplaces, or residential boilers because toxic chemicals may be produced as part of the smoke and ashes. Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in commercial or industrial incinerators or boilers rated at 20 million BTU/hour or greater heat input or its equivalent in accordance with state and Federal regulations.

SECTION 14 TRANSPORT INFORMATION

Pentachlorophenol Treated Wood is not regulated as a DOT hazardous material.

DOT SHIPPING DESCRIPTION (49 CFR 172.101)
Not Applicable

PLACARD REQUIRED
Not Applicable

Provide a copy of *Consumer Information Sheet, Pentachlorophenol Pressure-Treated Wood.*

SECTION 15 REGULATORY INFORMATION

U S FEDERAL REGULATIONS

REPORTABLE QUANTITY
N/A

TOXIC SUBSTANCES CONTROL ACT

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III HAZARD CATEGORIES (40 CFR 370.2)
N/A

EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW (40 CFR 355, APP A)
N/A

SECTION 16 OTHER INFORMATION

NFPA RATINGS

The NFPA has not established a rating for this product.

As part of the industry/EPA Consumer Awareness program, wood treaters should ensure that a *Consumer Information Sheet* (CIS), containing the following language approved by the US Environmental Protection Agency, is provided to buyers of penta treated wood (51 FR 1348, 1/10/86).

EPA Consumer Information Sheet
Pentachlorophenol Pressure-Treated Wood

Consumer Information

This wood has been preserved by pressure-treatment with an EPA-registered pesticide containing pentachlorophenol to protect it from insect attack and decay. Wood treated with pentachlorophenol should be used only where such protection is important.

Pentachlorophenol penetrates deeply into and remains in the pressure-treated wood for a long time. Exposure to pentachlorophenol may represent certain hazards. Therefore, the following precautions should be taken both when handling the treated wood and in determining where to use and dispose of the treated wood.

Use Site Precautions

Logs treated with pentachlorophenol should not be used for log homes.

Wood treated with pentachlorophenol should not be used where it will be in frequent or prolonged contact with bare skin (for example, chairs and other outdoor furniture), unless an effective sealer has been applied.

Pentachlorophenol-treated wood should not be used in residential, industrial, or commercial interiors except for laminated beams or for building components which are in ground contact and are subject to decay or insect infestation and where two coats of an appropriate sealer are applied. Sealers may be applied at the installation site.

Wood treated with pentachlorophenol should not be used in the interiors of farm buildings where there may be direct contact with domestic animals or livestock which may crib (bite) or lick the wood.

In interiors of farm buildings where domestic animals or livestock are unlikely to crib (bite) or lick the wood, pentachlorophenol-treated wood may be used for building components which are in ground contact and are subject to decay or insect infestation and where two coats of an appropriate sealer are applied. Sealers may be applied at the installation site.

Do not use pentachlorophenol-treated wood for farrowing or brooding facilities.

Do not use treated wood under circumstances where the preservative may become a component of food or animal feed. Examples of such sites would be structures or containers for storing silage or food.

Do not use treated wood for cutting-boards or countertops.

Only treated wood that is visibly clean and free of surface residue should be used for patios, decks and walkways.

Do not use treated wood for construction of those portions of beehives which may come into contact with the honey.

Pentachlorophenol-treated wood should not be used where it may come into direct or indirect contact with public drinking water, except for uses involving incidental contact such as docks and bridges.

Do not use pentachlorophenol-treated wood where it may come into direct or indirect contact with drinking water for domestic animals or livestock, except for uses involving incidental contact such as docks and bridges.

Handling Precautions

Dispose of treated wood by ordinary trash collection or burial. Treated wood should not be burned in open fires or in stoves, fireplaces, or residential boilers because toxic chemicals may be produced as part of the smoke and ashes. Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in commercial or industrial incinerators or boilers rated at 20 million BTU/hour or greater heat input or its equivalent in accordance with state and Federal regulations.

Avoid frequent or prolonged inhalation of sawdust from treated wood. When sawing and machining treated wood, wear a dust mask. Whenever possible, these operations should be performed outdoors to avoid indoor accumulations of airborne sawdust from treated wood.

Avoid frequent or prolonged skin contact with pentachlorophenol-treated wood; when handling the treated wood, wear long-sleeved shirts and long pants and use gloves impervious to the chemicals (for example, gloves that are vinyl-coated).

When power-sawing and machining, wear goggles to protect eyes from flying particles.

After working with wood, and before eating, drinking, and use of tobacco products, wash exposed areas thoroughly.

If oily preservatives or sawdust accumulate on clothes, launder before reuse. Wash work clothes separately from other household clothing.

Urethane, shellac, latex epoxy enamel and varnish are acceptable sealers for pentachlorophenol-treated wood.

NOTE: Where appropriate, based on the actual method of treatment, the term "Pressure-treated" may be replaced by "Thermal-processed" or equivalent terms.

NOTICE: The information contained on this material safety data sheet is believed to be accurate. The suggested procedures are based on information available as of the date of publication. The information contained herein should not be construed as a recommendation to violate any federal, state or municipal law, rule or regulation.

NO WARRANTY IS MADE, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.

Date of Preparation: May 30, 2008

June 4, 2009

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BY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: Notice of Violations of Federal Law and Notice of Intent to Begin Citizen Enforcement Action

Greetings:

I write on behalf of the Ecological Rights Foundation (hereinafter, "ERF") to notify you of violations of federal law caused by power poles located in Alameda, Contra Costa, Marin and San Francisco Counties, California ("the Poles"). ERF has conducted an investigation of power poles to determine the extent to which they discharge, leak, spill, drip, deposit and discard toxic chemicals that endanger health and the environment. These power poles discharge, leak, spill, drip, deposit and discard a wood treatment mixture of oil and an active ingredient – pentachlorophenol. Because of the way it is manufactured, pentachlorophenol is necessarily and

invariably contaminated with a suite of similar, but even more toxic chemicals. These contaminants include all of the various congeners and isomers of polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (hereinafter "dioxin" or "dioxins") and hexachlorobenzene. These power poles discharge, leak, spill, drip, deposit and discard these toxic chemicals, which are deposited on the surface environments surrounding the poles and entrained in storm water run-off which is then carried into surface waterbodies and, eventually, to the larger aquatic complex of bays commonly known collectively as "San Francisco Bay" or "the Bay". Once in the environment, these toxic chemicals enter the food chain and cause and threaten to cause cancer, reproductive, developmental and immunological harm to humans and other mammals, fish, birds and other wildlife. This letter begins the process by which ERF will seek available remedies under the federal Resource Conservation and Recovery Act ("RCRA") and the federal Clean Water Act ("CWA"). ERF will pursue these remedies so as to prevent future disposal and discharge of this waste and pollution. ERF will further seek civil penalties for CWA violations.

I. The Noticing Party

ERF is organized under the laws of the State of California. ERF's main office is at 867 "B" Redwood Drive, Garberville, California, 95542. ERF's telephone number is (707) 923-4372. Members of ERF reside in Alameda, Contra Costa, Marin and San Francisco Counties, California and use and enjoy the public streets, sidewalks, parks, and other public places and water bodies located in these counties.

II. The Noticed Party

Pacific Gas & Electric Company ("PG&E") is an electrical utility that supplies electricity to Alameda, Contra Costa, Marin and San Francisco Counties, California. PG&E distributes electricity in Alameda, Contra Costa, Marin and San Francisco Counties via an electrical grid, the wires for which are suspended by wooden power poles that are treated with the above-referenced oil-pentachlorophenol mixture. PG&E owns and maintains these power poles, which are the Poles to which this Notice pertains.

III. Factual Background: The Problem with Power Poles

PG&E owns, operates and maintains the Poles referred to in this letter. A mixture containing pentachlorophenol as its active ingredient has been used to pressure treat the Poles. This wood treatment mixture contains all of the various congeners and isomers of dioxins. This mixture also contains hexachlorobenzene, 2,3,4,6 tetrachlorophenol, 2,4,6 trichlorophenol, 2,4 dichlorophenol and 2,6 dichlorophenol. The carrier for the wood treatment mixture used on these Poles is oil. Over time, this oil-wood treatment mixture leaks out of each Pole into or onto the surface the Pole contacts. This oil-wood treatment mixture also oozes to the surface of that

part of the Pole that is above ground, and then itself drips, or is washed off the pole by rainwater. As a result, dioxins, hexachlorobenzene, and pentachlorophenol from the Poles is deposited onto or into the pavement, the soil, and other surfaces (such as water) that surround the Poles. In addition, storm water runoff from the Poles carries these pollutants from the Poles to storm drains and/or water bodies adjoining or near the Poles. These toxic pollutants contaminate the pavement, the soil and storm drains and/or water bodies adjoining or near the Poles. Additional sources of waste contaminants being released from the Poles and then further disbursed to the environment are as follows: (1) When workers and other persons make contact with the Poles, wood chips are frequently dislodged from the Poles and fall to the ground and are then spread around the vicinity of the Poles. (2) Many persons nail, tack, tape, or otherwise attach paper notices and advertisements to the Poles; these paper notices soak up and absorb dioxins, hexachlorobenzene, and pentachlorophenol from the Poles. These paper notices are subsequently removed from the Poles and further distributed in the environment or are blown off the Poles and land on the sidewalks, streets, or ground adjoining the Poles. (3) Woodpeckers bore into the Poles, and release sawdust from the Poles to the ground and into the environment (including, but not limited to exposing the woodpeckers to dioxins, hexachlorobenzene, and pentachlorophenol from the Poles). (4) Dioxins, hexachlorobenzene, and pentachlorophenol that has dripped, oozed, washed or otherwise been released from the Poles to adjoining surface areas is tracked by pedestrians, cyclists, pets, cars and landscaping activity into wider distribution in the environment, including into the homes and onto the rugs and carpets of people who live in Alameda, Contra Costa, Marin and San Francisco counties. (5) Storm water that runs off the Poles and collects in puddles on streets or other publicly used areas is a source of public contact with dioxins, hexachlorobenzene, and pentachlorophenol from the Poles.

On February 27 and March 25, 2006, ERF collected rainwater that dripped directly off power poles located along Pleasant Hill Road near that road's intersection with Church Street across from Nancy Boyd Creek, in Martinez, California. ERF had that rainwater analyzed for pentachlorophenol and dioxins. All of the Poles investigated had been treated with the above-referenced oil-pentachlorophenol mixture. Pentachlorophenol that dripped off one Pole was detected at levels so high that it exceeded the calibration limits of the test. The results were reported as greater than 1000 micrograms per liter ("> 1000 µg/L") . Dioxins were reported as the toxic equivalence of 2,3,7,8 tetrachlorinated dibenzo-p-dioxin ("dioxin TEQ"). The dioxin concentration in the rainwater that dripped off a power pole was reported as 1383 picrograms TEQ per liter ("1383 pg/L"). Water pooled around the base of Poles was also sampled and tested for dioxin concentration. Two samples were taken from around the bottom of two separate Poles. One sample contained a dioxin TEQ concentration of 579 pg/L and the other 610 pg/L. Finally, water from a ditch into which pentachlorophenol from the Poles was deposited was sampled as it discharged from culverts into Nancy Boyd Creek in Martinez, California. Two samples were collected. One sample contained a dioxin TEQ concentration of 8.5 pg/l and the other 28.07 pg/L. These water samples were taken during an intense rainfall event such that literally millions of gallons of water were flowing through the relevant culverts and into Nancy

Boyd Creek. Nancy Boyd Creek is a tributary of Alhambra Creek, which flows into Suisan Bay in Martinez California, near the Carquinez Strait. This is evidence that, in absolute terms, a shocking quantity of pentachlorophenol and dioxin from the Poles was flowing through Nancy Boyd Creek and, eventually, into San Francisco Bay.

ERF's sampling of the storm water runoff from the above-mentioned Poles in Martinez is representative of the levels (and the absolute quantities) of pentachlorophenol and dioxins that, with each significant rainstorm, is discharged into waterbodies from the numerous Poles that have been treated with pentachlorophenol and that are located throughout Alameda, Contra Costa, Marin and San Francisco Counties, California.

The disposal and discharge of toxic wastes and pollutants from the Poles poses a significant threat to the health of persons and to the local environment. Numerous members of the public are exposed daily to the dioxins, hexachlorobenzene and pentachlorophenol wastes released/discarded from the Poles into public streets, sidewalks, parks, other surface areas accessible to the public and San Francisco Bay and its tributaries, exposing these individuals to significant health risks.

The San Francisco Bay Basin Plan ("Basin Plan") seeks to protect and maintain aquatic ecosystems and the resources those systems provide to society. The Basin Plan acknowledges discharges of urban industrial site storm water as a significant source of pollution adversely affecting the quality of local waters. Contaminated storm water discharged from the Poles adversely impacts the water quality of the Bay watershed and threatens the ecosystem of this watershed, which includes significant habitat for listed rare and endangered species. The discharge of pollutants from the Poles also negatively impacts the water and aquatic sediments adjacent to the Poles.

The Bay and its shoreline and tributaries are ecologically sensitive areas. Although pollution and habitat destruction have drastically diminished the Bay's once-abundant and varied fisheries, the Bay and its tributaries are still essential habitat for dozens of fish and bird species as well as macroinvertebrate and invertebrate species. Storm water contaminated with dioxins, hexachlorobenzene and pentachlorophenol harms the special aesthetic and recreational significance that the Bay has for people in the surrounding communities. The Bay and its tributaries are used by kayakers, swimmers, and windsurfers, as well as recreational and subsistence anglers. The public's use of the Bay for water contact sports exposes many people to the contaminants in storm water runoff. Non-contact recreational and aesthetic opportunities, such as wildlife observation, also are damaged by storm water contaminants discharged to the Bay. Under Section 303(d) of the federal CWA, the Bay has been listed as impaired for dioxin because of public health concerns raised by the concentration of dioxins in the tissues of fish caught in San Francisco Bay.

IV. Specific Permits, Standards, Regulations, Conditions, Requirements or Orders Violated

A. RCRA Standard Violated

With regard to RCRA, this Notice pertains to PG&E's violation of 42 U.S.C. § 6972(a)(1)(B) (Section 7002 of the Solid Waste Disposal Act), which provides that:

> Any person may commence a civil action on his own behalf – against any person, including the United States and any other governmental instrumentality or agency, to the extent permitted by the eleventh amendment to the Constitution, and including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility, who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment.

For purposes of 42 U.S.C. § 6972(a)(1)(B), PG&E is a generator of waste oil-pentachlorophenol mixture and has contributed and is contributing to the past, present and future storage and disposal of solid waste, to wit: the oil-pentachlorophenol mixture referenced above (including all of the toxic contaminants referenced above which make up that oil-pentachlorophenol mixture), and all soil, sediment and water contaminated with the oil-pentachlorophenol mixture. PG&E's disposal of this waste presents an imminent and substantial endangerment to health and the environment.

B. CWA Effluent Limitations Violated

With regard to the CWA, this Notice pertains to PG&E's violation of CWA § 301(a), which provides that "the discharge of any pollutant by any person shall be unlawful" unless the discharger is in compliance with the terms of a National Pollutant Discharge Elimination System ("NPDES") permit. 33 U.S.C. § 1311(a); *see also* CWA § 402(p), 33 U.S.C. § 1342(p) (requiring NPDES permit issuance for the discharge of storm water associated with industrial activities). CWA § 301(a)'s prohibition on unpermitted discharges constitutes an "effluent limitation" within the meaning of CWA section 505(f), 33 U.S.C. § 1365(f). The Poles discharge storm water associated with industrial activity to San Francisco Bay and its tributaries, and that storm water is contaminated with pollutants. So far as ERF is aware, PG&E lacks any NPDES permit authorizing storm water discharges from the Poles, thus rendering all discharges of storm water (all of which contain pollutants) from the Poles unlawful.

To the extent that PG&E is authorized by General Permit No. CAS000001 [State Water Resources Control Board] Water Quality Order No. 92-12-DWQ, as amended by Order No. 97-03-DWQ ("General Permit") to discharge storm water from any of the Poles, these storm

water discharges are conditioned on PG&E's compliance with the terms of the General Permit. Each of these permit terms constitutes an "effluent limitation" within the meaning of CWA section 505(f), 33 U.S.C. § 1365(f). PG&E's storm water discharges have violated several of these permit terms, thereby violating CWA effluent limitations.

C. The Activity that Constitutes the Violations

1. Location of the Violations at Issue

This notice of intention to file citizen suit pertains to each and every Pole located in San Francisco, Alameda, Contra Costa, and Marin counties, to the extent the Pole has been treated with the above-referenced oil-pentachlorophenol mixture. PG&E maintains an extensive database with information about the treatment method used on every Pole it owns. PG&E knows every single Pole in the above-referenced counties that has been treated with the oil-pentachlorophenol mixture. Given PG&E's ownership, control and usage of these Poles, PG&E knows the location of each of these Poles. These Poles include, but are not limited to, the Poles identified in the attached Exhibits A and B. The itemization of Poles in Exhibits A and B are provided by way of example to illustrate ERF's concern with the Poles; there are thousands of additional Poles that have been treated with the above-referenced oil-pentachlorophenol mixture and to which this Notice pertains. These "additional" Poles are located at conspicuous, plainly visible locations – such as along public thoroughfares, on school grounds, in public parks, next to playgrounds, and in the front and back yards of private citizens – throughout Alameda, Contra Costa, Marin and San Francisco Counties, California. These additional Poles pose risks similar to those posed by the Poles listed in Exhibits A and B.

2. Imminent and Substantial Endangerment to Health and the Environment in Violation of RCRA

Disposal of waste from the Poles causes an imminent and substantial endangerment to health and the environment. As discussed above, waste from the Poles is disposed when the oil-pentachlorophenol mixture used to treat the Poles spills, leaks, discharges and drips from the Poles and is deposited at the bottom of each pole. Over time, this oil-wood treatment mixture leaks out of each Pole into or onto the surface the Pole contacts. This oil-wood treatment mixture also oozes to the surface of that part of the Pole that is above ground and then itself drips, or is washed off the pole by rainwater, which then carries the oil-wood treatment mixture onto or into the surfaces surrounding the Poles and/or is deposited into the soil, aquatic sediments, and the storm drains and/or water bodies adjoining or near the Poles. This toxic mixture contaminates the surface areas, storm drains and/or water bodies near the Poles. Additional ways that PG&E's chlorophenolic wastes (and their more toxic contaminants) from the Poles are disposed of, released or further distributed to the environment are as follows: (1) When workers and other persons make contact with the Poles, wood chips are frequently

dislodged from the Poles, fall to the ground and are then spread around the vicinity of the Poles. (2) Many persons nail, tack, tape, staple or otherwise attach paper notices and advertisements to the Poles; these paper notices soak up and absorb oil, dioxins, hexachlorobenzene, and pentachlorophenol from the Poles. These paper notices are subsequently removed from the Poles or are blown off the Poles and land on the ground near the Poles. (3) When PG&E and/or its agents perform maintenance work on the Poles, attach wires or cables or other hardware to the Poles, or replace or add cross arms on the Poles, PG&E and its agents drill holes in, or saw into, the Poles thus generating sawdust which is released to the surfaces beneath the Poles and the environment. (4) Weathering and aging of the Poles causes them to erode, thus sloughing off chips, dust and particles of wood impregnated with pentachlorophenol and its highly toxic contaminants. (5) Woodpeckers and insects bore into the Poles, and release sawdust from the Poles to the surface below the Poles and into the environment (including, but not limited to exposing the woodpeckers and insects to dioxins, hexachlorobenzene, and pentachlorophenol from the Poles). (6) Dioxins, hexachlorobenzene, and pentachlorophenol that has leaked, dripped, oozed, washed or otherwise been released from the Poles to adjoining surface areas are tracked by pedestrians, wild and domestic animals, cyclists, cars, landscaping activity and blown by the wind into wider distribution in the environment, including into the homes of people who live near the Poles or who otherwise come into contact with wastes from the Poles. (7) Storm water that runs off the Poles and collects in puddles on streets or other publicly used areas is a source of public contact with dioxins, hexachlorobenzene, and pentachlorophenol from the Poles.

Disposal of these chemicals into the environment causes an imminent and substantial endangerment to health and the environment. The chemicals in the oil-wood treatment mixture are highly toxic and are known to the State of California, the federal government and the World Health Organization to cause cancer, immunotoxicity, birth defects and other reproductive toxicity. Currently existing published, peer reviewed literature shows that pentachlorophenol is routinely contaminated with dioxins and hexachlorobenzene. Dioxins and hexachlorobenzene are manufacturing impurities that are found in virtually all samples of technical grade pentachlorophenol, which is widely used to treat power Poles to this day. For example, a report published by the California State Water Resources Control Board cites to a 1981 study of the concentration of dioxins in the commercial oil-pentachlorophenol mixture used on PG&E's Poles. This study shows that the oil-pentachlorophenol mixture contained 4.5% pentachlorophenol and 7.6 parts per million dioxin (with a dioxin TEQ of approximately 0.6 parts per ***million***. EPA Region 9 has set a preliminary remediation goal for dioxin TEQ in residential soil of 3.9 parts per ***trillion***. The dioxin TEQ in PG&E's waste oil-pentachlorophenol mixture is thus approximately 150,000 ***times*** the EPA Region 9 provisional remediation goal for residential soil. Any disposal of this waste oil-pentachlorophenol mixture from Poles can reasonably be expected also to include the disposal of its dioxin and hexachlorobenzene contaminants at very high concentrations.

In assessing cancer hazard from dioxins, it is safe to rely on a linear, no-threshold model for genotoxic chemicals. A linear no-threshold model for cancer risk assessment is a standard toxicological method used to assess cancer risk. For example, under 22 Cal. Code Regs. 27 Cal. Code Regs section 25701(a)(5), the California Office of Environmental Health Hazard Assessment ("OEHHA") has found that "the absence of a carcinogenic threshold dose shall be assumed and no-threshold models shall be utilized" when assessing cancer risk from a particular carcinogen. OEHHA has determined that, in the absence of convincing data which shows a threshold below which there is no risk of cancer, it is standard toxicological practice to assume no threshold exists for cancer hazard. Under the linear no-threshold model, exposure to extremely low levels of a carcinogen increases the quantitative risk of contracting cancer, even if that risk is very small. Based on currently existing published, peer reviewed studies, there is no significant evidence to show that there is a threshold below which there is no cancer risk from exposure to dioxins. Data exists which demonstrates biological effects of dioxins in the nanogram and picogram range, i.e., at levels substantially below those previously found to be toxic for these chemicals.

Based on a review of current, published, peer reviewed literature, dioxins and hexachlorobenzene, when discharged into a terrestrial or aquatic environment, can be ingested and concentrated in the fatty tissues of aquatic and terrestrial organisms. This literature demonstrates that dioxins and hexachlorobenzene bio-accumulate and bio-magnify in organisms. These chemicals degrade very slowly and they bind to fatty substances. What this means is that if a fish eats many microscopic organisms, each of which has ingested a low level of dioxin and hexachlorobenzene, the dioxin and hexachlorobenzene from each microscopic organism will remain in the fatty tissues and fluids of the fish, resulting in a much greater concentration of these chemicals in the fish. Similarly, any fish that feeds on fish that have eaten microscopic organisms that have ingested dioxins and hexachlorobenzene will have even greater concentrations of these chemicals in its fatty tissues and fluids. This same bio-magnifying process applies up any food chain, especially resulting in high concentrations of these chemicals in the fatty tissues and fluids of animals at the top of a food chain, such as osprey, bald eagles, salmon, raccoons, bear, seals, whales and humans. This bio-magnified amount concentrated in fatty tissues and fluids is commonly referred to as the "body burden" of these chemicals.

Dioxins and hexachlorobenzene are part of a class of compounds that the scientific community identifies as "dioxin-like" compounds. These chemicals are called dioxin-like compounds because they tend to affect organisms in the same way as does the most potent toxic chemical of this class, 2,3,7,8 tetrachlorodibienzo-p-dioxin, but have different potencies for causing toxicological effects. It is the generally accepted practice within the scientific community to assess the toxicological effects of dioxins and hexachlorobenzene based on their relative potencies compared to the potency of 2,3,7,8 tetrachlorodibenzo-p-dioxin. These relative potencies have been set by various organizations including the World Health Organization ("WHO").

An extensive body of literature on the carcinogenicity and developmental, reproductive and immunotoxicity of dioxins and related compounds in laboratory studies exists. These studies provide adequate evidence that 2,3,7,8 tetrachlorodibenzo-p-dioxin is a carcinogen in laboratory animals based on long-term bioassays conducted in both sexes of rats and mice. All studies have produced positive results, leading to the conclusion that tetrachlorodibenzo-p-dioxin is a multistage carcinogen increasing the incidence of tumors at sites distant from the site of treatment and at doses well below the maximum tolerated dose. 2,3,7,8 tetrachlorodibenzo-p-dioxin has been shown to be a carcinogen in hamsters, which are relatively resistant to the effects of dioxin-like compounds. Recent data have shown 2,3,7,8 tetrachlorodibenzo-p-dioxin to be a liver carcinogen in small fish.

Recent peer reviewed studies of human populations exposed to dioxins and related compounds has strengthened the inference, based on all the evidence from mechanistic, animal, and epidemiological studies that these compounds are appropriately characterized as human carcinogens. Recently, the International Agency for Research on Cancer ("IARC"), the cancer research arm of the World Health Organization, has upgraded its assessment of 2,3,7,8 tetrachlorodibenzo-p-dioxin to the status of being known to cause cancer in humans. The IARC did this as part of a broadly and extensively peer reviewed process.

Dioxins and hexachlorobenzene can cause developmental and reproductive toxicity in both animals and humans. The potential for dioxins and related compounds to cause reproductive and developmental toxicity in animals has been recognized for many years and there is extensive, peer reviewed literature regarding these effects.

A wide variety of developmental events, crossing three vertebrate classes and several species within each class, can be perturbed by dioxins and dioxin-like compounds, suggesting that dioxins have the potential to disrupt a large number of critical developmental events at specific developmental stages. Some of these changes can disrupt organ system structure and irreversibly impair organ function. A general finding in fish, bird, and mammalian species is that the embryo or fetus is more sensitive to dioxin-induced mortality than the adult. In mammals, postnatal functional alterations involving learning behavior and the developing reproductive system are sensitive to prenatal dioxin exposure at low levels (in the parts per billion range or lower). The developing immune system is also highly sensitive to extremely low dioxin levels. Alterations in developing systems and diminished prenatal viability and growth have been observed at maternal dioxin body burdens and/or daily dioxin doses during gestation above 100 nanograms per kilogram of body weight in virtually every species tested. Higher dose levels can be demonstrated to result in prenatal mortality.

Individual species vary in their sensitivity to any particular dioxin effect. The evidence available to date indicates that humans most likely fall in the middle of the range of sensitivity for individual effects among animals. In dioxin-exposed men, subtle changes in biochemistry

and physiology, such as enzyme induction, altered levels of circulating reproductive hormones, or reduced glucose tolerance, have been detected in a limited number of available studies. These findings, coupled with knowledge derived from animal experiments, suggest the potential for adverse impacts on human metabolism and developmental and/or reproductive biology and, perhaps other effects in the range of current human exposures at nanograms per kilogram (parts per trillion) levels. As body burdens of dioxin-like compounds increase, the probability and the severity, as well as the spectrum of human noncancer effects most likely increase. Hence, any additional increase in body burden of dioxin-like compounds increases the risk of harmful toxicological effects.

The immune system is a particularly vulnerable target for the toxicity of dioxin-like compounds, including dioxins and hexachlorobenzene. The ability of an animal to resist and/or control viral, bacterial, parasitic, and neoplastic diseases is determined by both nonspecific and specific immunological functions, which can be adversely affected by very low levels of dioxin-like compounds in body tissues.

Evidence has accumulated to demonstrate that the immune system is a target for toxicity of dioxins and structurally related compounds. The evidence has derived from numerous studies in various animal species. Animal studies suggest that some immunotoxic responses may be evoked at very low levels of dioxin exposure, which indicates the potential for similar risk to humans.

In summary, exposure to dioxins and hexachlorobenzene can increase the body burden of these chemicals, particularly in species like humans who are at the top of long food chains. Any increase in body burdens of these chemicals increases the human risk of several toxic end points including cancer, developmental toxicity, reproductive toxicity, and possibly immunotoxicity. Because of the present high body burdens of these compounds in humans and wildlife, any increment in dosage will generate an increased risk of toxicity in humans. Because there is such a wide range of species of animals for which exposure to dioxin-like compounds has been shown to disrupt prenatal development and to cause embryo/fetal mortality, exposure to dioxins and hexachlorobenzene is likely to increase the risk of embryo/fetal mortality in both fish, birds and marine mammals. Exposure to dioxins and hexachlorobenzene can increase the risk that wildlife, including fish, birds, and mammals will suffer decreased immune system function, and thus bear an increased risk that they will contract, or succumb to viral, bacterial, parasitic, and neoplastic infections and diseases. As body burdens of these chemicals increase, so does the risk that all of the above mentioned species will suffer the above referenced toxic endpoints.

Because the toxic chemicals in the oil-pentachlorophenol mixture are so long lived and because they bio-accumulate and biomagnify in living organisms, many species, including fish, birds, and mammals, including humans, that participate in the food chain affected by PG&E's Poles, bear an increased risk of suffering the toxic endpoints discussed above.

Consequently, PG&E is hereby placed on formal notice that after the expiration of ninety (90) days from the date of this Notice of Violation and Intent to file suit, ERF intends to file suit in federal court against PG&E under 42 U.S.C. section 6972(a)(1)(B) for violation of RCRA.

3. CWA Violations

During every significant local rain event over the past five years, PG&E has discharged contaminated storm water from many of the Poles into (1) San Francisco Bay, San Pablo Bay, Suisan Bay, or Carquinez Strait and wetlands adjacent to these waters (collectively, "the Bay") or (2) creeks and streams that flow into the Bay and wetlands adjacent to these waters. In addition, during every significant rainstorm over the past five years, PG&E has discharged contaminated storm water from many of the Poles into storm drains that lead to various creeks and streams that flow into the Bay or that lead directly to the Bay. Discharges into such storm drains causes pollutants to be discharged to the Bay and/or streams and creeks that are tributaries to the Bay and their adjoining wetlands. By way of example and illustration, ERF has set forth in the attached Exhibit B an exemplary list of a subset of the Poles from which storm water has discharged into these waters or storm drains. Given PG&E's ownership, operation, and maintenance of the Poles, PG&E knows the location of each additional Pole (i.e., Poles in addition to those listed in Exhibit B) that are situated such that storm water runoff from the Poles will reach these waters or storm drains.

These creeks and streams and the Bay are all waters of the United States within the meaning of the CWA. The CWA requires that these water bodies meet water quality objectives/criteria which protect specific "beneficial uses." The beneficial uses of the Bay and its tributaries include commercial and sport fishing, estuarine habitat, fish migration, navigation, preservation of rare and endangered species, water contact and non-contact recreation, shellfish harvesting, fish spawning and wildlife habitat.

Significant local rain events are reflected in the rain gauge data available at http://cdec.water.ca.gov and http://lwf.ncdc.noaa.gov/oa/ncdc.html. The attached Exhibit C compiles all dates in the last five (5) years when a significant rain event occurred–i.e., the dates that PG&E discharged storm water from the Poles.

It is unlawful to discharge pollutants to waters of the United States, such as the Bay and its tributaries, without an NPDES permit or in violation of the terms and conditions of an NPDES permit. So far as ERF is aware, PG&E lacks NPDES permit authorization for discharges of pollutants into waters of the United States from the Poles, rendering all discharges of storm water from the Poles to waters of the United States unlawful under the CWA. To the extent that PG&E has sought and acquired NPDES permit authorization under the General Permit, PG&E is violating terms of the General Permit.

The Effluent Limitations of the General Permit, E.3, prohibit the Poles from discharging pollutants above the level commensurate with application of Best Available Control Technology ("BAT") and Best Conventional Technology ("BCT"). The Poles are discharging pollutants such as dioxins, hexachlorobenzene, and pentachlorophenol above a level commensurate with application of BAT and BCT, as PG&E has failed to employ measures that constitute BAT and BCT for power poles–which would include using power poles that are not treated with pentachlorophenol (such as cement or metal poles or wood poles treated with less toxic preservatives).

The Discharge Prohibitions of the General Permit, A.2, prohibit storm water discharges that cause or threaten to cause pollution, contamination, or nuisance. The Discharge Prohibitions of the General Permit, A.2, prohibit storm water discharges to surface or groundwater that adversely impact human health or the environment. The Receiving Water Limitations of the General Permit, C.2, prohibit storm water discharges that cause or contribute to an exceedance of applicable Water Quality Standards. Applicable Water Quality Standards are set forth in the Basin Plan,[1] the National Toxics Rule and the California Toxics Rule (the National Toxics Rule and the California Toxics Rule are hereinafter collectively referred to as "the CTR").[2]

The Basin Plan, *inter alia*, establishes the following Water Quality Standards for San Francisco Bay and its tributaries:

> All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. Acute toxicity is defined as a median of less than 90 percent survival, or less than 70 percent survival, 10 percent of the time, of test organisms in a 96-hour static or continuous flow test. Id. There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

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[1] The Basin Plan is published by EPA on the internet at: http://www.epa.gov/waterscience/standards/wqslibrary/ca/ca_9_san_francisco.pdf. The Basin Plan is also published by the Regional Board on the internet at: http://www.swrcb.ca.gov/rwqcb2/basinplan.htm

[2] The CTR is set forth at 40 C.F.R. § 131.38 and is explained in the Federal Register preamble accompanying the CTR promulgation set forth at 65 Fed. Reg. 31682.

The CTR, *inter alia*, sets limits on levels of dioxins, hexachlorobenzene, and pentachlorophenol.

PG&E's storm water discharges from all the Poles located adjacent to the Bay or its tributaries or to storm drains that discharge to the Bay or its tributaries have caused or contributed to an exceedance of these Water Quality Standards set forth in the Basin Plan and CTR by causing or contributing to causing excessive levels of dioxins, hexachlorobenzene, and pentachlorophenol to be in applicable waters.

The General Permit, Section A: Storm Water Pollution Prevention Plan Requirements, ¶ 1 requires dischargers covered by the General Permit and commencing industrial activities before October 1, 1992 to develop and implement an adequate SWPPP by October 1, 1992. Section A ¶ 1 of the General Permit also requires dischargers to make all necessary revisions to existing SWPPPs promptly, and in any case no later than August 1, 1997.

The SWPPP must include, among other requirements, the following: (a) identification of all the members of a storm water pollution prevention team responsible for developing and implementing the SWPPP, General Permit Section A, ¶ 3; (b) a site map showing the storm water conveyance system and areas of actual and potential pollutant contact and all areas of on-going industrial activity, General Permit Section A, ¶ 4; (c) a list of significant materials handled and stored at the site including quantities and frequencies, General Permit Section A, ¶ 5; (d) all potential pollutant sources, industrial processes, material handling and storage, dust and particulate generating activities, significant spills and leaks, non-storm water discharges, and potential soil erosion activity must be described, General Permit Section A, ¶ 6; (e) an assessment of potential pollutant sources at the Facility and a description of the BMPs to be implemented at the Facility that will reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges, including structural BMPs where non-structural BMPs are not effective must be included, General Permit Section A, ¶¶ 7, 8; (f) specification of Best Management Practices ("BMPs") designed to reduce pollutant discharge to BAT and BCT levels, including BMPs already existing and BMPs to be adopted or implemented in the future, General Permit Section A, ¶ 8; (g) a comprehensive site compliance evaluation completed each reporting year, and revisions to the SWPPP as necessary after the evaluation has been completed, General Permit Section A, ¶ 9.; and (h) revisions to the SWPPP within 90 days after a facility manager determines that the SWPPP is in violation of any requirements of the General Permit, General Permit Section A, ¶ 10.d. Facility operators are required at all times to operate properly and to maintain any facilities and systems of treatment and control (and related appurtenances) which have been installed or used to achieve compliance with the conditions of the General Permit and the requirements of the SWPPP, General Permit Section C, ¶ 5.

PG&E has failed to develop or implement a SWPPP for the Poles that meets any of these requirements.

Each and every day that PG&E has discharged storm water from each of the Poles to waters of the United States as described herein constitutes a separate CWA violation. Each and every day that PG&E continues in the future to discharge storm water from each of the Poles described herein will constitute additional violations of the CWA.

Each and every day that PG&E has failed to develop and implement a SWPPP for the Poles constitutes a separate CWA violation. PG&E will continue to violate the General Permit in the future each day that it continues to fail to acquire General Permit authorization and develop and implement a SWPPP that complies with the General Permit.

Consequently, ERF hereby places PG&E on formal notice that, after the expiration of sixty (60) days from the date of this Notice of Violation and Intent To File Suit, ERF intends to file suit in federal court against PG&E under CWA section 505(a), 33 U.S.C. § 1365(a), for violations of the CWA.

IV. The Persons Responsible for Violating RCRA and the CWA

The following persons are responsible for violating RCRA and the CWA as further described in this letter:

Pacific Gas & Electric Company
One Market Spear Tower, Suite 2400
San Francisco, CA 94105

A. Dates of Violation of RCRA, 42 U.S.C. § 6972(a)(1)(B)

Dioxins, hexachlorobenzene and pentachlorophenol have been discharged, leaked, spilled, dripped and discarded from the Poles, including during every significant rainstorm during the past five years. These chemicals have been deposited on the soil and in the water adjacent to the poles every day during the past five years. Thereafter, these contaminants have remained in the soils and sediments near the Poles (and in the sediments of waterbodies downstream of the Poles) on every day during the past five years, posing an imminent and substantial endangerment to health and the environment of the locality and region on every day during the past five years. Accordingly, PG&E has been violating this RCRA provision continuously for at least the past five years. Thus, the dates of violations to which this Notice pertains are each and every single day dating back five years from the date of this letter. ERF further puts PG&E on notice that these violations will continue on every day into the future until PG&E removes the soils and sediments near the Poles that are contaminated with dioxins, hexachlorobenzene and pentachlorophenol and replaces the Poles with poles that do not discharge, leak, spill, drip and/or discard dioxins, hexachlorobenzene or pentachlorophenol (such that future releases of these compounds from the Poles to the environment are halted).

B. Dates of Violation of the CWA

Each and every day in the five years preceding the date of this letter that PG&E has discharged storm water from each of the Poles to waters of the United States as described herein constitutes a separate CWA violation. As described above, PG&E has discharged storm water on each and every day of significant rainfall during these past five years. The dates of significant rainfall are listed on the attached Exhibit C. ERF further puts PG&E on notice that these violations will continue in the future until PG&E replaces the Poles with power poles that do not discharge pentachlorophenol and its contaminants.

In addition PG&E has failed to develop and implement a SWPPP for the Poles that complies with the General Permit. PG&E has separately violated the CWA on each and every day of the five years preceding the date of this letter by failing to develop and implement a SWPPP for the Poles during this period. ERF further puts PG&E on notice that these violations will continue in the future until PG&E obtains General Permit authorization and prepares and implements a SWPPP for the Poles that fully complies with the General Permit.

V. Full Name, Address and Telephone Number of the Person Giving Notice

The full name, address and telephone number of the person providing this Notice is:

Ecological Rights Foundation
867 "B" Redwood Drive
Garberville, CA 95542

ERF's telephone number is (707) 923-4372.

VI. Name, Address and Telephone Numbers of Noticing Party's Counsel

William Verick
Fredric Evenson
424 First Street
Eureka, CA 95501
(707) 268-8900

David Williams
Brian Acree
370 Grand Avenue, Suite 5
Oakland, CA 94610
(510) 271-0826

Christopher Sproul
Jodene Isaacs
Environmental Advocates
5135 Anza Street
San Francisco, CA 94121
(415) 533-3376

ERF would be happy to discuss effective remedies for the violations referenced in this Notice. If you wish to pursue such discussions in the absence of litigation, we suggest that you initiate these discussions immediately so that a resolution may be reached before the end of the 60-day notice period (for ERF's alleged CWA violations) and 90-day notice period (for ERF's alleged RCRA violations). Although ERF is always interested in avoiding unnecessary litigation,

in order to preserve its remedies, ERF will not delay filing a complaint if a satisfactory remedy has not been reached by the time the applicable notice periods have expired.

Cordially,

William Verick

Submitted by Council Member Sherri Myers Item 22-00291

CCA-Treated Wood

What Is CCA?	Chromated copper arsenate (CCA) is a water-soluble inorganic pesticide most commonly used as a wood preservative to make it resistant to attack by termites and fungi that cause decay. The wood is dipped in a solution of CCA and subjected to vacuum pressure to force penetration of CCA into the wood. CCA-treated wood is also referred to as **pressure-treated** wood and is known by the trade name Wolmanized®. Wood treated with CCA is used widely in outdoor structures such as decks, playground equipment, picnic tables, garden-bed borders and docks.
Pesticide Residue on the Pressure-Treated Wood Surface	Newly CCA-treated wood may have some pesticide residue left on the wood surface from the treatment process. Because CCA is water-soluble, rainwater can seep in and leach CCA onto the wood surface. Cracking of the wood as it ages speeds up the leaching process. The CCA residue can be wiped or dislodged from the wood surface and can stick to hands or clothing from contact with the wood surface.
Contamination in Soil From CCA-Treated Wood	Since CCA can be leached from CCA-treated wood by rainwater and weathering, the soil beneath and adjacent to CCA-treated wood structures has been shown to be contaminated by arsenic, chromium, and copper. When decks built with CCA-treated wood was coated with a waterproof sealant the soil underneath had lower concentrations of the metals.
Concern About Children's Exposure	Young children are more at risk of exposure to CCA because they tend to spend more time playing outdoors, and because they have frequent hand-to-mouth activities. When playing on playground equipment or decks built with CCA-treated wood, they can be exposed to CCA by touching the CCA leachate on the wood surface with their hands and then inadvertently ingesting the CCA on their hands by hand-to-mouth activity. The amount of CCA leached on the surface of the wood depends upon the type of wood and the age of the structure. The amount ingested is also dependent upon the frequency of hand-to-mouth activity. Children may also be exposed to CCA in contaminated soil when playing under these structures by touching the contaminated soil with their hands and then placing them in their mouths.
Greatest Health Risk From CCA - Exposure to Arsenic	CCA leachate contains arsenic, chromium, and copper. Available information suggests that exposure to the arsenic in CCA-treated wood poses the greatest potential health risk. However, there is great uncertainty regarding the exposure dose that results from contact with CCA-treated wood.
How To Prevent Exposure to CCA	The following measures can prevent or reduce exposure to CCA: • When working with CCA-treated wood, wear dust masks, gloves, and protective clothing to decrease exposure to sawdust (ATSDR 2007). • Apply a sealant every one to two years to CCA-treated wood structures to reduce direct contact with the wood preservative (CDPH 2007; CPSC 2006).

	• Do not allow children to play under CCA-treated wood decks. and encourage them to wash up after playing on decks or playground equipment. • Use alternative building materials, such as plastics and hardwood, for outdoor structures (EPA 2008). • Cover CCA-treated wood used for garden-bed borders with heavy plastic
Safe Handling and Disposal	• Retail stores that sell CCA-treated wood should have copies of the consumer information sheet that describes safe handling recommendations. • CCA-treated wood may be disposed of as ordinary household trash, but do not burn CCA-treated wood because toxic chemicals would be released into the air or remain in the ashes (EPA 2008). • Do not use CCA-treated wood as mulch or wood chips. Do not put sawdust from CCA-treated wood in the composting pile

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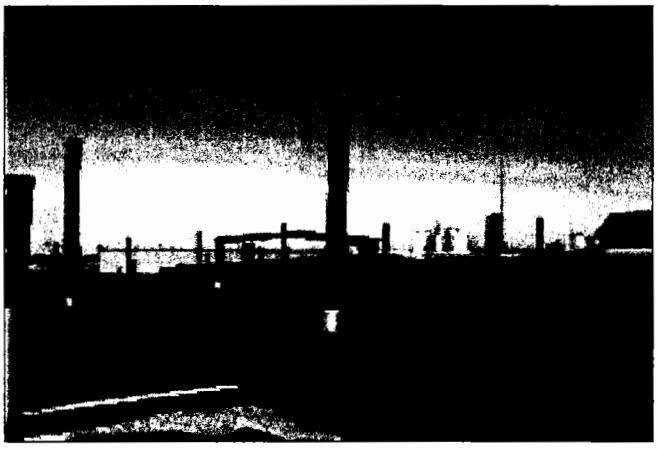
PENTACHLOROPHENOL

Pentachlorophenol: Poisonous Utility Poles

Pentachlorophenol (Penta) is an extremely toxic wood preservative that threatens the health of people and the environment. It builds up in the food chain and our bodies and is passed on to our children through breast milk (Jorens 1993). Penta belongs to a class of dangerous chemicals that have left a toxic legacy around the globe. This class of chemicals, often referred to as PBTs (persistent bioaccumulative toxics), also includes dioxin, mercury, and PCBs.



The Cascade Pole wood-treatment facility on the Tacoma tide flats is one of four such plants in Washington that use pentachlorophenol for utility poles.

Penta is so toxic that it is banned in 26 countries, yet the United States continues to allow registration and use of this chemical for treating utility poles and other wood. As a result of this registration, penta contaminates soil, rivers, streams, and our bodies. Even more alarming is the fact that penta is heavily contaminated with dioxins, which are among the most dangerous chemicals known.

Health Effects: The Risk is Too High

Penta is devastating to human health and the environment. It is classified as a probable carcinogen by the Environmental Protection Agency (EPA), which means that exposure to penta can cause cancer. Penta has also been linked to the impairment of the immune system, interference with reproduction, birth defects, and hormonal problems (Schwetz 1974; Daniel 1995; Schettler et al. 1999). Consider these disturbing facts about penta:

- According to EPA estimates, ongoing exposure to contaminated soil at the base of penta-treated telephone poles puts two children at risk for cancer each day (Beyond Pesticides/NCAMP 1999).
- According to EPA, at least 4 in 10 workers who apply penta grease to utility poles and have a lifetime exposure to penta are expected to get cancer. If the workers don't use protective equipment, EPA estimates that every worker can be expected to get cancer (U.S. EPA 1999).
- Penta has been found in milk, fruit, and meat (Jorens 1993).
- Penta has been found in human body fat, breast milk, cerebrospinal fluid, and other body fluids (Jorens 1993).
- A blue heron colony failed to reproduce when none of its 200 eggs hatched. This failure was attributed to penta exposure (Sloan et al. 1988).

Penta Pollution Sources

Utilities nationwide account for more than 90% of current penta use (Beyond Pesticides/ NCAMP 1999). Of the approximately 60 million utility poles currently in service in the United States about 36 million have been treated with penta (Malecki, 1992). Penta has been shown to leach from poles and contaminate the soil at the base of poles.

Although penta is not manufactured in Washington, there are four active wood treatment facilities in the state that use penta in their operations:

- Brooks Manufacturing and Oeser Co. in Bellingham,
- J.H. Baxter & Company in Arlington, and
- Cascade Pole in Tacoma.

All four facilities have contaminated their grounds to the extent that they are considered toxic sites under state or federal law. According to 1998 Toxics Release Inventory data, the four facilities together released 510 pounds of penta to the air and 250 pounds to water during that year.

Alternatives to Penta

There are alternatives to penta-treated poles. Alternatives include non-wood (steel, fiberglass, or concrete) poles, wood treated with copper napthenate or alkaline copper quaternary (ACQ), and burying utility lines underground. Although some of the alternatives may have environmental impacts, none of the options are as hazardous as penta.

Vision for the Future: Penta Solutions

In December 2000, Washington State released a plan to phase out and eliminate dioxin, mercury, PCBs, and other persistent pollutants. At the end of last year, the Washington State Department of Ecology (Ecology) released a working list of priority chemicals from which it will choose chemicals for state action. Despite the fact that penta is persistent, bioaccumulative, extremely toxic, and contaminates numerous waterbodies and communities in our state, penta is missing from Ecology's list. Penta should be placed on Ecology's list and prioritized for action.

There are numerous alternatives to penta-treated wood utility poles.

Public utilities around the state still purchase penta-treated poles. These poles are near schools, close to streams, and in residential backyards. To stop environmental and health risk due to penta exposure, public utilities should stop purchasing poles treated with penta.

What You Can Do

- Send the Department of Ecology a letter requesting that penta be placed on the Persistent Bioaccumulative Toxic (PBT) working list and prioritized for action. Letters should be sent to: Director Linda Hoffman, Department of Ecology, PO Box 47600, Olympia, WA 98504-7600; lhof461@ecy.wa.gov; phone 360-407-7001, fax 360-407-6989.

- Send a letter to your local public utility asking it to adopt a policy to stop purchasing penta-treated poles and begin purchasing alternatives.

Contact us at 206-632-1545 or visit our website at www.watoxics.org for the latest information on current activities and to find out how you can get more involved.

References

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Sloan K. et al. 1988. *Pentachlorophenol: Poison on Your Street*. A Western Washington Regional Investigation. Greenpeace Report.

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