

# Letter Health Consultation

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WALT DISNEY STUDIOS

BURBANK, CALIFORNIA

**Prepared by the  
California Department of Public Health**

MARCH 22, 2010

Prepared under a Cooperative Agreement with the  
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Agency for Toxic Substances and Disease Registry  
Division of Health Assessment and Consultation  
Atlanta, Georgia 30333

## **Health Consultation: A Note of Explanation**

A health consultation is a verbal or written response from ATSDR or ATSDR's Cooperative Agreement Partners to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR or ATSDR's Cooperative Agreement Partner which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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LETTER HEALTH CONSULTATION

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BURBANK, CALIFORNIA

Prepared By:

California Department of Public Health  
Under Cooperative Agreement with  
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Agency for Toxic Substances and Disease Registry



MARK B HORTON, MD, MSPH  
*Director*

State of California—Health and Human Services Agency  
California Department of Public Health



ARNOLD SCHWARZENEGGER  
*Governor*

February 18, 2010

Susan Neurath, Ph.D., P.E.  
CAPT, U.S. Public Health Service  
Petition Coordinator  
Agency for Toxic Substances and Disease Registry  
4770 Buford Hwy NE  
Atlanta, GA 30341

Dear Captain Neurath:

The California Department of Public Health (CDPH) received a request from your agency, the federal Agency for Toxic Substances and Disease Registry (ATSDR) for technical assistance in responding to community concerns expressed in a letter sent to ATSDR dated November 16, 2009, relating to Walt Disney Studios, located at 500 South Buena Vista Street, Burbank, California. CDPH evaluated these concerns as part of a cooperative agreement with ATSDR.

You received a letter from a community member who lives close to Walt Disney Studios, who is concerned that his family is being exposed to hexavalent chromium (CrVI) and possibly other chemicals in cooling tower waste water from Disney Studios. The concerns appear to stem from newspaper articles related to a lawsuit filed against Walt Disney Studios, alleging (among other issues), that Walt Disney Studios is discharging Cr VI-contaminated wastewater directly down the center of Parkside Avenue, which flowed across Riverside Drive and into an 11 acre area referred to as "Pollywog Park," within Griffith Park.

### **Summary**

CDPH concludes that residents living near Walt Disney Studios are not being exposed to CrVI-contaminated waste water from cooling towers on Walt Disney Studios' property, for these reasons: 1) residents are not coming into contact with cooling tower water; 2) waste water from Disney Studio's cooling towers is discharged directly into the sanitary sewer, not down the Parkside Avenue; and 3) cooling tower discharge water does not contain CrVI. Therefore, the health of residents is not being harmed from cooling tower waste water generated on Disney Studio's property. CDPH also concludes that nearby residents and people who walk or recreate in Pollywog Park are not being exposed to CrVI in surface soil at levels harmful to health.

The following provides the basis for the conclusion reached by CDPH.

### **Background and Discussion**

CDPH staff spoke with representatives from the City of Burbank, the California Regional Water Quality Control Board (RWQCB), Los Angeles Region, the California Environmental Protection Agency, the Department of Toxic Substances Control (DTSC), and Walt Disney Studios, to gain an understanding of operations associated with the disposal of cooling tower waste water.

CDPH also reviewed the following reports:

- Three RWQCB inspection reports and associated data, titled:
  1. Compliant Investigation: Alleged Discharge to Los Angeles River by the Walt Disney Company, Burbank, CA. July 7, 2009.
  2. Compliant Investigation: Illicit discharge to Keystone Street and Parkside Avenue storm drains by Walt Disney Company located at 500 South Buena Vista Street in Burbank. August 3, 2009.
  3. Continuation of Complaint Investigation: Illicit discharges to storm drains by Walt Disney Company located at 500 South Buena Vista Street in Burbank. October 14, 2009.
- DTSC Sampling Report: limited soil sampling at Griffith Park ("Pollywog Park"), West Riverside Drive, Burbank, CA. October 2006.

### **Summary of Cooling Water Practices at Disney Studios**

Based on the aforementioned communications, it is our understanding that between approximately 1939 and 1960, Walt Disney Studios pumped groundwater from two on-site wells into a large water tank (135 foot tall, 150,000 gallons), for the purpose of cooling water for air conditioning equipment, which at that time were "once-through condenser coolers." After the cooling water went through the air conditioning equipment, it was piped under Riverside Drive to the LA River and to adjacent settling ponds formerly used by Los Angeles (L.A.) Department of Water and Power, in an area known as Pollywog Park. We were informed by Disney staff that CrVI was not added as an anti-corrosive to the cooling water for the once-through condenser coolers (Maurie Nikkila, Disney Studios HVAC Department Head, personal communication, February 3, 2010). [CDPH notes that there is conflicting information as to Disney's past use of CrVI in cooling water; the RWQCB inspection reports (listed above) indicate that Disney staff reported using CrVI up until its ban in 1990.]

At some point in the 1960s, Disney began discharging air conditioning cooling water to a storm drain catch basin located on South Buena Vista Street, which flowed to the L.A. River. Contrary to newspaper reports, cooling water from Disney's air conditioning

equipment was not discharged to Parkside Avenue (Maurie Nikkila, Disney Studios HVAC Department Head, personal communication, February 3, 2010). During that same time period, Disney ceased pumping ground water from on-site wells and began using municipal water from the City of Burbank for their air conditioning equipment.

In 1993 and 1996, Disney Studios constructed cooling towers, replacing the once-through condenser coolers. CrVI was banned from use in cooling towers in 1990 and was not used in Disney's cooling towers constructed in 1993 and 1996. In 2000, Disney stopped discharging cooling tower "bleed off" water to the L.A. River and diverted it directly to the sanitary sewer. Thus, residents adjacent to Disney Studios are not coming into contact with cooling tower discharge water.

### **Review of Storm Water Data**

CDPH reviewed storm water data collected by the RWQCB as part of their investigation into a complaint that Disney was allegedly dumping CrVI and solvents from air conditioning cooling towers into a storm drain that discharges to the L.A. River. CrVI was not detected in storm water at the reporting limit of 10 ppb (parts per billion). Several volatile organic compounds (VOCs) (tetrachloroethylene, trichloroethylene, 1,1-dichloroethylene, and 1,2-dichloroethane) were also analyzed. VOCs were not detected at a reporting limit of 0.5 ppb. The RWQCB concluded that results from their inspections "do not validate the allegations of gross discharges of CrVI and VOCs from Disney cooling towers to the storm drain discharging into the L.A. River adjacent to Highway 134." CDPH concurs with this conclusion.

### **Review of Soil Sampling in Pollywog Park**

If prior to 1990, Disney Studios used CrVI in cooling water that was discharged to Pollywog Park, it is possible for soil in the area to have elevated levels of CrVI. However, some studies have shown that CrVI converts to the less toxic CrIII (trivalent chromium) in the presence of organic material usually found in the top 6-12 inches of soil. It is also important to note that there are a number of industrial sources that release CrVI, which could contribute to the presence of CrVI in soil in an urban area such as Burbank and/or Pollywog Park. In order to address this potential concern, CDPH reviewed the soil data collected by DTSC in Pollywog Park, to determine whether CrVI is present in surface soil at levels of health concern.

In 2006, DTSC collected soil samples in Pollywog Park in response to community concerns relating to possible soil contamination of CrVI from cooling tower water discharged by Disney. DTSC analyzed 22 soil samples from unpaved areas of Pollywog Park, at depths ranging from surface to 2 feet. Samples were analyzed for CrVI and CAM-17 (California Administrative Manual) metals, in particular total chromium, arsenic, and lead. With the exception of total chromium, the highest concentrations of contaminants analyzed were measured in surface soil. The maximum concentration of total chromium (26.2 milligram per kilogram, or mg/kg) was measured at a depth of 2

feet. DTSC concluded that levels of arsenic and lead are consistent with background levels for the area.

The following table summarizes the results of surface soil samples:

**Summary of Results of Surface Soil Samples Collected in Pollywog Park, July 2006**

<b>Contaminant</b>	<b>Range of Sampling Results (mg/kg)</b>	<b>Health Based Screening Value/Source (mg/kg)</b>
Arsenic	Not detected-0.24	0.5 (CREG) 20 (Chronic EMEG)
Hexavalent chromium (CrVI)	0.092-0.94	17 (CHHSL)
Total chromium	11.2-23.9	210 (PRG)
Lead	13.0-88.6	80 (CHHSL)

CREG: ATSDR Cancer Risk Evaluation Guide (based on 1 in 1,000,000 increased cancer risk)

CHHSL: California Human Health Screening Level

PRG: US Environmental Protection Agency, Preliminary Remedial Goal

Screening values based on total exposure: inhalation, ingestion, and dermal contact.

Concentrations of arsenic, CrVI, and total chromium in surface soil do not exceed health based screening values. One surface soil sample had a lead concentration exceeding screening values (80 mg/kg); however, lead concentrations (76.2 mg/kg) in the duplicate sample were below screening values. Furthermore, the average concentration of lead (29.3 mg/kg) in surface soil is more reflective of the level of potential exposure, since it is unlikely that someone would be chronically exposed to soil from one specific location. Thus, concentrations of metals analyzed in surface soil from Pollywog Park are below levels of health concern.

### **Conclusion**

Residents living on Parkside Avenue and near Pollywog Park are not being exposed to CrVI from cooling towers located on the Walt Disney Studios property. CDPH staff reviewed the current and historical practices at Disney Studios and did not find clear evidence that CrVI was used. It is possible that it was used before 1990. Soil sampling conducted in the location where historical discharges of cooling water occurred, did not show CrVI at levels that would be harmful to health.

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If you have any questions, please do not hesitate to contact Tracy Barreau at (510) 620-3670 or Marilyn C. Underwood, Ph.D., at (510) 620-3610.

Sincerely,



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Staff Environmental Scientist  
Environmental Health Investigations Branch



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## Certification

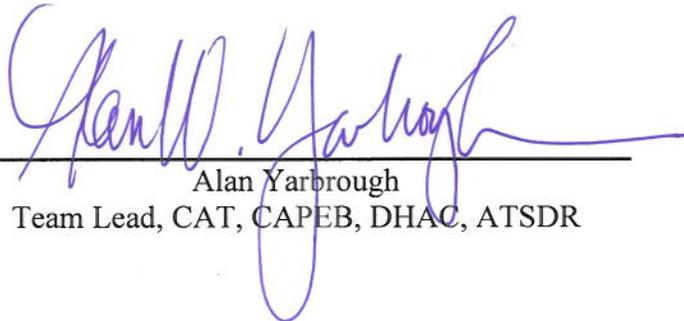
This Walt Disney Studios letter health consultation was prepared by the California Department of Public Health under a cooperative agreement with the federal Agency for Toxic Substances and Disease Registry (ATSDR). It was completed in accordance with approved methodologies and procedures existing at the time the health consultation was initiated. Editorial review was completed by the Cooperative Agreement partner.



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Charisse J. Walcott  
Technical Project Officer, CAT, CAPEB, DHAC

The Division of Health Assessment and Consultation (DHAC), ATSDR, has reviewed this health consultation and concurs with its findings.



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Alan Yarbrough  
Team Lead, CAT, CAPEB, DHAC, ATSDR