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Secretary for  
Environmental Protection

# California Regional Water Quality Control Board

## San Diego Region

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9174 Sky Park Court, Suite 100, San Diego, California 92123-4353  
(858) 467-2952 • Fax (858) 571-6972  
[http:// www.waterboards.ca.gov/sandiego](http://www.waterboards.ca.gov/sandiego)

August 26, 2010

Colonel Michael L. Lawrence  
Commanding Officer  
U.S. Marine Corps, Camp Pendleton  
Marine Corps Air Station  
P.O. Box 555151  
Camp Pendleton, California 92055-5151

In reply refer to:  
T10000000387:kdorsey

Dear Colonel Lawrence:

**SUBJECT: INVESTIGATIVE ORDER NO. R9-2010-0070, FOR MARINE CORPS AIR STATION, CAMP PENDLETON, SAN DIEGO COUNTY, CALIFORNIA**

Enclosed is Investigative Order No. R9-2010-0070 issued by the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) to the United States Marine Corps (USMC). The Order directs the USMC to investigate the effects of the pollution and nuisance created by an unauthorized discharge of waste constituents from the Marine Corps Air Station fuel storage facility.

The Investigative Order is issued under authority of California Water Code section 13267. The Site Investigation Report required by the Investigative Order is due on **October 15, 2010**. Please review the requirements contained within the Investigative Order and note that the technical report submitted to the San Diego Water Board must be accompanied by the certification, under penalty of law, that the information is true, accurate, and complete.

The procedures for requesting an evidentiary hearing before the San Diego Water Board and deadlines for appeal of this enforcement action to the State Water Board can be found in Sections E.2 and E.3 of the attached Order. Please note that the process of requesting an evidentiary hearing and/or appeal to the State Water Board does not automatically suspend or postpone the need to comply with requirements and due dates in the enclosed Order.

In the subject line of any response, please include the requested "in reply refer to" information located in the heading of this letter. For questions pertaining to the subject matter, please contact Ms. Kelly Dorsey at (858) 467-2745 or via email at [kdorsey@waterboards.ca.gov](mailto:kdorsey@waterboards.ca.gov).

Sincerely,



JAMES G. SMITH  
Assistant Executive Officer

JS:jc:jro:kkd

Enclosures: Cleanup and Abatement Order No. R9-2010-0070

cc w/encl: Captain Jon Kochersberger, Environmental Officer, MCAS Camp Pendleton (via e-mail)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

INVESTIGATIVE ORDER NO. R9-2010-0070

AN ORDER DIRECTING THE UNITED STATES MARINE CORPS  
TO SUBMIT  
TECHNICAL AND MONITORING REPORTS PERTAINING TO AN  
INVESTIGATION OF WATER QUALITY AT THE SITE OF:

MARINE CORPS AIR STATION (MCAS)  
CAMP PENDELTON, CALIFORNIA  
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), finds that:

- 1. Legal and Regulatory Authority:** This Order conforms to and implements policies and requirements of the Porter-Cologne Water Quality Control Act (Division 7, commencing with Water Code section 13000) including (1) sections 13267 and 13304; (2) applicable State and federal regulations; (3) all applicable provisions of statewide Water Quality Control Plans adopted by the State Water Resources Control Board (State Water Board) and the *Water Quality Control Plan for the San Diego Basin (Basin Plan)* adopted by the San Diego Water Board including beneficial uses, water quality objectives, and implementation plans; (4) State Water Board policies and regulations, including State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*, Resolution No. 88-63, *Sources of Drinking Water*, and Resolution No. 92-49, *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under California Water Code Section 13304*; California Code of Regulations (CCR) Title 23, Chapter 16, Article 11; CCR Title 23, section 3890 et. seq., and (5) relevant standards, criteria, and advisories adopted by other State and federal agencies.
- 2. Unauthorized Discharge of Fuel Wastes:** The Marine Corps Air Station, Camp Pendelton (hereinafter MCAS), discharged jet fuel (JP-5 fuel), on March 15, 2010, into the storm drain conveyance system and to the surface and subsurface environment in the vicinity of the MCAS aboveground tank farm, Camp Pendelton, California.

The MCAS stores, conveys and contains JP-5 fuel at a bulk fuel storage facility via four 50,000-gallon aboveground storage tanks, fuel transfer piping, underground storage tanks, oil water separators, mobile fuel truck loading/unloading racks, air craft refueling areas supplied by pipelines (hot pits), and various airport apron areas of the MCAS where aircraft could be refueled using mobile fuel trucks. The types and levels of waste constituents discharged into surface soils and surface water are associated with the waste

discharges from the fuel storage and conveyance system at the MCAS Fuel Farm. The JP-5 fuel release occurred on March 15, 2010 after a pressure relief valve failed, which redirected the fuel to a 2,500 gallon recovery tank that subsequently overflowed onto the paved and unpaved areas at the tank farm, as well as into the storm water drainage system. Human error, specifically failure of the operator to respond to the high level alarm of the recovery tank, was the cause of the spill. Approximately 750 gallons of JP-5 Fuel spilled from the recovery tank and approximately 669 gallons were recovered. The JP-5 fuel is a waste, as defined in California Water Code section 13050, subdivision (d).<sup>1</sup>

The discharge of waste from the fuel storage and conveyance system at the MCAS Fuel Farm has caused the presence of waste constituents in the surface water in concentrations exceeding applicable water quality objectives and has therefore created a condition of pollution in waters of the State as defined in Water Code section 13050(l). The potential adverse change in surface water quality and threat to groundwater quality caused by the release of wastes may be a contributing cause of interference with the Municipal and Domestic Supply (MUN)<sup>2</sup> designated beneficial use and is potentially injurious to the public health. This water quality condition caused by the discharge of wastes may create a condition of pollution and/or nuisance because it potentially interferes with and complicates the designated beneficial uses of surface water and can be considered an obstruction to the free use of property as provided in Water Code section 13050(m).

- 3. Persons Responsible for the Discharge of Waste:** The U.S. Marine Corps (USMC) is the current property owner and operator of the MCAS at Marine Corps Base, Camp Pendleton, California. Therefore, the USMC is the party responsible for the discharge of wastes from the fuel storage and conveyance system at the MCAS. The address of the responsible party is as follows:

Commanding Officer  
Marine Corps Air Station (MCAS)  
U.S. Marine Corps Base  
P.O. Box 555151  
Camp Pendleton, California 92055-5151

- 4. Water Quality Standards:** The MCAS is located within the Santa Margarita Hydrologic Subarea (Basin Number 902.12), which has the following

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<sup>1</sup> "Waste" is very broadly defined in Water Code section 13050(d) and includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

<sup>2</sup> See Basin Plan, page 2-3. The Basin Plan defines MUN as "uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply."

beneficial uses (BUs) of water resources designated in the Basin Plan  
 (Tables 2-2 and 2-5):

Hydrologic Unit/Watershed	Hydrologic Unit / Area Basin No.	Designated Beneficial Uses <sup>3</sup>	
<b>Groundwater</b>			
Santa Margarita HU	Ysidora HA 902.10	MUN	Municipal and Domestic Supply
		AGR	Agricultural Supply
		IND	Industrial Service Supply
		PROC	Industrial Process Supply
<b>Surface Water</b>			
Santa Margarita River WS	HU 902.12	MUN	Municipal and Domestic Supply
		AGR	Agricultural Supply
		IND	Industrial Service Supply
		PROC	Industrial Process Supply
		REC1	Contact Recreation
		REC2	Non-contact Recreation
		WARM	Warm Freshwater Habitat
		COLD	Cold Freshwater Habitat
		WILD	Wildlife Habitat
		RARE	Rare, Threatened, or Endangered Species

The Basin Plan contains numeric water quality objectives<sup>4</sup> for chemical constituents to protect the beneficial uses of surface water and groundwater, including those designated for municipal and domestic (MUN) supply. The numeric objectives for protection of MUN uses are derived from primary maximum contaminant levels (MCLs)<sup>5</sup> established by the Department of Health Services (Department) in Title 22 of the California Code of

<sup>3</sup> According to the Basin Plan, beneficial uses are the uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals of mankind. See Basin Plan Chapter 2 for a discussion of designated beneficial uses.

<sup>4</sup> "Water quality objectives" are defined in Water Code section 13050(h) as "the limits or levels water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area."

<sup>5</sup> MCLs, maximum contaminant levels, are public health-protective drinking water standards to be met by public water systems. MCLs take into account not only chemicals' health risks but also factors such as their detectability and treatability, as well as the costs of treatment. Primary MCLs can be found in Title 22 California Code of Regulations (CCR) sections 64431 - 64444. Secondary MCLs address the taste, odor, or appearance of drinking water, and are found in 22 CCR section 64449.

Regulations.<sup>6</sup> The discharge of wastes has the potential to cause surface and groundwater quality to exceed the water quality objectives needed to support MUN use, and create a condition of pollution and nuisance in waters of the state.

5. **Basis for Requiring Technical Report:** California Water Code section 13267 authorizes the San Diego Water Board to require dischargers, past dischargers, or suspected dischargers to furnish technical or monitoring reports as the San Diego Water Board may specify, provided that the burden, including costs, of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring the reports, the San Diego Water Board must provide the person with a written explanation with regard to the need for the reports, and identify the evidence that supports requiring that person to provide the reports.
6. **Need for and Benefit of Technical and Monitoring Reports:** A technical report is needed to provide information to the San Diego Water Board regarding (a) the nature and extent of the discharge, (b) the nature and extent of pollution conditions in State waters created by the discharge, (c) the threat to public health posed by the discharge, and (d) appropriate cleanup and abatement measures. The reports will enable the San Diego Water Board to determine the vertical and lateral extent of the discharge, ascertain if the condition of pollution poses a threat to human health in the vicinity of the Site, and provide technical information to determine what cleanup and abatement measures are necessary to bring the Site into compliance with applicable water quality standards. Based on the nature and possible consequences of the discharges (as described in Findings No. 1 through 5, above) the burden of providing the required report bears a reasonable relationship to the need for the report, the costs, and the benefits to be obtained from the report.
7. **Cost Recovery:** Pursuant to California Water Code section 13304, and consistent with other statutory and regulatory requirements, including not but limited to Water Code section 13365, the San Diego Water Board is entitled to, and will seek reimbursement for, all reasonable costs actually incurred by the San Diego Water Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order.
8. **California Environmental Quality Act Compliance:** The issuance of this Order is an enforcement action taken by a regulatory agency and is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15321(a) (2), Chapter 3, Title 14 of the California Code of Regulations. This Order requires submittal of detailed work plans that address cleanup activities. The proposed activities under the

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<sup>6</sup> Basin Plan, footnote 2, supra. Page 3-24 and Table 3-5 at page 3-25. The Basin Plan provides that "Water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels specified in California Code of Regulations, Title 22, Table 64444-A of section 64444 (Organic Chemicals) which is incorporated by reference into this plan. This incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect. (See Table 3-5.)"

work plans are not yet known, but implementation of the work plans may result in significant physical impacts to the environment that must be evaluated under CEQA. The appropriate lead agency will address the CEQA requirements prior to implementing any work plan that may have a significant impact on the environment.

- 9. Qualified Professionals:** The USMC's reliance on qualified professionals promotes proper planning, implementation, and long-term cost-effectiveness of investigation, and cleanup and abatement activities. Professionals should be qualified, licensed where applicable, and competent and proficient in the fields pertinent to the required activities. California Business and Professions Code sections 6735, 7835, and 7835.1 require that engineering and geologic evaluations and judgments be performed by or under the direction of licensed professionals.

**IT IS HEREBY ORDERED**, pursuant to section 13267 and 13304 of the Water Code, the USMC (hereinafter the Discharger) is required to submit a scientifically-defensible site investigation report that presents the results of an investigation of the discharged JP-5 fuel and the effects of the discharges on the environment at MCAS (Investigation), and complies with the following directives:

**A. SITE INVESTIGATION REPORT COMPONENTS**

At a minimum, the Site Investigation Report shall contain the following:

- 1. Transmittal Letter:** The transmittal letter shall include the following:

- a. **Content:** The Transmittal Letter shall include a brief discussion of the findings, conclusion(s), and recommendation(s) presented in the Investigation Report.
- b. **Certification Statement:** The person signing the Transmittal Letter shall make the following certification:

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

- c. **Signatory Requirements:** The Commanding Officer of MCAS shall sign the transmittal letter. If not feasible, the transmittal letter may be

signed by a duly-authorized representative of the Commanding Officer only if:

- i.) the authorization is made in writing by the Commanding Officer,
- ii.) the authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity, and
- iii.) the written authorization is submitted to the San Diego Water Board Executive Officer together with the Investigation Report.

**2. Summary of Investigation:** The Site Investigation Report must:

- a. Provide a detailed, comprehensive, and thorough discussion of the methods, approach, findings, conclusion(s), and recommendation(s) of the Investigation so that the nature and the effects or possible effects of the discharges can be understood.
- b. Identify all wastes and waste constituents associated with the discharge and the horizontal and vertical extent of the wastes/waste constituents both on and off site to background levels in the surface water, ground water, and soil.
- c. Characterize the geology and hydrogeology of the site with respect to transport of the wastes and waste constituents.
- d. Determine the source(s), and nature of the discharge in the subsurface, and evaluate the impacts of the wastes and waste constituents on all existing and future sensitive receptors that could be affected by the wastes. The determination must:
  - i. Identify all areas affected by the discharge of JP-5 fuel at the MCAS.
  - ii. Identify the concentrations of petroleum hydrocarbons in surface water, groundwater, and soil at the MCAS as a result of the discharge.
  - iii. Identify all possible sources of the JP-5 fuel discharged to surface waters at the MCAS and what immediate steps were taken to stop the illegal discharge.
  - iv. Identify the total volume of the JP-5 fuel discharged at the MCAS.



- v. Identify the possible effects of the discharge on water quality and the environment.

**3. Site Conceptual Model:** The Site Investigation Report must include a site conceptual model (SCM). The SCM is a written or pictorial representation of the release scenario and the likely distribution of waste at the site, as well as potential pathways and receptors. The SCM must identify and describe the types of wastes present including their distribution in space and time, and how the wastes are changing in space and time.

The SCM also must identify the potential, current and future receptors in the area; link potential sources to potential receptors through transport of wastes in the air, soil and water; and identify the fate and transport characteristics of the site. It should describe or show the physical characteristics and properties of the subsurface and identify the environmental issues that need to be investigated (and those issues that do not need to be addressed). The SCM must include data interpretations, a discussion of the level of uncertainty of conclusions, outline data gaps remaining in the conceptual model, and describe the additional work needed to fill identified data gaps and make recommendations for the next phase of the cleanup if needed.

If further investigation is needed to fill data gaps, the SCM must be refined and updated as site characterization data becomes available. Updates to the SCM should be submitted to the San Diego Water Board upon completion.

- 4. Tables:** The Site Investigation Report must contain a table(s) comparing the following information:
  - a. the concentration of each constituent detected;
  - b. the lowest established WQO that is protective of all the designated beneficial uses of waters of the State (refer to Order Finding No. 4 above) for each constituent detected, and
  - c. the lowest established concentration that is protective of all applicable receptors.
- 5. Figures:** The Site Investigation Report must contain figure(s) that clearly communicate the investigation findings. The figures must include the following minimum information: a detailed and comprehensive site plot plan, cross-sections illustrating the lateral and vertical extent of any soil, surface water, and groundwater pollution, monitoring well construction details, groundwater elevations, lithologies, sample locations and results, and groundwater flow direction.

6. **Documentation:** The Site Investigation Report must contain or cite reference document(s) that support Investigation findings.
7. **Use of Registered/Appropriately Qualified Professionals:** The Discharger shall provide documentation that the report required under this Order is prepared under the direction of appropriately qualified professionals. California Business and Professions Code sections 6735, 7835, and 7835.1 require that engineering and geologic evaluations and judgments be performed by or under the direction of licensed professionals. A statement of qualifications and license numbers, if applicable, of the responsible lead professional and all professionals making significant and/or substantive contributions shall be included in the report submitted by the Discharger. The lead professional(s) shall sign and affix his/her license stamp to the report.
8. **Laboratory Report:** The Site Investigation Report must contain copies of all laboratory analytical data and complete Laboratory Analytical Report(s). The Laboratory Report(s) must be signed by the laboratory director and contain:
  - a. a complete sample analytical report,
  - b. a complete laboratory quality assurance/quality control (QA/QC) report,
  - c. a discussion of the sample and QA/QC data, and
  - d. a transmittal letter indicating whether or not all the analytical work was supervised by the director of the laboratory, and contain the following statement, "All analyses were conducted at a laboratory certified for such analyses by the California Department of Health Services and in accordance with current U.S. Environmental Protection Agency (USEPA) procedures."

## **B. REPORTS TO BE FILED WITH THE SAN DIEGO WATER BOARD**

1. **Paper Copy of Site Investigation Report:** *By 5:00 pm on October 15, 2010, the Discharger is required to submit a paper copy of the Investigation Report that complies with all the requirements of this Order.*
2. **Electronic Format Reporting Requirements:** Beginning **January 1, 2005**, all reports submitted to the San Diego Water Board by the Discharger, pursuant to section 13267 of the Water Code, must be submitted in an electronic format. The Discharger shall comply with electronic reporting requirements of Title 23 of the California Code of Regulations, Division 3, section 3893, including the provision that complete copies of all reports be submitted in PDF format, and include the signed transmittal letter and professional certification. **By 5:00 pm on**

**October 15, 2010, the Discharger shall comply with these e-reporting requirements.**

**C. REPORTING TO THE SAN DIEGO WATER BOARD**

The required Investigation Report shall be submitted in paper copy to:

Assistant Executive Officer  
California Regional Water Quality Control Board, San Diego Region  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123-4340  
Attn: Supervisor Northern Cleanup Unit

**D. COST RECOVERY**

Upon receipt of invoices, and in accordance with instructions therein, the Discharger must reimburse the San Diego Water Board for all reasonable costs actually incurred by the San Diego Water Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order.

**E. NOTIFICATIONS**

1. **Enforcement Discretion:** The San Diego Water Board reserves its right to take any enforcement action authorized by law for violations of the terms and conditions of this Order.

2. **Requesting Evidentiary Hearing by the San Diego Water Board:** Any person affected by this action of the San Diego Water Board may request an evidentiary hearing before the San Diego Water Board. The San Diego Water Board's Executive Officer may elect to hold an informal hearing or a "paper hearing" in lieu of scheduling a hearing before the San Diego Water Board itself. If you decide to request an evidentiary hearing, send your request to the San Diego Water Board Executive Officer, Attn: Supervisor Northern Cleanup Unit, at the address provided on the Order transmittal letter. Please consider the following carefully:

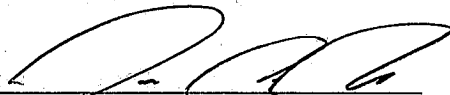
- a. The San Diego Water Board must receive your request within 30 days of the date of this Order.
- b. Your request must include all comments, technical analysis, documents, reports, and other evidence that you wish to submit for the evidentiary hearing. Please note, however, that the administrative record will include all materials the San Diego Water Board has previously received regarding this site. You are not required to submit documents that are already in the record.

- c. The Executive Officer or San Diego Water Board may deny your request for a hearing after reviewing the evidence.
- d. If you do not request an evidentiary hearing, the State Water Board may prevent you from submitting new evidence in support of a State Water Board petition.
- e. Your request for an evidentiary hearing, if you submit one, does not stay the effective date of the Order, whether or not a hearing is scheduled.
- f. A request for a hearing does not extend the 30-day period to file a petition with the State Water Board (see below). We suggest that you ask the State Water Board to hold the petition in abeyance while your request for a hearing is pending (Refer to CCR Title 23 section 2050.5(d)). Additional information regarding the State Water Board petition process is provided below.

**3. Requesting Administrative Review by the State Water Board:**

Any person affected by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with section 13320 of the Water Code and CCR Title 23 section 2050. The petition must be received by the State Water Board (Office of Chief Counsel, P.O. Box 100, Sacramento, California 95812) within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request.

Ordered By:



JAMES G. SMITH  
Assistant Executive Officer  
August 26, 2010