



Cal/EPA

Department of  
Toxic Substances  
Control

245 West Broadway,  
Suite 425  
Long Beach, CA  
90802-4444

July 1, 1996

Pete Wilson  
Governor

James M. Strock  
Secretary for  
Environmental  
Protection

Mr. Andy Piszkin  
Remedial Project Manager  
Naval Facilities Engineering Command  
Southwest Division, Code 1831.LN  
1220 Pacific Highway  
San Diego, California 92132-5187

**PRELIMINARY ANALYSIS OF APPLICABLE OR RELEVANT AND  
APPROPRIATE REQUIREMENTS FOR SITE 24**

Dear Mr. Piszkin:

U.S. Department of the Navy (Navy) letter dated May 1, 1996 requested the Department of Toxic Substances Control (DTSC), as the lead agency for the State of California, to identify potential State chemical-, location-, and action-specific Applicable or Relevant and Appropriate Requirements (ARARs) for Operable Unit 2A (OU-2A), Site 24. In a letter dated June 13, 1996, The DTSC enclosed ARARs from the following agencies: Regional Water Quality Control Board - Santa Ana Region, California Department of Fish and Game, South Coast Air Quality Management District, California Department of Transportation, California Air Resources Board, County of Orange Environmental Management Agency, California Department of Health Services, County Sanitation Districts of Orange County, and Orange County Water District. If the DTSC received ARARs from the remaining agencies, the Department would forward the information.

The DTSC has enclosed ARARs from the County of Orange Health Care Agency, Public Health Services. The ARAR analysis is an iterative process. As the alternatives are more fully described in the Feasibility Study, additional ARARs may be apparent.

M 600

M60050.001607  
MCAS EL TORO  
SSIC # 5090.3

RECEIVED  
CODE 10 DUPLICATION  
3 JUL 96 01 34



Mr. Andy Piszkin  
July 1, 1996  
Page 2

If you have any questions, please call me at (310) 590-5923.

Sincerely,



Roy Yeaman, Senior HSS  
Base Closure Unit  
Office of Military Facilities

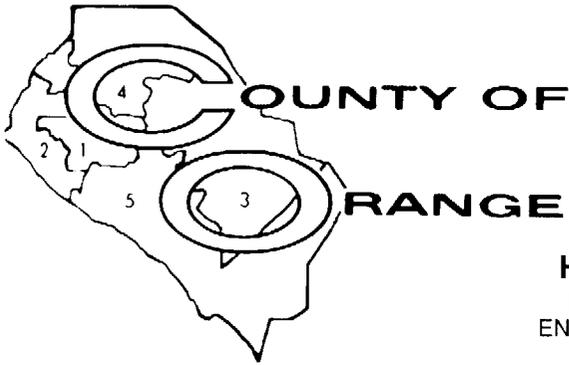
Enclosure

cc: Mr. Joseph Joyce  
BRAC Environmental Coordinator  
U.S. Marine Corps Air Station - El Toro  
P.O. Box 95001  
Santa Ana, California 92709-5001

Ms. Bonnie Arthur  
Project Manager  
U. S. Environmental Protection Agency  
75 Hawthorne Street  
San Francisco, California 94105-3901

Mr. Larry Vitale w/o enclosures  
Project Manager  
California Environmental Protection Agency  
Regional Water Quality Control Board  
Santa Ana Region  
3737 Main Street, Suite 500  
Riverside, California 92501-3339

Mr. Juan Gutierrez w/o enclosures  
Office of Legal Counsel  
Department of Toxic Substances Control  
Mail Code HQ-8  
P.O. Box 806  
Sacramento, California 95812-0806



**TOM URAM**  
DIRECTOR

**HUGH F. STALLWORTH, M.D.**  
HEALTH OFFICER

ENVIRONMENTAL HEALTH DIVISION  
**ROBERT E. MERRYMAN, REHS, MPH**  
DEPUTY DIRECTOR

**HEALTH CARE AGENCY**  
**PUBLIC HEALTH SERVICES**  
ENVIRONMENTAL HEALTH DIVISION  
2009 E. EDINGER AVENUE  
SANTA ANA, CALIFORNIA 92705-4720  
(714) 667-3700

June 11, 1996

Tayseer Mahmoud  
Office of Military Facilities  
Department of Toxic Substances Control, Region 4  
California Environmental Protection Agency  
245 West Broadway, Suite 425  
Long Beach, CA 90802-4444

Subject: Orange County Health Care Agency's *Applicable or Relevant and Appropriate Requirements*  
(ARARs) at Hazardous Waste Contaminated Sites

Dear Tayseer:

You recently requested a list of our ARARs as they relate to MCAS El Toro. At this time, we have identified two ARARs that apply to all such sites within Orange County.

**1. Groundwater Wells and Soil Borings.**

The Orange County Code, Article 2, describes standards for the Construction and Abandonment of Water Wells. The intent of the Article is to ensure that groundwater within the County is not impaired in quality, that water obtained from such wells is suitable for its intended purpose, and that the water will not jeopardize the health, safety, or welfare of the people of this County. Proper construction and closure of these wells helps us to meet those goals. Complying with Article 2 is, therefore, a *substantive* requirement as defined in CERCLA.

In accordance with Article 2, Section 4-5-17, prior to construction or abandonment of any well, a written permit must be issued by the Health Officer. The information requested on a permit application is necessary to assist in tracking all monitoring wells and applicable soil borings in the county and to ensure that soil borings, well installations, and well abandonments are done properly. When issued, these permits generally require payment of a fee. Fee payment and issuance of a written permit are *procedural* requirements, as defined in CERCLA, that assist us in meeting the provisions of Article 2.

In order to expedite the process at hazardous waste-contaminated sites being overseen by Federal and/or State agencies, we agree to waive our *procedural requirements* (we will waive payment of the permit fee and issuance of the written permit) in order to obtain compliance with our *substantive requirements* (proper construction and closure of wells and applicable soil borings). To accomplish this smoothly, the permit application form must be completed and submitted to this office for review *prior to field work*. The information may either be submitted on the four-part application or on photocopies of its first page. We request that the permit applicant is a representative of the Federal or the State agency that is overseeing the site investigation or remediation activities.

**2. Landfills.**

Our agency is certified by the California Integrated Waste Management Board as the Orange County Solid Waste Local Enforcement Agency (LEA) in order to oversee landfill construction, operation, and closure. If any investigation involves landfills (active or inactive), then our office must be consulted prior to the activity. Presently, written notification must be provided to our office, the appropriate Regional Water Quality Control Board, and the South Coast Air Quality Management District. The notification must include a description of the proposed activity, which must be reviewed and approved prior to field work. Closed or closing landfills must follow the State requirements for Clean Closure (see attached guidelines). Presently there is no fee for our solid waste consultative services.

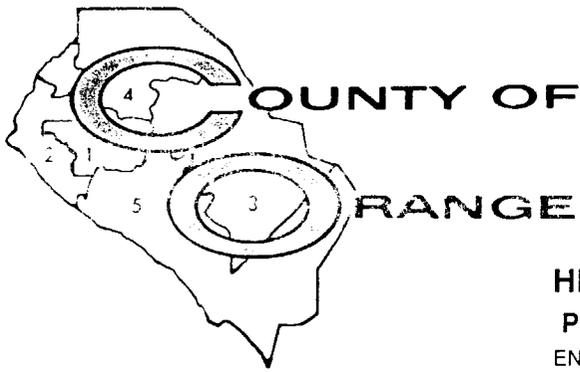
Thank you for your attention to this matter. If you need more information regarding wells, borings, or permits, please contact Larry Honeybourne, Supervisor of our Water Quality Section, at (714) 667-3750. If you need more information regarding landfills, please contact Patti Henshaw, Supervisor of our Solid Waste Section, at (714) 667-2014.

Sincerely,



Denise Fennessy, Supervising Hazardous Waste Specialist  
Environmental Health Division

- Attachments:
- County Requirements for Well Permits
  - Orange County Code, Article 2
  - Application for Well Construction Permit
  - Application for Well Destruction Permit
  - Well Destruction Specifications
  - Destruction of Monitoring Wells and Soil Borings
  - LEA Advisory #16: Clean Closure



TOM URAM  
DIRECTOR

HUGH F. STALLWORTH, M.D.  
HEALTH OFFICER

ENVIRONMENTAL HEALTH DIVISION  
ROBERT E. MCFRYMAN, REHS, MPH  
DEPUTY DIRECTOR

**HEALTH CARE AGENCY**  
**PUBLIC HEALTH SERVICES**  
ENVIRONMENTAL HEALTH DIVISION  
2009 E. EDINGER AVENUE  
SANTA ANA, CALIFORNIA 92705  
(714) 667-3600

**SUBJECT: County Requirements for Well Permits**

Dear Consultant/Contractor/Driller:

The Orange County Well Ordinance (County Ordinance No. 2607) requires that a permit be obtained prior to the construction or destruction of any well. In unincorporated County areas and in twenty-six of thirty-one Orange County cities, the Orange County Health Officer is responsible for enforcement of the well ordinance. In the remaining five cities (**Anaheim, Buena Park, Fountain Valley, Orange and San Clemente**), well ordinances are enforced by city personnel.

Permits are specifically required for all wells and soil borings except:

- 1) Vadose zone monitoring systems which are regulated by the administrative authority for enforcement of the Underground Storage Tank Laws and Regulations.
- 2) Wells used for the purpose of dewatering excavations during construction, or stabilizing hillsides or earth embankments.
- 3) Soil borings which meet **all** of the following conditions:
  - a) less than 50 feet in depth;
  - b) do not enter into groundwater;
  - c) do not penetrate significant confining material beds.

To expedite the permit approval process, all the necessary attachments and applicable fees should be submitted with the permit application. The required attachments include a site plan showing the locations of all wells (proposed and existing), potential sanitary hazards and a well construction diagram. The diagram should include, at a minimum, materials of construction, depth of seals, borehole diameter, size of casing, depth to first groundwater and total depth of wells.

A permit shall remain in effect for one year from date of issuance.

PERMIT APPLICATION FEES

CONSTRUCTION

Fee

Water Well (Domestic, Irrigation or Industrial)	\$405.00
Cathodic Protection Well	\$345.00
Monitoring Well, Observation Well, Hydropunch, or Soil Boring	
Initial	\$225.00
Each Additional (same permit number, same site)	\$115.00
Cone Penetration Test (CPT) Survey	\$225.00

DESTRUCTION

All Wells	\$ 72.00
-----------	----------

REFUND AND LATE FEES

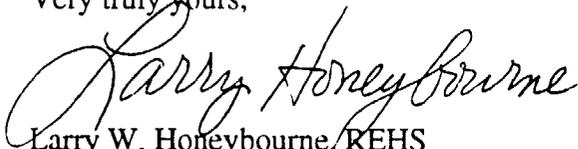
In the event the permit is denied or if the permit is canceled within sixty (60) days after issuance and no work has been performed, fifty percent (50%) of the fee shall be returned to the applicant. To avoid a twenty-five percent (25%) late charge, applicants are required to file for and receive approved permits prior to initiation of construction. Permit fees are not transferable between sites.

The County requires notification of at least **forty-eight hours** (48 hrs.) prior to beginning construction. Completion reports and well logs must be submitted to this Agency upon completion of work. The completion report should include the permit number, total number of wells installed, location of wells, and as built details of well construction (e.g., depth of seals, perforation intervals, and groundwater depth).

Failure to comply with any condition of an approved permit or any aforementioned requirement is a violation of the Orange County Well Ordinance and a misdemeanor.

If you have any questions or wish to obtain a well permit application or information, please feel free to contact the County of Orange Health Care Agency, Water Quality Section at (714) 667-3657 or 667-3758.

Very truly yours,



Larry W. Honeybourne, REHS  
Environmental Health Engineering Specialist  
Water Quality Section  
Environmental Health Division

LWH:aam

ARTICLE 2. CONSTRUCTION AND ABANDONMENT OF WATER WELLS

Sec. 4-5-14. Purpose.

It is the purpose of this article to control the construction and reconstruction of wells to the end that the groundwater of this County will not be impaired in quality and that water obtained from such wells will be suitable for the purpose for which used and will not jeopardize the health, safety or welfare of the people of this County, and to provide for the destruction of abandoned wells or wells found to be public nuisances to the end that such wells will not impair the quality of groundwater or otherwise jeopardize the health, safety or welfare of the people of this County. (Ord. No. 2607, § 1, 7-18-72)

Sec. 4-5-15. Definitions.

As used in this article, the following words shall have the meanings provided in this section:

*Abandoned and abandonment.* The terms "abandoned" or "abandonment" shall apply to a well which has not been used for a period of one year, unless the owner declares in writing, to the Well Standards Advisory Board, his intention to use the well again for supplying water or other associated purpose (such as an observation well or injection well) and receives approval of such declaration from the Board. All such declarations shall be renewed annually and at such time be resubmitted to the Board for approval. Test holes and exploratory holes shall be considered abandoned twenty-four (24) hours after construction work has been completed, unless otherwise approved by the Health Officer.

*Agricultural well.* A water well used to supply water for irrigation or other agricultural purposes, including so-called stock wells.

*Cathodic protection well.* Any artificial excavation in excess of fifty (50) feet constructed by any method for the purpose of installing equipment or facilities for the protection, electrically, of metallic equipment in contact with the ground, commonly referred to as a cathodic protection well or a deep anode.

*Community water supply well.* A water well used to supply water for domestic purposes in systems subject to chapter 7 of part I of division 5 of the California Health and Safety Code.

*Construct, reconstruct (construction, reconstruction).* To dig, drive, bore, drill or deepen a well, or to re-perforate, remove, replace or extend a well casing.

*Destruction.* The proper filling and sealing of a well that is no longer useful so as to assure that the groundwater is protected and to eliminate a potential physical hazard.

*Electrical grounding well.* Any artificial excavation in excess of fifty (50) feet constructed by any method for the purpose of establishing an electrical ground.

*Health Officer.* The Orange County Health Officer or his designee.

*Individual domestic well.* A water well used to supply water for domestic needs of an individual residence or commercial establishment.

*Industrial well.* A water well used to supply an industry on an individual basis.

*Observation well.* A well used for monitoring or sampling the conditions of a water-bearing aquifer, such as water pressure, depth, movement or quality.

*Permit.* A written permit issued by the Health Officer permitting the construction, reconstruction, destruction or abandonment of a well.

*Person.* Any person, firm, corporation or governmental agency.

*Public nuisance.* The term "public nuisance," when applied to a well, shall mean any well which threatens to impair the quality of groundwater or otherwise jeopardize the health or safety of the public.

*Saltwater (hydraulic) barrier well.* A well used for extracting water from or injecting water into the underground as a means of preventing the intrusion of saltwater into a fresh water-bearing aquifer.

WELL STANDARDS  
ADVISORY BOARD

*Test or exploratory hole.* An excavation used for determining the nature of underground geological or hydrological conditions, whether by seismic investigation, direct observation or any other means.

*Well.* Any artificial excavation constructed by any method for the purpose of extracting water from or injecting water into the underground, for providing cathodic protection or electrical grounding of equipment, for making tests or observations of underground conditions, or for any other similar purpose. Wells shall include, but shall not be limited to, community water supply wells, individual domestic wells, industrial wells, agricultural wells, cathodic protection wells, electrical grounding wells, test and exploratory holes, observation wells and saltwater (hydraulic) barrier wells, as defined herein, and other wells whose regulation is necessary to fulfill the purpose of this article as determined by the Well Standards Advisory Board. Wells shall not include:

- (a) Oil and gas wells, geothermal wells or other wells constructed under the jurisdiction of the State Department of Conservation, except those wells converted to use as water wells;
- (b) Wells used for the purpose of dewatering excavations during construction, or stabilizing hillsides or earth embankments; or
- (c) Other wells whose regulation is not necessary to fulfill the purpose of this article as determined by the Well Standards Advisory Board. (Ord. No. 2607, § 1, 7-18-72)

#### Sec. 4-5-16. Well Standards Advisory Board.

A board consisting of five (5) members shall be appointed by the Board of Supervisors. One of the members appointed shall be a person employed in a supervisory capacity by a water purveyor in the County of Orange whose system relies to a significant extent upon groundwater; one shall be a registered civil engineer under the laws of the State of California who is experienced in sanitary engineering and who is qualified in the field of water supply; one shall be a person licensed in accordance with the provisions of the Contractors License Law, chapter 9, division 3 of the Business and Professions Code of the State of California; one shall be a person who is qualified in the field of water quality; and one shall be a regis-

Supp. No. 15

tered geologist under the laws of the State of California who is qualified in the field of groundwater hydrology. One of the aforementioned persons shall be a representative of the Orange County Water District and one shall represent the Orange County Water Pollution Department.

Members shall serve for a three-year term and until the qualification of a successor, except that the first members shall serve staggered terms, as determined by the drawing of lots, in the following manner: One member shall serve for a one-year term of office; two (2) members shall serve for a three-year term of office. All terms shall end on the first Monday in January of the year in which such term is to expire. All members shall serve at the discretion of the Board of Supervisors; and any member or members of the Board, Committee or Commission may have his membership terminated by a majority vote of the Board of Supervisors. A vacancy thereby created shall be filled in the same manner as the original appointment.

Traveling and other expenses incurred by each Board member in the performance of his official duties shall be reimbursed at a rate of ten dollars (\$10.00) per meeting. (Ord. No. 2607, § 1, 7-18-72; Ord. No. 3038, § 3, 2-14-78)

#### Sec. 4-5-17. Acts prohibited; permit required.

No person shall, within the unincorporated area of the County of Orange, construct or reconstruct any well unless such construction or reconstruction is carried out pursuant to and in conformance with a written permit issued for that purpose by the Health Officer as provided in this article.

Nor shall any such person abandon a well unless it has been destroyed pursuant to and in conformance with a written permit issued by the Health Officer.

Nor shall any such person violate the terms of any order issued by the Well Standards Advisory Board or the Health Officer, issued pursuant to this article. (Ord. No. 2607, § 1, 7-18-72)

#### Sec. 4-5-18. Permits.

Applications for permits shall be made to the Health Officer containing such information as he shall require.

Each application shall be accompanied by a fee which shall be established by the Board of Supervisors on the basis of the cost incurred in enforcing the provisions of this article. Fifty (50) per cent of the fee shall be returned to the applicant should the permit be denied or if the permit is canceled within sixty (60) days after issuance and no work has been done. A permit shall remain in effect for one year from date of issuance.

Permits may be issued subject to any condition or requirement found by the Health Officer to be necessary to accomplish the purposes of this article.

A permit may be canceled or the conditions amended by the Health Officer if he determines that to proceed with the work would result in a public nuisance or the permit holder has violated the terms of the permit or this article. (Ord. No. 2607, § 1, 7-18-72)

#### Sec. 4-5-19. Completion of work.

The permittee shall notify the Health Officer in writing upon completion of the work and no work shall be deemed to have been completed until such written notification has been received. A final inspection of the work shall be made by the Health Officer and no permittee shall be deemed to have complied with this article or his permit until such inspection has been performed. (Ord. No. 2607, § 1, 7-18-72)

#### Secs. 4-5-20—4-5-24. Reserved.

#### Sec. 4-5-25. Notice; cancellation or denial of permit.

In the event a permit is denied or canceled, the applicant or permit holder shall be given written notice by the Health Officer, which notice shall specify the reasons for his action and shall notify the applicant or permit holder of his right to request a hearing before the Well Standards Advisory Board within ten (10) days. (Ord. No. 2607, § 1, 7-18-72)

#### Sec. 4-5-26. Notice; public nuisance.

In the event the Health Officer determines that a well constitutes a public nuisance, he shall mail a written notice to the landowner and the permit holder, if other than the landowner. A copy of the notice shall be posted

on the affected property. The notice shall state the specific facts giving rise to such nuisance; the corrective measures deemed necessary; and time, date and place at which a hearing shall be held by the Well Standards Advisory Board relating thereto, which date shall be not less than ten (10) nor more than thirty (30) days after the date such notice is mailed. The notice shall state that in the event the Board determines that a public nuisance exists a special assessment shall be imposed upon the land for any costs of abatement. (Ord. No. 2607, § 1, 7-18-72)

#### Sec. 4-5-27. Immediate abatement.

If the Health Officer finds that immediate action is necessary to prevent impairment of the groundwater or a threat to the health or safety of the public, he may abate the nuisance without giving notice. Within twenty-four (24) hours after initiating such abatement, the Health Officer shall give notice of a hearing before the Well Standards Advisory Board in the manner prescribed in section 4-5-26. (Ord. No. 2607, § 1, 7-18-72)

#### Sec. 4-5-28. Board hearing.

At the time fixed for the hearing, the Well Standards Advisory Board shall hear and consider all relevant testimony and evidence offered by the landowner, and by any other interested person. In the event the Board finds that a public nuisance exists, it shall direct the Health Officer to take any necessary action to protect the groundwater or the health and safety of the public, unless the situation is corrected by the landowner on or before a date to be specified by the Board. The costs of such corrective work by the Health Officer shall become a special assessment upon the land pursuant to section 4-5-29.

If the Board finds that a permit was improperly denied or canceled, it shall order the Health Officer to issue or reinstate such permit. (Ord. No. 2607, § 1, 7-18-72)

#### Sec. 4-5-29. Abatement costs a special assessment.

Upon a finding by the Well Standards Advisory Board that a well constitutes a public nuisance, all cost of abatement carried out under the terms of this article shall constitute a charge and special assessment upon the parcel of land involved. If such costs are not paid

within sixty (60) days, they shall then be declared a special assessment against that parcel as provided in Government Code, section 25845. Such special assessment shall be collected at the same time and in the same manner as ordinary County taxes are collected and shall be subject to the same penalties and the same procedures and sale in case of delinquency as provided for ordinary County taxes. The County shall retain the additional and independent right to recover its costs by way of civil action against the owner and person in possession or control, jointly or severally. (Ord. No. 2607, § 1, 7-18-72)

#### Sec. 4-5-30. Standards.

Standards for the construction, reconstruction, destruction, or abandonment of wells shall be the standards recommended in the State Department of Water Resources Bulletin No. 74, Chapter II and future amendments thereto. Standards for the construction, reconstruction, destruction or abandonment of cathodic protection wells and electrical grounding wells shall be the standards recommended in the State De-

partment of Water Resources Bulletin No. 74-1, and future amendments thereto. Well standards may be modified by the Health Officer, with the advice and concurrence of the Well Standards Advisory Board, where required to cope with the local geological and groundwater conditions. (Ord. No. 2607, § 1, 7-18-72; Ord. No. 2691, § 1, 7-17-73)

#### Sec. 4-5-31. Penalty.

Any person who violates the terms of this article or any permit issued hereunder shall be guilty of a misdemeanor, punishable by a fine not exceeding five hundred dollars (\$500.00) or by imprisonment not exceeding six (6) months, or by both such fine and imprisonment. Such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such violation is committed, continued or permitted and shall be subject to the same punishment as for the original offense. (Ord. No. 2607, § 1, 7-18-72)

# APPLICATION FOR WELL CONSTRUCTION PERMIT

ORANGE COUNTY HEALTH CARE AGENCY  
ENVIRONMENTAL HEALTH DIVISION

2009 E. EDINGER  
SANTA ANA, CA 92705  
(714) 667-3700

1. CITY _____		2. DATE _____	
WELL LOCATION _____ (NEAREST INTERSECTION)			
4. NAME OF WELL OWNER _____		7. TYPE OF WELL (CHECK) <input type="checkbox"/> SOIL BORING NUMBER _____	
ADDRESS _____		<input type="checkbox"/> PRIVATE DOMESTIC NUMBER _____	
CITY _____ TELEPHONE _____		<input type="checkbox"/> PUBLIC DOMESTIC NUMBER _____	
5. NAME OF CONSULTING FIRM _____		<input type="checkbox"/> IRRIGATION NUMBER _____	
BUSINESS ADDRESS _____		<input type="checkbox"/> CATHODIC NUMBER _____	
CITY _____ ZIP _____ TELEPHONE _____		<input type="checkbox"/> MONITORING NUMBER _____	
6. NAME OF DRILLING CO. _____ C-57 LICENSE NO. _____		8. TYPE OF CASING _____	
CITY _____ TELEPHONE _____		9. METHOD OF SEALING CASING AND/OR EXCAVATION (Use additional sheets)	
10. DIAGRAM OF WELL SITE (Use additional sheets and/or attachments)		DEPTH OF SEAL _____	
		<p><i>I hereby agree to comply in every respect with all requirements of the Health Care Agency and with all ordinances and laws of the County of Orange and of the State of California pertaining to well construction, reconstruction and destruction, including the requirements to maintain the integrity of all significant confining zones.</i></p> <p>_____ APPLICANT'S SIGNATURE</p> <p>_____ DATE</p> <p>_____ PRINT NAME</p> <p>_____ PHONE NUMBER</p>	
PLEASE ATTACH WELL CONSTRUCTION SPECIFICATION AND SITE PLAN TO THIS PERMIT			
<input type="checkbox"/> ATTACHED			
FOR ACCOUNTING USE ONLY:		DISPOSITION OF PERMIT (DO NOT FILL IN):	
HSO NO. _____ CHECK NO. _____		<input type="checkbox"/> APPROVED SUBJECT TO THE FOLLOWING CONDITIONS:	
DATE _____ AMOUNT _____		A. NOTIFY THIS AGENCY AT LEAST 48 HOURS	
INTL. _____ LOG _____		<input type="checkbox"/> PRIOR TO START.	
APPROVAL BY OTHER AGENCIES:		<input type="checkbox"/> PRIOR TO SEALING THE ANNULAR SPACE OR FILLING OF THE CONDUCTOR CASING.	
JURISDICTION _____		B. <input type="checkbox"/> SUBMIT TO THE AGENCY WITHIN 30 DAYS AFTER COMPLETION OF WORK, A WELL COMPLETION REPORT AND/OR DRILLING LOGS.	
REMARKS _____		C. <input type="checkbox"/> SECURE ALL MONITORING WELLS TO PREVENT TAMPERING.	
_____		D. <input type="checkbox"/> OTHER _____	
_____		<input type="checkbox"/> DENIED _____	
_____		PERMIT ISSUED BY _____	
AUTHORIZED SIGNATURE _____ DATE _____		DATE _____	

WELL PERMIT NUMBER \_\_\_\_\_

**WHEN SIGNED BY ORANGE COUNTY HEALTH CARE AGENCY REPRESENTATIVE, THIS APPLICATION IS A PERMIT.**

## APPLICATION FOR WELL DESTRUCTION PERMIT

ORANGE COUNTY HEALTH CARE AGENCY  
 ENVIRONMENTAL HEALTH DIVISION

2009 E. EDINGER AVE.  
 SANTA ANA, CA 92705  
 TELEPHONE: (714) 667-3601

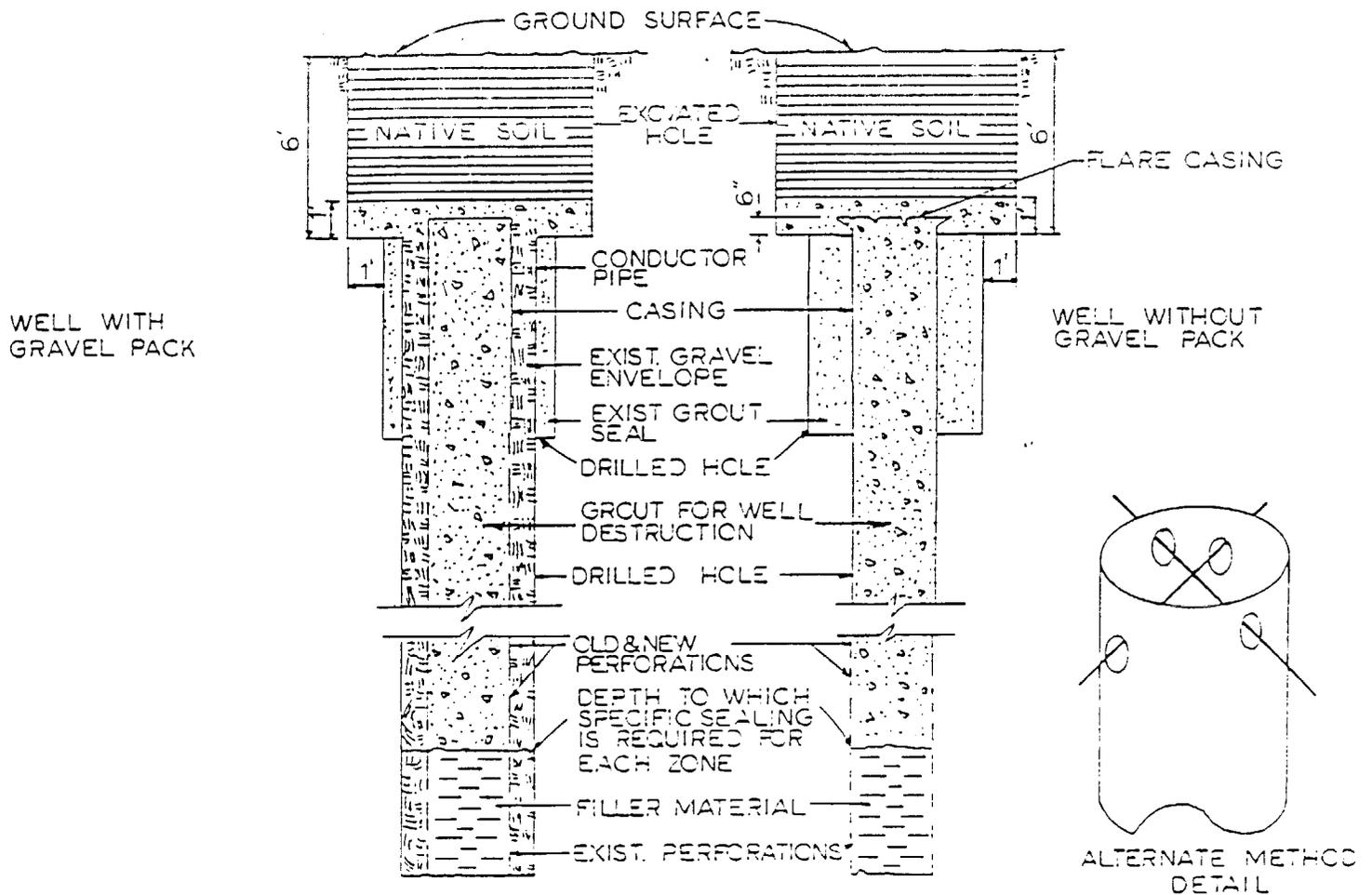
MAILING ADDRESS:  
 P.O. BOX 355  
 SANTA ANA, CA 92702

TY _____		DATE _____	
WELL LOCATION		NEAREST INTERSECTION	
NAME OF WELL OWNER		NAME OF CONSULTING FIRM	
ADDRESS		BUSINESS ADDRESS	
CITY _____	TELEPHONE _____	CITY _____	TELEPHONE _____
NAME OF CONTRACTOR	CONTRACTOR'S LICENSE NUMBER	WELL DEPTH _____ Feet	CASING _____
CITY _____	TELEPHONE _____	DIAMETER _____ Inches	PVC _____
Other _____		Other _____	
SEALING MATERIAL / ESTIMATE AMOUNT OF SEALING MATERIAL NEEDED			
METHOD OF DESTRUCTION			
DIAGRAM OF WELL LOCATION		I HEREBY AGREE TO COMPLY IN EVERY RESPECT WITH ALL REQUIREMENTS OF THE HEALTH CARE AGENCY AND WITH ALL ORDINANCES AND LAWS OF THE COUNTY OF ORANGE AND OF THE STATE OF CALIFORNIA PERTAINING TO WELL CONSTRUCTION, RECONSTRUCTION AND DESTRUCTION  _____ APPLICANT'S SIGNATURE  _____ PRINT NAME <span style="float: right;">PHONE NUMBER _____</span>	
DISPOSITION OF APPLICATION: (FOR OFFICE USE ONLY) <input type="checkbox"/> DENIED <input type="checkbox"/> APPROVED WITH CONDITIONS  <input type="checkbox"/> NOTIFY THIS AGENCY _____ HOURS PRIOR TO START  <input type="checkbox"/> OTHER _____  _____ _____  _____ DATE                                      PERMIT ISSUED BY:		FIELD OBSERVATIONS:  _____  _____  _____	
R ACCOUNTING USE ONLY HSO NO. _____ CHECK NO. _____ DATE _____ AMOUNT _____ INTL. _____ LOG _____			

WELL PERMIT NUMBER \_\_\_\_\_

**WHEN SIGNED BY ORANGE COUNTY HEALTH CARE AGENCY REPRESENTATIVE, THIS APPLICATION IS A PERMIT.**

# WELL DESTRUCTION SPECIFICATIONS



1. Inspect casing to ensure no obstructions are present.
2. Excavate around casing, a minimum of 6 feet.
3. Cut casing at 1' above bottom of excavation.
4. Flare casing (vertical cut casing 6 inches in several places and bend ears outward), heavy gauge casing: Bore 4 holes in casing, insert 2 pieces of Rebar - see alternate method detail.
5. Fill casing with Class B concrete and allow concrete to spill over into excavation to form a cap at least one foot thick.
6. Fill in open hole to original grade.

Formula used in determining the amount of sealing material needed:

$$\frac{3.14 \times r^2 \times h}{27} = \text{cubic yards}$$

r = Radius =  $\frac{1}{2}$  Diameter in feet  
 h = Depth of well in feet

# **DESTRUCTION OF MONITORING WELLS AND SOIL BORINGS**

All abandoned monitoring wells, and soil borings shall be properly destroyed. A monitoring well is considered abandoned if it has not been used for one year.

1. Monitoring wells may be destroyed by the following methods:

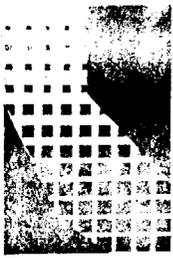
- Pressure grouting with approved sealing material. Casing may need to be ripped or punctured to assure sealing material penetrates filter pack and all other voids.
- Remove casing and fill with approved sealing material.

NOTE: If area is to be graded, well casing shall be excavated and removed to a depth of five feet below grade.

2. Soil borings are to be destroyed by filling borehole with an approved sealing material. Soil borings in areas to be graded shall be backfilled to within five feet of the ground surface.

3. Approved sealing materials are:

- Neat cement
- Sand cement grout
- Bentonite grout
- Bentonite - cement
- Concrete
- Bentonite
- High-solids Bentonite



INTEGRATED  
WASTE  
MANAGEMENT  
BOARD

## CLEAN CLOSURE

### To All Local Enforcement Agencies

#### What is "Clean Closure"?

Clean closure of a solid waste disposal site refers to the complete removal of all waste and waste residuals, including contaminated soils. A clean closure is generally defined as being successful when waste materials and residuals are removed to a point where remaining contaminant concentrations are at or below background levels or clean up levels established by the relevant regulatory agencies. Clean closure is an alternative to more conventional closure methods (closure with waste in place) described in Title 14, California Code of Regulations (14 CCR), Division 7, Chapter 3, Article 7.8, and 23 CCR, Division 3, Chapter 15, Article 8. Clean closure may also be considered a remedial action or a step in a remedial action in some cases.

The California Integrated Waste Management Board (Board) has not adopted regulations specifically concerning clean closure. However, the Board's Closure and Remediation Branch has developed a set of guidelines for Board and Local Enforcement Agency (LEA) staff to follow when overseeing a clean closure. The following guidelines should not be construed as regulations. These guidelines, however, are consistent with existing law and regulations and are intended to ensure that public health and safety and the environment are protected from pollution due to the disposal of solid waste. These guidelines are also intended to provide a basis to allow Board and LEA staff of varying background and expertise to deal with clean closure issues in a consistent manner.

#### What Sites are Candidates for Clean Closure?

Clean closure may be an appropriate alternative for permitted, illegal, or abandoned solid waste disposal sites. Clean closure may also be an appropriate action for sites which closed prior to the current closure regulations, but which are facing a change in land use which may threaten the integrity of the closed site or pose a threat to public health and safety and the environment. Also, clean closure may be an appropriate part of a remedial action for previously closed sites which have developed environmental problems. Sites that generally lend themselves to clean closure include, but are not limited to:

- Small landfills and burn dumps;
- Non-hazardous woodwaste disposal sites;
- Solid and liquid waste treatment and/or processing units; and
- Sites where the cost of clean closure would be less than or equal to the costs of long term monitoring and postclosure maintenance of the site.

#### What are the Benefits of Clean Closure?

A properly performed clean closure ensures that waste materials and residuals are removed and disposed of in a safe and environmentally sound manner. In addition, clean closing a disposal site can create several advantages for an owner/operator. If done properly, the clean closure of an entire

waste management unit (e.g., a landfill cell or contiguous group of cells) would eliminate the need for the following for that unit: (1) 30 years or more of postclosure maintenance; (2) potential future corrective actions; and (3) Board and LEA inspections of the site. While the clean closure of an illegal disposal site eliminates the necessity for LEA and Board staff inspections, in some areas, particularly rural areas where the use of such sites by local residents has become habitual, continued or even increased inspections may be needed temporarily to prevent reactivation of the illegal disposal site. By clean closing, an owner/operator may also increase the possible postclosure land uses for the site. Furthermore, clean closure plans are typically less involved than conventional closure plans. However, the owner/operator will have to evaluate the potential costs and benefits of clean closure versus those of a conventional closure on a site-by-site basis to determine the viability of this option.

### What Does the Clean Closure Process Involve?

The clean closure of a solid waste disposal site is a multiple step process. The steps may include, but are not limited to:

1. Site characterization;
2. Clean closure plan preparation;
3. Review and approval;
4. The actual clean closure; and
5. Verification and approval of the clean closure.

### Who Evaluates Clean Closure Proposals?

Adequate advance notification of the appropriate regulatory agencies (Board, Regional Water Quality Control Board [RWQCB], LEA, and in some cases the Air Pollution Control District [APCD] and/or Department of Toxic Substances Control [DTSC] or other agencies as necessary) is necessary to allow review and approval of any proposals as well as observation of the site prior to, during, and after clean closure to verify that the site has been properly clean closed. For clean closures of permitted solid waste disposal sites and those which are subject to 14 CCR, Division 7, Chapter 5, Article 3.4, the review and approval process for clean closure plans is the same as that for conventional closure plans and is described in 14 CCR, Division 7, Chapter 5, Article 3.4. For other sites, the position of coordinating agency for the review and the timeline for the submittal and review of documents by the various agencies should be agreed upon by the agencies at the beginning of each project. The timely submittal of appropriate documentation (e.g., site characterization studies or clean closure plans) allows the approving agencies an opportunity to review and comment on the proposed clean closure prior to the actual clean closure of the site. Failure to involve all of the regulatory agencies early in the clean closure process may lead to lack of final approval of the clean closure of the site and the application of the regulatory requirements described below.

The Board (Closure and Remediation Branch), RWQCB, and LEA must each make a final determination that a solid waste disposal site has been properly clean closed. The determination that a site has been successfully clean closed implies that the potential threats to public health and safety and the environment due to the disposal of solid waste at the site have been mitigated by the clean closure. An owner/operator must provide to these agencies an adequate characterization of the site

and satisfactory evidence that all waste and waste residuals were removed and properly disposed of. If these agencies determine a clean closure was not properly completed, 14 CCR, Division 7, Chapter 3, Article 7.8, and 23 CCR, Division 3, Chapter 15, may apply to the site. If the site was operating on or after January 1, 1988, 14 CCR Division 7, Chapter 5, Articles 3.4 and 3.5 will most likely also apply.

### What Information Should be Provided in Clean Closure Proposals?

The minimum components of a clean closure plan should include, but not be limited to:

- Site characterization;
- Excavation and material management;
- Confirmation of waste and degraded material removal; and
- Postclosure maintenance and land use.

The plan should be prepared by a registered civil engineer, a certified engineering geologist, or other qualified person depending on the complexity of the site. The owner /operator should submit all information regarding clean closure proposals, including clean closure plans, to all of the appropriate regulatory agencies.

### SITE CHARACTERIZATION

The site characterization phase of the clean closure process is probably the most critical phase as it will determine the suitability of the site for clean closure. A complete site characterization will define the extent and character of the wastes present and the levels and extent of any contamination due to the disposal of waste at the site. A complete site characterization may prevent unplanned for and expensive surprises after the actual clean closure process has been initiated. Depending upon the complexity of the site, it may be necessary or advisable to involve the regulatory agencies prior to or during the site characterization process to ensure that an adequate characterization is performed.

- For sites with known or suspected environmental problems, site characterization may occur under an enforcement order by one or more regulatory agencies who may require submittal of a workplan prior to the site characterization.
- For complicated sites, it may be beneficial to submit the results of the site characterization study to the regulatory agencies for review prior to development of the clean closure plan rather than as part of the clean closure plan.
- For relatively uncomplicated sites, it may be adequate to submit the results of the site characterization with the clean closure plan for review.

The owner/operator should supply the following information regarding the site:

- Name and legal description of the site.
- Description of the historical development of the site.
- Name of legal owner/operator, including title, address, and telephone number.
- Map showing the assessor's parcel number, site plot plan, and parcel map including: legal boundaries of the site and adjacent land use, location of existing and proposed footprint of refuse/waste, location of all structures within a 1000-foot radius of the site, including all existing and proposed (if any) environmental monitoring, collection, and control systems.
- A description of all refuse/waste materials encountered at the site including how the waste was generated and the method of disposal used. Provide type of waste, volume, and dimensions of each disposal area at the site. Include any chemical characterization of the waste if available or if requested by the regulatory agencies.
- If burning of waste occurred at the site, a chemical characterization of the ash.
- Sampling results identifying background levels of the constituents of concern.
- A description of the character and extent of any soil or ground water contamination discovered during the site characterization study.
- A description of the geology and soils at the site.
- A description of the occurrence of surface water on and adjacent to the site and an estimate of the depth to ground water at the site.
- A description of all existing and proposed environmental monitoring, collection, and control systems for the site as required by the regulatory agencies.
- Information on the occurrence and character of ground water as required by the RWQCB. This information may include but not be limited to:

A description of the occurrence and character of ground water on and adjacent to the site.

A detailed geologic map of the site with cross sections showing the relationships between the refuse/waste and geologic units and ground water levels.

A conceptual hydrogeologic model for the site.

## EXCAVATION AND MATERIAL MANAGEMENT

Excavation and removal of solid waste may be considered a project under the California Environmental Quality Act (CEQA) or the National Environmental Policy Act (NEPA). An environmental document or appropriate exemption under CEQA or NEPA may have to be secured and submitted as part of the clean closure plan prior to approval. All applicable federal, state, and local permits (e.g., grading permits, Fish & Game approvals, OSHA reviews, etc.) should be obtained prior to any excavation.

The owner/operator should supply the following information regarding the site and the proposed clean closure:

- Identification of health and safety issues regarding the proposed site activities and a detailed protocol indicating what measures will be taken to ensure protection of the public health and safety and the environment.
- A plan to evaluate and dispose of any hazardous waste encountered during the clean closure operations.
- An excavation plan.
- A description of the sequence of excavation operations including the proposed removal rate and timeframe for the excavation operation.
- A description of the protocol to be followed in monitoring, collecting and controlling leachate, ground and surface water and landfill gas.
- A description of the proposed sampling and testing protocols for verification of clean closure.
- A description of the transport and fate and/or final disposition of the waste materials and residuals that will be excavated from the site.
- A drainage and winterization plan (when applicable).
- Any mitigation measures as called for in any necessary CEQA or NEPA document.
- Financial assurance for the project as necessary.

#### CONFIRMATION OF REFUSE/WASTE AND DEGRADED MATERIAL REMOVAL

The following activities should be planned for and implemented:

- Observation and documentation of removal of refuse/waste.
- Documentation verifying the final disposition of all refuse/waste materials.
- Adequate sampling must be performed after excavation to verify the removal of all waste materials and residuals, including interpretation of the test results by a qualified professional.
- Prepare and submit a map with a letter certifying that the constituents of concern concentration levels in the target media are either at or below the clean up limits established for the project.
- Submit a report documenting the activities which have occurred and verifying completion of clean closure to the appropriate regulatory agencies.
- Indicate on the site deed and/or title that the project was completed and where it was located.
- If the constituents of concern clean up level has not been met and further excavation is deemed not practical, develop and implement a remedial action plan for the site.
- If the site cannot be clean closed then closure and postclosure maintenance plans should be developed and submitted for review and approval, prior to implementation.

#### POSTCLOSURE MAINTENANCE AND LAND USE

One of the advantages of clean closing a solid waste disposal site is that a postclosure maintenance plan should not be needed if the entire site has been successfully clean closed. A

description of the proposed postclosure land use should include:

- The proposed postclosure land use for the site.
- If the clean closure was part of a remedial action, describe any postclosure maintenance activities needed to comply with the implementation of the remedial action plan.
- If the clean closure was not successful, a postclosure maintenance plan and a financial assurance mechanism for postclosure maintenance are needed and should be included with the verification report.

These guidelines are intended to provide useful direction for the clean closure of a variety of site types and site conditions. In some instances, certain portions of the information outlined above may not be applicable to a given site or the level of detail necessary may vary due to site conditions. However, it is necessary for all of the regulatory agencies involved to agree on what information is and is not necessary, and the level of detail required, to allow the owner/operator to prepare the necessary documents and to carry out a clean closure that can be approved by all of the agencies.

#### Additional Information

If you have any questions regarding clean closure, please contact the Closure and Remediation Branch staff person assigned to your jurisdiction for assistance.

Sincerely,



Douglas Okumura, Deputy Director  
Permitting and Enforcement Division

For Back copies of the LEA Advisory call (916) 255-2287

- (LEA Advisory # 1, Oct. 6, 1992, Asbestos Containing Waste Disposal)  
(LEA Advisory # 2, Feb. 17, 1993, 1992 Legislation Impacts Existing Waste Programs)  
(LEA Advisory # 3, June 10, 1993, Site investigation Process for Investigating Closed, Illegal, and Abandoned Disposal Site's)  
(LEA Advisory # 4, Sept. 23, 1993, Permitting of Fuel Contaminated Soils Treatment/Processing Facilities)  
(LEA Advisory # 5, Dec. 15, 1993, Use of Non Hazardous Contaminated Soil as Daily Cover)  
(LEA Advisory # 6, Dec. 16, 1993, Aspergillus, Aspergillosis, and Composting Operations in California)  
(LEA Advisory # 7, Dec. 30, 1993, Subtitle D Questions and Answers)  
(LEA Advisory # 8, June 24, 1994, General Guidance for Implementing AB 1220 in the Regulation of Solid Waste Disposal Sites, REVISED)  
(LEA Advisory # 9, Feb. 10, 1994, Solid Waste Ranking System User Guide: Site Investigation Process (SIP) Part II)  
(LEA Advisory #10, Mar. 17, 1994, Procedural Change in Approving Alternative Cover Demonstration Projects Using Geosynthetic Blankets)  
(LEA Advisory #11, Mar. 24, 1994, Metallic Discards Management)  
(LEA Advisory #12, Mar. 29, 1994, Permitting of Non-Traditional Facilities)  
(LEA Advisory #13, May 17, 1994, Wood Waste Landfills)  
(LEA Advisory #14, May 25, 1994, Revised Policy and Procedures for Maintaining the Inventory of Solid Waste Facilities Which Violate State Minimum Standards)  
(LEA Advisory # 15, June 8, 1994, Completion of Solid Waste Information System Inspection Reports for Disposal Sites and Transfer Stations)