

**State of North Carolina
Department of Environment
and Natural Resources
Wilmington Regional Office
Division of Waste Management
UST Section**

**Michael F. Easley, Governor
William G. Ross Jr., Secretary
Dexter R. Matthews, Director**



March 26, 2003

Ms. Nikki Hall
Attention: Director, I & E/EMD/EQB
Marine Corps Base
PSC Box 20004
Camp Lejeune, NC 28542-0004

Subject: Notice of No Further Action
15A NCAC 2L .0115(h)
USMC ~~Camp Lejeune~~
AS-2904 Patrick St.
~~Camp Lejeune~~, Onslow County
Incident No. 23296
Classification: Low Risk

*Should be
AS-2094*

Dear Ms. Hall:

On April 2, 2002, the Underground Storage Tank (UST) Section, Division of Waste Management (DWM) Wilmington Regional Office received a Limited Site Assessment Report for the above-referenced site. A review of the report shows that soil contamination does not exceed the residential maximum soil concentrations established in 15A NCAC 2L .0115(m). A review of the report also shows that groundwater standards have not been exceeded.

Based on information provided to date, the UST Section determines that no further action is warranted for this incident. This determination is conditional pending completion of the public notice specified below. Once proper public notice has been given, this determination will apply unless the UST Section later determines that the discharge or release poses an unacceptable risk or a potentially unacceptable risk to human health or the environment.

Pursuant to 15A NCAC 2L .0115(e), the USMC has a continuing obligation to notify the UST Section of any changes that it knows of or should know of, that might affect the level of risk assigned to the discharge or release. Such changes include, but are not limited to, changes in zoning of real property, use of real property or the use of groundwater that has been contaminated or is expected to be contaminated by the discharge or release, if such change could cause the UST Section to reclassify the risk. Please note that this responsibility not only pertains to changes involving the property on which the release occurred, but to changes involving the surrounding properties as well.

Please be advised that the USMC must comply with the public notice requirements of 15A NCAC 2L .0115(k) as specified below. **If public notice is not provided as required, this no further action determination will be deemed invalid.** Within **30 days** of receipt of this no further action notice, the USMC must provide a copy of this notice to the following persons:

- local health director;
- chief administrative officer (i.e., Mayor, Chairman of the County Commissioners, County Manager, City Manager or other official of equal or similar position) of each political jurisdiction in which the contamination occurs;
- all property owners and occupants within or contiguous to the area containing contamination; and
- all property owners and occupants within or contiguous to the area where the contamination is expected to migrate.

Copies of this no further action notice must be sent to the persons listed above by certified mail. If it is impractical to provide notice by certified mail to the occupants of apartment buildings, condominiums, office buildings, etc., the USMC may post a copy of this notice in a prominent place where the occupants are most likely to see it.

Within **60 days** of receiving this no further action notice, the USMC must provide the UST Section at the Wilmington Regional Office with proof of receipt of the copy of the notice or of refusal by the addressee to accept delivery of the copy of the notice. If a copy of the notice is posted, the USMC must provide the UST Section with a description of the manner in which the notice was posted.

Interested parties may examine the Limited Site Assessment Report by contacting Ms. Nikki Hall at (910) 451-9610. In addition, the UST Section Wilmington Regional Office has the report along with other site information on file and available for public review.

Ms. Nikki Hall
March 26, 2003
Page 3

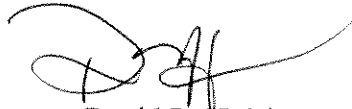
Interested parties may arrange to review this information by contacting the regional office as listed below. In addition, comments on the Limited Site Assessment Report may be submitted to the regional office.

Bruce Reed
NCDENR Wilmington Regional Office
127 Cardinal Drive Extension
Wilmington, N C 28405
(910) 395-3900

Please be advised that the USMC should close any monitoring wells or injection wells used to investigate or remediate this incident in accordance with 15A NCAC 2C .0113 and .0214, respectively. For guidance on closure of infiltration galleries, please contact the Division of Water Quality, Groundwater Section, at the Wilmington Regional Office.

If there are any questions concerning this notice, please contact Bruce Reed at (910) 395-3900.

Sincerely,



David R. Holsinger, P.E.
Regional Supervisor

DRH/BAR

Attachments: Well Abandonment Form
15A NCAC 2C .0113

cc: Rob Krebs
WiRO-UST

s:\bruce\hall2904.nfa

WELL ABANDONMENT RECORD WELL CONTRACTOR _____
WELL CONTRACTOR CERTIFICATION # _____

1. WELL USE (Check Applicable Box): Residential Municipal Industrial Agricultural Monitoring
Recovery Heat Pump Water Injection Other If Other, List Use: _____

2. WELL LOCATION: (Show a sketch of the location on back of form.)
Nearest Town: _____ County _____

(Road Name and Number, Community, Subdivision, Lot No.) _____ Quadrangle No. _____

3. OWNER: _____

4. ADDRESS: _____

5. TOPOGRAPHY: draw, slope, hilltop, valley, flat
(circle one)

6. TOTAL DEPTH: _____ DIAMETER _____

7. CASING REMOVED:
feet diameter

8. DISINFECTION: _____
(Amount of 70% hypochlorite used:)

9. SEALING MATERIAL:
Neat Cement Sand Cement
bags of cement _____ bags of cement _____
gallons of water _____ gallons of water _____
Other
Type material _____
Amount _____

10. EXPLAIN METHOD EMPLACEMENT OF MATERIAL.

11. DATE WELL ABANDONED _____

WELL DIAGRAM: Draw a detailed sketch of the well showing total depth, depth and diameter of screens remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

I do hereby certify that this well was abandoned in accordance with 15A NCAC 2C, well construction standards, and that a copy of the record has been provided to the well owner.

Signature of person abandoning the well _____ Date _____

WELL LOCATION: Draw a location sketch on the reverse of this sheet, showing the direction and distance of the well to at least two (2) nearby reference points such as roads, intersections and streams. Identify roads with State Highway road identification numbers.

Submit original to the Division of Water Quality, Groundwater Section, one copy to the owner within 30 days from completion of abandonment.

(a) Any well which has been temporarily abandoned, shall be abandoned in accordance with one of the following procedures:

- (1) Upon temporary removal from service or prior to being put into service, the well shall be sealed with a water-tight cap or seal compatible with casing and installed so that it cannot be removed easily by hand.
- (2) The well shall be maintained whereby it is not a source or channel of contamination during temporary abandonment.
- (3) Every temporarily abandoned well shall be protected with a casing.

(b) Any well which has been abandoned permanently shall be abandoned in accordance with the following procedures:

- (1) Procedures for permanent abandonment of wells, other than bored and hand dug wells:
 - (A) All casing and screen materials may be removed prior to initiation of abandonment procedures if such removal will not cause or contribute to contamination of the groundwaters. Any casing not grouted in accordance with 15A NCAC 2C .0107(e) of this Section shall be removed or properly grouted.
 - (B) The entire depth of the well shall be sounded before it is sealed to ensure freedom from obstructions that may interfere with sealing operations.
 - (C) Using a hypochlorite solution (such as HTH), disinfect the well in accordance with 15A NCAC 2C .0111. Do not use a common commercial household liquid bleach, as this is too weak a solution to ensure proper disinfection.
 - (D) In the case of gravel-packed wells in which the casing and screens have not been removed, neat-cement, or bentonite grout shall be injected into the well completely filling it from the bottom of the casing to the top.
 - (E) Wells, other than "bored" wells, constructed in unconsolidated formations shall be completely filled with cement grout, or bentonite grout by introducing it through a pipe extending to the bottom of the well which can be raised as the well is filled.
 - (F) Wells constructed in consolidated rock formations or that penetrate zones of consolidated rock may be filled with cement grout, bentonite grout, sand, gravel or drill cuttings opposite the zones of consolidated rock. The top of the cement grout, bentonite grout, sand, gravel or cutting fill shall terminate at least 10 feet below the top of the consolidated rock or five feet below the bottom of casing. Cement grout or bentonite grout shall be placed beginning 10 feet below the top of the consolidated rock or five feet below the bottom of casing and extend five feet above the top of consolidated rock. The remainder of the well, above the upper zone of consolidated rock, shall be filled with cement grout or bentonite grout up to land surface. For any well in which the depth of casing or the depth of the bedrock is not known or cannot be confirmed, then the entire length of the well shall be filled with cement grout or bentonite grout up to land surface.
 - (G) Temporary wells or monitor wells:
 - (i) less than 20 feet in depth which do not penetrate the water table shall be abandoned by filling the entire well up to land surface with cement grout, dry clay, bentonite grout, or material excavated during drilling of the well and then compacted in place; and
 - (ii) that penetrate the water table shall be abandoned by completely filling with a bentonite or cement - type grout.

.0214 ABANDONMENT AND CHANGE-OF-STATUS OF WELLS

(a) In the event any injection or associated monitoring well is abandoned, either temporarily or permanently, the well owner shall notify the Director within 15 days and the well(s) shall be abandoned in accordance with one of the following procedures or other alternatives approved by the Director based on a demonstration of not adversely affecting human health or the environment:

- (1) Procedures for temporarily abandoned wells.
 - (A) Upon temporary removal from service, or prior to being put into service, the well shall be sealed with a water-tight cap or seal compatible with the casing and installed so that it cannot be removed without the use of hand or powers tools.
 - (B) The well shall be maintained whereby it is not a source or channel of contamination to an underground source of drinking water during its temporary status.
 - (C) The well shall be repaired, to achieve compliance with the Rules in this Section, or permanently abandoned within 30 days of receipt of notice from the department, upon finding that a well is acting as a source or channel of contamination to an underground source of drinking water.
- (2) Procedures for permanently abandoned wells.
 - (A) All casing and materials may be removed prior to initiation of abandonment procedures if the Director finds such removal will not be responsible for, or contribute to, the contamination of an underground source of drinking water. Any casing not grouted in accordance with 15A NCAC 2C .0113 shall be removed or properly grouted.
 - (B) The entire depth of the well shall be sounded before it is sealed to insure freedom from obstructions that may interfere with sealing operations.
 - (C) The well shall be thoroughly disinfected, prior to sealing, if the Director determines that failure to do so could lead to the contamination of an underground source of drinking water.
 - (D) Drilled wells shall be completely filled with cement grout, which shall be introduced into the well through a pipe which extends to the bottom of the well and is raised as the well is filled. "Bored" or hand-dug wells over 24 inches in diameter may be filled with an alternative material approved by the Director based on a demonstration of not adversely affecting human health or the environment.
 - (E) In the case of gravel-packed wells in which the casing and screens have not been removed, neat-cement shall be injected into the well completely filling it from the bottom of the casing to the top.
 - (F) In those cases when, as a result of the injection operations, a subsurface cavity has been created, the well shall be abandoned in such a manner that will prevent the movement of fluids into or between underground sources of drinking water and in accordance with the terms and conditions of the permit.

(b) Exploratory or test wells, constructed for the purposes of obtaining information regarding an injection well site, shall be permanently abandoned in accordance with Subparagraph (2) of this Rule upon completion of their exploratory or testing status.

(c) An injection well shall be permanently abandoned by the drilling contractor before removing his equipment from the site if the well casing has not been installed or has been removed from the well bore.

*History Note: Authority G.S. 87-87; 87-88; 143-211; 143-215.1A; 143-215.3(a)(1); 143-215.3(c);
Eff. August 1, 1982;
Amended Eff. February 1, 1997; October 1, 1996.*

State of North Carolina
Department of Environment
and Natural Resources
Wilmington Regional Office
Division of Waste Management
UST Section

Michael F. Easley, Governor
William G. Ross Jr., Secretary



June 15, 2001

Info sent to LR 7/9/2001
Funds Req to BI 8/2001

Ms. Nikki Hall
United States Marine Corps
PSC Box 20004
Camp Lejeune, NC 28542-0004

RE: Notice of Regulatory Requirements
15A NCAC 2L .0115(c)
RISK-BASED ASSESSMENT AND
CORRECTIVE ACTION FOR PETROLEUM
UNDERGROUND STORAGE TANKS
USMC-Camp Lejeune-2094 Patrick St AS2094
Camp Lejeune, Onslow County, N.C.
Risk: Unconfirmed
Incident No. Pending

Dear Ms. Hall:

Information received by this office on May 21, 2001, confirms a release or discharge from a petroleum underground storage tank (UST) system at the above referenced location. Records indicate that the USMC is the owner and/or operator of this UST tank system. This letter is a standard notice explaining the actions that the USMC must take as a result of the release or discharge in accordance with North Carolina statutes and rules. The UST Section of the Division of Waste Management administers the state's rules for USTs and the required response for petroleum releases. Those rules are located in Title 15A, Subchapter 2L and Title 15A, Subchapter 2N of the North Carolina Administrative Code (NCAC).

As a responsible party, the USMC is required to comply with the release response and corrective action requirements of 15A NCAC 2L .0115(c), which include the requirements established in 15A NCAC 2N. Listed is a general description of actions that the USMC must take to comply with State rules. For a detailed description of your requirements please refer to the enclosed rules and the January 1998 Groundwater Section Guidelines for the Investigation and Remediation of Soil and Groundwater, Volume II ("the Guidelines"). The Guidelines are available on the Internet at <http://ust.ehn.state.nc.us> or may be purchased from the UST Section for a fee of \$7.00. To purchase a copy of the Guidelines, please send a check made payable to DENR to:

DENR/DWM/UST Section
1637 Mail Service Center
Raleigh, NC 27699-1637

Required Actions:

- 1) If the USMC has not already done so, the USMC must take immediate action to prevent any further release of the regulated substance into the environment and to identify and mitigate any fire, explosion and vapor hazards; remove any free product; and comply with the requirements of Rules .0601 through .0604 and .0701 through .0703 and .0705 of Subchapter 2N;
- 2) Incorporate the requirements of 15A NCAC 2N .0704 into the report to be submitted in accordance with 15A NCAC 2L .0115 (c)(3) or (c)(4), whichever is applicable (see Item #3 below). This shall constitute compliance with the reporting requirements of 15A NCAC 2N .0704(b);
- 3) If the USMC can demonstrate that no soil remains in the unsaturated zone in the sidewalls and at the base of the UST system excavation with contaminant levels exceeding either the "soil-to-groundwater" or the residential maximum soil contaminant concentrations (See Guidelines), whichever are lower, then submit a Soil Contamination Report in accordance with 15A NCAC 2L.0115(c)(3). The Soil Contamination Report, if applicable, is due in this office within **90 days** of the date of receipt of this notice. Upon approval of this report, the Department will issue a notice indicating that no further action related to this incident is required; or,
- 4) If the requirements of 15A NCAC .0115(c)(3) cannot be met as described in Item #3 above, submit a Limited Site Assessment (LSA) Report in accordance with 15A NCAC 2L .0115(c)(4), containing information needed by the Department to classify the level of risk to human health and the environment posed by the discharge or release. The LSA Report is due in this office within **120 days** of the date of receipt of this notice. Based on a review of the information submitted in the LSA, the Department will classify the risk of the discharge or release as high, intermediate or low. At that time, the Department will also classify the land use of the site as either residential or industrial/commercial. The USMC will be notified of the risk and land use classifications once review of your LSA Report is completed.

If the USMC believes that any of the information requested above has already been submitted, please notify me of the date, title, and content of the documents that contain the information.

Ms. Nikki Hall
June 15, 2001
Page 3

The USMC's prompt attention to the items described herein is required. Failure to comply with the state's rules in the manner and time specified, may result in the assessment of civil penalties and /or the use of other enforcement mechanisms available to the State. Each day that a violation continues may be considered a separate violation. If the USMC believes that it is not the responsible party notify the UST Section within 15 days of receipt of this letter.

Please note that performing assessment and cleanup work that is not required under 15A NCAC 2L.0115 is not reimbursable from the Commercial or Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds.

If the USMC has any questions regarding the actions that must be taken or the rules mentioned in this letter, please contact me at the letterhead address and/or at (910) 395-3900. If the USMC has any questions regarding trust fund eligibility or reimbursement, please contact the UST Section in Raleigh at (919) 733-8486.

Sincerely,



Bruce Reed
Hydrogeologist II

BR

cc: Ruth Strauss
George O'Daniel (Onslow County Health Dept.)
WiRO-UST

s:\bruce\hall2094.jun